Appendix 6.3-A

Baseline Water Quality Report

KGHM AJAX MINING INC.
AJAX PROJECT

BASELINE WATER QUALITY REPORT

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KGHM AJAX MINING INC.
AJAX PROJECT

BASELINE WATER QUALITY REPORT
VA101-246/31-3

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EXECUTIVE SUMMARY

KGHM Ajax Mining Inc. proposes to develop the Ajax Project (the Project), an open pit copper-gold mine, near the City of Kamloops, British Columbia. The Project is located within the Thompson River watershed, Thompson – Okanagan Plateau Ecoregion of the Southern Interior Ecoprovince of British Columbia, which is within the Interior Plateaus and Highlands Ground Water Region of British Columbia (Province of British Columbia 2013 and Zubel 2001). The immediate project area is within the smaller Peterson Creek watershed and is on the eastern side of the previous Afton Mine property. Previously mined areas on site include the partially backfilled Ajax East open pit and the two Ajax West open pits, and two reclaimed mine rock piles. The proposed open pit will further develop and encompass the previously mined Ajax East and Ajax West open pits east of Jacko Lake. The remainder of the Project footprint is comprised of forested land and ranching property. Residential and industrial neighbourhoods are located in proximity to the creeks.

Water quality and quantity in the local area is influenced significantly by the arid climate conditions. Jacko Lake and Edith Lake are managed water features. The outflow management strategies are not formally documented and as a result it is difficult to correlate flows with observed chemistry, though seasonality is evident. The primary objective for the management of outflows from Jacko Lake is to sustain the requirements of the numerous water licences on Peterson Creek and the Edith Lake outlet is managed to maintain lake levels in that lake.

In the spring, freshet runoff is the major contributor to surface water flows, however, outside of this spring freshet, flows are observed to be low in the local creeks (Peterson Creek, Keynes Creek, Humphrey Creek, Anderson Creek, Cherry Creek, and Alkali Creek) and groundwater is the primary source of flow. Even under high flow conditions, surface connections between Keynes Creek and Humphrey Creek with Peterson Creek were not observed, and flow connection is assumed through the subsurface. The baseline water quality study was strategically planned to provide insight into surface water and groundwater quality in the Project area and to provide appropriate coverage both up-gradient and down-gradient of the historical and proposed mine features, and local land uses.

The primary objectives of the water quality study were to characterize the complex environment and understand the interactions between surface water and groundwater in the project area, to provide valuable insight into current and potential future stresses on surface and ground water resources and management strategies to address these issues, and to provide a basis for predicting future water quality. The water quality analytical results have been compared against an exhaustive list of relevant guidelines as specified in the Application Information Requirements for the Project. The relevant guidelines were based on all potential water users in the project area and include aquatic life, drinking water, agricultural water uses (irrigation and livestock), wildlife, and recreation. Aquatic life guidelines tend to be the most stringent and the report discussion is generally focussed on these guidelines, though the others are discussed to provide context.

Surface Water Quality

The surface water quality sampling program includes 38 established sites, 33 of which are part of the ongoing monthly sampling program. The study area is characterized as dry, with variable flow in the creeks; at times, some creeks run dry and cannot be sampled. During spring freshet, flows change at a faster rate than other times of year and weekly samples have been collected to document the changes in water quality associated with the changing flows.

All surface waters in the project area are neutral to basic pH, hard to very hard, and alkaline with high buffering capacity. Concentrations of most parameters were noted to increase with distance downstream in the creeks in every watershed sampled in the baseline surface water quality program. This increase was most evident outside of spring freshet. Surface water quality within the project area is highly variable depending on whether the system is a lake, slough, creek, or historical mine site features. Total dissolved solids (TDS) is a key parameter that differentiates these surface water features within the baseline study program. The creeks, Makaoo Lake, and Jacko Lake qualify as freshwater sources, the historical mine site features and Polygon Pond are within the slightly to moderately saline range, and Inks Lake and Wallender Lake are saline, though Wallender Lake is verging upon hyper-saline. Wallender Lake, Inks Lake and the historical mine site features are local groundwater discharge zones, with no outlet channels, within a net evaporative climate. The parameter concentrations in these man-made features and lakes tend to be higher than the surrounding groundwater and surface water and in Wallender Lake and Inks Lake, parameter concentrations appear to have stabilized under natural equilibrium conditions, whereas concentrations in the historical mine features are typically trending upwards.

Sulphate or bicarbonate are the dominant anions in all surface waters and the major cation is generally magnesium, with significant sodium and calcium. Sulphate concentrations are lower in Anderson Creek, Cherry Creek, Alkali Creek and Jacko Lake than in lower Peterson Creek. Sulphate loading in Peterson Creek is generally understood to be associated with groundwater inflows as concentrations reach maximum values under low flow conditions in late summer and late winter, when runoff due to precipitation is non-existent and surface flows are supported almost exclusively by local groundwater discharge. Sulphate levels in Inks Lake, Wallender Lake, Polygon Pond and the historical mine site features were elevated and exceed the 1000 mg/L livestock water use guidelines. Due to high hardness in the surface water environmental in the project area site specific toxicity testing was required for sulphate and science based environmental benchmarks (SBEBs) were developed for the site. Two SBEB thresholds were developed specific to the presence or absence of early life stages for trout (early life stages present: Sulphate 429 mg/L – hardness up to 800 mg/L $CaCO_3$; and early life stages absent: Sulphate 730 mg/L – hardness up to 1,377 mg/L $CaCO_3$). Sulphate surface water concentrations rarely exceeded the SBEBs but occasional samples from the Peterson Creek, in the lower reaches of the baseline study area were above these thresholds.

Chloride concentrations were elevated seasonally in samples collected from surface water sites in Peterson Creek and Anderson Creek that were downstream of highways (Highways 5, 5A and Lac La Juene) and samples occasionally exceeded aquatic life guidelines for long-term exposure. Road salt application is the likely source, as groundwater sample concentrations from monitoring wells in the immediate project area are all low in chloride. Samples from residential water well sources in the vicinity of the Davidson Creek Aquifer (parallel to Highway 5A) are also elevated in chloride. Seasonal increases typically occur between August and October, and sites upstream of the highways are not affected. Fluoride concentrations were elevated in samples from project area groundwater wells and surface water samples. Fluoride surface water concentrations did not tent to exceed the BC aquatic life guideline (hardness dependent), and concentrations did not show consistent increasing trends with distance downstream, but tended to be elevated in the samples from Humphrey Creek, and Keynes Creek and samples from the mid-reaches of Peterson Creek, which are downstream of Humphrey Creek and Keynes Creek.

Total phosphorus concentrations in the creeks varied significantly on a seasonal basis, resulting in a wide range of trophic classification from eutrophic to hyper-eutrophic. Nutrient loading within the project area is dominantly phosphorus related and nitrogen based inorganics (nitrite, nitrate, and ammonia) concentrations were somewhat variable in the creeks and aquatic life guideline exceedances were infrequent.

In the Peterson Creek watershed (including Keynes Creek and Humphrey Creek), Anderson Creek, Cherry Creek and Alkali Creek aluminum, copper, and iron frequently exceeded the aquatic life guideline limits and molybdenum and manganese concentrations frequently exceeded the guidelines for irrigation and/or livestock water uses. With the exception of manganese and molybdenum, the total concentrations of these parameters were generally elevated in response to freshet flows. Manganese and molybdenum concentrations were elevated in local groundwater and in seepage downstream of historical waste rock, and surface water concentrations were higher during non-freshet periods when surface water flows are predominantly sustained by groundwater. Molybdenum sample concentrations seasonally exceeded the wildlife and livestock water quality guideline in Peterson Creek downstream of the historical mine site area. Selenium aquatic life guideline exceedances were also noted within the project area creeks, generally in association with late winter low flow periods, and although concentrations tended to decrease through spring freshet, guidelines were still exceeded during this period. Selenium concentrations were highest in samples from Keynes Creek and lower Humphrey Creek and were also high in the lower reaches Peterson Creek. In Jacko Lake only aluminum, selenium, and zinc were reported above fresh water aquatic life guideline limits, though exceedances were infrequent. Metal parameters were generally below aquatic life guidelines in Makaoo Lake.

The historical mine site features water quality samples revealed elevated concentrations of arsenic, cadmium, copper, molybdenum, selenium, and uranium, and aquatic life guideline exceedances were frequent for these parameters. In Inks Lake and Wallender Lake arsenic and boron regularly exceeded guidelines and aluminum, copper, and selenium exceeded guidelines, though elevated MDLs due to sample matrix interference often resulted in MDLs that exceeded the guidelines for these and other parameters.

Groundwater

A total of 73 monitoring wells have been installed in the project area, 51 of which have been sampled and are the basis for the groundwater quality characterization provided in this report. Forty-six (46) of these monitoring wells continue to be sampled in the ongoing groundwater monitoring program. The first wells were installed in 2007 and the most recent drilling event occurred in 2014. At some well locations, paired wells (deep and shallow) have been installed to characterize any differences in water quality at different depths. Each well is generally sampled quarterly, with sampling events targeted to capture water quality associated with the lowest and highest water levels.

Regional groundwater quality in the Thompson River watershed, in the Thompson Plateau (Interior Plateau and Highlands groundwater region of British Columbia) is described as having high concentrations of total dissolved solids (TDS) (>500 mg/L) and in some areas the sulphate concentrations are above the 500 mg/L Health Canada Drinking Water Standards (Zubel 2001). Water quality in the area is characterized as very hard and highly mineralized, and of the carbonate to sulphate water type; however, these interpretations are based upon limited data (Zubel 2001). The groundwater quality analysis for the local study area support observations in this reference.

Groundwater quality in the local study area is characterized as alkaline, hard to very hard, and generally classified as fresh water to slightly saline, with TDS that was typically higher than that described by Zubel (2001). The dominant anion was sulphate and the dominant cation was sodium, typically in association with sulphate, though intermediate geochemical facies were identified. Magnesium was also a dominant cation but generally with significant proportions of sodium and calcium and rarely as a major contributing cation. Calcium was proportionally dominant in samples from a few monitoring wells installed immediately east of Jacko Lake, but typically only slightly greater than magnesium and/or sodium. Hydrochemical signatures were not distinct for the specific bedrock or overburden lithological units but were more easily distinguished by location in the project area. Major ion and dissolved solids concentrations were typically lower in the groundwater samples from wells in the upland areas (groundwater recharge areas) of the project and were more concentrated in samples collected from wells at lower points along the Peterson Creek valley (i.e. groundwater discharge areas), and generally increased from west to east along the Peterson Creek valley and into the Peterson Creek aquifer.

Sulphate concentrations were elevated in all of the groundwater samples collected from within the baseline study area, and with few exceptions, concentrations frequently exceeded livestock water use guideline (1000 mg/L). The highest sulphate concentrations were noted for those wells that are in the vicinity of local groundwater discharge areas, such as the Ajax West open pits, sloughs, Inks Lake, and Peterson Creek. Fluoride was elevated throughout the project area though locally enriched in the vicinity of the proposed Ajax Pit, where concentrations were often greater than the livestock and irrigation water use guideline limits.

Trace metal and metalloid concentrations in groundwater were not always well correlated with the major ions and the distribution appears to be more strongly influenced by local geological enrichment in specific minerals (deposit area and historic waste rock storage areas) and by proximity to local scale groundwater discharge areas which are typically at lower elevations in the project area. Arsenic, boron, iron, manganese, molybdenum, and selenium were metals and metalloids that were elevated in the groundwater quality baseline study area, though the spatial extent varied somewhat by parameter. Concentrations of some metals were higher in groundwater samples collected from monitoring wells in the vicinity of the open pit (deposit area) and the historical mine features (arsenic, boron, iron, manganese, molybdenum, and selenium), whereas others are elevated in the vicinity of the proposed East Mine Rock Storage Facility (EMRSF) (North Peterson Creek watershed) (iron and manganese), Humphrey Creek area (manganese), Keynes Creek area (arsenic and manganese), and the Upper Peterson Creek area (arsenic, boron, and manganese).

Aquatic life guideline exceedances for groundwater quality were most common through the majority of the baseline groundwater quality study area for fluoride, sulphate, and arsenic, less common for boron, copper, iron, manganese, molybdenum, and selenium, and rare for aluminum, antimony, cadmium, chromium, cobalt, mercury, uranium, and zinc.

The groundwater in the project area is generally not suitable as a raw drinking water source and drinking water quality guideline exceedances are common for pH, TDS, sulphate, fluoride, manganese and sodium, and are less common for nitrate, ammonia, arsenic, selenium, and uranium.

Livestock water use guideline exceedances are common throughout the Project area for specific conductance, TDS, and molybdenum, and less common for sulphate, fluoride, and arsenic. Irrigation

water use guideline exceedances are common for specific conductance, TDS, manganese and molybdenum, and less common for chloride, selenium, and uranium.

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ABBREVIATIONS

Ajax Project	the Project
BCWQG	British Columbia Water Quality Guidelines
BC MOE	British Columbia Ministry of Environment
BGC	BGC Engineering Inc.
CCME	Canadian Council of Ministers of the Environment
CEQG	Canadian Environmental Quality Guidelines
DO	dissolved oxygen
DOC	dissolved organic carbon
DP	dissolved phosphorus
DQO	data quality objectives
DW	drinking water
EA	Environmental Assessment
EMRSF	East Mine Rock Storage Facility
KP	Knight Piésold Ltd.
KAM	KGHM Ajax Mining Inc.
KCBL	Klohn Crippen Berger Ltd.
LSA	local study area
Lorax	Lorax Environmental Services Ltd.
RSA	regional study area
Rec	recreation
SBEB	Science Based Environmental Benchmark
SMRSF	South Mine Rock Storage Facility
TSF	Tailings Storage Facility
TDS	total dissolved solids
TOC	total organic carbon
TP	total phosphorus
WAD	weak acid dissociable
WMRSF	West Mine Rock Storage Facility
m	metres
masl	metres above sea level
mg/L	milligrams per litre
SpC	specific conductance
t/d	tonnes per day
uS/cm	microsiemens per centimetre

1 – INTRODUCTION

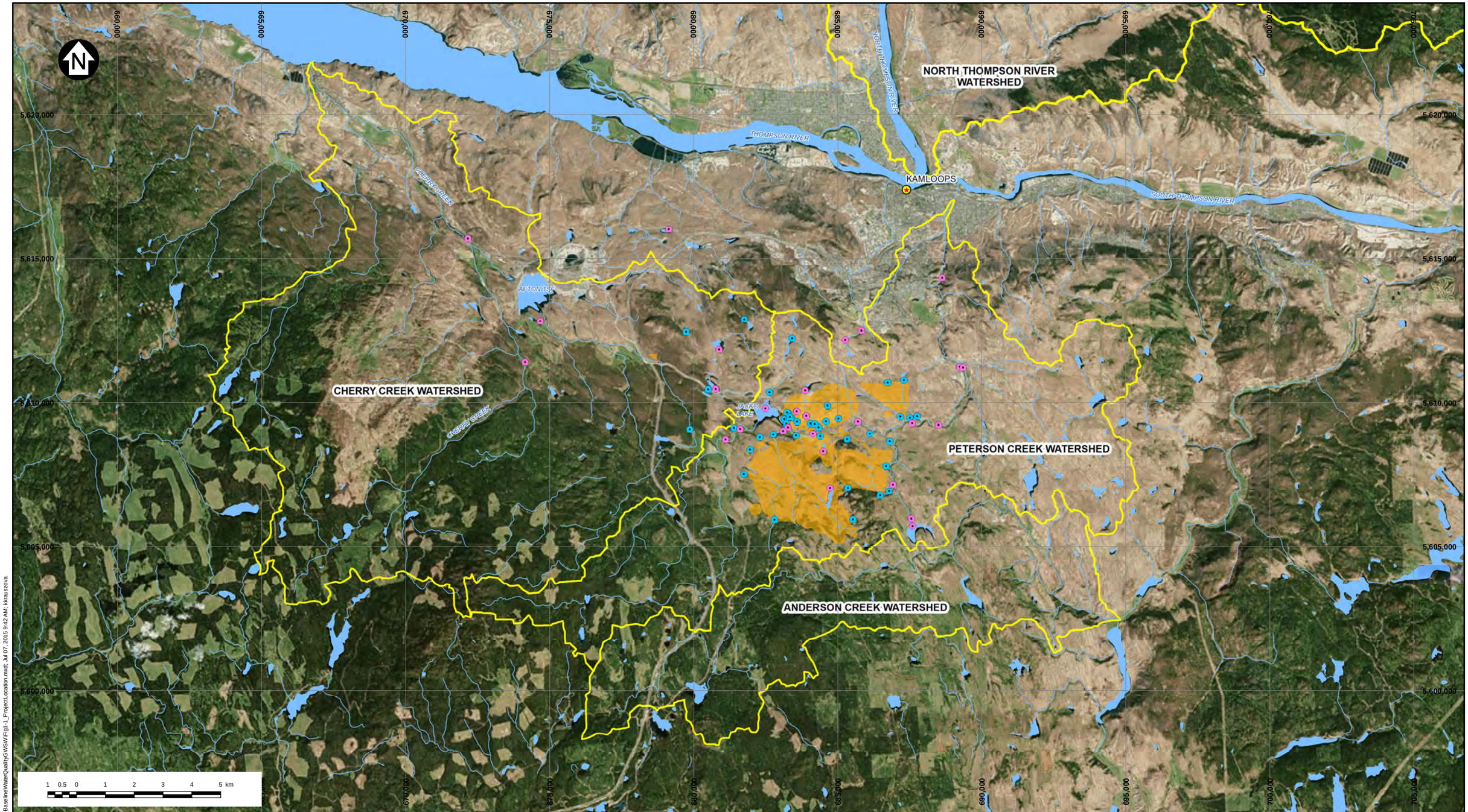
1.1 PROJECT DESCRIPTION AND BACKGROUND

KGHM Ajax Mining Inc. (KAM) proposes to develop the Ajax Project (the Project), an open pit copper-gold mine with a planned processing rate of 65,000 t/d, near the City of Kamloops, British Columbia. The Project location and facility footprints are shown on Figure 1.1, in relation to the city of Kamloops and the major watershed boundaries.

The proposed Project is partially located on a historical mine site and mining activities in the immediate project area began in 1989. Mining operations ceased under Teck Cominco in the Afton, Ajax East and Ajax West open pits in 1997. Previously mined areas on site include the partially backfilled Ajax East open pit and the two Ajax West open pits, and two reclaimed waste rock piles. Historical-mined rock has been stored to the east of the open pit, adjacent to Peterson Creek. After mining operations terminated, reclamation was carried out. The proposed open pit will further develop and encompass the previously mined Ajax East and Ajax West open pits east of Jacko Lake.

1.2 REPORT SCOPE

Knight Piésold Ltd. (KP) was requested by KAM to complete a baseline water quality study to support the application for an Environmental Assessment (EA) certificate for the Project. This report provides a detailed assessment of the baseline water quality data collected from 2007 through September 2014 for surface water quality and groundwater quality within the project area. The Project is located within the Peterson Creek watershed (Figure 1.1), which is the focus of the baseline water quality characterization; however, the Cherry Creek and Anderson Creek watersheds have been included in the baseline characterization due to their proximity to the Project.



LEGEND:

GENERAL

- SURFACE WATER QUALITY SITE
- GROUNDWATER QUALITY SITE
- COMMUNITY
- RIVER/CREEK
- LAKE
- CATCHMENT BOUNDARY

PROPOSED FACILITIES

- MINE SITE

NOTES:

1. BASE MAP: ESRI ARCGIS ONLINE BING MAPS.

2. COORDINATE GRID IS IN METRES.
COORDINATE SYSTEM: NAD 1983 UTM ZONE 10N.

3. THIS FIGURE IS PRODUCED AT A NOMINAL SCALE OF 1:125,000 FOR 11x17 (TABLOID) PAPER. ACTUAL SCALE MAY DIFFER ACCORDING TO CHANGES IN PRINTER SETTINGS OR PRINTED PAPER SIZE.

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	REVIEWED
0	07JUL'15	ISSUED WITH REPORT	CMJ	AMD	JEM

KGHM AJAX MINING INC.

AJAX PROJECT

PROJECT LOCATION AND LOCAL WATERSHED BOUNDARIES

Knight Piésold CONSULTING

P/A NO. VA101-246/31

REF NO. 3

FIGURE 1.1

REV 0

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2 – PHYSICAL SETTING

2.1 OVERVIEW

The Project is located within the Thompson River watershed, Thompson – Okanagan Plateau Ecoregion of the Southern Interior Ecoprovince of British Columbia, which is within the Interior Plateaus and Highlands Ground Water Region of British Columbia (Province of British Columbia 2013 and Zubel 2001). The immediate project area is within the smaller Peterson Creek and Cherry Creek watersheds.

The landforms of the project area are reflective of the glacial history of the region. Extensive glacial action has created topography of low rolling hills with local deep accumulations of glacial till on the southeast flanks of larger rock outcroppings and drumlins (Province of British Columbia 2013 and Zubel 2001). The area consists of rolling grasslands surrounded by local relief that ranges from 800 metres above sea level (masl) to 1,100 masl and forested areas at higher elevations. Sugarloaf Hill is the prominent landform in the area and has an elevation of 1,130 masl.

Most of the forested portion of the project area is structural stages 4 and 5 as a result of a frequent fire regime. A recent fire south of Ned Roberts Lake (south of Hughes Lake tailings pond) has removed most of the older forest in that area. Very little old forest is currently present in the vicinity of the Project.

2.2 GEOLOGICAL OVERVIEW

The geological summary provided below is based upon the geology description from the BGC Engineering Inc. (BGC), *Baseline Groundwater Hydrology Assessment* report (BGC 2015a). For a more detailed description please reference that report.

The bedrock in the project area consists of the Upper Triassic Nicola Group (volcanics, volcaniclastics, and picrite), Late Triassic to Early Jurassic Iron Mask Batholith (dioritic intrusive rock), and the Eocene Kamloops Group (volcanic and sedimentary rock groups); listed in order from oldest to youngest. The Ajax deposit is included within the Iron Mask pluton of the Iron Mask Batholith. The Iron Mask pluton is the larger of the two plutons of which the Iron Mask Batholith is comprised; the Cherry Creek pluton forms the smaller northwest section of this batholith. A discussion of the major faults and structures is not provided here, but can be referenced from the above mentioned document.

Quaternary deposits in the local project area are comprised of Kamloops Drift resulting from the Fraser Glaciation and post-glacial deposits in lacustrine, fluvial, eolian, and colluvial depositional environments. The glaciofluvial deposits in the project area placed during the Fraser glaciation have been mapped in the Peterson Creek and Davidson Creek Aquifers and in the vicinity of the proposed Tailings Storage Facility (TSF) and South Mine Rock Storage Facility (SMRSF) and *"…consist broadly of gravel, sandy gravel and sand*" (BGC 2015a). Drumlinoid moraines, consisting of till with lenses of sand, gravel and silt and these deposits are "…*the most common surficial material within the study area and is mapped around all project facilities*" (BGC 2015a). The post-glacial deposits are more limited than the glacial deposits in project area. Lacustrine deposits, consisting of bedded fine sands, silts and clays are limited to ponds in the project area. "*Fluvial deposits consisting of loosely packed, non-cohesive sand and silt. These are fans that formed floodplains and terraces. These deposits have been mapped in the Peterson Creek area, south of the planned open pit and*

[East Mine Rock Storage Facility] *EMRSF* (BGC 2015a)". "*Colluvial/mass movement deposits consist of loose, unconsolidated sediments of various sizes that have been deposited at the base of hillslopes. These materials have been mapped near the eastern limit of the open pit, to the north of the WMRSF* [West Mine Rock Storage Facility] *and near and within the footprints of the TSF, SMRSF and EMRSF"* (BGC 2015a).

2.3 CLIMATE AND HYDROMETEOROLOGY

Situated within the rain shadow of the Coast Mountains, this region has a semi-arid steppe climate characterized by generally cool dry winters and hot dry summers. The hydrograph generally peaks in April or May, during spring freshet and decreases quickly in June, when evaporation is high and rainfall is low. Creek flows remain low throughout the summer. Despite higher rainfall in the fall season, creek flows remain very low relative to those observed during freshet. Winters are very dry and cold and some creeks cease to flow. Results from the 2014 KPL Hydrometeorology Report (KPL 2014) indicate a long-term average annual temperature of 6.4 °C, with average monthly temperatures ranging from 18.7 °C in July to -4.9 °C in January. Relative humidity varies throughout the year, but it is typically highest in mid-winter and lowest in mid-summer, with monthly average values of approximately 88.5% and 48.6% respectively. The long-term mean annual precipitation was estimated to be 336 mm, 30% of which falls as snow. Convective storm cell events are frequent in the summer months and as a result precipitation is generally highest in June and July. The mean annual lake evaporation was estimated to be 585 mm.

2.4 WATERSHED

The proposed Project components are all situated within the Peterson Creek watershed, which drains to the South Thompson River. Because of their close proximity to the Project, the Anderson Creek and Cherry Creek watersheds are included in the baseline study. The Peterson Creek and Cherry Creek watersheds have been studied extensively and detailed reports are summarized below; however, the physical hydrology of the sites located in the Thompson River and Anderson Creek watersheds (located north and south of the Peterson Creek watershed, respectively), has not been characterized as extensively as those of the Peterson Creek and Cherry Creek watersheds. The topography of the project area is consistent between watersheds and the physical hydrological and climatic properties of the Anderson Creek watershed are expected to be similar to those observed in Peterson Creek. The Thompson River watershed is much larger than the watersheds that make up the majority of the project area and is expected to be very different; however, the section of this watershed that is included in the baseline water quality study is limited to a very small area close to the borders of the Cherry Creek and Peterson Creek watersheds. The physical properties of the similar terrain observed in the Cherry Creek and Peterson Creek watersheds is assumed to apply to the two water bodies studied for water quality within the Thompson River watershed: Polygon Pond and Makaoo Creek.

Within the Peterson Creek, Cherry Creek, and Anderson Creek watersheds, the mean annual hydrographs at each site show the same general trends. A sample hydrograph from the JACINF hydrology station, located near the site and considered representative of the Ajax site, is shown on Figure 2.1. Creek flows are generally low to dry from late summer (September) through the winter months (up to and including February) with increased flow from early spring (March) through summer (August). Spring freshet generally happens in late May and June and is characterized by higher

runoff contributing to creek flow. Precipitation is often higher in October and November, causing a period where creek flow is predominantly recharged by surface runoff, while groundwater recharge is the main source of surface water discharge in the winter months (December through February).

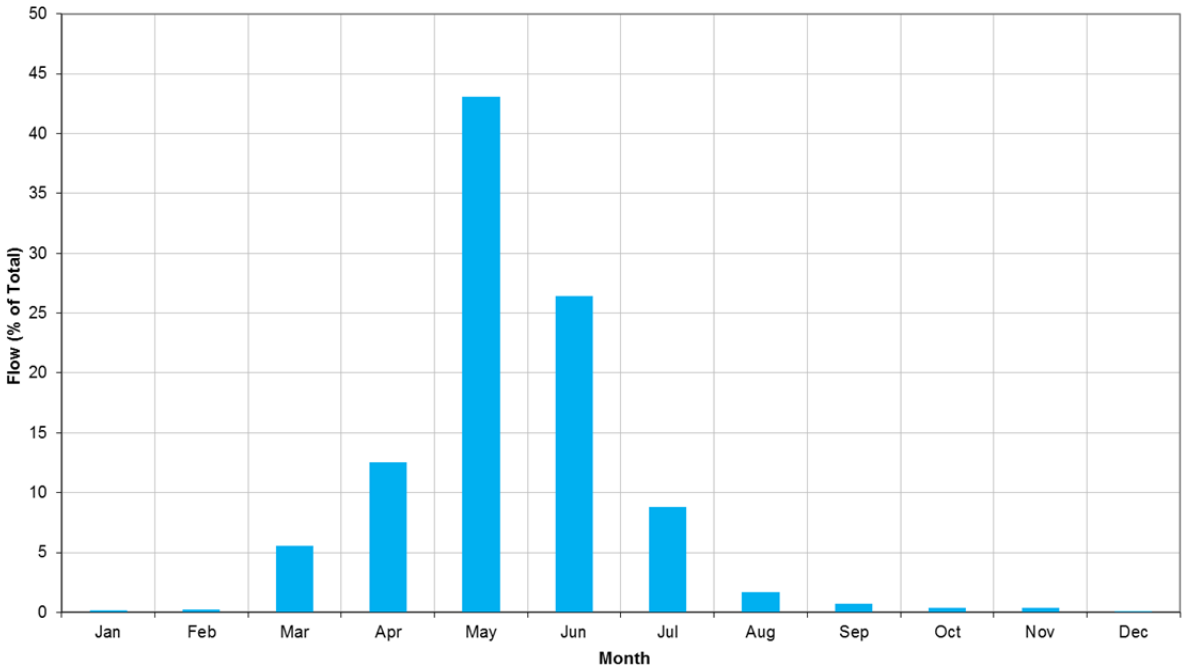


Figure 2.1 Representative Hydrograph of the Ajax Site

NOTES:
1. HYDROGRAPH IS FOR THE JACINF HYDROLOGY STATION, WHICH IS CONSIDERED REPRESENTATIVE OF THE AJAX SITE.

2.4.1 Peterson Creek Watershed

Peterson Creek has a mainstem length of approximately 40 km and a watershed area of approximately 130 km^2 (BGC 2015b). The creek is a tributary to the South Thompson River, and the lower reaches run through Peterson Creek Park and an urbanized portion of the City of Kamloops, BC. The majority of the creek within the City of Kamloops is now buried in culverts and channelled in concrete waterways from Columbia Street to the South Thompson River; an example of these modifications is provided on Photo 13 in the Photograph Section. The creek also runs through ranch land and the historical Afton Mine site. The creek has been used as a source of drinking water, irrigation, and as a drainage channel since the late 1800s. To help mitigate water losses due to seepage and evapotranspiration a 1,000 m portion of the Peterson Creek channel immediately downstream of Jacko Lake was lined with impervious till in 1990 (Price 1991).

The major tributaries of Peterson Creek include Keynes Creek and Humphrey Creek. Peterson Creek has its headwaters southwest of the City of Kamloops in a marshy area to the east of Eureka Lake. From the headwaters, the creek flows northeast and forms the sole inlet to Jacko Lake (KPL 2012). Peterson Creek continues at the controlled outlet of Jacko Lake. Keynes Creek flows north into Peterson Creek less than 1 km downstream of the outflow of Jacko Lake and Humphrey

Creek flows north into Peterson Creek approximately 2.5 km downstream of the confluence with Keynes Creek.

Small, mostly alkaline lakes are relatively common in the Peterson Creek watershed. Jacko Lake, located adjacent to the proposed pit, is the largest water body in the project area. Edith Lake is the second largest lake included in the baseline water quality study and is located at the headwaters of Humphrey Creek. Goose Lake is a shallow lake located in one of the three branches of the headwaters of Keynes Creek.

Jacko Lake has been altered due to human activities dating back to the late 1940s when the outlet channel (Peterson Creek) was modified for irrigation purposes. In order to accommodate irrigation requirements the lake was raised in the 1970s leading to the expansion into the northeast and southeast arms and an expansion of the two westerly arms. In 1990 the lake was again altered with the addition of 1 m to the outlet structure at Peterson Creek and the dredging of silt to effectively double the live storage capacity of the lake. Currently the surface area of the lake is approximately 48 ha. Water licences for extraction from Jacko Lake and Peterson Creek date back to the late 1800s and on wetter years the current requirements can be met through effective management, however, these requirements are not met on drier years (Price 1991).

The two open pit lakes within the Peterson Creek watershed are the Ajax West-East Pit and the smaller Ajax West-West Pit. The two pits were created during previous open pit mining operations and the lakes formed when mining ceased. The lake in Ajax West-East Pit is approximately 30 m at its deepest point and has an estimated surface area of 1.7 ha. The lake in Ajax West-West Pit, was 9 m at its deepest point measured in 2008, and has been dry for periods in the baseline water quality program. The lake surface elevations remain well below the natural ground surface in the area and as such there are no surface discharges. The Ajax East Pit was previously mined but was backfilled with waste rock during reclamation efforts. This open pit was immediately east of the Ajax West Pits open pits and the high walls along the west, north and eastern boundaries are still visible.

2.4.2 Cherry Creek Watershed

The Cherry Creek mainstem length is approximately 24 km and encompasses an area of approximately 190 km^2 (Rescan 2007). Cherry Creek flows into a broad reach of the Thompson River known as Kamloops Lake, approximately 22 km east of the City of Kamloops. The major tributaries of Cherry Creek include Alkali Creek, Beaton Creek, Ned Roberts Creek, and Pendleton Creek (KPL, 2012). The Cherry Creek watershed is a relatively large perennial creek system flowing northwest from Greenstone Mountain to Kamloops Lake. Prior to mining activity in the area, Alkali Creek flowed into what was Hughes Lake (now the site of the historical Afton TSF) before entering Cherry Creek further downstream.

Chuwhels Lake forms the headwaters of Cherry Creek, and has approximately 11.7 ha of surface area. Chuwhels Lake is immediately upstream of the historical and proposed mine facility influence, from a seepage perspective, with water flowing from the lake downstream into the creek through a control structure at its outlet (KPL 2012). Intermittent dry conditions have been observed in downstream reaches of Cherry Creek, which may be attributed to the operating practices for Chuwhels Lake.

Inks Lake is located within the vicinity of the proposed TSF, immediately northeast of the mine site. Inks Lake is located at an elevation of 850 masl and is made up of three distinct lobes, the northwest

lobe (3.1 ha), the northeast lobe (2.0 ha), and the main south lobe (8.1 ha). The total surface area of the lake is approximately 13.2 ha. Throughout the study period no flowing inlet or outlet channels have been observed, and Inks Lake is isolated from nearby fish bearing water bodies.

Wallendar Lake is similar to Inks Lake in that it is sustained by spring melt, groundwater inflows and precipitation and there are no outlet channels. Water levels are highly dependent on precipitation, and the pond remains dry for the better part of the year. The lake is smaller than Inks Lake (approximately 3.2 ha) and is immediately east of Lac La Jeune Highway, approximately 1 km north of Inks Lake.

2.5 HYDROGEOLOGICAL SETTING AND CONCEPTUAL MODEL

The hydrogeological setting and conceptual model provided below is based upon the Ajax Project *Baseline Groundwater Hydrology Assessment* report (BGC 2015a). For a more detailed description of the Project groundwater resources and the hydrogeological setting please reference that report.

A total of 13 aquifers have been mapped within the region, eight of which are sand and gravel aquifers and five are bedrock aquifers. Five of the 13 aquifers are located within the immediate project area. Three of the aquifers in the immediate project area, the Sugarloaf Hill (No. 0276), Knutsfords (No. 0275), and Brigade Lake (No. 0278) are bedrock aquifers, and the Davidson Creek (No. 0277) and Peterson Creek (No. 0278) are sand and gravel aquifers. These aquifers have been classified based on the vulnerability to potential contamination and the level of use (development). The methodology for classification is provided in the Ministry of Environment online resource entitled An Aquifer Classification System for Ground Water Management in British Columbia (Kreye et.al. 2013). In accordance with this classification system the Davidson Creek and Knutsford aquifers are classified as moderately developed and the Sugarloaf Hill, Peterson Creek, and Brigade Lake aquifers are classified as lightly developed.

"*Surficial materials in the RSA are comprised of glacial and post-glacial deposits consisting primarily of discontinuous glacial till, with occasional sand and gravel hummocks. Lacustrine silts and clays are common in valley bottoms. Surficial materials have been grouped into glaciofluvial/fluvial, glacial till, glaciolacustrine/lacustrine, waste rock and colluvium hydrostratigraphic units based on geologic provenance, available drill hole, test pit and mapping data. The fluvial/glaciofluvial hydrostratigraphic unit consists of glacial sand and gravel complexes and post-glacial fluvial deposits. The connectivity of hydraulically conductive gravels within these deposits could be limited due to their complex depositional history. Variable states of aquifer confinement throughout the fluvial/glaciofluvial unit are conceptualized due to layering and heterogeneity. This hydrostratigraphic unit includes the mapped Peterson and Davidson Creek Aquifers near the Mine Site. Bedrock has been divided into Nicola Group, Picrite, Iron Mask Hybrid, Sugarloaf Diorite and Kamloops Group hydrostratigraphic units consistent with mapped and modelled geology. The mapped Sugarloaf Hill bedrock aquifer is included with the Iron Mask Hybrid unit and the mapped Knutsford bedrock aquifer is included in the Kamloops Group unit. The sub-horizontal deposition of Kamloops Group could impart a layered characteristic giving it a macroscale anisotropy.*

Available hydraulic conductivity (K) data indicate that, within overburden, fluvial/glaciofluvial deposits are generally the most conductive, and glacial till deposits are the least conductive. The distribution of K data in bedrock suggest that the bedrock hydrostratigraphic units may be ordered from most to least conductive as follows: Kamloops Group, Iron Mask Hybrid, Picrite, Sugarloaf Diorite, Nicola

Group. There is a general trend of decreasing K with depth within the LSA, where below approximately 200 m bgs, bedrock K is typically less than 1 x 10^{-8} m/s. This suggests a potential for a separation of shallow and deep groundwater flow systems, with groundwater flow most active within overburden and shallow bedrock, particularly within aquifer complexes comprising the fluvial/glaciofluvial hydrostratigraphic unit. Estimates of specific storage for the various units vary by material type and include values calculated from the results of pumping tests and slug tests near the Mine Site. Specific storage estimates reported in this assessment were augmented by calibrated results from a companion numerical groundwater flow model being completed for the Project EA.

Alteration zones and geologic faults of potential hydrogeologic significance include swelling clays/bentonite and the Hugh Allen and Versatile faults in Aberdeen, and serpentinized picrite and the Edith Lake Fault Zone (ELFZ) near the Mine Site. The swelling clays in Aberdeen are susceptible to instability when groundwater pressures are raised due to development-related recharge [Golder, 2008a]. The Hugh Allen and Versatile faults have been interpreted to act as barriers to groundwater flow, contributing to local artesian conditions [Golder, 2008a]. The serpentenized picrite has been noted to be weaker and more altered than adjacent rocks and is considered to be a unique hydrostratigraphic unit in this assessment. Preliminary results of drilling investigations suggest a potentially enhanced K within the ELFZ compared to the surrounding country rock."

Groundwater flow on a local and regional scale has been interpreted to be controlled by topography, with recharge in the upland areas and discharge in the low-lying areas. On a regional scale, the conceptual groundwater model extends from Chuwhels Mountain (approximately 20 km southwest of the project area, elevation 1900 masl (metres above sea level)) to Kamloops Lake/Thompson River area (approximately 7 km north, elevation 340 masl). Groundwater flows, on a regional scale, are from south to north and are understood to be dominantly along deeper (i.e., > 200 m) slow moving bedrock flow pathways, that become more shallow in the vicinity of Kamloops Lake. The abstraction of water in the Aberdeen area to maintain slope stability is considered a regional scale sink for groundwater flows. *"Project-scale groundwater flow is predicted to be dominated by local-scale systems within overburden and the top 200 m of bedrock. Principal discharge zones near the Mine Site include reaches of Peterson Creek and Jacko Lake, the existing Ajax West Pit lakes as well as other local ephemeral streams, sloughs and ponds. Local artesian conditions are observed in the lower lying region that extends from the north arm of Jacko Lake and in topographic depressions around the WMRSF, TSF and SMRSF footprints.*

The available groundwater elevation data support a separation of shallow overburden and deep bedrock groundwater flow in the project area. The shallow system is driven more strongly by topography and is interpreted to recharge the deeper regional system. The deeper regional system has a slower component of flow moving down-gradient (north) towards Kamloops Lake/Thompson River. Near the Mine Site, groundwater converges locally towards the existing Ajax West Pits. Groundwater also converges towards the towards topographic saddle that occurs near the confluence of Peterson Creek with Jacko Lake, and then flows either northwestward from Jacko Lake beyond the Project area, or eastward following the Peterson Creek drainage. The available potentiometric data suggest that groundwater follows this trend northwestward or eastward away from the project site to merge with flow systems beyond the LSA.

Seasonal fluctuations in groundwater levels range from less than 0.1 m to approximately 3 m, annually. Groundwater elevations monitored within the Project area typically decline through the

winter and spring (i.e., September to March), and are highest during the summer and fall quarter (i.e. June to September). The seasonal variation in groundwater levels is consistent with precipitation and temperature trends. Some monitoring locations near the Mine Site also show rapid water level recoveries (i.e., within a month) following precipitation events. These locations are interpreted to receive localized sources of recharge due to an enhanced hydraulic connection to surface water. Groundwater at locations where water levels appear to reach seasonal maxima in September or October likely receive recharge from more regional sources (i.e., inter-aquifer flow) in addition to infiltration of surface water.

A number of faults have been mapped in the vicinity of the Mine Site. At the pit-scale, faults have not been defined as distinct hydrogeologic structures because the available hydraulic conductivity test data did not indicate that these zones are significantly more or less conductive than the surrounding rock mass at the time this report was prepared. However, recent investigations around the ELFZ suggest that this feature may exhibit an enhanced local hydraulic conductivity compared to the surrounding country rock to the south of Jacko Lake" (BGC 2015a).

3 – METHODOLOGY

3.1 OBJECTIVES

The primary objectives of the baseline surface water and groundwater quality programs are to:

- Collect and analyze baseline water quality data to characterize the existing conditions.
- Evaluate the water quality data to develop a conceptual understanding of the hydrological and hydrogeological environment.
- Provide the basis for assessing potential water quality effects, mitigation measures, monitoring and contingency planning as the mine planning proceeds.

The methods described in this section are employed for the surface water and groundwater quality programs to meet the objectives of the study and the data quality objectives, outlined in the quality assurance/quality control report (QA/QC) in Appendix A. Groundwater and surface water samples have been collected since 2007, either by KP or under the technical guidance of Knight Piésold Consulting (KP) or under the technical guidance of KP personnel. Field staff who have collected samples were provided with work instructions and training which are summarized in the following subsections.

3.2 SURFACE WATER SAMPLING METHODOLOGY

The water quality program and sampling protocols were implemented following the general requirements of the following documents:

- Guidelines for Designing and Implementing a Water Quality Monitoring Program in British Columbia. BC Ministry of Environment, Lands and Parks, Wildlife Branch. Resource Inventory Committee. 1998.
- British Columbia Field Sampling Manual for Continuous Monitoring and the Collection of Air, Air-emission, Water, Wastewater, Soil, Sediment and Biological Samples. 2003 Edition. BC Ministry of Water, Land and Air Protection.
- Protocols Manual for Water Quality Sampling in Canada. Canadian Council of Minister of the Environment. 2011.
- Water and Air Baseline Monitoring Guidance Document for Mine Proponents and Operators. Prepared by the Ministry of Environment. October 9, 2012 (MoE 2012).

In situ parameters were routinely collected for each sample using a regularly calibrated multi-parameter probe. The multi-parameter probe was exposed to surface water conditions downstream of the sampling area so as not to disturb the sediment and was left in place until the parameters have stabilized. These parameters are pH, temperature, turbidity, dissolved oxygen, conductivity, and specific conductance (SpC).

Grab samples were collected from the active flow channel of the creeks, either obtained by wading into the creek or by reaching out from the bank. Water samples were collected by inserting the bottle neck down into the water; once submerged, the bottle was tipped with the mouth facing upstream. The bottle remained submerged until full. This method minimizes the amount of surface debris that can contaminate the sample. In cases where water levels were not sufficient to submerge the bottles, a disposable 60 mL syringe was used to extract water samples from below the surface. Dissolved metals and dissolved organic carbon samples were filtered using a 60 mL syringe with

0.45 µm syringe filters. All samples were preserved and filtered in the field, unless otherwise specified, according to the instructions sent from the laboratory.

3.3 GROUNDWATER SAMPLING METHODOLGOY

The sampling procedures were adapted from the following documents:

- British Columbia Field Sampling Manual for Continuous Monitoring and the Collection of Air, Air-emission, Water, Wastewater, Soil, Sediment and Biological Samples. 2003 Edition. BC Ministry of Water, Land and Air Protection.
- Low-Flow (Minimum Drawdown) Ground-Water Sampling Procedures. 1996. United States Environmental Protection Agency. EPA/540/S-95/504 (Puls, W. and Barcelona, M. 1996).
- Water and Air Baseline Monitoring Guidance Document for Mine Proponents and Operators. Prepared by the Ministry of Environment. October 9, 2012 (MoE 2012).

The groundwater sampling methodology for the Project has evolved since its inception in 2007. New practices to improve sample integrity have been established through the baseline program. Initially, the monitoring wells were purged and sampled using Waterra inertial pumps (tubing with foot valves) and/or bailers (for slow recovery wells), and all wells were purged of three well volumes, or so to dry, prior to collecting a sample. High turbidity values were a common result of these methods, so the methodology was changed and electronic submersible pumps were used. The three well volume approach to purging was phased out to current methods which are specific to low-flow (minimum draw-down) purging and sampling. Current methods have resulted in lower turbidity samples which are more representative of the groundwater conditions. The following methods description is specific to the current groundwater sampling practices at site, which have been the dedicated methods of sample collection since 2011.

3.3.1 Low-Flow Sampling

To collect representative groundwater samples, stagnant water present in the well was purged prior to sampling. The purging and sampling methods employed were dictated by the conditions of each individual well. Two approaches were applied to the purging and sampling, as the wells fall into two categories: wells that recover very quickly (i.e. a minimum drawdown can be maintained while purging), and wells with slow to very slow recovery rates where minimum drawdown cannot be maintained (despite pumping rates below 0.2 L/min). Both methods, described in detail in the following sub-sections, are considered low-flow methods and require the use of a submersible pump.

The submersible pump was placed approximately 1 m above the top of the screen and was set at a low pumping rate during purging and sampling to minimize turbulence in the well and surrounding formation. Target pumping rates ranged from 0.2 litres per minute (L/min) to 0.5 L/min, though higher rates were sometimes employed in cases where the turbidity was low and the water levels in the well were maintained. The following pump systems were used for purging and sampling the Ajax Project wells:

- QED SamplePro submersible pump, and
- Grundfos RediFlo2 submersible pump.

During the purging process *in situ* parameters were monitored using a regularly calibrated multi-parameter probe with a flow-through cell. The flow-through cell provides a closed environment for the collection of *in situ* data, minimizing interaction with ambient atmospheric conditions. Final *in situ*

parameters for each sampling event were recorded immediately prior to collecting the sample. The *in situ* parameters recorded are as follows: pH, temperature, dissolved oxygen, conductivity, SpC, turbidity and oxidation-reduction potential. Depth to water is recorded throughout each sampling event using a water level meter. Well stick-up and total well depth were also recorded for each sampling event.

Once the purging conditions were met and the final in situ parameters were recorded, the water line was disconnected from the flow-through cell and water samples were collected. Samples for dissolved parameters were filtered in the field by attaching a 0.45 µm in-line filter to the water line. Any required preservatives were added immediately after sample collection. Groundwater is generally in a reducing environment and efforts were made to preserve the samples in their original form. Using in-line filters reduces sample contact with ambient surface conditions and immediate preservation of the samples assists in this process also.

3.3.1.1 Low-Flow Minimum Drawdown Purging and Sampling Approach

The low-flow minimum drawdown procedure was used to purge and sample the Project wells when hydraulic conductivity of the formation was high enough to allow stable drawdown conditions during pumping. The primary objective of this sampling method is to match the pumping rate with that of the groundwater flow rate in the formation. This was achieved by adjusting the pumping rate such that the water level in the well would stabilize during pumping at an elevation relatively close to the pre-pumping water level. When a stable water level was attained, the water entering the pump was assumed to be coming from the formation around the screened interval below the pump intake and not from the stagnant overlying water column.

Well purging was complete and samples were collected when all of the following objectives were met during the purging process:

- Minimum purge volume was removed (volume in drawdown plus the volume below the pump intake)
- Stable *in situ* parameters (pH, SpC, temperature, turbidity, oxidation reduction potential, and dissolved oxygen), and
- The water level was confirmed to be stable or rising.

Final *in situ* parameters were recorded for the sampling event immediately prior to collecting the sample.

The key advantages of the low-flow groundwater quality sampling method are:

- Minimise the groundwater velocity (and thus turbulence) as the water enters the well during pumping
- More representative samples due to reduced turbidity, and
- Reducing purge volume.

3.3.1.2 Low Hydraulic Conductivity Well Purging and Sampling Approach

The low hydraulic conductivity sampling approach was used when the water levels in the wells were slow to recover (low hydraulic conductivity) and the groundwater flow rate was less than the lowest pumping rate (i.e. less than 0.01 L/min). This approach was used when the water level continued to drop during the purging process, despite pumping at the lowest rate. The stagnant water above the

pump was purged and the well was allowed to recover overnight, or longer, with the pump in place. As the well recovered, the stagnant water below the pump was assumed to be displaced and fresh groundwater surrounded the pump. Additional water was often purged from the well, provided there was sufficient recovery. The objective was to purge a minimum of 1 full well volume prior to sample collection. This process often took place over several days, with several visits to the well to record water levels and to purge water.

The key disadvantages of this approach are:

- Potentially less representative samples due to mixing of stagnant water with formation water
- Increased hydraulic gradient imposed on the surrounding aquifer and potential for turbulence as the water enters the well
- Greater purge volume, and
- Longer sampling time.

In situ parameters were routinely monitored and recorded through the purging process and final values were recorded immediately prior to sampling.

3.4 LABORATORY ANALYSIS

Water samples were submitted to ALS Environmental in Burnaby for the following analyses:

- Physical Tests – Hardness, pH, SpC, total dissolved solids (TDS), total suspended solids (TSS), and turbidity
- Dissolved Anions – Alkalinity (bicarbonate, carbonate, and hydroxide), bromide, chloride, fluoride, and sulphate
- Nutrients – Ammonium nitrogen, nitrate, nitrite, dissolved orthophosphate, and total and dissolved phosphate
- Total and Dissolved Metals - analyzed at low levels to meet the B.C. Water Quality Guidelines (BCWQG) and the Canadian Environmental Quality Guidelines (CEQG) criteria values
- Cyanide - Free, total, and weak acid dissociable (WAD), and
- Organics – Total organic carbon (TOC).

Sample dilution was often required for the analysis of samples of high TDS (i.e. greater than 500 mg/L), which resulted in raised method detection limits (MDL). The requirement for sample dilution is based on matrix interference and the magnitude of dilution varied depending on specific concentrations of the constituents of the TDS. Alternative analytical procedures were used to achieve lower MDLs when necessary.

3.5 GUIDELINES

Baseline water quality analytical and *in situ* data were examined and compared to relevant guidelines with respect to the most sensitive receptors in the downstream environment. The guidelines relevant to the water quality data for the Project are as follows:

- British Columbia Ministry of Environment Approved and Working Water Quality Guidelines (BCWQG) (BC MOE 2015a and BC MOE 2015b):
  - Drinking Water Supply (BCWQG-DW)
  - Fresh Water Aquatic Life (BCWQG-Aq)
    - Maximum (BCWQG-Max)
    - 30 Day Average (BCWQG-30 D)

  - Livestock Water Supply (BCWQG-Livestock)
  - Irrigation (BCWQG-Irrigation)
  - Recreation (BCWQG-Rec)
- Canadian Council of Ministers of the Environment (CCME), Canadian Environmental Quality Guidelines (CCME 2014):
  - Water Quality Guidelines for the Protection of Aquatic Life (Freshwater) (CEQG-PAL)
  - Water Quality Guidelines for the Protection of Agriculture (Livestock) (CEQG-Livestock)
  - Water Quality Guidelines for the Protection of Agriculture (Irrigation) (CEQG-Irrigation)
  - Water Quality Guidelines for the Protection of Wildlife (CEQG-Wildlife)
- Health Canada (Health Canada 2012):
  - Guidelines for Canadian Drinking Water Quality (HC-DW)
  - Guidelines for Canadian Recreational Water Quality (HC-Rec)

Guidelines for some parameters are hardness or pH dependent. In these cases, the guideline was assessed based on the measured hardness or pH in each sample. For sample summary statistics and figures, the guideline value was based on the average hardness or pH of all samples in the dataset or data subset used in the statistical analysis.

Aquatic life guidelines developed for British Columbia generally refer to the total fraction of the parameter being evaluated. The water quality guidelines for the protection of aquatic life have been applied to both total and dissolved concentrations for all parameters, unless the guideline specifically addresses the dissolved fraction. For example, in British Columbia, the aquatic life guidelines for aluminum are for the dissolved fraction only, and the iron guidelines have different values for total and dissolved, recognizing the difference in biological availability of these parameters based on the form present in the water column. Iron and aluminum are the only metals that have aquatic life guidelines that differentiate between the total and dissolved concentrations, the remaining aquatic life guidelines are stated to apply to the total fraction. Since the dissolved fraction should never exceed the total fraction, applying the guidelines to both total and dissolved fractions is deemed appropriate and understanding the relative relationship between the total and dissolved fractions is very important for water quality characterization. The CEQG-PAL limits are not specific to total or dissolved fractions and have been applied to both.

The BCWQG – 30 D for aquatic life is based on the average of five samples collected over a 30-day period. Project surface water samples were collected on a monthly basis for all seasons except during freshet, when samples were collected weekly; bi-monthly samples were also collected outside of the freshet period in 2014 in order to provide a more advanced characterization of seasonal water quality and to provide a robust dataset for the sites that were added to the sampling program in 2014. During freshet, if the average of any five samples collected within a 30-day period was higher than the BCWQG – 30 D, it was considered to represent the potential for chronic toxic effects to aquatic life. The observed sample concentrations in exceedance of this guideline outside of the freshet period are not necessarily true exceedances of the guideline; rather, they provide an indication of the possibility of chronic toxic effects to aquatic life as a result of prolonged exposure to concentrations at or above a chronic guideline. Groundwater samples were collected on a quarterly basis and the BCWQG-30 D are not directly applicable; however, these guidelines have been used as benchmarks for the groundwater quality assessment as regular exceedances of these thresholds may indicate chronic toxicity in local receiving water environments.

The BCWQG-30 D for sulphate specifies that site specific toxicity testing is required when hardness exceeds 250 mg/L $CaCO_3$, as was frequently the case in the baseline surface water environment in the project area. The toxicity testing, documented in *Testing in support of development of a science based environmental benchmark for sulphate for the Ajax Mine* (Nautilus 2015), resulted in a recommended science based environmental benchmark (SBEB) for a maximum sulphate concentration of 429 mg/L, which is the same as the current BCWQG-30 D, but with the maximum hardness adjusted up to 800 mg/L $CaCO_3$ which is protective of early life stages for trout (present from May through June). An alternative SBEB of 730 mg/L for a hardness of up to 1,377 mg/L $CaCO_3$ was recommended for surface waters where early life stages for trout are never present, or for periods of the year when these life stages are not expected to be present in a given reach of Peterson Creek (July through April). All of the baseline water quality samples have been screened against the BCWQG-30 D and highlighting in the tables and lines on figures are specific to this guideline. The discussion in the text is expanded to account for the SBEB and specific details with respect to presence or absence of fish and the early life stages.

Drinking water quality guidelines are not typically applicable to source waters such as those sampled for the purposes of this baseline surface water and groundwater quality characterization, but are intended to protect human health and as such are applicable to treated waters or that which comes from a tap for human use. For the purposes of characterizing the existing conditions, these guidelines have been used for comparison to untreated source waters. In some cases, the HC-DW and BCWQG-DW limits are aesthetic objectives and are not based on health effects; the aesthetic objectives are used as a basis of comparison, but are qualified in the text as such. It is recognized that surface water sources are rarely of sufficient quality for direct use as a source of drinking water without some form of conventional treatment, whereas groundwater may not require treatment. The guidelines have been applied to both total and dissolved sample concentrations for all parameters that have been reported accordingly.

The varied terrain of the project area and its proximity to densely populated areas contribute to the multidisciplinary water use and the relevance of many different guidelines. While twelve relevant guidelines have been identified and listed above, the guidelines vary and some are more stringent than others. The most stringent guidelines are generally for aquatic life which have been used to screen the data and identify parameters that exceed guidelines. While all types of guideline exceedances are discussed within the scope of this report, most exceedances of guidelines are within the subset of aquatic life guideline exceedances. The least stringent guidelines are the recreational category, which are discussed in the text, but are not highlighted in the data tables. Surface water and groundwater data tables are presented in comparison with the following groupings of guidelines in Appendix C and Appendix D, respectively:

- Aquatic life guidelines
- Drinking water guidelines
- Agricultural guidelines
- Wildlife guidelines, and
- Recreational guidelines.

Some guidelines are relevant to both surface water and groundwater; however, recreational guidelines are applicable only to surface water bodies, since groundwater is never used directly for recreation. Aquatic life guidelines are specifically targeted to surface water bodies; however, they have been applied to groundwater as well, since they are generally the most stringent guidelines and

are good indicators of potential concerns to aquatic life in areas where groundwater contributes significantly to surface water flows. Groundwater discharge to surface water varies during the water year and has a greater influence on surface water during low-flow months (i.e. winter) when groundwater comprises nearly all flow in surface water. Understanding the groundwater chemistry in relation to aquatic life guidelines is important in determining the effects of changes in groundwater on aquatic habitat. Wildlife guidelines have been applied to groundwater for similar reasons. Agricultural (livestock and irrigation) water quality guidelines can be directly applied to groundwater as these water uses can be specifically sourced from groundwater.

3.6 QUALITY ASSURANCE/QUALITY CONTROL

A QA/QC program was implemented from the on-set of the environmental baseline program. The program assists with obtaining representative data in a manner which is scientifically defensible, repeatable, and well documented. Quality assurance is facilitated at the project management level through organization and planning and the enforcement of both external and internal quality control. The following lists are a summary of the QA/QC procedures and practices being followed, which are described in detail in Appendix A:

- Internal Quality Control:
  - Staffing the project with experienced/trained individuals
  - Providing representative, meaningful data are collected through planning and efficient research
  - Use of standard protocols for sample collection, preservation, and documentation
  - Regular calibration and maintenance of all field equipment, and
  - Collection of duplicate, blank and filter blank samples for submission for analysis (approximately 10% of overall samples).
- External Quality Control:
  - Employment of fully accredited analytical laboratories for the analysis of all samples, and
  - Determination of analytical precision and accuracy through the interpretation of the analysis reports for the blind duplicate, blank, and filter blank samples.

The quality of the dataset included in this report was assessed based on adherence to the pre-set data quality objectives (DQOs). DQOs provide a means of assessing the QA/QC data and determining whether the data in question were precise, accurate, representative, and complete. The results from QA/QC samples (blanks and duplicates) were reviewed to determine if sample contamination has occurred, and these data were further used to determine if contamination occurred during collection, handling, storage, or shipping. Upon receipt from the laboratory the data were uploaded into KP's in-house data management system, FULCRUM, along with copies of field notes, photos, Microsoft Excel data, and Certificates of Analysis. The data were then routinely reviewed by the procedures outlined in Appendix A, including the following:

- Sample holding times
- Duplicate samples
- Blank samples
- Total and dissolved metals comparison
- Data validation
- Method detection limits (MDL)
- Analytical precision

- Analytical accuracy
- Ion balance (groundwater quality only)
- Turbidity (groundwater quality only), and
- Outliers.

The data were assessed compared to the DQOs on a timely basis upon receipt of analytical data from the laboratory. Flagged data were investigated, but may or may not be included in the baseline data set, depending on the level of the deviation from the acceptable limits and on the suspected reason for that deviation. In cases where the investigation indicated a potential lack of integrity of the data, the data were not used in the analysis. In some cases, however, flagged data were the result of an error in the collection or analysis of a QA/QC sample that did not affect the representative samples of the field site (ex. contaminated blank samples due to low grade deionized water from the lab). In these cases, flagged data were included in the baseline data set. Details of the data quality assessment procedures and results are provided in Appendix A.

4 – SURFACE WATER QUALITY ASSESSMENT

4.1 OVERVIEW

The surface water quality and *in situ* data collection program began in 2007, and with the exception of one year (2009), has continued to the present day. Surface water sampling sites were strategically selected based on proximity to Project facilities and historical mine site features. A total of 38 surface water sampling sites have been established to date, of which five are no longer actively sampled as they are not related to the current project plan. A summary of the samples collected to date is shown in in Table 4.1 and the site locations are shown on Figure 4.1. A broad overview of the project setting within catchment boundaries is shown on Figure 1.1.

The baseline characterization of surface water quality is focused on summarizing the physical characteristics of the waters found in the project area and defining seasonal and spatial trends. This analysis is intended to be used as a basis for determining and quantifying potential changes in water quality as a result of the Project. In compliance with government regulations, and to provide context for the observations in water quality, data have been compared to relevant guidelines. The parameters discussed in this report have been selected based on the relevance of guideline exceedances, using the aquatic life guidelines as the most relevant and most stringent basis of comparison. In general, parameter concentrations are described qualitatively as low, high, very high, and elevated. These qualitative descriptions are based on observations of water quality typical of natural waters and refer to spatial and seasonal variations in concentrations. Where concentrations exceed guidelines, the exceedances are stated explicitly.

Summaries of parameters for which aquatic life guidelines were exceeded are shown as percentages of the total number of samples at each site that exceeded one or more aquatic life guidelines in Table 4.2 for sites in the Peterson Creek watershed and in Table 4.3 for sites in the Cherry Creek, Anderson Creek, and Thompson River watersheds. The parameters that exceeded drinking water and agricultural guidelines are shown in the same watershed groupings in Table 4.4 and Table 4.5 (drinking water guideline exceedances) and in Table 4.6 and Table 4.7 (agricultural guideline exceedances). Parameters that regularly exceeded guideline categories other than aquatic life (i.e. drinking water, agriculture, wildlife, and recreational water quality guidelines; Section 3.5) are also discussed in this report; however, most of these parameters also exceed aquatic life guidelines.

Physical parameters are an important part of water quality characterization; however guidelines are often not directly applicable. For total dissolved solids, hardness, and alkalinity, ranges of parameter concentrations are used to define water types. The ranges used for descriptions in this report are listed below.

Hardness is defined as soft to very hard, based on the following ranges of $CaCO_3$ concentrations:

- Soft: 0 mg/L to 60 mg/L
- Moderately hard: 61 mg/L to 120 mg/L
- Hard: 121 mg/L to 180 mg/L, and
- Very hard: ≥181 mg/L.

TDS is used to classify water salinity in the following categories (NGWA 2010):

- Freshwater: less than 1,000 mg/L
- Slightly saline water: 1,000 mg/L to 3,000 mg/L

- Moderately saline water: 3,000 mg/L to 10,000 mg/L, and
- Highly saline water: 10,000 mg/L to 35,000 mg/L (ocean water contains 35,000 mg/L salt).

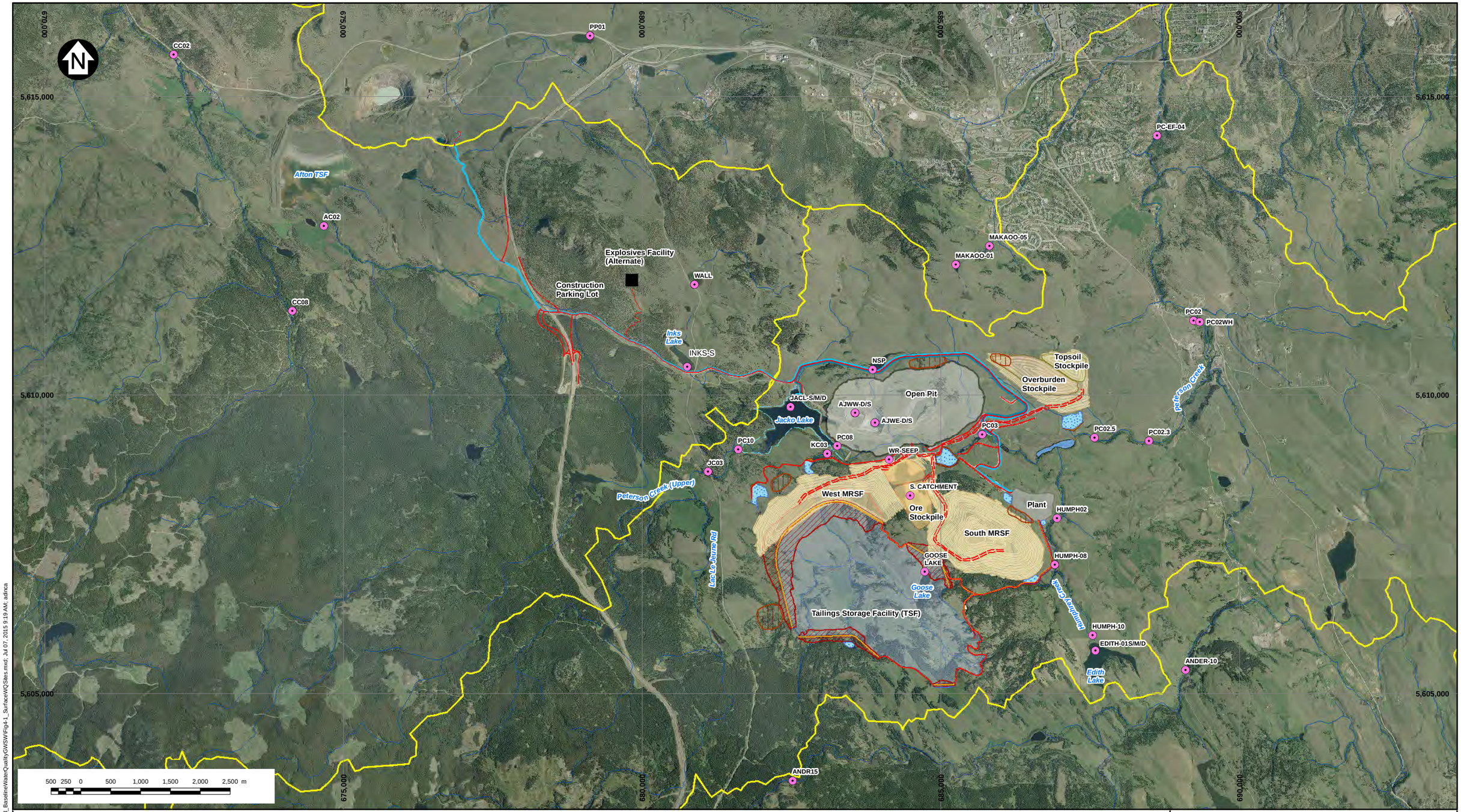
Alkalinity is a measure of the sensitivity of a waterbody to changes in pH and is usually reported as a concentration of $CaCO_3$ (BC MoE 2015b):

- Highly sensitive to acidic inputs/low buffering capacity: <10 mg/L $CaCO_3$
- Moderate sensitivity to acidic input/buffering capacity: 10 mg/L $CaCO_3$ to 20 mg/L $CaCO_3$, and
- Low sensitivity to acidic input/good buffering capacity: >20 mg/L $CaCO_3$.

Guideline limits are not applicable to some nutrient parameters, including phosphorous, which is used instead to define the trophic status of surface water bodies. The trophic status is generally categorized by the dissolved phosphorus concentrations, as well as chlorophyll A and Secchi depth. Phosphorus is often the limiting nutrient in a water body, though this is not likely the case for the project area. The trophic status is determined as a baseline for which to assess changes from current conditions, as specified in *Phosphorus: Canadian Guidance Framework for the Management of Freshwater Systems* (CCME 2004). The ranges of total phosphorus (TP) used to define each trophic category are as follows:

- Ultra-oligotrophic <0.004 mg/L
- Oligotrophic 0.004 mg/L to 0.010 mg/L
- Mesotrophic 0.010 mg/L to 0.020 mg/L
- Meso-eutrophic 0.020 mg/L to 0.035 mg/L
- Eutrophic 0.035 mg/L to 0.100 mg/L, and
- Hyper-eutrophic >0.100 mg/L.

Major ion concentrations were used in piper diagrams to characterize surface water types that could be compared with the water types observed in groundwater. A piper diagram is a trilinear plot of the major dissolved ions in water, which provides a visual interpretation of water types. Groundwater recharge has greatest influence on creek water quality during winter, when surface water runoff is at a minimum; this is the best season to compare groundwater samples to surface water. The median winter low-flow concentrations of the major ions at surface water sites were plotted on piper diagrams, grouped by catchment area, on Figure 4.2 through Figure 4.5 to demonstrate these ion signatures. Groundwater is often characterized as the sodium-potassium-sulphate type, while surface water is higher in calcium and bicarbonate. Inks Lake, Keynes Creek, Goose Lake, and the historical mine feature sites are all water bodies that are recharged by surfacing groundwater and are generally higher in sulphate, sodium, and potassium, with lower contributions from calcium and bicarbonate. Within Peterson Creek, sulphate concentrations relative to bicarbonate concentrations vary spatially, increasing from upstream to downstream. This indicates that the lower-gradient sites are affected by groundwater recharge more than the sites closer to the headwaters, where ion signatures are more consistent with surface water runoff. A similar trend is observed in Humphrey Creek, where relative sulphate is higher at the site furthest downstream from the source (Humph-02) than the upstream sites and the headwaters at Edith Lake, where bicarbonate is the dominant anion.



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LEGEND:

GENERAL

- SURFACE WATER QUALITY SITE
- RIVER/CREEK
- CATCHMENT BOUNDARY

PROPOSED FACILITIES

- RECLAIM WATERLINE
- WATERLINE
- TAILINGS LINE
- ROAD
- ROAD - HAUL

- MINE ROCK STORAGE FACILITY (MRSF)
- PIT OUTLINE
- TAILINGS STORAGE FACILITY (TSF)
- TSF EMBANKMENT
- CUT / FILL

- OTHER INFRASTRUCTURE
- ORE STOCKPILE
- OVERBURDEN STOCKPILE
- RECLAMATION STOCKPILE
- TOPSOIL STOCKPILE

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	REVIEWED
0	07JUL'15	ISSUED WITH REPORT	CMJ	AMD	JEM

NOTES:

1. Base map: ORTHO IMAGERY SUPPLIED BY ABACUS.

2. COORDINATE GRID IS IN METRES.
COORDINATE SYSTEM: NAD 1983 UTM ZONE 10N.

3. THIS FIGURE IS PRODUCED AT A NOMINAL SCALE OF 1:60,000 FOR 11x17 (TABLOID) PAPER. ACTUAL SCALE MAY DIFFER ACCORDING TO CHANGES IN PRINTER SETTINGS OR PRINTED PAPER SIZE.

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SURFACE WATER QUALITY SITES

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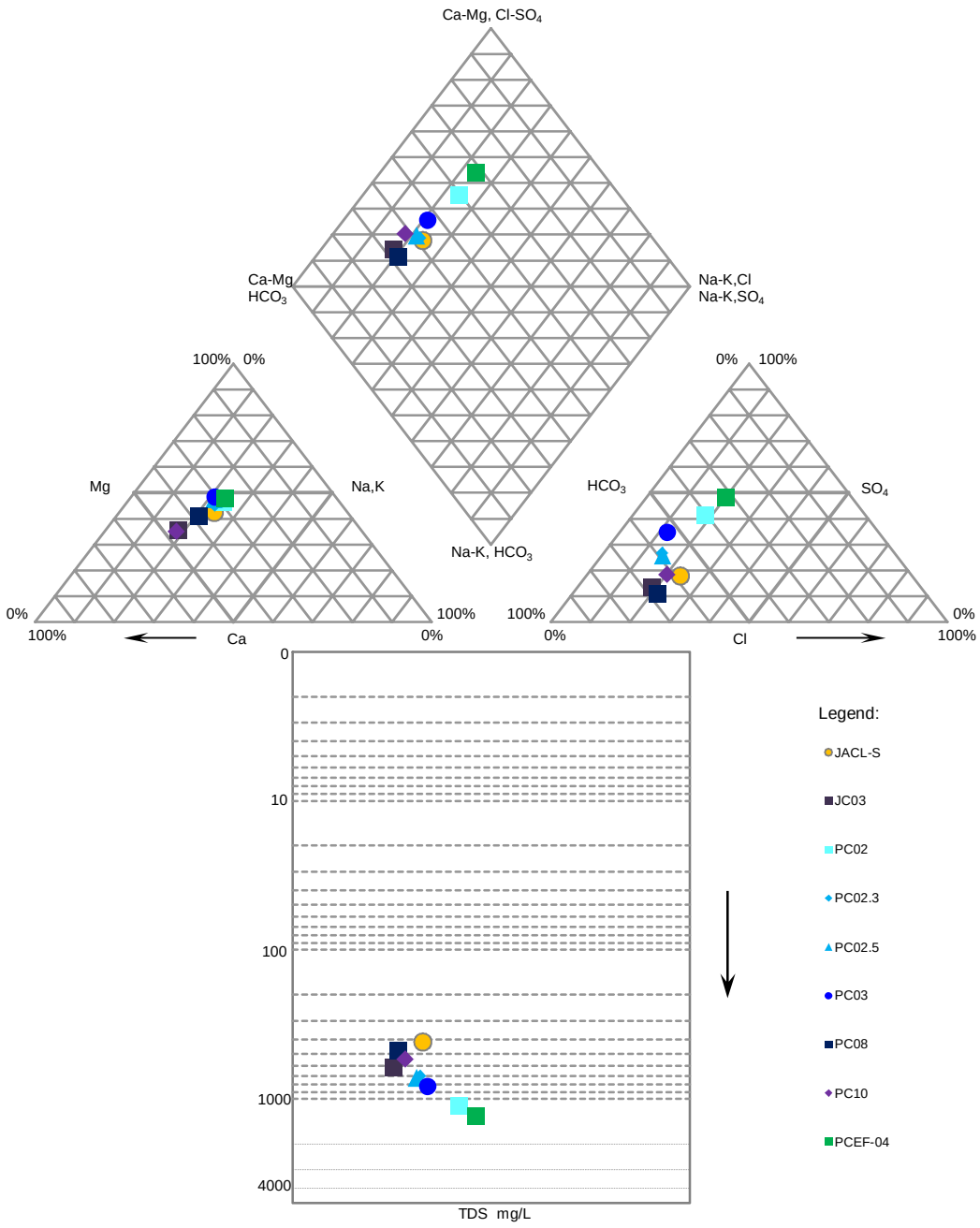
P/A NO.	REF NO.
VA101-246/31	3

FIGURE 4.1 REV 0



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. DATA USED FOR THESE PLOTS ARE MEDIAN LOW-FLOW VALUES, BASED ON SAMPLES COLLECTED DURING THE WINTER SEASON (DECEMBER THROUGH MARCH) PRIOR TO OCTOBER 1ST 2014. WHERE WINTER DATA WAS NOT AVAILABLE, VALUES REPRESENT THE MEDIAN CONCENTRATIONS OF DATA COLLECTED IN THE FALL SEASON (SEPTEMBER THROUGH NOVEMBER).
3. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.
4. TDS VALUES GREATER THAN 4000 mg/L ARE SHOWN AS 4000 mg/L.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	14APR'15	ISSUED WITH REPORT	CJ	JEM

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PIPER DIAGRAM OF SURFACE WATER CHEMISTRY - PETERSON CREEK

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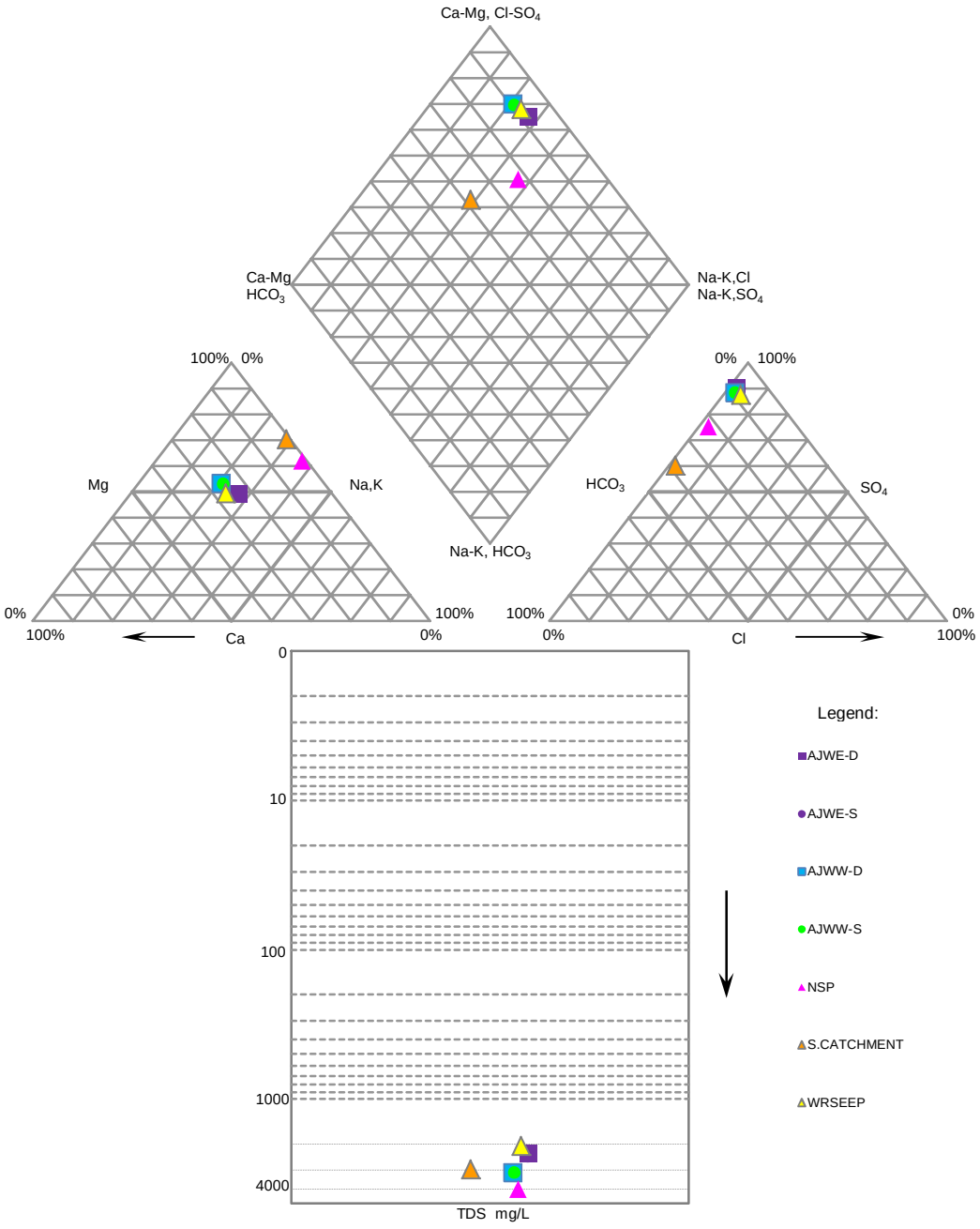
P/A NO.	REF. NO.
VA101-246/31	3

FIGURE 4.2 REV 0



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. DATA USED FOR THESE PLOTS ARE MEDIAN LOW-FLOW VALUES, BASED ON SAMPLES COLLECTED DURING THE WINTER SEASON (DECEMBER THROUGH MARCH) PRIOR TO OCTOBER 1ST 2014. WHERE WINTER DATA WAS NOT AVAILABLE, VALUES REPRESENT THE MEDIAN CONCENTRATIONS OF DATA COLLECTED IN THE FALL SEASON (SEPTEMBER THROUGH NOVEMBER).
3. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.
4. TDS VALUES GREATER THAN 4000 mg/L ARE SHOWN AS 4000 mg/L.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	14APR'15	ISSUED WITH REPORT	CJ	JEM

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PIPER DIAGRAM OF SURFACE WATER CHEMISTRY - HISTORICAL MINE SITE FEATURES

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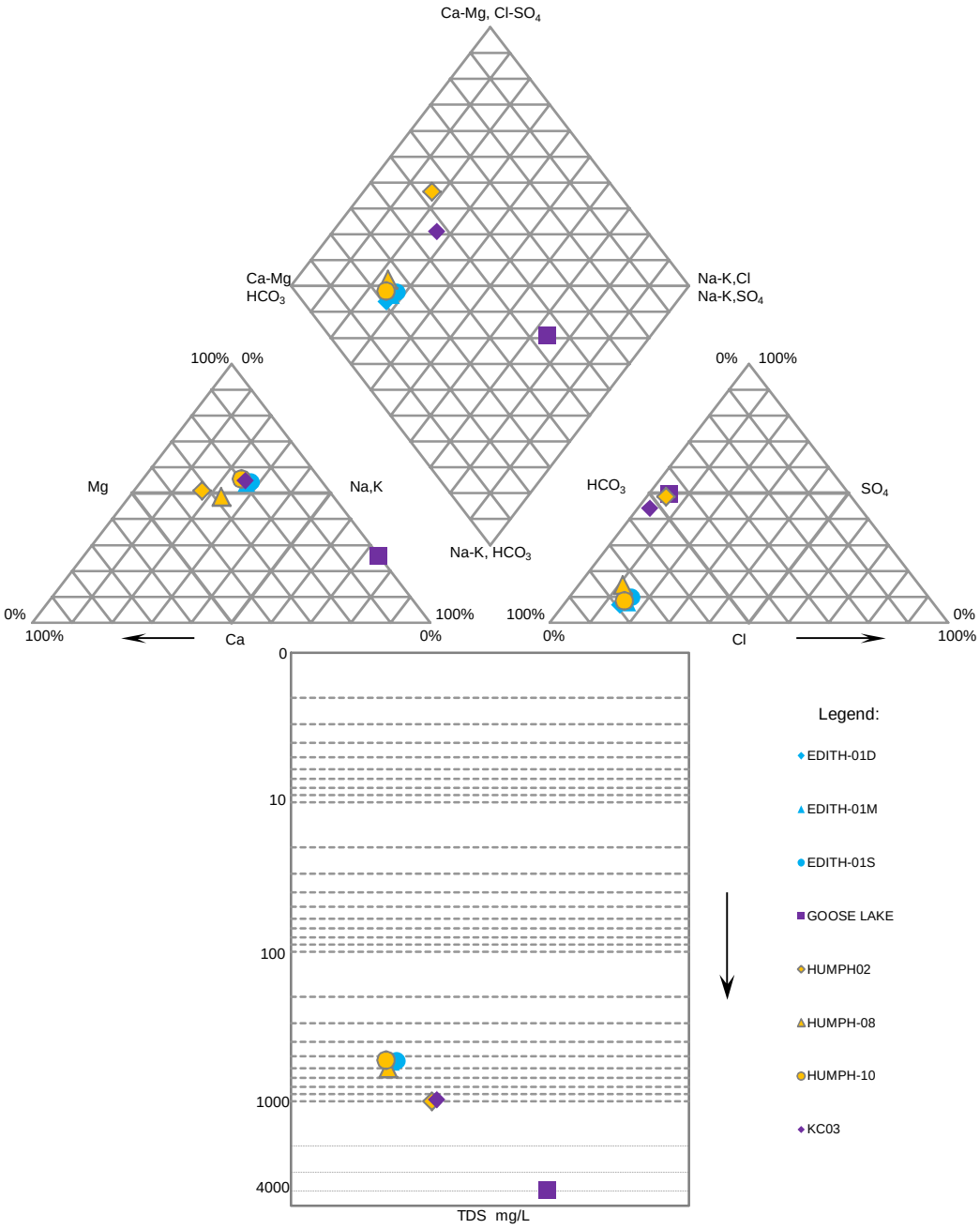
P/A NO. VA101-246/31

REF. NO. 3

FIGURE 4.3

REV 0



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. DATA USED FOR THESE PLOTS ARE MEDIAN LOW-FLOW VALUES, BASED ON SAMPLES COLLECTED DURING THE WINTER SEASON (DECEMBER THROUGH MARCH) PRIOR TO OCTOBER 1ST 2014. WHERE WINTER DATA WAS NOT AVAILABLE, VALUES REPRESENT THE MEDIAN CONCENTRATIONS OF DATA COLLECTED IN THE FALL SEASON (SEPTEMBER THROUGH NOVEMBER).
3. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.
4. TDS VALUES GREATER THAN 4000 mg/L ARE SHOWN AS 4000 mg/L.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	14APR'15	ISSUED WITH REPORT	CJ	JEM

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PIPER DIAGRAM OF SURFACE WATER CHEMISTRY - PETERSON CREEK TRIBUTARIES

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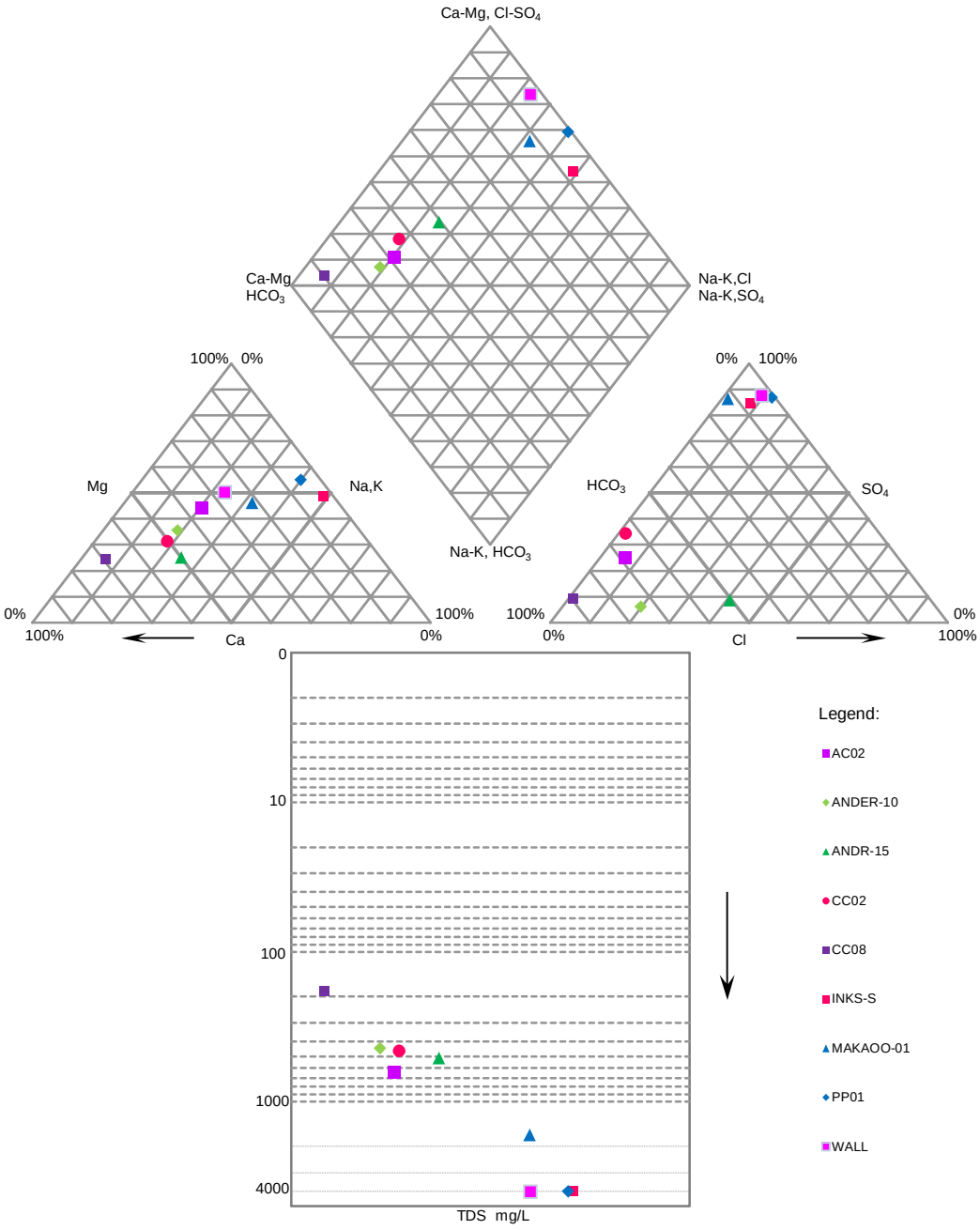
P/A NO.	REF. NO.
VA101-246/31	3

FIGURE 4.4 | REV 0



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. DATA USED FOR THESE PLOTS ARE MEDIAN LOW-FLOW VALUES, BASED ON SAMPLES COLLECTED DURING THE WINTER SEASON (DECEMBER THROUGH MARCH) PRIOR TO OCTOBER 1ST 2014. WHERE WINTER DATA WAS NOT AVAILABLE, VALUES REPRESENT THE MEDIAN CONCENTRATIONS OF DATA COLLECTED IN THE FALL SEASON (SEPTEMBER THROUGH NOVEMBER).
3. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.
4. TDS VALUES GREATER THAN 4000 mg/L ARE SHOWN AS 4000 mg/L.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	14APR'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

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PIPER DIAGRAM OF SURFACE WATER CHEMISTRY - CHERRY CREEK, ANDERSON CREEK, AND THOMPSON RIVER WATERSHEDS

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P/A NO. VA101-246/31

REF. NO. 3

FIGURE 4.5

REV 0

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TABLE 4.1

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BASELINE WATER QUALITY REPORT
SURFACE WATER QUALITY SAMPLE SUMMARY

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Site ID	Easting	Northing	Samples Collected	Site Description	2007			2008			2010			
					M	J	S	A	J	S	J	A	S	N
Peterson Creek Watershed														
JC03	681100	5608717	30	Peterson Creek upstream reference site (superseded by PC10), upstream of Jacko Lake	-	-	-	1	1	-	1	-	-	-
PC02	689229	5611248	62	Peterson Creek, adjacent to the Princeton-Kamloops Highway	-	-	-	1	1	1	-	-	-	-
PC02.3	688485	5609232	9	Peterson Creek down-gradient of all project facilities	-	-	-	-	-	-	-	-	-	-
PC02.5	687573	5609285	50	Peterson Creek down-gradient of the EMRSF	-	-	-	-	-	-	-	-	-	-
PC02WH	689335	5611224	1	Well house at PC02	-	-	-	-	-	-	-	-	-	-
PC03	685692	5609339	61	Peterson Creek, down-gradient of all historical mine features	1	1	-	1	1	1	1	-	-	-
PC08	683266	5609146	63	Peterson Creek, at the outlet of Jacko Lake	1	1	1	1	1	1	1	-	1	1
PC10	681607	5609088	15	Peterson Creek upstream reference site, upstream of Jacko Lake	-	-	-	-	-	-	-	-	-	-
PC-EF-04	688617	5614344	5	Peterson Creek, upstream of Bridal Veil Falls	-	-	-	-	-	-	1	-	1	-
JACL-D	682481	5609804	40	Jacko Lake deep location	1	1	1	1	1	1	1	-	1	-
JACL-M	682481	5609804	6	Jacko Lake mid-depth location	-	-	-	-	-	-	-	-	-	-
JACL-S	682481	5609804	41	Jacko Lake shallow location	1	1	1	1	1	1	1	-	1	-
KC03	683097	5609018	8	Keynes Creek, upstream of the confluence with Peterson Creek	-	-	-	-	-	-	-	-	-	-
EDITH-01D	687588	5605722	11	Edith Lake deep location	-	-	-	-	-	-	-	-	-	-
EDITH-01M	687588	5605722	3	Edith Lake mid-depth location	-	-	-	-	-	-	-	-	-	-
EDITH-01S	687588	5605722	12	Edith Lake shallow location	-	-	-	-	-	-	-	-	-	-
GOOSE LAKE	684727	5607042	13	Headwaters of Keynes Creek	-	-	-	-	-	-	-	-	-	-
HUMPH02	686943	5607938	18	Humphrey Creek, upstream of a small tributary outside of the Project footprint	-	-	-	-	-	-	-	-	-	-
HUMPH-08	686907	5607159	10	Humphrey Creek, down-gradient of the confluence with a tributary within the Project footprint	-	-	-	-	-	-	-	-	-	-
HUMPH-10	687540	5605977	15	Humphrey Creek at the outflow of Edith Lake	-	-	-	-	-	-	-	-	-	-
AJWE-D	683896	5609537	11	Ajax west-east pit deep location	1	1	1	1	1	1	-	-	-	-
AJWE-M	683896	5609537	1	Ajax west-east pit mid-depth location	-	-	-	-	-	-	-	-	-	-
AJWE-S	683895	5609536	11	Ajax west-east pit shallow location	1	1	1	1	1	1	-	-	-	-
AJWW-D	683563	5609701	7	Ajax west-west pit deep location	-	1	1	1	1	1	-	-	-	-
AJWW-S	683562	5609700	8	Ajax west-west pit shallow location	1	1	1	1	1	1	-	-	-	-
NSP	683859	5610425	25	North seepage collection pond for a historical mine rock pile	-	-	-	-	-	-	-	1	-	-
S. CATCHMENT	684483	5608316	5	South side of Peterson Creek, in close proximity to the historical waste rock area	-	-	-	-	-	-	-	-	-	-
WR-SEEP	684133	5608923	19	Historical mine rock seepage collection pond, south of Peterson Creek	-	-	-	-	-	-	-	-	-	-
Cherry Creek Watershed														
AC02	674669	5612833	30	Alkali Creek, upstream of the historic Afton Mine TSF	1	1	1	1	1	1	-	-	-	-
CC02	672155	5615702	50	Cherry Creek, 2 km west and down-gradient of the historic Afton Mine TSF	1	1	1	1	1	1	-	-	1	1
CC08	674141	5611409	48	Cherry Creek reference site, upstream of the Project footprint on Greenstone Mountain	1	1	1	1	1	1	-	-	1	1
INKS-S	680755	5610474	29	Inks Lake, south end	-	-	-	-	-	-	1	1	-	-
WALL	680876	5611852	6	Wallander Lake, between Lak Le Jeune road and the NMRSF	-	-	-	-	-	-	-	-	-	-
Thompson River Watershed														
PP01	679127	5616018	6	Polygon Pond	1	1	1	1	1	1	-	-	-	-
MAKAOO-01	685248	5612186	8	Makaoo Lake	-	-	-	-	-	-	-	-	-	-
Anderson Creek Watershed														
ANDER-10	689097	5605395	17	Anderson Creek, down-gradient of Hull Lake	-	-	-	-	-	-	-	-	-	-
ANDR15	682517	5603543	18	Anderson Creek, upstream of Hull Lake	-	-	-	-	-	-	-	-	-	-

Site ID	2011										2012											2013												2014									
	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O
Peterson Creek Watershed																																											
JC03	1	3	2	2	1	-	2	-	-	-	-	-	-	2	4	1	-	1	1	1	-	1	1	1	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PC02	1	3	3	1	1	1	1	1	-	1	1	1	1	2	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	3	2	2	3	1	2	1
PC02.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	1	2	1
PC02.5	-	1	-	1	-	1	1	1	-	1	1	-	1	2	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	3	2	2	3	1	2	-
PC02WH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
PC03	1	3	3	1	1	1	1	1	-	1	-	-	1	2	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	3	2	2	3	1	1	-
PC08	1	3	3	1	1	1	1	1	-	1	1	-	-	2	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	3	2	2	3	1	-	-
PC10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3	3	2	2	3	1	-	-
PC-EF-04	-	-	-	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JACL-D	-	-	-	2	1	1	1	-	1	-	1	1	1	1	1	1	1	1	-	1	-	1	1	-	-	1	-	-	-	1	-	1	-	1	-	-	1	2	2	2	2	2	-
JACL-M	-	-	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	-
JACL-S	1	-	-	2	1	1	1	1	-	-	1	1	1	1	1	1	1	1	-	1	-	1	1	-	-	1	-	-	-	1	-	1	-	1	-	-	1	2	2	2	2	2	-
KC03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	2	2	-	-	-	-
EDITH-01D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	2	2	2	2	-
EDITH-01M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	-
EDITH-01S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	2	2	2	2	2	-
GOOSE LAKE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	3	1	2	1
HUMPH02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3	3	2	2	3	1	2	1
HUMPH-08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	3	1	2	1
HUMPH-10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	2	2	3	1	1	-
AJWE-D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-
AJWE-M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
AJWE-S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-
AJWW-D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-
AJWW-S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-
NSP	-	-	-	-	-	-	1	-	-	-	-	-	-	1	1	1	1	1	1	1	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	-	1	1	1	2	-	1	1
S. CATCHMENT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	1	-	1	1
WR-SEEP	1	-	-	-	-	-	-	-	-	-	-	-	-	2	1	1	1	-	1	1	-	-	-	-	-	1	1	1	-	-	-	1	1	-	1	-	1	1	1	2	-	-	-
Cherry Creek Watershed																																											
AC02	-	-	1	-	-	-	-	-	-	-	-	-	-	-	3	1	1	1	1	1	-	1	1	1	1	1	1	1	1	1	1	1	1	-	-	-	2	-	-	-	-	1	-
CC02	1	3	3	1	1	-	2	1	-	1	1	1	1	2	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-	-	-	1	-	-	-	-	1	-
CC08	1	3	3	1	1	-	2	-	-	-	-	-	-	1	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-	-	-	-	1	1	1	2	-	1	1
INKS-S	1	1	-	2	1	1	1	1	-	-	1	1	1	1	1	1	1	1	-	1	1	-	1	1	-	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-
WALL	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	1	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Cherry Creek Watershed																																											
PP01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MAKAOO-01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	1	1	1
Anderson Creek Watershed																																											
ANDER-10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	2	2	3	1	2	1
ANDR15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3	3	2	2	3	1	2	1

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NOTES:

1. GPS COORDINATES ARE IN UTM WGS84 ZONE 10 U.
2. SAMPLE COUNT DOESN NOT INCLUDE DUPLICATES.

0	14MAY'15	ISSUED WITH REPORT VA101-246/31-3	CJ	JEM
REV	DATE	DESCRIPTION	PREP'D	RVW'D

Knight Piésold CONSULTING

TABLE 4.2

KGHM AJAX MINING INC.
AJAX PROJECT

SUMMARY OF AQUATIC LIFE GUIDELINE EXCEEDANCES
PETERSON CREEK WATERSHED

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Watershed	Guidelines			Peterson Creek Watershed																											
				Peterson Creek										Jacko Lake			Keynes Creek Watershed		Humphrey Creek Watershed						Historical Mine Features							
Site	BCWQG-30 D [2]	BCWQG-MAX [3]	CEQG-PAL [4]	JC03	PC10	PC08	PC03	PC02.5	PC02.3	PC02WH	PC02	PC-EF-04	JACL-D	JACL-M	JACL-S	GOOSE LAKE	KC03	EDITH-01D	EDITH-01M	EDITH-01S	HUMPH-10	HUMPH-08	HUMPH02	WR-SEEP	S. CATCHMENT	NSP	AJWW-D	AJWW-S	AJWE-D	AJWE-M	AJWE-S
Number of Samples [1]				29	13	58	54	46	8	1	61	4	40	5	41	12	6	11	3	11	15	9	16	15	4	22	7	8	11	1	11
In Situ Parameters																															
pH (unitless)		6.5 to 9	6.5 to 9	-	-	-	2%	-	-	-	-	-	-	-	2%	100%	-	-	-	-	7%	-	-	-	50%	86%	-	-	-	-	9%
Physical Tests																															
pH (unitless)		6.5 to 9	6.5 to 9	-	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	100%	73%	-	-	-	-	-
Dissolved Anions																															
Chloride	150	600	120 (long-term) / 640 (short-term)	7%	-	-	-	-	-	100%	28%	50%	-	-	-	50%	-	-	-	-	-	-	-	33%	-	-	-	-	-	-	-
Fluoride		0.4 to 0.01(-51.73+92.57(Log(H))) [6]	0.12	55%	69%	91%	59%	80%	100%	100%	49%	25%	90%	100%	93%	-	100%	100%	100%	100%	100%	100%	100%	27%	-	5%	57%	50%	45%	100%	45%
Sulphate	SITE SPECIFIC [11]			-	-	-	-	-	-	-	23%	50%	-	-	-	100%	-	-	-	-	-	-	6%	87%	100%	100%	100%	100%	100%	100%	100%
Nutrients																															
Ammonia (Total)	0.102 to 2.08 [7,8]	0.681 to 28.7 [7,8]	0.017 to 192 [7,8]	-	-	12%	2%	-	-	-	-	-	15%	-	2%	100%	-	55%	100%	9%	20%	11%	-	-	75%	95%	-	-	-	-	-
Nitrate (as N)	3	32.8	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7%	-	5%	100%	100%	100%	100%	100%
Nitrite (as N)	0.02 to 0.2 [7]	0.06 to 0.6 [7]	0.06	-	-	-	2%	2%	-	-	-	-	-	-	-	8%	-	-	-	-	-	-	-	20%	-	-	71%	100%	27%	100%	82%
Cyanide																															
Cyanide (WAD)		0.01		-	-	-	-	-	-	-	3%	-	3%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Metals																															
Aluminum	0.05 to $e^{(1.6-3.327*[pH]+0.402*([pH]\ ^2)\ ])}$ [7,10]	0.1 to $e^{(1.209-2.426*[pH]+0.286*([pH]\ ^2)\ ])}$ [7,10]	0.005 to 0.1 [7]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7%	-	-	-	-	-	-	-
Antimony		0.02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	100%	100%	100%	100%
Arsenic		0.005	0.005	-	-	-	-	-	-	-	-	-	-	-	-	100%	100%	-	-	-	-	11%	-	-	100%	100%	100%	100%	100%	100%	100%
Cadmium	0.0000176 to $e^{(0.736*ln(H)-4.943)}$/1000 to 0.000457 [6]	0.0000380 to $e^{(1.03*ln(H)-5.274)}$/1000 to 0.00280 [6]	$10^{(0.83*(log(H)-2.46)}$/1000 (min 0.000036 mg/L; max 0.000373 mg/L) [6,18] $10^{(1.016*(log(H)-1.71)}$/1000 (min 0.000106 mg/L; max 0.0077 mg/L) [6,19]	-	-	2%	2%	-	-	-	3%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5%	29%	38%	36%	-	27%
Chromium	0.001 (Cr VI)/0.0089 (Cr III)		0.001 (Cr VI)/0.0089 (Cr III)	3%	8%	2%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	(0.04*H)/1000 to 0.010 [6]	(0.094*H+2)/1000 TO 0.010 [6]	$e^{(0.8545*ln(H)-1.465)}$ 0.2/1000 to 0.004 [6]	7%	8%	-	2%	4%	-	-	2%	-	-	-	-	-	100%	9%	-	-	7%	78%	94%	93%	-	-	100%	100%	91%	100%	100%
Iron		0.35 [10]/1 [9]	0.3	-	-	9%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Molybdenum	1	2	0.073	-	-	-	6%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	87%	25%	-	100%	100%	100%	100%	100%
Selenium	0.002		0.001	-	8%	-	2%	-	-	-	26%	25%	10%	-	2%	-	100%	9%	-	-	-	44%	63%	87%	-	41%	100%	100%	100%	100%	100%
Uranium	0.0085		0.015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	100%	91%
Zinc	(7.5+0.75*(H-90))/1000 to 0.0075 [6]	(33+0.75*(H-90))/1000 to 0.033 [6]	0.03	3%	-	-	-	-	-	-	-	-	-	-	7%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Metals																															
Aluminum			0.005 to 0.1 [7]	86%	69%	48%	15%	48%	63%	-	48%	50%	-	-	2%	8%	-	-	-	-	53%	100%	69%	27%	50%	14%	-	-	-	-	-
Antimony		0.02		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	100%	100%	100%	100%
Arsenic		0.005	0.005	-	-	-	-	-	-	-	-	-	-	-	-	100%	67%	-	-	-	-	11%	-	7%	100%	100%	100%	100%	100%	100%	100%
Cadmium			$10^{(0.83*(log(H)-2.46)}$/1000 (min 0.000036 mg/L; max 0.000373 mg/L) [6,18] $10^{(1.016*(log(H)-1.71)}$/1000 (min 0.000106 mg/L; max 0.0077 mg/L) [6,19]	3%	-	-	2%	-	-	-	5%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5%	29%	38%	36%	-	27%
Chromium	0.001 (Cr VI)/0.0089 (Cr III)		0.001 (Cr VI)/0.0089 (Cr III)	62%	23%	24%	2%	11%	-	-	28%	25%	-	-	-	8%	-	-	-	-	7%	78%	-	13%	25%	-	-	-	-	-	-
Copper	(0.04*H)/1000 to 0.010 [6]	(0.094*H+2)/1000 TO 0.010 [6]	$e^{(0.8545*ln(H)-1.465)}$ 0.2/1000 to 0.004 [6]	62%	54%	12%	4%	13%	50%	100%	34%	50%	3%	-	-	-	100%	27%	-	-	73%	100%	100%	93%	25%	-	100%	100%	91%	100%	100%
Iron		0.35 [10]/1 [9]	0.3	79%	46%	64%	11%	30%	38%	100%	34%	25%	-	-	-	8%	-	-	-	-	47%	100%	31%	13%	50%	-	-	-	-	-	-	-
Mercury	0.00002		0.000026	-	-	-	-	-	-	-	2%	-	-	-	-	-	-	-	-	-	47%	-	-	-	-	-	-	-	-	-	-
Molybdenum	1	2	0.073	-	-	-	9%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	93%	50%	-	100%	100%	100%	100%	100%
Selenium	0.002		0.001	-	8%	-	-	-	-	-	23%	25%	5%	-	-	-	100%	-	-	-	-	33%	63%	93%	25%	32%	100%	100%	100%	100%	100%
Silver	0.00005 to 0.0015 [6]	0.0001 to 0.003 [6]	0.0001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11%	-	-	-	-	-	-	-	-	-
Uranium	0.0085		0.015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	100%	91%
Zinc	(7.5+0.75*(H-90))/1000 to 0.0075 [6]	(33+0.75*(H-90))/1000 to 0.033 [6]	0.03	-	-	-	-	-	-	-	-	-	-	-	5%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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NOTES:

1. GUIDELINES ARE PRESENTED IN mg/L UNLESS OTHERWISE STATED; SAMPLE COUNTS ARE INTEGER VALUES; ALL OTHER UNITS ARE %.
2. BRITISH COLUMBIA WATER QUALITY GUIDELINES (APPROVED AND WORKING) - 30 DAY AVERAGE LIMITS (BCWQG-30 D) - FRESHWATER AQUATIC LIFE.
3. BRITISH COLUMBIA WATER QUALITY GUIDELINES (APPROVED AND WORKING) - MAXIMUM LIMITS (BCWQG-MAX) - FRESHWATER AQUATIC LIFE.
4. CANADIAN ENVIRONMENTAL QUALITY GUIDELINES - WATER QUALITY GUIDELINE FOR THE PROTECTION OF AQUATIC LIFE (CEQG-PAL) - FRESHWATER.
5. VALUES REPRESENT PERCENTAGES OF SAMPLES COLLECTED AT EACH SITE THAT EXCEED ONE OR MORE AQUATIC LIFE GUIDELINE.
6. HARDNESS (H) DEPENDENT GUIDELINE LIMIT (DISSOLVED).
7. pH DEPENDENT GUIDELINE LIMIT (*IN SITU* VALUE PREFFERED).
8. TEMPERATURE DEPENDENT GUIDELINE LIMIT.
9. GUIDELINE IS SPECIFIC TO TOTAL CONCENTRATION ONLY.
10. GUIDELINE IS SPECIFIC TO DISSOLVED CONCENTRATION ONLY.
11. GUIDELINE IS APPLIED ONLY FOR WATERS OF DISSOLVED HARDNESS >250 mg/L AND IS DEPENDENT ON TOXICITY TESTING.
12. THE PERCENTAGE IS BASED ON THE NUMBER OF SAMPLES THAT EXCEED THE LOWEST APPLICABLE GUIDELINE.

REV	DATE	DESCRIPTION	PREP'D	REVW'D
0	14MAY'15	ISSUED WITH REPORT VA101-246/31-3	CF	JKM

Knight Piésold CONSULTING

TABLE 4.3

KGHM AJAX MINING INC.
AJAX PROJECT

SUMMARY OF AQUATIC LIFE GUIDELINE EXCEEDANCES
ANDERSON CREEK, CHERRY CREEK, AND THOMPSON RIVER WATERSHEDS

Print Jul/13/15 15:28:02

Watershed	Guidelines			Thompson River Watershed		Anderson Creek Watershed		Cherry Creek Watershed				
Site	BCWQG-30 D [2]	BCWQG-MAX [3]	CEQG-PAL[4]	MAKAOO-01	PP01	ANDER-10	ANDR15	INKS-S	WALL	CC08	AC02	CC02
Number of Samples [1]				7	6	16	17	29	4	44	26	50
In Situ Parameters												
pH (unitless)		6.5 to 9	6.5 to 9	100%	-	6%	-	28%	25%	2%	-	2%
Physical Tests												
pH (unitless)		6.5 to 9	6.5 to 9	57%	-	-	-	10%	25%	2%	-	-
Dissolved Anions												
Chloride	150	600	640	-	100%	-	24%	97%	100%	-	-	-
Fluoride		0.4 to 0.01(-51.73+92.57(Log(H))) [6]	0.12	-	50%	88%	71%	7%	-	-	77%	30%
Sulphate	SITE SPECIFIC [11]			100%	100%	-	-	100%	100%	-	-	-
Nutrients												
Ammonia (Total)	0.102 to 2.08 [7,8]	0.681 to 28.7 [7,8]	0.017 to 192 [7,8]	100%	-	-	-	72%	50%	-	-	-
Nitrite (as N)	3	0.06 to 0.6 [7]	0.06	-	50%	-	-	3%	25%	-	-	-
Dissolved Metals												
Aluminum	0.05 to $e^{(1.6-3.327*[pH]+0.402*([pH]\ ^{\wedge}(2)\ ]\ ))}$ [7,10]	0.1 to $e^{(1.209-2.426*[pH]+0.286*[pH]\ ^{\wedge}(2)\ ]\ )}$ [7,10]	0.005 to 0.1 [7]	-	-	-	-	-	-	-	-	2%
Arsenic		0.005	0.005	-	-	-	-	97%	75%	2%	-	-
Boron		1.2		-	100%	-	-	97%	75%	-	-	-
Copper	(0.04*H)/1000 to 0.010 [6]	(0.094*H+2)/1000 TO 0.010 [6]	$e^{(0.8545*ln(H)-1.465)}$ 0.2/1000 to 0.004 [6]	-	-	-	-	10%	25%	34%	15%	12%
Selenium	0.002	0.002	0.001	-	-	-	-	7%	25%	-	-	4%
Uranium	0.0085		0.015	-	-	33%	-	-	50%	-	-	-
Zinc	(7.5+0.75*(H-90))/1000 to 0.0075 [6]	(33+0.75*(H-90))/1000 to 0.033 [6]	0.03	-	-	-	-	7%	25%	-	-	-
Total Metals												
Aluminum			0.005 to 0.1 [7]	-	17%	44%	53%	34%	-	16%	62%	22%
Arsenic		0.005	0.005	-	-	-	-	97%	75%	2%	-	-
Boron		1.2		-	100%	-	-	97%	75%	-	-	-
Chromium		0.001 (Cr VI)/0.0089 (Cr III)	0.001 (Cr VI)/0.0089 (Cr III)	-	-	13%	18%	14%	-	9%	4%	16%
Cobalt	0.004	0.11		-	-	-	-	-	-	2%	-	6%
Copper	(0.04*H)/1000 to 0.010 [6]	(0.094*H+2)/1000 TO 0.010 [6]	$e^{(0.8545*ln(H)-1.465)}$ 0.2/1000 to 0.004 [6]	-	-	-	12%	21%	-	43%	35%	20%
Iron		0.35 [10]/1 [9]	0.3	-	-	19%	29%	14%	25%	11%	31%	16%
Mercury	0.00002		0.000026	-	-	-	-	-	-	2%	4%	6%
Molybdenum	1	2	0.073	-	-	-	-	-	25%	-	-	-
Selenium	0.002	0.002	0.001	-	-	-	-	14%	-	-	-	4%
Silver	0.00005 to 0.0015 [6]	0.0001 to 0.003 [6]	0.0001	-	-	-	-	3%	-	-	-	-
Uranium	0.0085		0.015	-	-	33%	-	-	50%	-	-	-
Zinc	(7.5+0.75*(H-90))/1000 to 0.0075 [6]	(33+0.75*(H-90))/1000 to 0.033 [6]	0.03	-	-	-	-	7%	-	2%	-	2%

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NOTES:

1. GUIDELINES ARE PRESENTED IN mg/L UNLESS OTHERWISE STATED; SAMPLE COUNTS ARE INTEGER VALUES; ALL OTHER UNITS ARE %.
2. BRITISH COLUMBIA WATER QUALITY GUIDELINES (APPROVED AND WORKING) - 30 DAY AVERAGE LIMITS (BCWQG-30 D) - FRESHWATER AQUATIC LIFE.
3. BRITISH COLUMBIA WATER QUALITY GUIDELINES (APPROVED AND WORKING) - MAXIMUM LIMITS (BCWQG-MAX) - FRESHWATER AQUATIC LIFE.
4. CANADIAN ENVIRONMENTAL QUALITY GUIDELINES - WATER QUALITY GUIDELINE FOR THE PROTECTION OF AQUATIC LIFE (CEQG-PAL) - FRESHWATER.
5. VALUES REPRESENT PERCENTAGES OF SAMPLES COLLECTED AT EACH SITE THAT EXCEED ONE OR MORE AQUATIC LIFE GUIDELINE.
6. HARDNESS (H) DEPENDENT GUIDELINE LIMIT (DISSOLVED).
7. pH DEPENDENT GUIDELINE LIMIT (*IN SITU* VALUE PREFFERED).
8. TEMPERATURE DEPENDENT GUIDELINE LIMIT.
9. GUIDELINE IS SPECIFIC TO TOTAL CONCENTRATION ONLY.
10. GUIDELINE IS SPECIFIC TO DISSOLVED CONCENTRATION ONLY.
11. GUIDELINE IS APPLIED ONLY FOR WATERS OF DISSOLVED HARDNESS >250 mg/L AND IS DEPENDENT ON TOXICITY TESTING.
12. THE PERCENTAGE IS BASED ON THE NUMBER OF SAMPLES THAT EXCEED THE LOWEST APPLICABLE GUIDELINE.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	14MAY'15	ISSUED WITH REPORT VA101-246/31-3	CJ	JEM

Knight Piésold CONSULTING

TABLE 4.4

KGHM AJAX MINING INC.
AJAX PROJECT

SUMMARY OF DRINKING WATER GUIDELINE EXCEEDANCES
PETERSON CREEK WATERSHED

Print Jul/13/15 15:28:02

Watershed	Drinking Water Guidelines		Peterson Creek Watershed																											
			Peterson Creek									Jacko Lake			Keynes Creek Watershed		Humphrey Creek Watershed						Historical Mine Features							
Site	BCWQG [3]	HC [4]	JC03	PC10	PC08	PC03	PC02.5	PC02.3	PC02WH	PC02	PC-EF-04	JACL-D	JACL-M	JACL-S	GOOSE LAKE	KC03	EDITH-01D	EDITH-01M	EDITH-01S	HUMPH-10	HUMPH-08	HUMPH02	WR-SEEP	S. CATCHMENT	NSP	AJWW-D	AJWW-S	AJWE-D	AJWE-M	AJWE-S
Number of Samples			29	13	58	54	46	8	1	61	4	40	5	41	12	6	11	3	11	15	9	16	15	4	22	7	8	11	1	11
In Situ Parameters																														
pH (unitless)		6.5 to 8.5	-	-	26%	15%	-	25%	-	2%	-	15%	-	44%	100%	-	36%	-	82%	20%	33%	13%	27%	100%	105%	-	-	9%	-	9%
Temperature °C	15	15	3%	8%	36%	33%	30%	75%	-	13%	-	8%	-	46%	75%	-	27%	33%	55%	53%	33%	6%	53%	50%	45%	-	-	-	-	45%
Total Dissolved Solids		500	45%	38%	34%	54%	76%	88%	-	89%	25%	15%	20%	2%	92%	100%	100%	100%	100%	87%	89%	94%	87%	50%	91%	29%	25%	36%	100%	36%
Physical Tests																														
Color TCU	15	15	93%	8%	64%	70%	65%	-	-	26%	75%	45%	-	46%	-	17%	-	-	-	-	-	6%	47%	25%	64%	-	-	-	-	-
pH (unitless)		6.5 to 8.5	-	-	24%	13%	-	38%	-	2%	50%	3%	-	37%	100%	-	27%	33%	100%	20%	56%	31%	13%	100%	100%	-	-	-	-	-
Total Dissolved Solids		500	48%	38%	9%	70%	83%	88%	100%	98%	100%	3%	-	-	100%	100%	91%	100%	73%	73%	89%	94%	100%	100%	100%	100%	100%	100%	100%	100%
Turbidity NTU		0.1	100%	100%	91%	93%	98%	100%	100%	97%	100%	90%	100%	90%	100%	100%	100%	100%	100%	100%	100%	100%	93%	100%	95%	71%	63%	73%	100%	73%
Dissolved Anions																														
Bromide	0.05		-	8%	-	2%	-	-	-	7%	-	-	-	2%	-	-	-	-	-	-	-	-	7%	-	18%	-	-	-	-	-
Chloride	250		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoride	1.5	1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulphate	500	500	-	-	-	4%	-	-	-	10%	25%	-	-	-	100%	-	-	-	-	-	-	-	87%	100%	100%	100%	100%	100%	100%	100%
Nutrients																														
Nitrate (as N)			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	100%	100%	100%	100%
Dissolved Metals																														
Antimony	0.014	0.006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	100%	100%	100%	100%
Arsenic	0.025	0.01	-	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	75%	77%	100%	100%	100%	100%	100%
Iron		*0.05*	-	-	9%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese		*0.05*	*41%*	*8%*	*60%*	*65%*	*70%*	-	-	*69%*	-	*50%*	-	-	-	-	*45%*	*100%*	-	*87%*	*11%*	-	*20%*	-	*59%*	-	-	-	-	-
Molybdenum	0.25		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33%	-	-	100%	100%	100%	100%	100%
Selenium	0.01	0.01	-	-	-	-	-	-	-	-	-	3%	-	-	-	-	-	-	-	-	-	-	33%	-	-	100%	100%	100%	100%	100%
Sodium		*200*	-	-	-	-	-	-	-	-	-	-	-	-	*100%*	-	-	-	-	-	-	-	*33%*	*75%*	*100%*	*29%*	*38%*	*91%*	*100%*	*27%*
Uranium		0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7%	-	-	-	-	-	-	-
Total Metals																														
Antimony	0.014	0.006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	100%	100%	100%	100%
Arsenic	0.025	0.01	-	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	75%	77%	100%	100%	100%	100%	100%
Iron		*0.3*	*79%*	*46%*	*64%*	*11%*	*30%*	*38%*	*100%*	*34%*	*25%*	-	-	-	*8%*	-	-	-	-	*47%*	*100%*	*31%*	*13%*	*50%*	-	-	-	-	-	-
Manganese		*0.05*	*79%*	*15%*	*60%*	*76%*	*83%*	*13%*	-	*93%*	*25%*	*53%*	-	-	-	-	*55%*	*100%*	-	*87%*	*44%*	*38%*	*27%*	*25%*	*68%*	-	-	-	-	-
Molybdenum	0.25		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40%	-	-	100%	100%	100%	100%	100%
Selenium	0.01	0.01	-	-	-	-	-	-	-	-	-	3%	-	-	-	-	-	-	-	-	-	-	40%	-	-	100%	100%	100%	100%	100%
Sodium		*200*	-	-	-	-	-	-	-	-	-	-	-	-	*100%*	-	-	-	-	-	-	-	*33%*	*75%*	*100%*	*14%*	*25%*	*91%*	*100%*	*45%*
Organics																														
Carbon Organic (Total)	4		86%	100%	84%	89%	100%	100%	100%	93%	50%	80%	100%	78%	100%	100%	100%	100%	100%	100%	100%	100%	93%	100%	95%	-	-	-	-	-

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NOTES:

1. GUIDELINES ARE PRESENTED IN mg/L UNLESS OTHERWISE STATED; SAMPLE COUNTS ARE INTEGER VALUES; ALL OTHER UNITS ARE %.
2. VALUES REPRESENT PERCENTAGES OF SAMPLES COLLECTED AT EACH SITE THAT EXCEED ONE OR MORE DRINKING WATER GUIDELINE.
3. BCWQG: BC WATER QUALITY GUIDELINES FOR DRINKING WATER.
4. HC: HEALTH CANADA DRINKING WATER GUIDELINES.
5. ITALICIZED VALUES REPRESENT GUIDELINES BASED ON AESTHETIC OBJECTIVES (EX. TASTE, ODOUR, COLOUR), RATHER THAN HEALTH-BASED EFFECTS.
6. THE PERCENTAGE IS BASED ON THE NUMBER OF SAMPLES THAT EXCEED THE LOWEST APPLICABLE GUIDELINE.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	14MAY'15	ISSUED WITH REPORT VA101-246/31-3	CJ	JEM

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TABLE 4.5

KGHM AJAX MINING INC.
AJAX PROJECT

SUMMARY OF DRINKING WATER GUIDELINE EXCEEDANCES
ANDERSON CREEK, CHERRY CREEK, AND THOMPSON RIVER WATERSHEDS

Print Jul/13/15 15:28:02

Watershed	Drinking Water Guidelines		Thompson River Watershed		Anderson Creek Watershed		Cherry Creek Watershed				
Site	BCWQG [3]	HC [4]	MAKAOO-01	PP01	ANDER-10	ANDR15	INKS-S	WALL	CC08	AC02	CC02
Number of Samples [1]			21	6	16	17	29	4	44	26	50
In Situ Parameters											
pH (unitless)		6.5 to 8.5	114%	33%	13%	12%	97%	75%	9%	4%	4%
Temperature °C	15	15	100%	50%	19%	6%	38%	50%	2%	38%	6%
Total Dissolved Solids		500	86%	-	25%	41%	90%	75%	2%	27%	12%
Physical Tests											
Color TCU	15	15	-	17%	-	6%	97%	75%	57%	81%	26%
pH (unitless)		6.5 to 8.5	86%	33%	-	-	97%	75%	2%	4%	2%
Total Dissolved Solids		500	100%	100%	19%	35%	97%	100%	2%	42%	18%
Turbidity NTU		0.1	100%	50%	100%	100%	100%	100%	91%	88%	92%
Dissolved Anions											
Bromide	0.05		-	-	-	-	14%	-	2%	-	4%
Chloride	250	250	-	100%	-	-	97%	100%	-	-	-
Fluoride	1.5	1.5	-	50%	-	-	-	-	-	-	-
Sulphate	500	500	100%	100%	-	-	100%	100%	2%	-	-
Nutrients											
Nitrite (as N)	1	1	-	33%	-	-	-	-	-	-	-
Dissolved Metals											
Arsenic	0.025	0.01	-	-	-	-	90%	50%	2%	-	-
Manganese		*0.05*	*14%*	*33%*	*63%*	-	*69%*	*75%*	-	*58%*	*2%*
Sodium		*200*	-	*100%*	-	-	*100%*	*100%*	*2%*	-	-
Total Metals											
Arsenic	0.025	0.01	-	-	-	-	90%	50%	2%	-	-
Iron		*0.3*	-	-	*19%*	*29%*	*14%*	*25%*	*11%*	*31%*	*16%*
Manganese		*0.05*	*14%*	*67%*	*81%*	*24%*	*90%*	*75%*	*7%*	*85%*	*12%*
Sodium		*200*	-	*100%*	-	-	*100%*	*100%*	*2%*	-	-
Organics											
Carbon Organic (Total)	4		100%	17%	100%	100%	90%	100%	80%	81%	84%

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NOTES:

1. GUIDELINES ARE PRESENTED IN mg/L UNLESS OTHERWISE STATED; SAMPLE COUNTS ARE INTEGER VALUES; ALL OTHER UNITS ARE %.
2. VALUES REPRESENT PERCENTAGES OF SAMPLES COLLECTED AT EACH SITE THAT EXCEED ONE OR MORE DRINKING WATER GUIDELINE.
3. BCWQG: BC WATER QUALITY GUIDELINES FOR DRINKING WATER.
4. HC: HEALTH CANADA DRINKING WATER GUIDELINES.
5. ITALICIZED VALUES REPRESENT GUIDELINES BASED ON AESTHETIC OBJECTIVES (EX. TASTE, ODOUR, COLOUR), RATHER THAN HEALTH-BASED EFFECTS.
6. THE PERCENTAGE IS BASED ON THE NUMBER OF SAMPLES THAT EXCEED THE LOWEST APPLICABLE GUIDELINE.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	14MAY'15	ISSUED WITH REPORT VA101-246/31-3	CJ	JEM

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TABLE 4.6

KGHM AJAX MINING INC.
AJAX PROJECT

SUMMARY OF AGRICULTURAL GUIDELINE EXCEEDANCES
PETERSON CREEK WATERSHED

Print Jul/14/15 8:50:39

Watershed	Guideline				Peterson Creek Watershed																											
					Peterson Creek									Jacko Lake			Keynes Creek Watershed		Humphrey Creek Watershed						Historical Mine Features							
Site	BCWQG-Irrigation[3]	BCWQG-Livestock[4]	CCME-Irrigation[5]	CCME-Livestock[6]	JC03	PC10	PC08	PC03	PC02.5	PC02.3	PC02WH	PC02	PC-EF-04	JACL-D	JACL-M	JACL-S	GOOSE LAKE	KC03	EDITH-01D	EDITH-01M	EDITH-01S	HUMPH-10	HUMPH-08	HUMPH02	WR-SEEP	S. CATCHMENT	NSP	AJWW-D	AJWW-S	AJWE-D	AJWE-M	AJWE-S
Number of Samples					30	14	62	59	50	9	1	62	4	40	6	41	12	7	11	3	12	15	10	18	19	5	24	7	8	11	1	11
Physical Tests																																
Conductivity (µS/cm)	700	1400			2%	3%	1%	1%	2%	10%	100%	2%	25%	2%	6%	1%	8%	12%	9%	33%	8%	6%	9%	5%	4%	16%	4%	14%	13%	9%	100%	9%
Total Dissolved Solids	500	1000	500	3000	2%	3%	-	1%	2%	9%	100%	2%	25%	0%	-	-	8%	12%	8%	33%	6%	5%	8%	5%	4%	16%	4%	14%	13%	9%	100%	9%
Turbidity (NTU)	10	5			2%	3%	1%	-	-	1%	100%	0%	6%	0%	3%	0%	4%	-	1%	22%	1%	2%	9%	1%	1%	8%	1%	-	-	-	-	-
Dissolved Anions																																
Chloride	100	600	100		-	-	-	-	-	-	100%	1%	13%	-	-	-	7%	-	-	-	-	-	-	-	2%	-	-	-	-	-	-	-
Fluoride	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	2%	-	1%	-	1%
Sulphate		1000		1000	-	-	-	-	-	-	-	-	-	-	-	-	8%	-	-	-	-	-	-	-	2%	16%	4%	14%	13%	9%	100%	9%
Dissolved Metals																																
Arsenic	0.1	0.025	0.1	0.025	-	-	-	-	-	-	-	-	-	-	-	-	2%	-	-	-	-	-	-	-	-	-	-	-	2%	9%	100%	9%
Boron	0.5	5	0.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8%	-	-	-	-	-	-
Chromium III	0.0049	0.05	0.0049	0.05	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	6%	8%	-	-	-
Manganese	0.2		0.2		0%	-	0%	0%	1%	-	-	0%	-	-	-	-	-	-	1%	22%	-	5%	-	-	0%	-	-	-	-	-	-	-
Molybdenum	0.02	0.05	0.01	0.5	-	-	-	1%	1%	6%	-	1%	25%	-	-	-	-	12%	-	-	-	-	7%	5%	4%	16%	4%	14%	13%	9%	100%	9%
Selenium	0.01	0.03	0.02	0.05	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	1%	-	-	14%	13%	9%	100%	9%
Uranium	0.01	0.2	0.01	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1%	-	-	14%	13%	4%	-	3%
Vanadium	0.1	0.1	0.1	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Metals																																
Arsenic	0.1	0.025	0.1	0.025	-	-	-	-	-	-	-	-	-	-	-	-	2%	-	-	-	-	-	-	-	-	4%	-	-	2%	9%	100%	9%
Boron	0.5	5	0.5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12%	-	-	-	-	-	-
Chromium III	0.0049	0.05	0.0049	0.05	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	1%	-	-	-	0%	6%	8%	-	-	-
Manganese	0.2		0.2		-	-	-	-	1%	-	-	0%	-	-	-	-	-	-	1%	11%	-	5%	-	-	0%	-	-	-	-	-	-	-
Molybdenum	0.02	0.05	0.01	0.5	-	-	-	1%	1%	7%	100%	1%	25%	-	-	-	-	12%	-	-	-	-	7%	5%	4%	16%	4%	14%	13%	9%	100%	9%
Selenium	0.01	0.03	0.02	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2%	-	-	14%	13%	9%	100%	9%
Uranium	0.01	0.2	0.01	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1%	-	-	14%	13%	6%	-	3%
Vanadium	0.1	0.1	0.1	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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NOTES:

1. GUIDELINES ARE PRESENTED IN mg/L UNLESS OTHERWISE STATED; SAMPLE COUNTS ARE INTEGER VALUES; ALL OTHER UNITS ARE %.
2. VALUES REPRESENT PERCENTAGES OF SAMPLES COLLECTED AT EACH SITE THAT EXCEED ONE OR MORE AQUATIC LIFE GUIDELINE.
3. BCWQG-Irrigation: BC WATER QUALITY GUIDELINES FOR IRRIGATION.
4. BCWQG-Livestock: BC WATER QUALITY GUIDELINES FOR LIVESTOCK.
5. CCME-Irrigation: CCME GUIDELINES FOR IRRIGATION.
6. CCME-L CCME GUIDELINES FOR IRRIGATION.
7. THE PERCENTAGE IS BASED ON THE NUMBER OF SAMPLES THAT EXCEED THE LOWEST APPLICABLE GUIDELINE.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
1	10JUL'15	ISSUED WITH REPORT VA101-246/31-3	CJ	JEM

Knight Piésold CONSULTING

TABLE 4.7

KGHM AJAX MINING INC.
AJAX PROJECT

SUMMARY OF AGRICULTURAL GUIDELINE EXCEEDANCES
ANDERSON CREEK, CHERRY CREEK, AND THOMPSON RIVER WATERSHEDS

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Watershed	Guideline				Thompson River Watershed		Anderson Creek Watershed		Cherry Creek Watershed				
Site	BCWQG-Irrigation[3]	BCWQG-Livestock[4]	CCME-Irrigation[5]	CCME-Livestock[6]	MAKAOO-01	PP01	ANDER-10	ANDR15	INKS-S	WALL	CC08	AC02	CC02
Number of Samples					14	6	17	18	29	4	48	29	50
Physical Tests													
Conductivity (µS/cm)	700	1400	-	-	7%	17%	3%	4%	3%	-	0%	2%	1%
Total Dissolved Solids	500	1000	500	3000	7%	17%	1%	2%	3%	25%	0%	1%	0%
Turbidity (NTU)	10	5	-	-	-	-	1%	1%	2%	25%	0%	1%	0%
Dissolved Anions													
Chloride	100	600	100	-	-	17%	-	2%	3%	25%	0%	-	-
Fluoride	1	1	1	1	-	11%	-	-	0%	-	-	-	-
Sulphate	-	1000	-	1000	2%	17%	-	-	3%	25%	0%	-	-
Dissolved Metals													
Arsenic	0.1	0.025	0.1	0.025	-	-	-	-	-	6%	-	-	-
Boron	0.5	5	0.5	5	-	17%	-	-	3%	25%	-	-	-
Chromium III	0.0049	0.05	0.0049	0.05	-	17%	-	-	1%	13%	-	-	-
Manganese	0.2	-	0.2	-	-	-	1%	-	0%	-	-	1%	-
Molybdenum	0.02	0.05	0.01	0.5	-	17%	-	-	3%	19%	0%	-	0%
Selenium	0.01	0.03	0.02	0.05	-	17%	-	-	-	6%	-	-	-
Uranium	0.01	0.2	0.01	0.2	-	3%	-	-	-	-	-	-	-
Vanadium	0.1	0.1	0.1	0.1	-	6%	-	-	-	-	-	-	-
Total Metals													
Arsenic	0.1	0.025	0.1	0.025	-	-	-	-	-	6%	-	-	-
Boron	0.5	5	0.5	5	-	17%	-	-	3%	25%	-	-	-
Chromium III	0.0049	0.05	0.0049	0.05	-	17%	-	-	1%	13%	0%	-	0%
Manganese	0.2	-	0.2	-	-	-	2%	0%	-	-	0%	1%	0%
Molybdenum	0.02	0.05	0.01	0.5	-	17%	-	-	3%	19%	1%	-	1%
Selenium	0.01	0.03	0.02	0.05	-	17%	-	-	0%	6%	-	-	-
Uranium	0.01	0.2	0.01	0.2	-	3%	-	-	-	-	-	-	-
Vanadium	0.1	0.1	0.1	0.1	-	17%	-	-	1%	13%	-	-	-

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NOTES:

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6. CCME-L CCME GUIDELINES FOR IRRIGATION.
7. THE PERCENTAGE IS BASED ON THE NUMBER OF SAMPLES THAT EXCEED THE LOWEST APPLICABLE GUIDELINE.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
1	10JUL'15	ISSUED WITH REPORT VA101-246/31-3	CJ	JEM

The *in situ* and analytical sample data are provided in tabular form in Appendix C, with a separate table for each site and grouping of guidelines. The guideline exceedance discussions below are related specifically to the freshwater aquatic life guidelines. The guideline exceedance tables specific to aquatic life are presented in Appendix C1. The drinking water and agricultural water use guideline comparisons are tabulated in Appendix C2 and Appendix C3, respectively. Summaries of the relatively few guideline exceedances for wildlife and recreational water uses are listed in Appendix C4 and Appendix C5, respectively. Exceedances related to guidelines other than aquatic life have been noted in the text, but have not been discussed at length. Surface water summary statistics are included in Appendix C6. Depth profiles of *in situ* parameters in Jacko Lake have been recorded since 2007 and Edith Lake has been profiled in 2014 and are provided for dissolved oxygen, temperature, and pH in Appendix C7; the most recent (2014) lake profiles have been included as examples embedded in the relevant sections of the report.

Throughout the following discussion graphs have been used to help demonstrate the spatial and seasonal variability in some of the more abundant parameters or those that exceeded one or more guidelines. Boxplot graphs were most frequently used to help demonstrate the spatial variability in the watersheds. Boxplots, or box and whisker plots, have been used to graphically portray the 75th, 50th, and 25th (quartiles) percentile summary data for a given parameter, and the whiskers are representative of the maximum and minimum concentrations; outliers were included. Guidelines provided on these plots are specific to aquatic life as these guidelines tend to be the most conservative. Exceedances of other guidelines are addressed in the text.

Seasonality and spatial variability of the data are similar for most parameters discussed in this report and this discussion for each parameter may seem repetitive with respect to these observations. The intention is that these details are not lost for the reader that will only focus on a couple of parameters and not read the report from beginning to end.

4.2 SAMPLING FREQUENCY

The majority of the water quality monitoring sites has been sampled on a monthly basis for the last four years; however, the sampling frequency prior to that was quarterly. Spring freshet sampling programs were also conducted in 2011, 2012, and 2014; these programs included the collection of weekly samples for five consecutive weeks, with focus on adequately characterizing water quality during a period of rapid change in hydrological conditions. All sites were attempted to be sampled on a monthly basis; however, the frequency of sample collection was largely influenced by the seasonal presence or absence of flowing water at some of the locations. Sites that were added to the monitoring program in 2014 were sampled twice monthly for the first year in order to establish a more robust dataset in a shorter period of time.

The dataset includes numerous years of sampling programs, which capture the seasonality of surface water quality. The amount of data and quality of data is considered adequate for characterizing the spatial and seasonal variability of the parameters of interest. The data are managed within the FULCRUM data management system, allowing Project connectivity and efficiency through integration of its numerous functionalities.

4.3 SURFACE WATER QUALITY SAMPLE SITE LOCATIONS

The surface water quality site locations and rationale are described in the subsections below, grouped by watershed. A summary of the sampling history is provided for each site in Table 4.1. Historical and current surface water quality site locations are shown on Figure 4.1. The main focus of the baseline surface water quality characterization is on the Peterson Creek watershed, where the project facilities and most of the water quality monitoring sites are located; however, water quality monitoring sites have been established in the following four watersheds:

- Peterson Creek
- Cherry Creek
- Thompson River, and
- Anderson Creek.

4.3.1 Peterson Creek Watershed

The proposed Project features are located within the Peterson Creek watershed; as such, most of the surface water quality monitoring sites are located within this watershed. The Peterson Creek watershed has been subdivided into six distinct areas or features to assist in the characterization of the water quality, which are described in the following subsections: (1) Peterson Creek, (2) Jacko Lake, (3) Keynes Creek, (4) Edith Lake, (5) Humphrey Creek, and (6) historical mine site features.

4.3.1.1 Peterson Creek Water Quality Sites

The section of Peterson Creek that was actively sampled for this baseline water quality program extends from approximately 1.5 km upstream of Jacko Lake to the Long Lake Road Quarry in Knutsford. Water extraction and anthropogenic activity in and around Peterson Creek is extensive and six water quality monitoring sites have been established in this creek, which are as follows, listed from upstream to downstream:

- JC03 – Established in 2008 on agricultural land approximately 1.5 km upstream of Jacko Lake, below the confluence of Jacko Creek and Peterson Creek. This site is no longer active and served as an upstream reference site as it is located upstream of all the historical mine workings planned Project facilities. Winter samples have not been collected from this site as it is either frozen or dry at this time of the year. This site was sampled monthly until July 2013, when access was no longer granted by the land owner, and was replaced by a new site (PC10) in February, 2014.
- PC10 – Established in 2014 to replace the inactive site at JC03 and serve as an upstream reference site. This site is located on Peterson Creek, approximately 1 km upstream of Jacko Lake.
- PC08 – Established in 2007 at the outlet of Jacko Lake, located immediately downstream of the Jacko Lake Spillway.
- PC03 – Established in 2007 on Peterson Creek downstream of all historical mine features (the open pits and historical waste rock pile to the south of Peterson Creek).
- PC02.5 – Established in 2011 along Goose Lake Road on Peterson Creek between PC02.
- PC02.3 – Established in 2014 on Peterson Creek, downstream of all surface drainages that may be influenced by runoff from project facilities.

- PC02 – Established in 2008 to supplement surface water sites PC03 and PC08 along Peterson Creek. The site is located downstream of a trailer park, a rock quarry/gravel pit operation, agricultural lands, and adjacent to the Princeton-Kamloops Highway.
- PC02WH – One sample was collected from this site, located in the well house of the property at PC02. This site was sampled to supplement water quality data collected at PC02.
- PC-EF-04 – Established in 2010 along Peterson Creek within Peterson Creek Park, upstream of Bridal Veil Falls (over 2 km upstream of the North Thompson River). This site was established as an aquatic ecology site and samples collected at this site coincide with ecological data collection dates. This is not a regular water quality site.

4.3.1.2 Jacko Lake Water Quality Sites

Jacko Lake is located east of the Open Pit facility and northeast of the other Project features. Upper Peterson Creek contributes to the inflow to Jacko Lake and the lower portion of the Peterson Creek is the main outflow, which is controlled by a wier. One sampling location has been established on Jacko Lake, with three samples collected from distinct depths:

- JACL – Established in 2007 at approximately the deepest part of Jacko Lake. Samples have been collected from shallow (JACL-S), middle (JACL-M) and deep (JACL-D) depths, upon evaluation of the vertical temperature and dissolved oxygen profiles at the time of sampling.

4.3.1.3 Keynes Creek Water Quality Sites

Keynes Creek is located within the Peterson Creek watershed and flows north towards Peterson Creek, downstream of PC08. A surface drainage connection between Keynes Creek and Peterson Creek has not been located and flow from Keynes Creek into Peterson Creek is through the subsurface. The TSF facility footprint covers most of the Keynes Creek watershed. Two water quality monitoring sites have been established in the Keynes Creek watershed:

- GOOSE LAKE – Established in 2014, in the east branch of the upper headwaters of Keynes Creek. This is the only sampling location on Goose Lake and is collected as a grab sample from the shore.
- KC03 – Established in 2014 immediately upstream of Peterson Creek.

4.3.1.4 Edith Lake Water Quality Sites

Edith Lake is located at the headwaters of Humphrey Creek, which flows north into Peterson Creek, downstream of most of the project features, except the east mine rock storage facility. Edith Lake levels are often supplemented by diversion of water from Anderson Creek, which results in a surface connection between the Peterson Creek and Anderson Creek watersheds. One sampling site has been established on Edith Lake, with three samples collected from distinct depths:

- EDITH-01 – Established in 2014 at approximately the deepest part of Edith Lake. Samples have been collected from shallow (EDITH-01S), middle (EDITH-01M), and deep (EDITH-01D) depths, upon evaluation of the vertical temperature and dissolved oxygen profiles at the time of sampling.

4.3.1.5 Humphrey Creek Water Quality Sites

Humphrey Creek flows north towards Peterson Creek, between PC03 and PC02.5, a surface connection is not evident and flow in Humphrey Creek goes subsurface in the lower portion of the

catchment. The following three water quality monitoring sites have been established on Humphrey Creek, listed from upstream to downstream:

- HUMPH-10: Established in 2014 at the outflow of Edith Lake.
- HUMPH-08: Established in 2014, immediately downstream of the confluence with a tributary located within the Project footprint.
- HUMPH-02: Established in 2014, immediately upstream of a small tributary flowing from the west, outside of the Project footprint.

4.3.1.6 Historical Mine Site Features Water Quality Sites

Historical mining activities in the Peterson Creek watershed are evident with the three existing open pits. The two western open pits have lakes formed in them with no surface discharge, and the eastern open pit was backfilled with waste rock during reclamation of the former mine. In addition to the open pits there are two mine rock piles, one to the south of Peterson Creek and one to the north of the open pits. In order to characterize the water quality in the project area, water quality sites were established within, or down-gradient of these features, at the following sites:

- WR-Seep – Established in 2011 at the historical mine rock seepage collection pond to the south of Peterson Creek between the toe of the mine rock pile and creek.
- North Seepage Pond (NSP) – Established in 2010, this site is at the south end of the pond. Other than the open pits, this site is a seepage collection point for the historical mine rock pile located to the north of the exiting open pits.
- Ajax West-West Pit (AJWW) – Established in 2007 in the western most historical open pit, this site is sampled at two discrete depths. A shallow depth sample (S) and deeper sample (D) are collected at this site, from approximately 1 m below surface and above the bottom, respectively (Photo 19).
- Ajax West-East Pit (AJWE) – Established in 2007 in the eastern historical open pit (that contain water), this site is sampled at three discrete depths. A shallow depth sample (S), medium depth sample (M), and deeper sample (D) are collected at this site, from approximately 1 m below surface, half way between the surface and the bottom, and 1 m above the bottom, respectively (Photo 20).
- S.Catchment – This site was established in 2013 on the south catchment pond, south of Peterson Creek. This site is located within the Project footprint and is in close proximity to the historical waste rock area.

4.3.2 Cherry Creek Watershed Water Quality Sites

The project facilities under the current mine plan are not located within the Cherry Creek watershed; however, previous mine layout plans have included facilities within this area. As such, water quality sites have been established along Cherry Creek and other water bodies within the Cherry Creek watershed. Some of the established sites continue to be monitored as reference sites, because of the close proximity of the project facilities to the Cherry Creek watershed boundary.

Cherry Creek runs adjacent to the western extent of the historical Afton Mine TSF. There are numerous water licences currently in effect in Cherry Creek, including domestic and commercial usage in the lower extent of the baseline study area. Alkali Creek lies within agricultural property and is commonly used for irrigation and livestock watering purposes. The lower reaches of Alkali Creek are diverted around the historical Afton Mine TSF, where it drains through a swampy area into

Cherry Creek. The three creek based water quality sites in this watershed are as follows (listed from upstream to downstream):

- CC08 – Established in 2007 upstream of the Project footprint on Greenstone Mountain. This site is a suitable reference site for this watershed as it is situated upstream of historical mining areas and it is also not heavily influenced by agricultural activity.
- AC02 – Established in 2007 in Alkali Creek, approximately 300 m upstream of the historical Afton Mine tailings storage facility and 4 km downstream (west) of the TSF.
- CC02 – Established in 2007 along Cherry Creek approximately 2 km west and down-gradient of the historical Afton Mine tailings storage facility.

In addition to Cherry Creek and Alkali Creek there are two other water bodies that have been part of this baseline investigation: Inks Lake and Wallander Lake. Both of these lakes are situated in low topographic points with no surface expression of connectivity to other surface water bodies. These lakes were within the catchment area of the project facilities under a previous mine plan, but are not relevant to the current design. As such, they are no longer sampled; however, data collected from these sites may be used to support the baseline characterization. The sample sites are listed below:

- INKS – Established in 2010, surface grab samples were collected regularly until 2013, from the south end of Inks Lake (along Lac Le Jeune road, east of the TSF and southwest of the North Mine Rock Storage Facility (NMRSF).
- WALL – Established in April 2011 and is located between Lac Le Jeune road and the NMRSF; several samples have been collected since its establishment.

4.3.3 Thompson River Watershed Water Quality Sites

Two sites are located on water bodies which drain directly to the Thompson River, downstream of the confluence of the North Thompson River and the South Thompson River:

- PP01: Established in 2007 and sampled until the end of 2008, on Polygon Pond.
- MAKAOO-05: Established in 2013, on Makaoo Creek immediately downstream of Makaoo Lake. Makaoo Creek drains south into the Thompson River. This creek is normally dry and is not sampled regularly.
- MAKAOO-01: Established in 2013, within Makaoo Lake.

4.3.4 Anderson Creek Watershed Water Quality Sites

Anderson Creek flows from east to west, south of the Project footprint and the Peterson Creek watershed. Two water quality sites have been established (from upstream to downstream):

- ANDR15: Established in 2014 upstream of Hull Lake, and
- ANDR10: Established in 2014 downstream of Hull Lake.

4.4 PETERSON CREEK WATERSHED SURFACE WATER QUALITY

The majority of surface water monitoring sites and all of the project features are located within the Peterson Creek watershed, which is the main focus of the baseline surface water quality characterization study. The 28 monitoring sites in the Peterson Creek watershed have been subdivided into the following categories to assist in the interpretation of the water quality results:

- Peterson Creek
- Jacko Lake

- Historical Mine Site Features, and
- Tributaries to Peterson Creek (including Keynes Creek, Goose Lake, Humphrey Creek, and Edith Lake).

The Peterson Creek watershed monitoring sites are focused around Peterson Creek itself and the historical mine features; however, sites have also been established to characterize the main tributaries to Peterson Creek. The most extensively sampled section of Peterson Creek extends from just upstream of Jacko Lake to downstream to the Long Lake Road Quarry in Knutsford. Peterson Creek is the only outlet channel for Jacko Lake, and the Historical Mine Site Features are downstream of the Jacko Lake to the north and south of the upper reaches of Peterson Creek. The main tributaries that have been included in the baseline water quality study flow north into Peterson Creek, upstream (Keynes Creek) and downstream (Humphrey Creek) of the majority of the project features. Edith Lake has been included in the baseline study as its outflow is the headwaters to Humphrey Creek.

4.4.1 Peterson Creek Water Quality Assessment

Flow in Peterson Creek, downstream of Jacko Lake, is managed through the control structure at the lake outlet, and there are numerous water licenses for extraction along this channel. As such, it has not been possible to strongly correlate flows and concentrations observed through the channel; however, seasonality is still evident in the analytical data set. Sample collection at various sites along Peterson Creek has been hampered on occasion due to insufficient flow (winter and summer months). Surface water flows in Peterson Creek have been observed both upstream and downstream of sites that are dry during a specific sampling event, which indicates that groundwater inflows have a strong influence on the baseflow to this creek. Additionally, numerous beaver dams have been noted along this creek over the course of the baseline program.

Spatial trends for some parameters are evident and boxplots showing the spatial variability of parameter concentrations have been used to demonstrate this trend. For this purpose, the results of the nine water quality sites along Peterson Creek have been combined into six groups, with each of the six defining a localized section of the creek. The grouping of site data was done in cases where sites were located close to one another and when minimal data was available from one site, with a larger sample number from a site nearby. The groupings are as follows:

- JC03 and PC10: upper Peterson Creek; JCO3 has been replaced by the newly established PC10.
- PC08: downstream of the outlet of Jacko Lake.
- PC03.
- PC02.5 and PC02.3: PC02.3 is a new site, established in 2014, with a lower sample count at when this report was compiled (9 samples).
- PC02 and PC02WH: PC02 is an established long-term monitoring site, while PC02WH represents a single sampling event.
- PCEF-04: only four samples have been collected from this site, which is not a long-term monitoring site. The site has been included to show spatial variability because of its location further downstream, towards the City of Kamloops.

4.4.1.1 Physical Parameters, Major Ions and Nutrients

Peterson Creek waters are generally characterized as neutral to moderately basic pH, very hard with high buffering capacity. The pH has been observed to be somewhat more variable immediately downstream of Jacko Lake (PC08) than the other Peterson Creek water quality sites, but was generally within the range of pH observed within Jacko Lake (shallow and deep). Measured pH values never exceeded the acceptable range for aquatic life (6.5-9); however, the upper bound for drinking water (pH 8.5) was exceeded on occasion. Total dissolved solids (TDS) were elevated in the creek and specific conductance (SpC) was typically higher than the normal range for interior streams, which is up to 500 µS/cm (RISC 1998). The measured SpC was typically between 400 µS/cm and 2,200 µS/cm. The majority of the TDS values exceeded the 500 mg/L drinking water and irrigation water guidelines and the main constituents of the elevated TDS were calcium, magnesium, sodium, sulphate, and bicarbonate.

Hardness, alkalinity, SpC, and TDS values have demonstrated similar trends in seasonal and spatial variability. Seasonal minimum values were typically reached during spring freshet and early summer and increased to sustained higher values from late summer through to late winter. Examples of this seasonal trend are shown in seasonal boxplots on Figure 4.6, for hardness and TDS. The seasonal distribution in this figure is used in comparison to the example hydrograph shown on Figure 2.1 to identify seasonal trends. Spatial boxplots of hardness and TDS concentrations are shown on Figure 4.7 as examples to demonstrate the spatial trends in concentrations of physical parameters, which increased from upstream to downstream. The spatial and seasonal trends of dissolved physical parameters are indicative of a flow system that is predominantly sustained by groundwater, as these parameters are all elevated in the subsurface water quality samples. Parameters associated with suspended solids, such as turbidity and TSS were inversely proportional to these parameters; values increased during freshet and were lower through the remainder of the years. The seasonal maximum pH values were typically measured in the late summer, when surface water runoff is lower and creek flows are predominantly sustained by groundwater discharge. This trend is shown on Figure 4.6 and supports the hypothesis that groundwater is the main contributor to surface water flow in Peterson Creek.

Water temperature in Peterson Creek was highly variable and is very strongly influenced by ambient air temperature. Temperatures over 20^{o}C have been measured regularly during summer sampling events, with temperatures as low as 0.05^{o}C observed in winter months, in open water amongst iced over sections. Water temperature in Peterson Creek, above Jacko Lake (JC03 and PC10), was generally colder than locations downstream of the lake where temperatures were generally similar to the shallow lake water. Water temperatures were noted to increase with distance downstream, particularly during the summer months. With the exception of spring freshet, the flow in the creek is generally very low and slow moving, and the creek is generally poorly shaded for long stretches, resulting in significant exposure to ambient conditions.

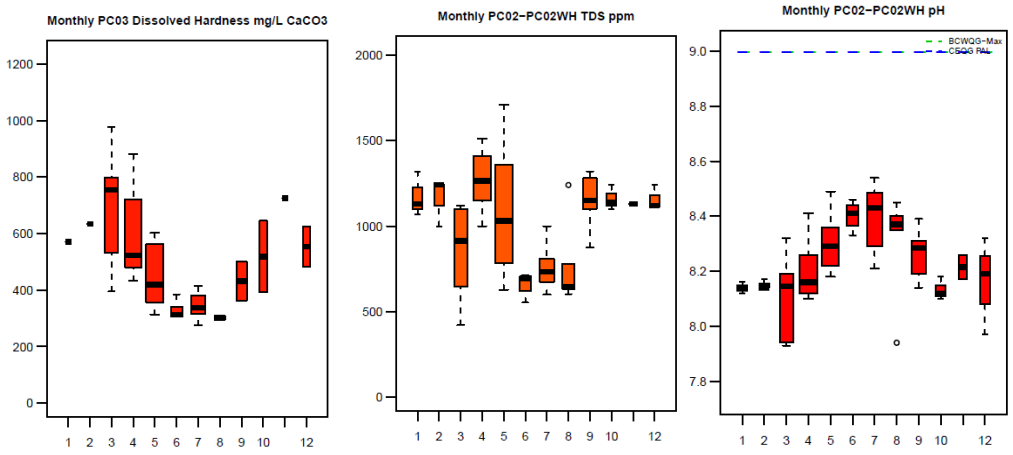

Figure 4.6 Seasonal Boxplot of Physical Parameters (Hardness, TDS, and pH) in Peterson Creek

NOTES:

1. Y-AXIS UNITS ARE mg/L UNLESS OTHERWISE STATED (pH IS SHOWN IN pH UNITS).
2. X-AXIS UNITS ARE MONTHS.
3. BOXPLOTS SHOW THE DISTRIBUTION OF DATA FOR EACH MONTH (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES).
4. VALUES BELOW THE DETECTION LIMIT ARE EQUATED TO HALF THE DETECTION LIMIT FOR STATISTICAL AND GRAPHING PURPOSES. BASED ON THIS METHOD, SOME VALUES SHOWN TO BE ABOVE GUIDELINES MAY NOT ACTUALLY EXCEED GUIDELINES.
5. THE GRAPHS SHOWN IN THIS FIGURE ARE SHOWN AS EXAMPLES TO REPRESENT SEASONAL TRENDS THAT WERE GENERALLY OBSERVED AT EACH SITE WITHIN THE PETERSON CREEK WATERSHED.
6. THERE ARE NO AQUATIC LIFE GUIDELINES FOR HARDNESS; HOWEVER, HARDNESS GREATER THAN 250 mg/L TRIGGERS A REQUIREMENT FOR SULPHATE TOXICITY TESTING UNDER THE GUIDANCE OF THE BCWQG-30 D.
7. THERE ARE NO AQUATIC LIFE GUIDELINES FOR TDS; HOWEVER, 500 mg/L IS APPLIED FOR DRINKING WATER AND IRRIGATION WATER (HC-DW, BCWQG-IRRIGATION, CEQG-IRRIGATION).
8. THE CEQG-PAL AND THE BCWQG-MAX FOR pH SPECIFY AN ACCEPTABLE pH RANGE OF 6.5 TO 9; THE ACCEPTABLE DRINKING WATER RANGE IS FROM 6.5 TO 8.5 AND IS NOT SHOWN ON THIS FIGURE.

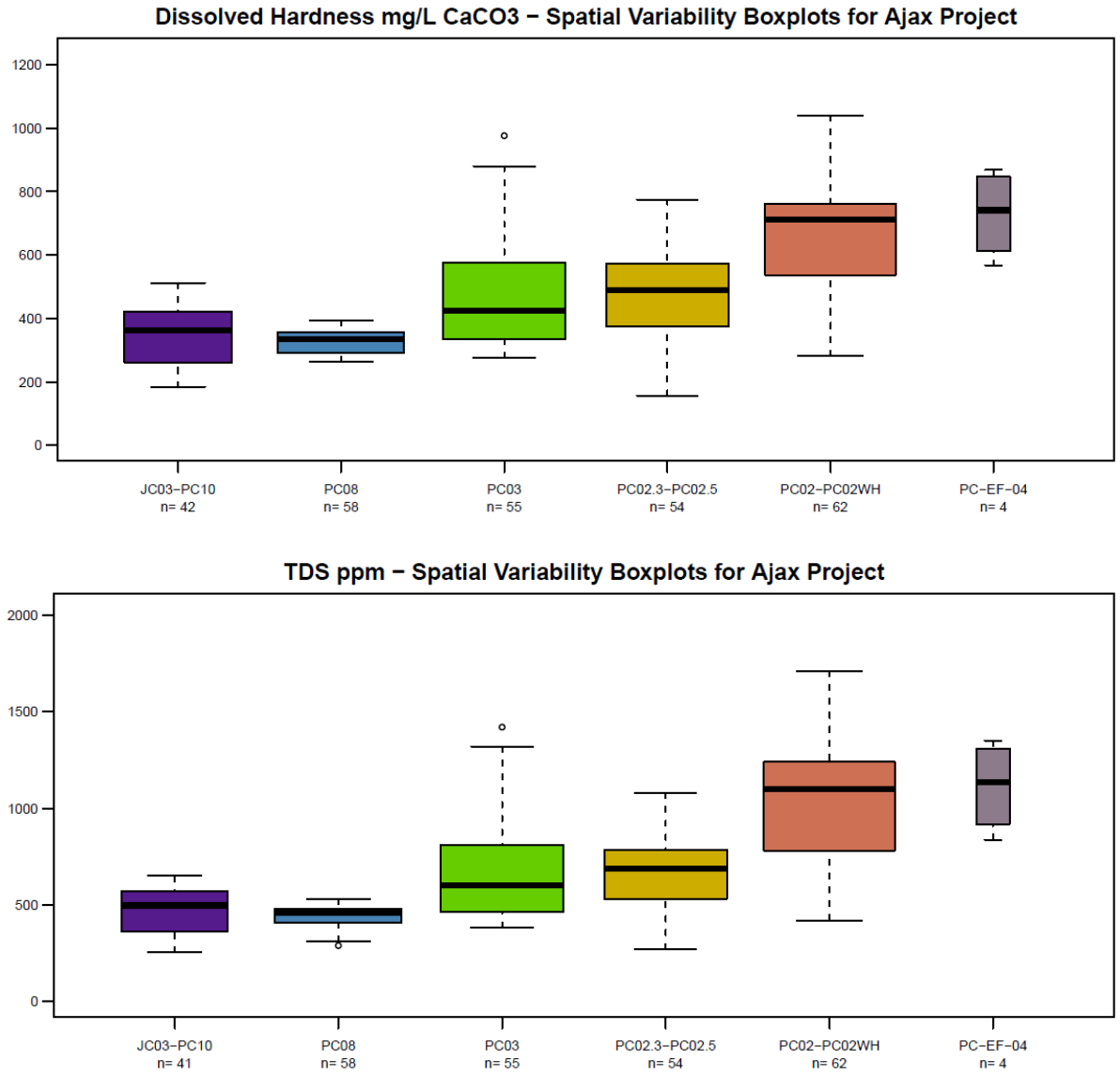

Figure 4.7 Spatial Boxplot of Physical Parameters (Hardness and TDS) in Peterson Creek

NOTES:

1. Y-AXIS UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SITE ORDER ALONG THE X-AXIS IS FROM UPSTREAM TO DOWNSTREAM. n=NUMBER OF SAMPLES.
3. SITES ALONG PETERSON CREEK HAVE BEEN COMBINED INTO SIX GROUPINGS, EACH REPRESENTING ONE SECTION OF THE CREEK (FROM UPSTREAM TO DOWNSTREAM): 1) JC03 AND PC10; 2) PC08; 3) PC03; 4) PC02.5 AND PC02.3; 5) PC02WH AND PC02; AND 6) PCEF-04.
4. BOXPLOTS SHOW THE DISTRIBUTION OF DATA AT EACH SITE (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES).
5. VALUES BELOW THE DETECTION LIMIT ARE EQUATED TO HALF THE DETECTION LIMIT FOR STATISTICAL AND GRAPHING PURPOSES. BASED ON THIS METHOD, SOME VALUES SHOWN TO BE ABOVE GUIDELINES MAY NOT ACTUALLY EXCEED GUIDELINES.
6. THERE ARE NO AQUATIC LIFE GUIDELINES FOR HARDNESS; HOWEVER, HARDNESS GREATER THAN 250 mg/L TRIGGERS A REQUIREMENT FOR SULPHATE TOXICITY TESTING UNDER THE GUIDANCE OF THE BCWQG-30 D.
7. THERE ARE NO AQUATIC LIFE GUIDELINES FOR TDS; HOWEVER, 500 mg/L IS APPLIED FOR DRINKING WATER AND IRRIGATION WATER (HC-DW, BCWQG-IRRIGATION, CEQG-IRRIGATION).

Major Ions

The seasonal trends for the major ion concentrations were similar to most other parameters monitored in the baseline water quality characterization; concentrations decreased during freshet to seasonal minimums and generally increased during periods of lower surface discharge (examples of the seasonality of major ion concentrations are shown on Figure 4.8); however, the major ions within Peterson Creek varied between sites and the spatial trends were not always clear. The major anion was either sulphate or bicarbonate at each site, with minor contributions of the others, and the major cation was either magnesium or calcium, although significant contributions of calcium, magnesium, and sodium were present at each site. These observations are shown visually on the Piper diagram on Figure 4.2. A piper diagram is a trilinear plot of the major dissolved ions in water, which provides a visual interpretation of the similarities and differences in the water types. Figure 4.2 shows two groupings of sites within Peterson Creek in terms of dominant cations; however, the characterization of each site does not appear to be related to any spatial trends.

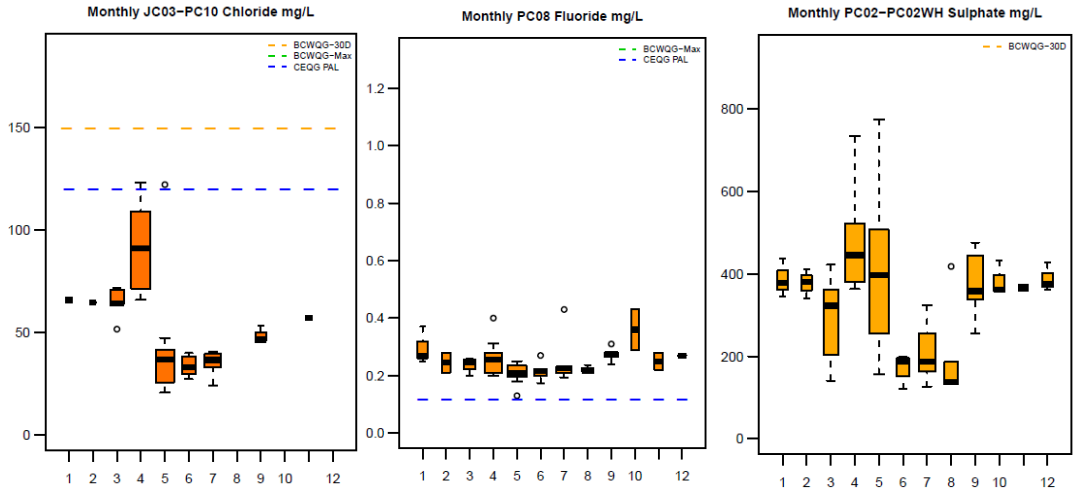

Figure 4.8 Seasonal Boxplot of Major Ion Parameters (Chloride, Fluoride, Sulphate) in Peterson Creek

NOTES:

1. Y-AXIS UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. X-AXIS UNITS ARE MONTHS.
3. BOXPLOTS SHOW THE DISTRIBUTION OF DATA FOR EACH MONTH (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES).
4. VALUES BELOW THE DETECTION LIMIT ARE EQUATED TO HALF THE DETECTION LIMIT FOR STATISTICAL AND GRAPHING PURPOSES. BASED ON THIS METHOD, SOME VALUES SHOWN TO BE ABOVE GUIDELINES MAY NOT ACTUALLY EXCEED GUIDELINES.
5. THE CEQG-PAL FOR CHLORIDE OF 120 mg/L IS SPECIFIC TO LONG-TERM EXPOSURE; THE CEQG-PAL FOR SHORT-TERM EXPOSURE IS 640 mg/L AND IS NOT WITHIN THE SCALE OF THE GRAPH.

Sulphate concentrations increased with distance downstream in Peterson Creek and the greatest increase happened between sample locations PC02.5 and PC02 (Figure 4.9). Relatively similar sulphate concentration ranges were noted for PC03, PC02.5/PC02.3 and Lower Humphrey Creek (HUMPH02), indicating uniform loading through that region of the Peterson Creek watershed. There are no major surface tributaries that inflow to Peterson Creek between PC02.5 and PC02, however, PC02 is located in a reach of Peterson Creek that is likely affected by local groundwater discharge

from the Davison Creek Aquifer and the other sites are upstream of this aquifer. Sulphate rarely exceeded the drinking water guidelines (BCWQG-DW and HC-DW; both 500 mg/L) and exceeded the aquatic life guideline in very few of the seasonal maximum sample concentrations. The BCWQG-30 D for sulphate specifies that site specific toxicity testing is required when hardness exceeds 250 mg/L $CaCO_3$, as was frequently the case in the baseline surface water environment in the project area. The toxicity testing, documented in *Testing in support of development of a science based environmental benchmark for sulphate for the Ajax Mine* (Nautilus 2015), resulted in a recommended science based environmental benchmark (SBEB) for a maximum sulphate concentration of 429 mg/L, which is the same as the current BCWQG-30 D, but with the maximum hardness adjusted up to 800 mg/L $CaCO_3$ which is protective of early life stages for trout (present from May through June). An alternative SBEB of 730 mg/L for a hardness of up to 1,377 mg/L $CaCO_3$ was recommended for surface waters where early life stages for trout are never present, or for periods of the year when these life stages are not expected to be present in a given reach of Peterson Creek (July through April). Samples from PC02 were often reported at hardness values that exceeded 800 mg/L $CaCO_3$, but were never reported above the 1,377 mg/L $CaCO_3$ threshold. Higher hardness concentrations (>800 mg/L $CaCO_3$) were generally reported through the winter months when early life stages for trout would not be expected in this reach of Peterson Creek, but in 2011 and 2012, higher hardness and sulphate persisted into May (2011 and 2012) and June (2011 only) and in May 2011 one sample was reported with a sulphate concentration of 775 mg/L and a hardness of 1,040 mg/L. A sample collected in April 2014 from PC02 also exceeded the upper benchmark (sulphate concentration of 734 mg/L and a hardness of 911 mg/L $CaCO_3$). Samples collected upstream of this location were rarely observed to exceed this benchmark.

Sulphate concentrations were observed at elevated concentrations in groundwater samples collected from monitoring wells in the Peterson Creek catchment area, including the groundwater monitoring site up-gradient of Jacko Lake (MW11-08D), indicating that sulphate is naturally elevated within the region (Project wide groundwater average sulphate concentration is in excess of 500 mg/L). Seepage from the historical waste rock in the area is likely contributing to sulphate concentrations in Peterson Creek; however, the elevated concentrations observed in the surface water are also sustained by regional geochemistry as is evidenced by the elevated sulphate concentrations in the groundwater samples collected from all areas of the baseline study area.

Fluoride concentrations were elevated above the 0.12 mg/L CEQG-PAL in most samples collected from Peterson Creek, with the highest concentrations generally occurring in late summer and fall (Figure 4.8). Fluoride was not a parameter that was noted to consistently increase with distance downstream in Peterson Creek and concentrations in mid reaches (PC02.5) were often higher than upstream of downstream concentrations, likely due to subsurface inflows from groundwater, and Humphrey Creek and Keynes Creek watersheds, which were typically higher than Peterson Creek concentrations. Values generally did not exceed the BCWQG-Max which is hardness dependent because samples containing high fluoride concentrations were generally higher in hardness as well. The MDL values were also frequently elevated above the CEQG-PAL and the majority of the noted exceedances occurred for samples for which the desired 0.02 mg/L detection limit could not be achieved. Fluoride concentrations in groundwater samples from the area of the historical open pit were elevated and guideline exceedances were frequent. In some groundwater samples, the BCWQG limit was exceeded, despite elevated hardness. The high fluoride concentrations in

groundwater samples and the seasonality evident in surface water samples indicate that groundwater discharge is likely the primary source for fluoride in this area.

Chloride concentrations were elevated in baseline surface water samples collected from throughout the study area, and spatial and seasonal trends were evident. Spatially, chloride concentrations were highest in samples collected from Peterson Creek sites PC02, PC-EF-04, and JC03 and Anderson Creek site ANDR-15, all sites that are located in close proximity to highways where road salting would be common practice during the winter months. Seasonally, chloride concentrations were highest in the winter months and at monitoring sites PC02 and JC03 concentrations typically doubled between August and September or September and October, depending on the year; this increase was less emphasized at other sites in Peterson Creek. Chloride concentrations were low in all groundwater samples collected from drilled monitoring wells in the project area (less than 20 mg/L), but were elevated in samples collected from residential water supply wells RES-1 and RES-4, which are located in the vicinity of the Davidson Creek aquifer and near the surface water site PC02. These higher concentrations indicate that chloride is elevated in the groundwater system in that reach of Peterson Creek. Exceedances of the CEQG-PAL short-term (120 mg/L) were common at the above mentioned sites from September through March and only the occasional sample exceeded the BCWQG-30 D (150 mg/L) and no samples exceeded the BCWQG-Max (600 mg/L) or the CEQG-PAL long-term (640 mg/L). Irrigation guidelines (CEQG and BCWQG; 100 mg/L) were also regularly exceeded for chloride at these sites.

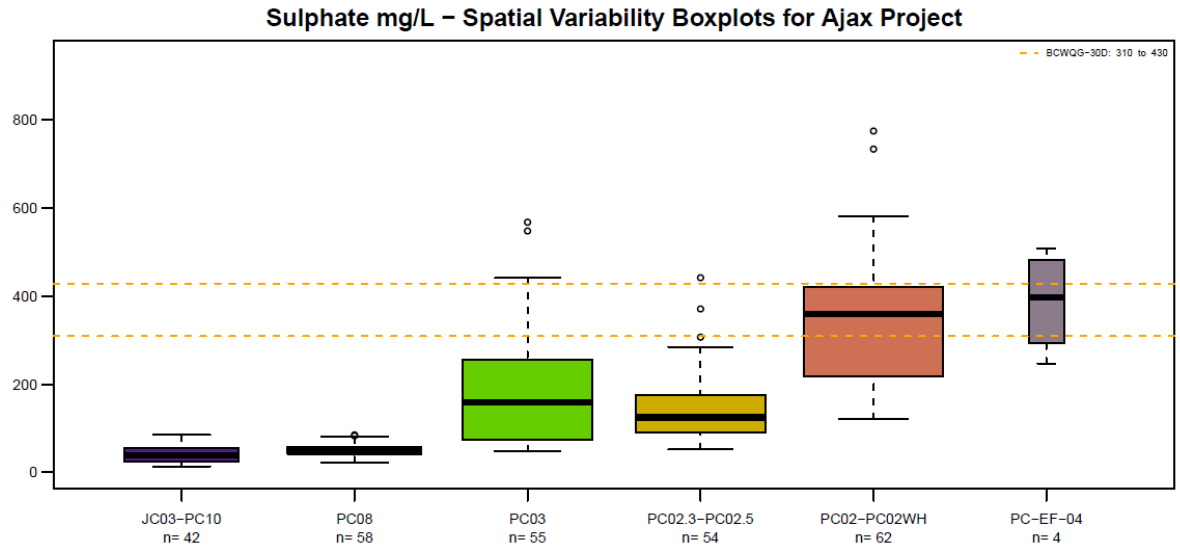

Figure 4.9 Spatial Boxplot of Sulphate in Peterson Creek

NOTES:

1. Y-AXIS UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SITE ORDER ALONG THE X-AXIS IS FROM UPSTREAM TO DOWNSTREAM. n=NUMBER OF SAMPLES.
3. SITES ALONG PETERSON CREEK HAVE BEEN COMBINED INTO SIX GROUPINGS, EACH REPRESENTING ONE SECTION OF THE CREEK (FROM UPSTREAM TO DOWNSTREAM): 1) JC03 AND PC10; 2) PC08; 3) PC03; 4) PC02.5 AND PC02.3; 5) PC02WH AND PC02; AND 6) PCEF-04.
4. BOXPLOTS SHOW THE DISTRIBUTION OF DATA AT EACH SITE (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES).
5. VALUES BELOW THE DETECTION LIMIT ARE EQUATED TO HALF THE DETECTION LIMIT FOR STATISTICAL AND GRAPHING PURPOSES. BASED ON THIS METHOD, SOME VALUES SHOWN TO BE ABOVE GUIDELINES MAY NOT ACTUALLY EXCEED GUIDELINES.
6. THE BCWQG-30 D FOR SULPHATE IS DEPENDENT ON ONGOING TOXICITY TESTS; PRELIMINARY RESULTS HAVE INDICATED A RECOMMENDED LIMIT OF 730 mg/L.

Nutrients

Phosphorus concentrations in Peterson Creek were highly variable and generally lower during the winter months. The total phosphorus (TP) concentrations in Peterson Creek extend over several trophic status ranges at any given site. TP concentrations within this creek are clearly influenced by the surrounding agricultural/livestock rearing land uses, and even at the baseline level there are extreme fluctuations across multiple trophic status ranges which can induce stress on a creek system and the aquatic flora and fauna.

The TP concentrations upstream of Jacko Lake (JC03 and PC10) were higher than those immediately downstream of the lake. The trophic status of those sites upstream of Jacko Lake ranged from eutrophic to hyper-eutrophic, with the seasonal median values generally falling within the hyper-eutrophic range. The TP concentrations within Jacko Lake at depth were generally higher and more variable than the shallow sample concentrations and the concentrations immediately downstream (PC08) were generally similar to the shallow water Jacko Lake sample values. Seasonal turnover in the lake was apparent in the fall and supported by the observation of similar TP concentrations in the shallow and deep samples (the deep sample concentrations decreased and the shallow sample concentrations increased to match). The difference in concentrations is significant

during the summer when stratification is observed; in winter, when stratification is known to occur in some lakes, very little difference in TP concentrations between shallow and deep samples from Jacko Lake is observed. The average TP concentration in the shallow water in the lake was within the lower eutrophic range (0.04 mg/L) and the deeper water was well within the hyper-eutrophic range (0.17 mg/L).

TP concentrations increased with distance downstream between PC08 (below outlet of Jacko Lake) to PC02.5 (along Goose Lake Road), and then were noted to decrease slightly below that point. The upper trophic status achieved was in the hyper-eutrophic range and all sites had several samples that were within this range. The average TP concentrations for mid-Peterson Creek (PC02.5 and PC02.3) were greater than 0.1 mg/L and thus within this hyper-eutrophic range. The average TP for the section of Peterson Creek that extends from the lake outlet to just beyond the extent of the open pit was within the upper range of the eutrophic status.

The nitrogen based inorganic nutrient (nitrite, nitrate, and ammonia) concentrations were somewhat variable in Peterson Creek; however, guideline exceedances were infrequent. The nitrogen parameter concentrations were seasonally variable, with concentrations generally lowest during the higher flows of spring freshet, increasing through the summer and early fall, and decreasing through the late fall and winter (a seasonal boxplot of nitrate is shown as an example on Figure 4.10). The area is frequented by cattle and as such cow dung was often noted in and near the creek, which is likely the primary driving factor for the presence of the nitrogen parameters. Additionally, cows were noted to cross the creek at many locations, further disturbing the substrate and mixing the waters.

Organic Carbon and Nitrogen

Total organic carbon (TOC) and dissolved organic carbon (DOC) concentrations varied seasonally and were generally found at the lowest concentrations in samples collected through the winter months and highest soon after freshet, in the summer months. TOC and DOC concentrations were generally highest in mid-Peterson Creek, at the sites between PC03 and PC02.3 and were generally lowest at the PC02 site, further downstream. Upstream of Jacko Lake, the organic carbon concentrations are very similar to that of Jacko Lake deep and shallow samples, which are also similar to each other. The organic carbon is predominantly present in the dissolved form and seasonal median concentrations within the creek generally ranged from 6 mg/L to 20 mg/L. Guidelines for organic carbon are available for drinking water (BCWQG limit of 4 mg/L) and most samples from all sites in Peterson Creek exceeded this limit. Organic carbon in drinking water can result in the formation of trihalomethanes when chlorinated, which are toxic for human consumption. Aquatic life and wildlife guidelines have not been established for background levels; however, an understanding of the background concentrations is required in order to assess for changes. A change of no greater the ±20% from background is recommended for the protection of aquatic life and wildlife.

Organic nitrogen concentrations were low and exhibited some seasonality, with generally lower concentrations observed in samples collected through the winter and higher concentrations noted during spring freshet, with some variability, through the summer months.

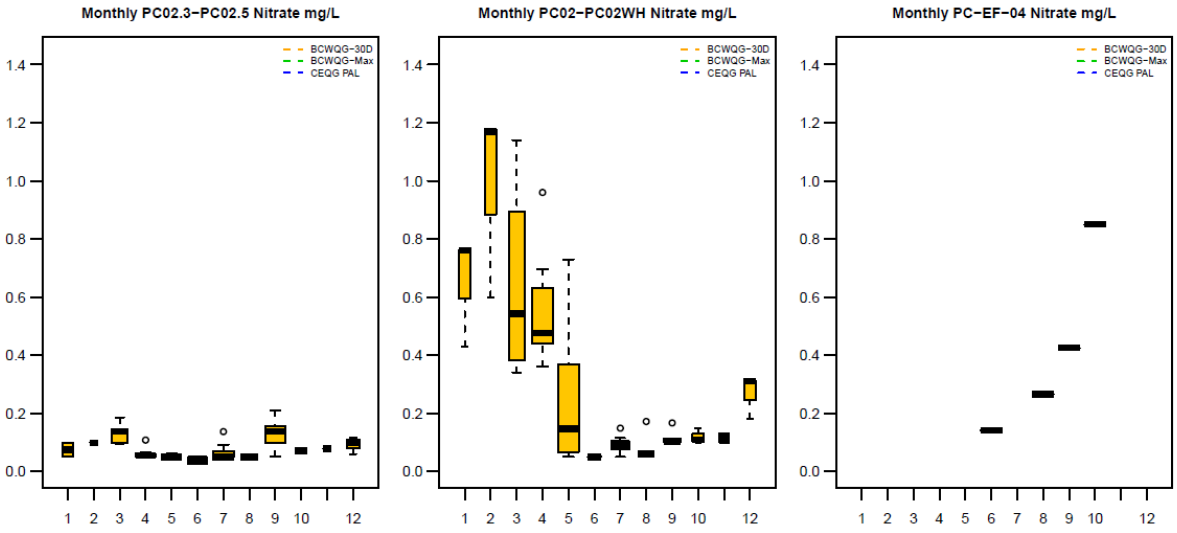

Figure 4.10 Seasonal Boxplot of Nitrate in Peterson Creek

NOTES:

1. Y-AXIS UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. X-AXIS UNITS ARE MONTHS.
3. BOXPLOTS SHOW THE DISTRIBUTION OF DATA FOR EACH MONTH (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES).
4. VALUES BELOW THE DETECTION LIMIT ARE EQUATED TO HALF THE DETECTION LIMIT FOR STATISTICAL AND GRAPHING PURPOSES. BASED ON THIS METHOD, SOME VALUES SHOWN TO BE ABOVE GUIDELINES MAY NOT ACTUALLY EXCEED GUIDELINES.
5. THE GRAPHS SHOWN IN THIS FIGURE ARE SHOWN AS EXAMPLES TO REPRESENT SEASONAL TRENDS THAT WERE GENERALLY OBSERVED AT EACH SITE WITHIN THE PETERSON CREEK WATERSHED.
6. THE BCWQG-MAX FOR NITRATE IS 32.8 mg/L AND THE CEQG-PAL IS 3 mg/L; GUIDELINE EXCEEDANCES WERE NOT OBSERVED; THIS GRAPH IS INCLUDED TO SHOW THE SEASONAL TREND IN NUTRIENT CONCENTRATIONS.

4.4.1.2 Metals and Metalloids

In Peterson Creek aluminum, chromium, copper, iron, and selenium were the only metals parameters that exceeded aquatic life guidelines on a regular basis. Iron and manganese were the only metals parameters that exceeded drinking water guidelines. Manganese and molybdenum were the only metals that exceeded agricultural (irrigation) guidelines regularly in Peterson Creek; molybdenum also exceeded the livestock and wildlife guideline often in samples collected from the Peterson Creek baseline surface water site PC03.

Total and dissolved concentrations of most metals parameters tended to decrease during spring freshet, though a few metals parameters were noted to increase under these flow conditions; concentrations of these same parameters also tended to increase again in late summer / early fall, though rarely achieved the same freshet peak concentrations. Particulate contributions to total concentrations tended to be greater at the sites upstream of Jacko Lake (JC03 and PC10), immediately downstream of Jacko Lake (PC08), and much further downstream at PC02, which is located downstream of a trailer park, a rock quarry/gravel pit operation, extensive ranch lands with active cattle crossings along the creek, and adjacent to the Princeton-Kamloops Highway. The correlation between TSS and total metals concentrations for iron, aluminum, copper, and chromium tends to be poor with respect to r-squared valued due to the prevalence of non-detect values for TSS

when flow conditions are lower, but the relationship is more clearly demonstrated with time-series graphs, as provided on Figure 4.11, for baseline samples from a water quality site upstream of Jacko Lake (JC03). Anthropogenic activity in the area make is difficult to differentiate changes in water chemistry that may have natural origins, from those that do not. Elevated particulate metals downstream of Jacko Lake may be attributed to suspension of particulate as a result of turbulent flow through the outlet control structure.

Metals parameters that sporadically exceeded guidelines for aquatic life include cadmium, mercury, and molybdenum. Selenium sporadically exceeded the BCWQG-DW of 0.01 mg/L, but was below the HC-DW guideline of 0.05 mg/L in nearly all samples. Arsenic concentrations approached the aquatic life guideline in sites further downstream in Peterson Creek (CEQG-PAL and BCWQG-Max; both 0.005 mg/L), reaching concentrations up to 0.004 mg/L. Arsenic concentrations typically increased with distance downstream, with notable increases downstream of the confluence with Keynes Creek and Humphrey Creek; arsenic was elevated in samples from these creeks compared to Peterson Creek, and the aquatic life guideline was almost always exceeded for samples from Keynes Creek. These guideline exceedances are highlighted in the data tables in Appendix C, but are not discussed in the text.

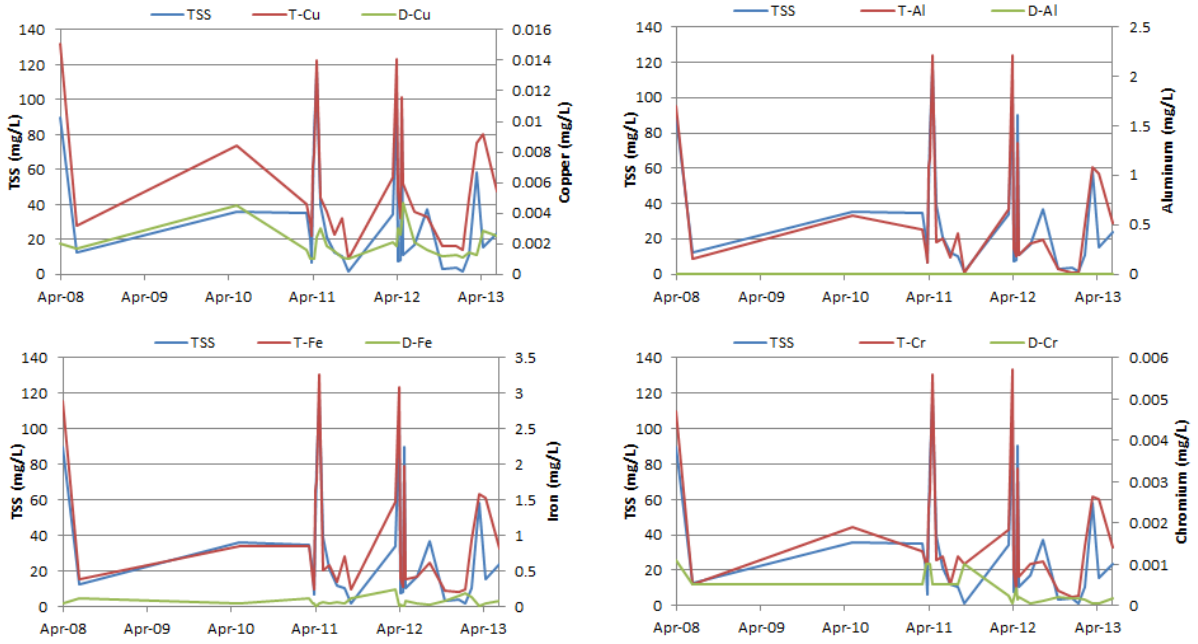

Figure 4.11 TSS Compared with Total and Dissolved Metals Concentrations in Peterson Creek, Upstream of Jacko Lake (JC03)

NOTES:

1. TIME-SERIES DATA PLOTS FOR TSS WITH COPPER, IRON, ALUMINUM, AND CHROMIUM AT BASELINE SURFACE WATER SITE JC03.
2. SIMILAR TRENDS NOTED AT OTHER SURFACE WATER SITES IN THE PROJECT AREA; SHORT-TERM ELEVATION IN TOTAL CONCENTRATIONS OF SELECT PARAMETERS IN RESPONSE TO HIGHER ENERGY FLOWS DURING SPRING FRESHET.

Aluminum

Total aluminum concentrations were much more variable than dissolved concentrations and peak values occurred during spring freshet (an example of a seasonal boxplot within Peterson Creek is

shown on Figure 4.12). The spatial variation in total aluminum is shown on the lower graph on Figure 4.12. Median total aluminum concentrations were highest at JC03, upstream of Jacko Lake, and were generally sustained at higher median concentrations through April, May, and June. Few samples from JC03 were below the CEQG-PAL limit (0.1 mg/L for samples with pH>6.5) and most samples were over three times the CEQG-PAL (median concentration 0.36 mg/L). Many sample concentrations were over ten times the CEQG-PAL and the maximum value of 2.22 mg/L is 22 times greater than the limit. Concentrations of aluminum at PC10, which is downstream of JC03 and upstream of Jacko Lake, were lower than at JC03 and reached a seasonal maximum in June, immediately after freshet. The seasonal distribution of concentrations immediately downstream of Jacko Lake, at PC08, is similar but lower than at JC03 and also lower than at PC10. At this site 48% of the samples exceeded the guideline, with median value slightly below the guideline limit (0.09 mg/L). Total aluminum concentrations were lowest at the PC03 monitoring site in Peterson Creek, increased slightly downstream at PC02.5 and PC02.3, and then decreased again at PC02 and PCEF-04.

The BCWQG for aquatic life apply to only the dissolved aluminum concentrations. Dissolved aluminum concentrations are generally very low, and all values were less than the BCWQG-30 D- (0.05 mg/L for samples with pH>6.5), and well below the acute limit (0.1 mg/L; pH>6.5). Dissolved aluminum concentrations distribution throughout the Peterson Creek sample sites is similar to that of the total concentrations.

Chromium

Total chromium has two tiers of guidelines (BCWQG-Max and CEQG-PAL): 0.001 mg/L for Cr(VI) and 0.0089 mg/L for the less toxic Cr(III). Only one sample collected from Peterson Creek exceeded 0.0089 mg/L; all other guideline exceedances were for the more toxic Cr(VI) species. Since a species analysis has not been conducted, it is not confirmed whether the chromium present in Peterson Creek is in the Cr(III) or Cr(VI) form, though the Cr(VI) form is most likely in well oxygenated surface waters and Cr(III) in reducing conditions such as deeper groundwater sources.

Seasonal and spatial variability of total chromium concentrations in Peterson Creek are shown on Figure 4.13. Like other metals, the highest concentrations of total chromium at each site were observed during freshet, although sporadic exceedances of aquatic life guidelines were observed during the periods of lower flow at some sites. Concentrations generally decrease from upstream (JC03) to downstream (PC02.3); however, at PC02, concentrations increase over those observed at the sites upstream and an additional increase in chromium concentrations was observed in the samples collected at PCEF-04. Similar but slightly lower seasonal and spatial trends were observed for dissolved chromium, indicating that some of the total chromium concentration is due to particulate chromium. This is especially relevant to JC03, where the difference between total and dissolved chromium concentrations is greater than at the downstream sites.

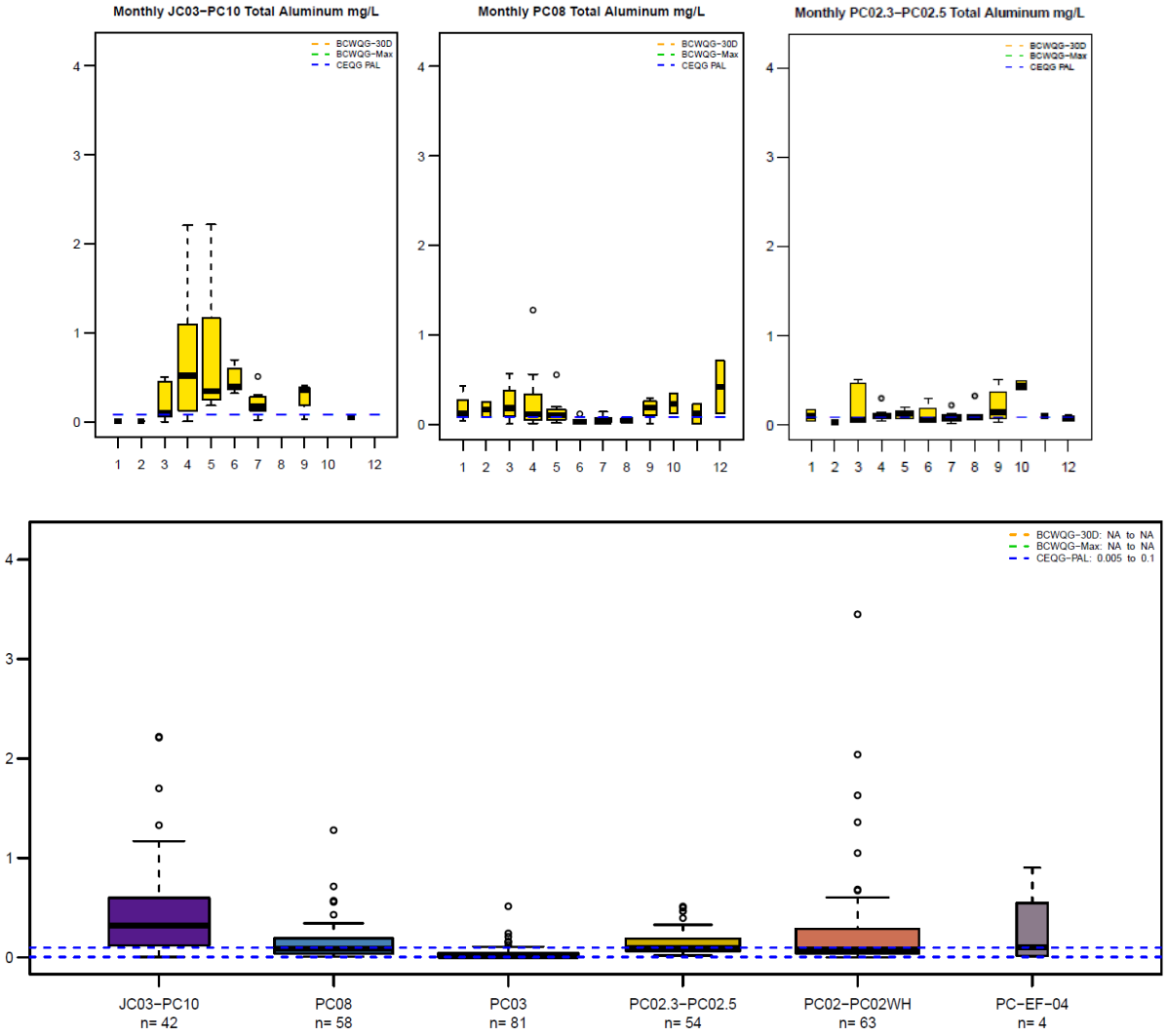

Figure 4.12 Seasonal and Spatial Boxplot of Total Aluminum in Peterson Creek

NOTES:

1. Y-AXIS UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. X-AXIS UNITS FOR GRAPHS IN THE TOP ROW ARE MONTHS; IN THE BOTTOM GRAPH, SITE ARE LISTED ALONG THE X-AXIS IN ORDER FROM UPSTREAM TO DOWNSTREAM. n=NUMBER OF SAMPLES.
3. SITES ALONG PETERSON CREEK HAVE BEEN COMBINED INTO SIX GROUPINGS, EACH REPRESENTING ONE SECTION OF THE CREEK (FROM UPSTREAM TO DOWNSTREAM): 1) JC03 AND PC10; 2) PC08; 3) PC03; 4) PC02.5 AND PC02.3; 5) PC02WH AND PC02; AND 6) PCEF-04.
4. BOXPLOTS SHOW THE DISTRIBUTION OF DATA AT EACH SITE (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES).
5. VALUES BELOW THE DETECTION LIMIT ARE EQUATED TO HALF THE DETECTION LIMIT FOR STATISTICAL AND GRAPHING PURPOSES. BASED ON THIS METHOD, SOME VALUES SHOWN TO BE ABOVE GUIDELINES MAY NOT ACTUALLY EXCEED GUIDELINES.
6. THE GRAPHS IN THE TOP ROW ARE SHOWN IN THIS FIGURE ARE SHOWN AS EXAMPLES TO REPRESENT SEASONAL TRENDS THAT WERE GENERALLY OBSERVED AT EACH SITE WITHIN THE PETERSON CREEK WATERSHED.
7. THE BCWQG -MAX, BCWQG-30 D AND CEQG-PAL FOR FRESHWATER AQUATIC LIFE FOR ALUMINUM ARE DEPENDENT ON WHETHER pH IS ABOVE OR BELOW 6.5; ALL pH VALUES ARE GREATER THAN 6.5.
8. THE BCWQG-MAX AND BCWQG-30 D ARE SPECIFIC TO DISSOLVED (D) ALUMINUM AND THE CEQG-PAL IS SPECIFIC TO TOTAL ALUMINUM.

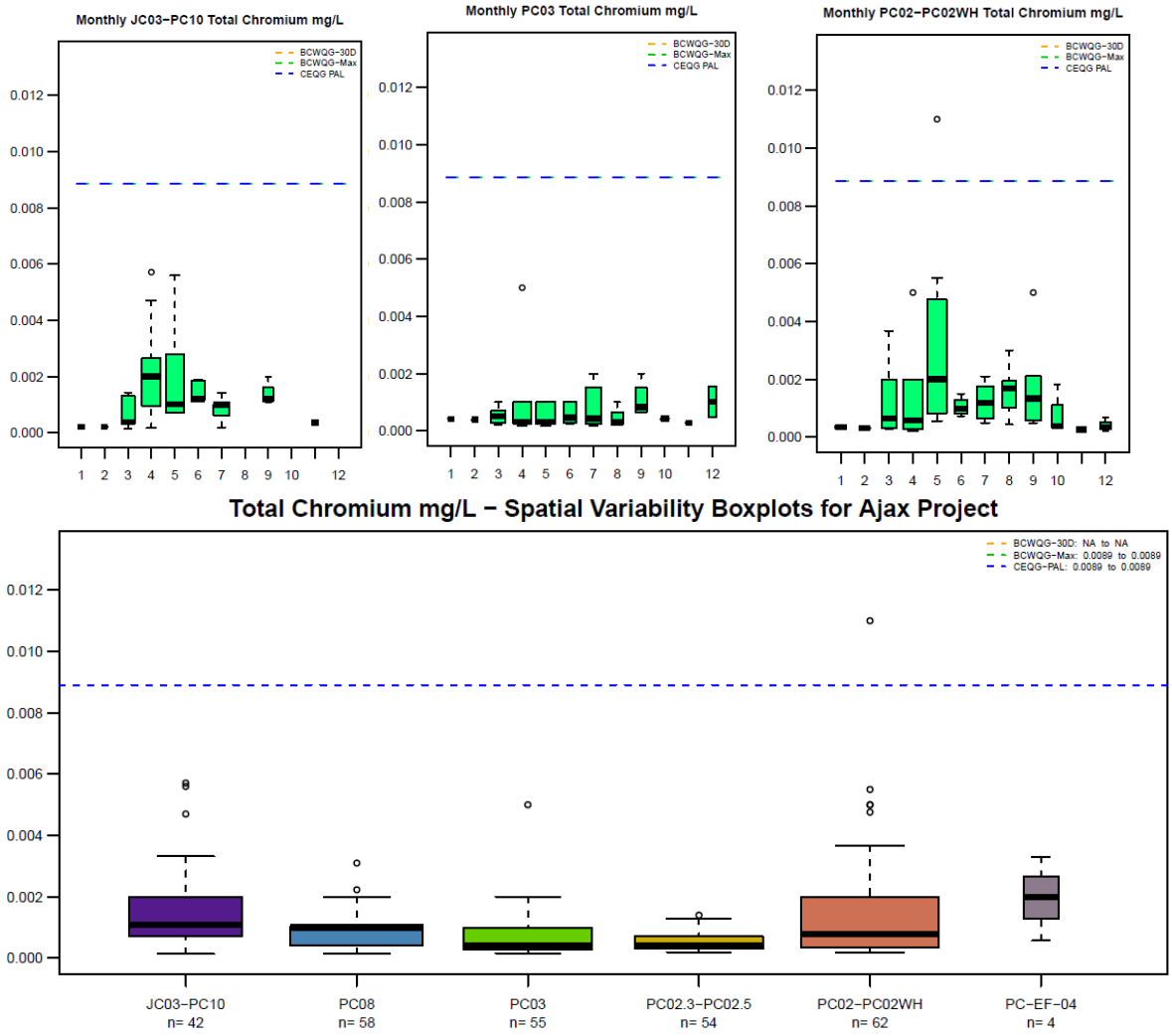

Figure 4.13 Seasonal and Spatial Boxplot of Total Chromium in Peterson Creek

NOTES:

1. Y-AXIS UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. X-AXIS UNITS FOR GRAPHS IN THE TOP ROW ARE MONTHS; IN THE BOTTOM GRAPH, SITE ARE LISTED ALONG THE X-AXIS IN ORDER FROM UPSTREAM TO DOWNSTREAM. n=NUMBER OF SAMPLES.
3. SITES ALONG PETERSON CREEK HAVE BEEN COMBINED INTO SIX GROUPINGS, EACH REPRESENTING ONE SECTION OF THE CREEK (FROM UPSTREAM TO DOWNSTREAM): 1) JC03 AND PC10; 2) PC08; 3) PC03; 4) PC02.5 AND PC02.3; 5) PC02WH AND PC02; AND 6) PCEF-04.
4. BOXPLOTS SHOW THE DISTRIBUTION OF DATA AT EACH SITE (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES).
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6. THE GRAPHS IN THE TOP ROW ARE SHOWN IN THIS FIGURE ARE SHOWN AS EXAMPLES TO REPRESENT SEASONAL TRENDS THAT WERE GENERALLY OBSERVED AT EACH SITE WITHIN THE PETERSON CREEK WATERSHED.
7. THE BCWQG-MAX AND CEQG-PAL THRESHOLDS FOR AQUATIC LIFE ARE 0.0089 mg/L FOR Cr(VI) (SHOWN ON THE FIGURE); THE SAME GUIDELINES ARE 0.001 mg/L FOR THE CR(III) SPECIES; IT IS NOT KNOWN WHICH SPECIES IS PREVALENT.

Copper

Total and dissolved copper varied seasonally and spatially and exceeded the CEQG-PAL seasonally at most sites. The seasonal and spatial variations in total copper concentrations are shown in boxplots on Figure 4.14; the same trends were observed for dissolved copper, but with lower concentrations. Aquatic life guideline exceedances during freshet were common for total copper, but were observed only sporadically for dissolved copper. The highest concentrations of total copper also exceeded the BCWQG-30 D limit; however, these exceedances are not true exceedances of the chronic guidelines because the freshet samples were not observed to consistently exceed the BCWQG-30 D over the required five-week period. No samples in Peterson Creek exceeded the BCWQG-Max limit.

Total copper concentrations were highest in the samples collected at the Peterson Creek, upstream of Jacko Lake (JC03 and PC10) and were lower in the samples collected within the lake. Samples collected from Peterson Creek downstream of the outlet of Jacko Lake (PC08) had slightly higher concentrations of copper than in the lake and concentrations generally increased with distance downstream.

Iron

Iron is dominantly present in the particulate form in the water quality samples from most sites in Peterson Creek and concentrations varied seasonally and spatially (Figure 4.15). The seasonality of iron concentrations in Peterson Creek is generally similar to that of other metals, with higher concentrations occurring during freshet; however, this trend is inconsistent at the first two monitoring sites downstream of the outflow of Jacko Lake (PC08 and PC03). The highest dissolved iron concentrations in Peterson Creek were measured at PC08, with the highest total and dissolved iron concentrations typically observed from September through May. More water is typically released through the Jacko Lake spillway from June through August, likely diluting the iron concentrations in the samples collected from the sites nearest the lake. In general, total iron concentrations were highest upstream and immediately downstream of Jacko Lake (JC03 and PC08); however, the lake sample concentrations were low in total iron and were mostly below the MDL (<0.03 mg/L). Downstream of the outlet of Jacko Lake, total iron varied between sites with no clear trend from upstream to downstream. The relatively high and spatially and seasonally inconsistent particulate iron concentrations could result from groundwater discharge being oxidized in surface water or from frequent creek bed disturbance from livestock, which could cause intermittent oxidizing conditions.

Aquatic life and drinking water guideline exceedances were prevalent throughout Peterson Creek for total iron. Exceedances of dissolved iron guidelines were rarely observed. Total iron concentrations frequently exceeded the HC-DW aesthetic objective (0.3 mg/L), the CEQG-PAL (0.3 mg/L), and the BCWQG-Max (1 mg/L) at all sites along Peterson Creek.

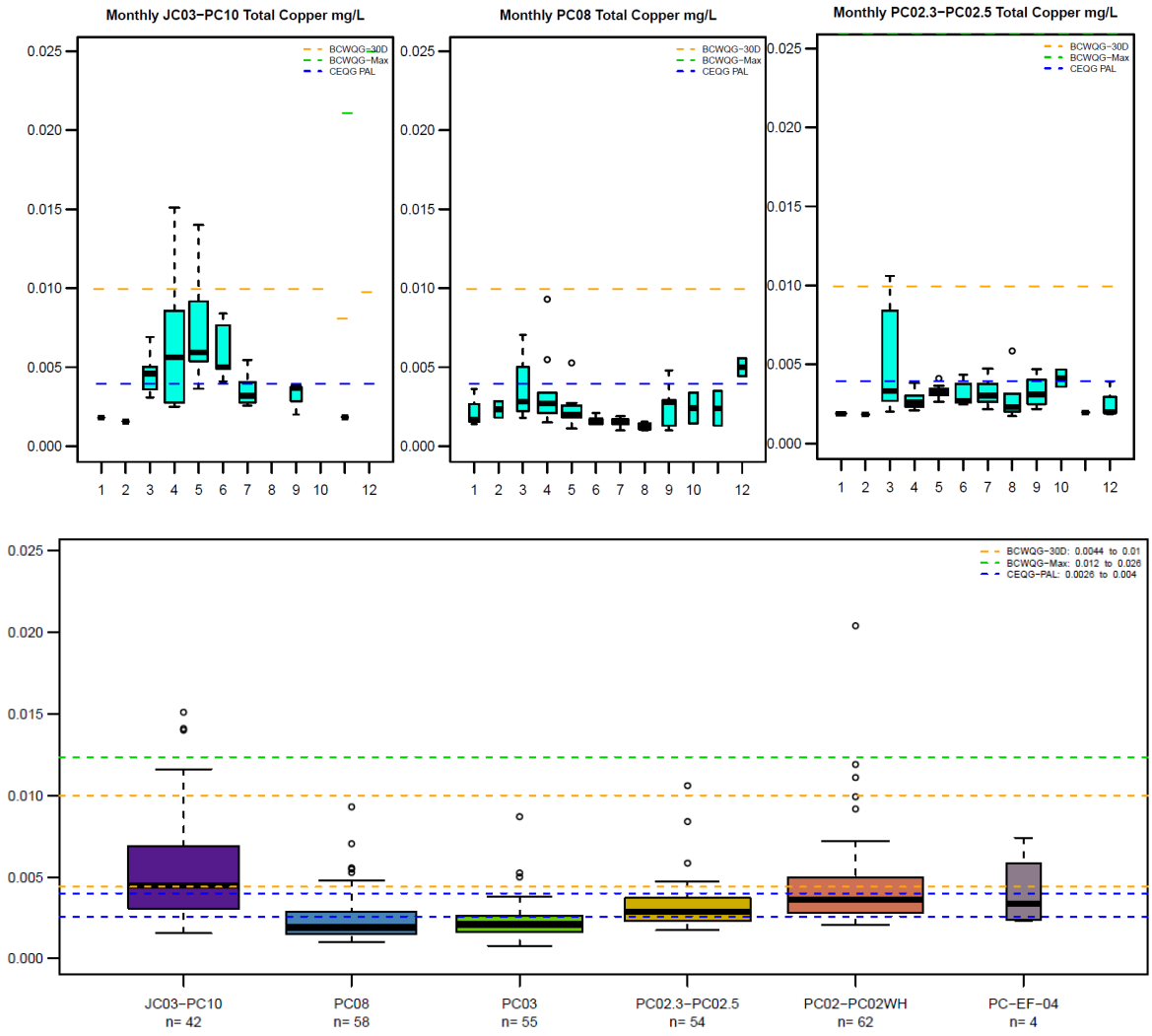


Figure 4.14 Seasonal and Spatial Boxplot of Total Copper in Peterson Creek

NOTES:

1. Y-AXIS UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. X-AXIS UNITS FOR GRAPHS IN THE TOP ROW ARE MONTHS; IN THE BOTTOM GRAPH, SITE ARE LISTED ALONG THE X-AXIS IN ORDER FROM UPSTREAM TO DOWNSTREAM. n=NUMBER OF SAMPLES.
3. SITES ALONG PETERSON CREEK HAVE BEEN COMBINED INTO SIX GROUPINGS, EACH REPRESENTING ONE SECTION OF THE CREEK (FROM UPSTREAM TO DOWNSTREAM): 1) JC03 AND PC10; 2) PC08; 3) PC03; 4) PC02.5 AND PC02.3; 5) PC02WH AND PC02; AND 6) PCEF-04.
4. BOXPLOTS SHOW THE DISTRIBUTION OF DATA AT EACH SITE (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES).
5. VALUES BELOW THE DETECTION LIMIT ARE EQUATED TO HALF THE DETECTION LIMIT FOR STATISTICAL AND GRAPHING PURPOSES. BASED ON THIS METHOD, SOME VALUES SHOWN TO BE ABOVE GUIDELINES MAY NOT ACTUALLY EXCEED GUIDELINES.
6. THE GRAPHS IN THE TOP ROW ARE SHOWN IN THIS FIGURE ARE SHOWN AS EXAMPLES TO REPRESENT SEASONAL TRENDS THAT WERE GENERALLY OBSERVED AT EACH SITE WITHIN THE PETERSON CREEK WATERSHED.
7. THE CEQG-PAL, BCWQG-MAX, AND BCWQG-30D THRESHOLDS ARE HARDNESS-DEPENDENT AND WERE CALCULATED BASED ON THE MEDIAN MONTHLY HARDNESS OBSERVED AT EACH SITE.

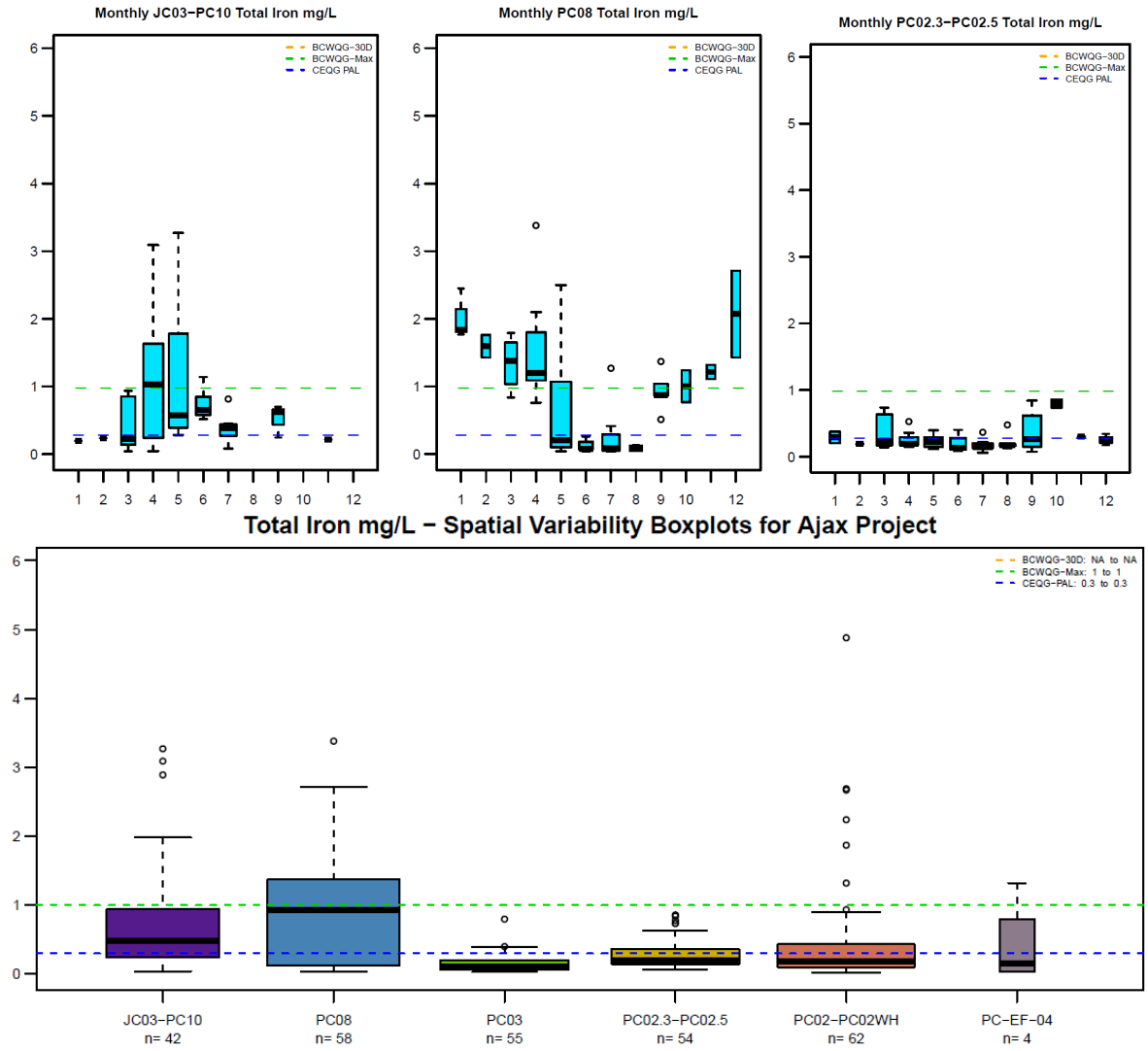


Figure 4.15 Spatial Boxplot of Total Iron in Peterson Creek

NOTES:

1. Y-AXIS UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. X-AXIS UNITS FOR GRAPHS IN THE TOP ROW ARE MONTHS; IN THE BOTTOM GRAPH, SITE ARE LISTED ALONG THE X-AXIS IN ORDER FROM UPSTREAM TO DOWNSTREAM. n=NUMBER OF SAMPLES.
3. SITES ALONG PETERSON CREEK HAVE BEEN COMBINED INTO SIX GROUPINGS, EACH REPRESENTING ONE SECTION OF THE CREEK (FROM UPSTREAM TO DOWNSTREAM): 1) JC03 AND PC10; 2) PC08; 3) PC03; 4) PC02.5 AND PC02.3; 5) PC02WH AND PC02; AND 6) PCEF-04.
4. BOXPLOTS SHOW THE DISTRIBUTION OF DATA AT EACH SITE (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES).
5. VALUES BELOW THE DETECTION LIMIT ARE EQUATED TO HALF THE DETECTION LIMIT FOR STATISTICAL AND GRAPHING PURPOSES. BASED ON THIS METHOD, SOME VALUES SHOWN TO BE ABOVE GUIDELINES MAY NOT ACTUALLY EXCEED GUIDELINES.
6. THE GRAPHS IN THE TOP ROW ARE SHOWN IN THIS FIGURE ARE SHOWN AS EXAMPLES TO REPRESENT SEASONAL TRENDS THAT WERE GENERALLY OBSERVED AT EACH SITE WITHIN THE PETERSON CREEK WATERSHED.
7. THE BCWQG-MAX FOR IRON IS 1 mg/L (SPECIFIC TO TOTAL IRON) AND THE CEQG-PAL IS 0.3 mg/L.
8. THE HC-DW AESTHETIC OBJECTIVE FOR IRON IS 0.3 mg/L.

Selenium

Selenium was predominantly detected in the dissolved form in Peterson Creek and the distribution of concentrations within the creek is somewhat different than the other parameters discussed. In earlier analyses, the MDLs were elevated, and as such clear resolution of the selenium concentrations has been hampered. The MDLs for more recent sampling events (October 2011 to date) have decreased due to the request for alternative low levels metals analysis. Low levels of selenium have been detected in almost all of the samples since this time. Selenium concentrations trended upwards through the winter months, typically reaching peak concentrations in April, when groundwater inflows are the predominant waters contributing to surface flows. Similar trends were observed for selenium at Peterson Creek tributary sites in Keynes Creek (KC03) and lower Humphrey Creek (HUMPH02), though peak concentrations were much higher at these sites. Selenium concentrations at monitoring site PC02 (located in agricultural property immediately adjacent to the Princeton-Kamloops Highway and north of a quarry in Knutsford, BC) were typically the highest compared to other Peterson Creek sites and often exceeded the 0.001 mg/L CEQG-PAL and occasionally also exceeded the less stringent 0.002 mg/L BCWQG-30 D. The total and dissolved selenium seasonal and spatial variability boxplots are provided for the Peterson Creek water quality sites on Figure 4.16.

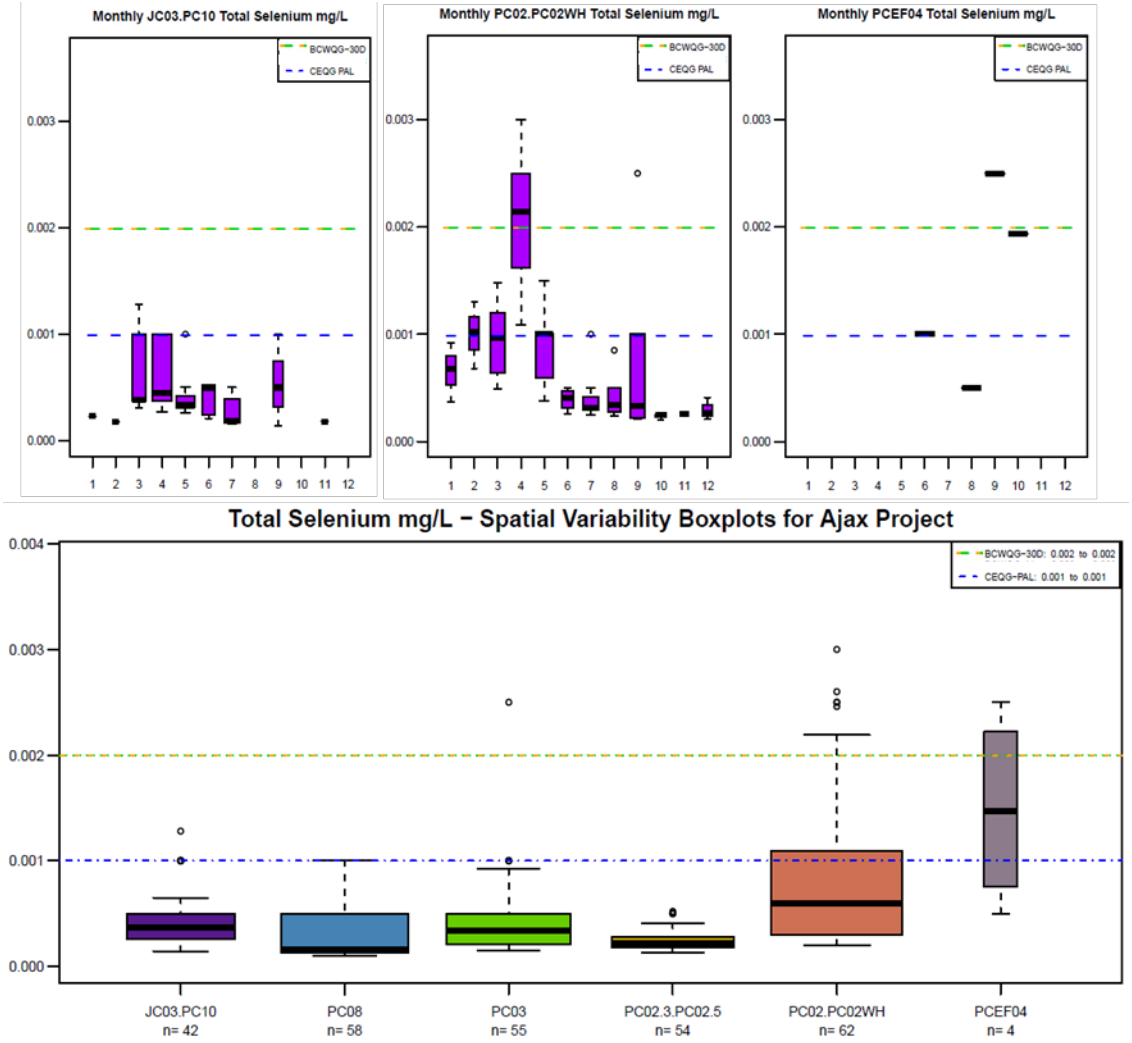


Figure 4.16 Spatial Boxplot of Total Selenium in Peterson Creek

NOTES:

1. Y-AXIS UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. X-AXIS UNITS FOR GRAPHS IN THE TOP ROW ARE MONTHS; IN THE BOTTOM GRAPH, SITE ARE LISTED ALONG THE X-AXIS IN ORDER FROM UPSTREAM TO DOWNSTREAM. n=NUMBER OF SAMPLES.
3. SITES ALONG PETERSON CREEK HAVE BEEN COMBINED INTO SIX GROUPINGS, EACH REPRESENTING ONE SECTION OF THE CREEK (FROM UPSTREAM TO DOWNSTREAM): 1) JC03 AND PC10; 2) PC08; 3) PC03; 4) PC02.5 AND PC02.3; 5) PC02WH AND PC02; AND 6) PCEF-04.
4. BOXPLOTS SHOW THE DISTRIBUTION OF DATA AT EACH SITE (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES).
5. VALUES BELOW THE DETECTION LIMIT ARE EQUATED TO HALF THE DETECTION LIMIT FOR STATISTICAL AND GRAPHING PURPOSES. BASED ON THIS METHOD, SOME VALUES SHOWN TO BE ABOVE GUIDELINES MAY NOT ACTUALLY EXCEED GUIDELINES.
6. VALUES REPORTED BELOW THE MDL OF 0.002 mg/L PRIOR TO OCTOBER 2011, WHEN THE MDL WAS LOWERED, ARE NOT SHOWN ON THESE GRAPHS.
7. THE GRAPHS IN THE TOP ROW ARE SHOWN IN THIS FIGURE ARE SHOWN AS EXAMPLES TO REPRESENT SEASONAL TRENDS THAT WERE GENERALLY OBSERVED AT EACH SITE WITHIN THE PETERSON CREEK WATERSHED.
8. THE BCWQG-MAX FOR SELENIUM IS 0.002 mg/L AND THE CEQG-PAL IS 0.001 mg/L.
9. ONE OUTLIER VALUE WAS REMOVED FROM THE BOXPLOT FOR PC03 BECAUSE IT WAS A RESULT OF AN ELEVATED MDL.

4.4.2 Jacko Lake Water Quality Assessment

4.4.2.1 Physical Parameters, Major Ions and Nutrients

Physical Parameters

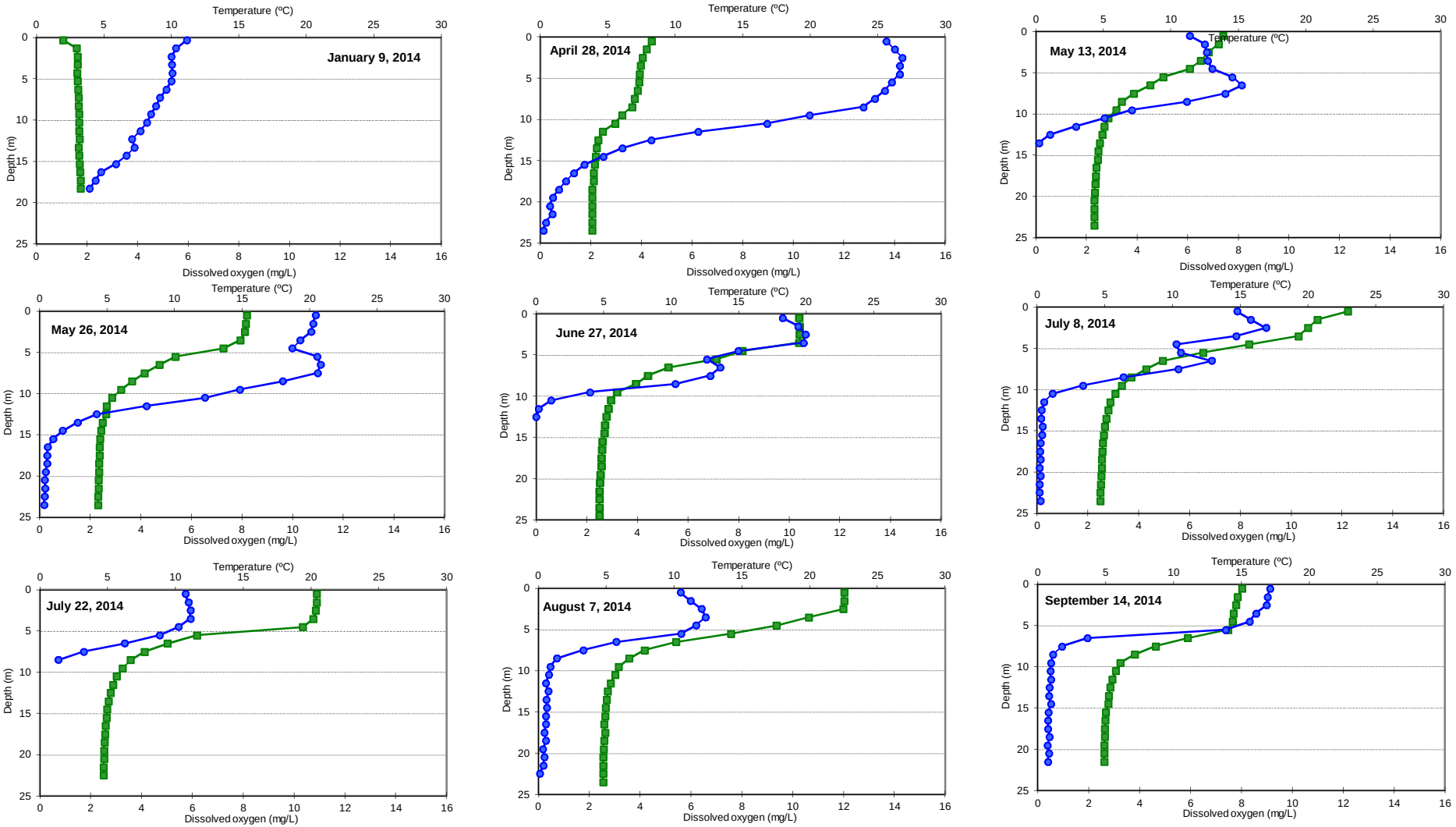
Depth profiles of *in situ* parameters have been recorded since 2007 and are provided for dissolved oxygen, temperature, and pH in Appendix C; the most recent (2014) lake profiles have been included as examples embedded in this section of the report: Figure 4.17 (dissolved oxygen and temperature) and Figure 4.18 (pH).

Jacko Lake waters are generally characterized as neutral to basic pH, very hard, with high buffering capacity. Shallow water samples had higher pH compared to deeper samples and exhibited greater seasonal variability; pH tended to exceed the drinking water acceptable upper limit of 8.5 during the summer, though remained below the aquatic life upper limit of pH 9.0. TDS concentrations were higher in the deep samples than the shallow samples (median concentrations of 453 mg/L and 413 mg/L, respectively) and remained consistent through the sampling program with little seasonal variability. The TDS values observed classify this water body as freshwater. Specific conductance (SpC) for the lake also increased with depth was higher than typical for the BC interior, with median values of 740 µS/cm and 663 µS/cm in the deep and shallow samples, respectively (RISC 1998). Higher than typical conductivity (and TDS) is likely due to the net evaporative climate conditions in the Project area which can result in greater concentrations of dissolved species in local waters. TSS and turbidity values for the lake and creek area are low. Secchi depth measurements were collected on the majority of the ice free sample collection dates and the and were generally between 3 m and 5 m, which is typical for lakes with the trophic status descriptions of eutrophic to meso-eutrophic.

Water temperature for Jacko Lake was seasonally affected throughout the year. *In situ* measurements taken along the surface of Jacko Lake showed temperatures just above freezing in the winter, with median summer temperatures of 20^{o}C. *In situ* measurements taken at depth showed a more consistent temperature profile, with a median temperature of 3.2 ^{o}C in the winter and close to 5 ^{o}C during the other three seasons.

The dissolved oxygen and temperature profiles for Jacko Lake (Figure 4.17) are indicative of mesotrophic (moderately biologically productive) conditions where the dissolved oxygen concentrations remain high in the epilimnion (the upper wind-mixed layer), throughout the summer. This is likely due to photosynthesis and diffusion from the atmosphere. Dissolved oxygen and temperature tend to decline rapidly with depth across the thermocline, and fall more gradually in the hypolimnion where no wind-mixing and little photosynthetic influences occur. Anoxic conditions were commonly observed near bottom-sediments in summer sampling events, likely due to decomposition of organic matter and the oxygen consumption of lake bed dwelling organisms.

During spring and fall turnover, temperate lakes tend to have uniform, well-mixed conditions throughout the water column. Spring turnover tends to happen as soon as the ice melts from the lake, which is typically in April or early May, though this has been noted to occur earlier and is highly dependent on the climatic conditions of a given year. Fall turnover conditions have been reported for sampling events in September, predominantly, but have occurred as late as November.



NOTES:

1. DEPTH UNITS ARE METRES BELOW SURFACE.
2. TEMPERATURE IS SHOWN ON THE PRIMARY X-AXIS.
3. DISSOLVED OXYGEN IS SHOWN ON THE SECONDARY X-AXIS.

Legend

Dissolved Oxygen (mg/L)

Temperature (˚C)

KGHM AJAX MINING INC.

AJAX PROJECT

2014 JACKO LAKE DEPTH PROFILES
DISSOLVED OXYGEN AND TEMPERATURE

Knight Piésold CONSULTING

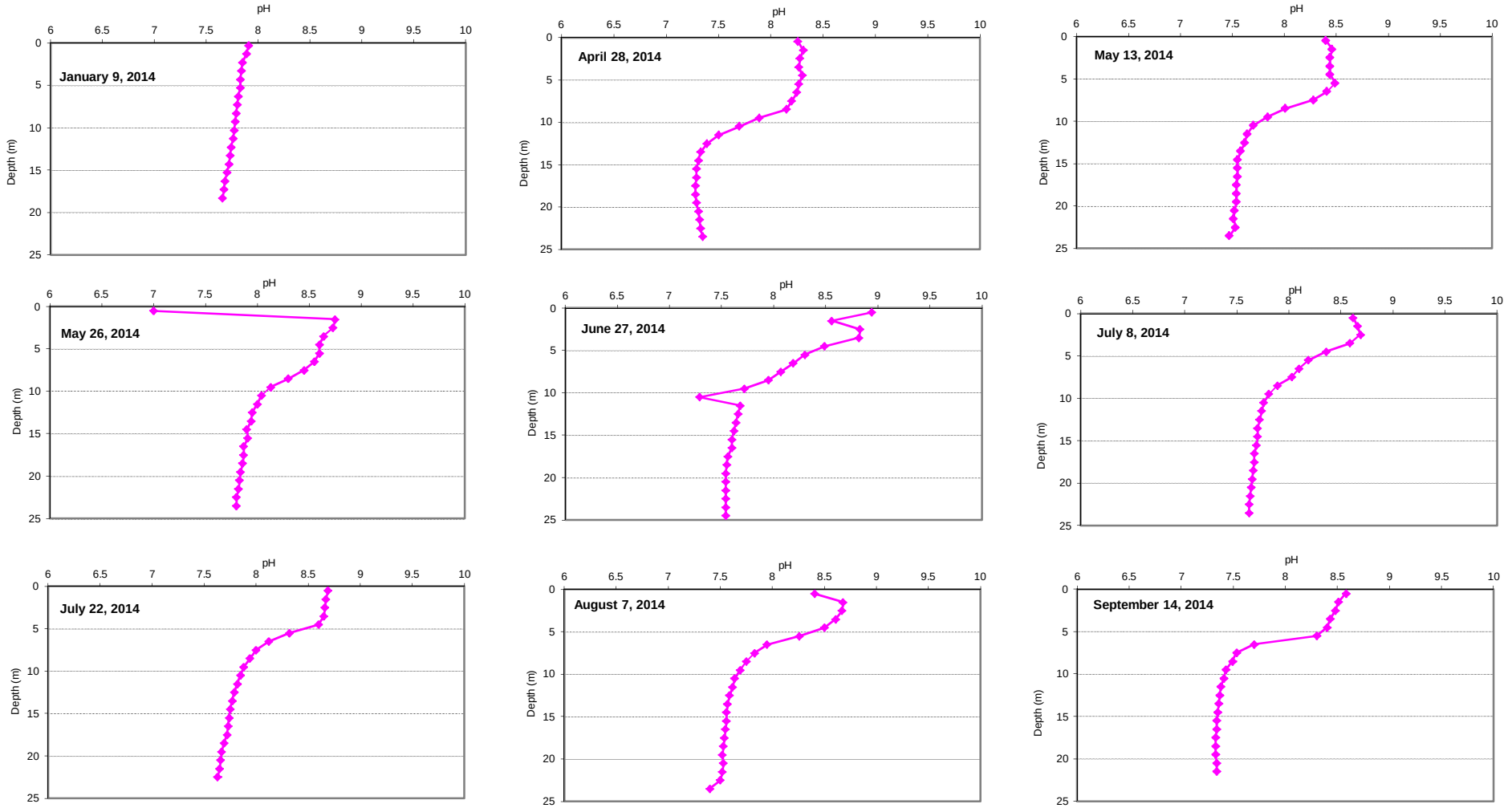
P/A NO. VA101-246/31

REF NO. 3

FIGURE 4.17

REV 0

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	14APR'15	ISSUED WITH REPORT	CJ	JEM



NOTES:

1. DEPTH UNITS ARE METRES BELOW SURFACE.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	14APR'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

AJAX PROJECT

2014 JACKO LAKE DEPTH PROFILES
pH

Knight Piésold CONSULTING

P/A NO. VA101-246/31

REF NO. 3

FIGURE 4.18

REV 0

Major Ions

The ion characterization of Jacko Lake is shown on the Piper diagram on Figure 4.2. The dominant anion in the Jacko Lake water samples is bicarbonate, with significant contributions of chloride in the deeper samples. There are no dominant cations (none contribute greater than 50%), though magnesium is weekly dominant in the shallow water samples, with significant calcium, while magnesium is the dominant cation at mid- and deep depth ranges, with equally significant calcium and sodium contributions.

Fluoride concentrations were observed in similar concentrations to what those in samples collected in Peterson Creek and the Open Pit area, and frequently exceeded the 0.12 mg/L CEQG-PAL, indicating that fluoride is persistent throughout the baseline study area. CEQG-PAL exceedances for fluoride were observed in 92% of the samples collected in Jacko Lake; however, all sample concentrations remained below the hardness dependent BCWQG-Max (1.57 mg/L for hardness 180 mg/L $CaCO_3$ or greater).

Sulphate and chloride concentrations were observed in lesser concentrations that what were found in the greater Peterson Creek watershed area samples and both of these parameters were noted to increase in concentration with depth. Chloride concentrations remained below all applicable guidelines. The SBEB developed for sulphate was necessary for the assessment of Jacko Lake water quality due to the hard water conditions in the lake, despite the lower sulphate concentrations (ranged from 37 mg/L to 84.5 mg/L); hardness rarely dropped below 250 mg/L CaCO3, which is the threshold in the BCWQG-30 D for sulphate that triggers the requirement for site specific toxicity testing. The recommended SBEB for the lake, which supports early life stages for trout, is a maximum sulphate concentration of 429 mg/L, which is the same as the current BCWQG-30 D, but with the maximum hardness adjusted up to 800 mg/L $CaCO_3$ (Nautilus 2015). There were no reported sulphate concentrations that exceeded the SBEB and sulphate concentrations have been trending down since sampling began in 2007, with concentrations typically above 80 mg/L in 2007 and the maximum concentration reported at 55.1 mg/L in 2014.

Nutrients

Phosphorous concentrations in Jacko Lake varied with depths and season. Surface concentrations of total phosphorous (TP) decreased during freshet and remained stable through the summer, while at the depths of Jacko Lake, this trend was reversed: TP typically remained stable during freshet and increased in the summer, with highest concentrations observed in the fall season. The median TP concentrations observed along the surface of the lake were in the eutrophic range in winter and spring and in the upper range of meso-eutrophic in the summer and fall, while concentrations at depth were generally in the upper eutrophic and hyper-eutrophic ranges. The TP concentrations within Jacko Lake at depth were significantly more variable than the shallow sample concentration and the concentrations immediately downstream (PC08) were generally similar to the shallow water sample values. Using the average TP concentrations the shallow water in the lake was within the eutrophic range and the deeper water was within the hyper-eutrophic range.

The nitrogen based inorganic nutrient (nitrite, nitrate, and ammonia) concentrations were generally low in Jacko Lake and few guideline exceedances were noted. Ammonia was the only parameter to exceed the temperature- and pH dependent aquatic life guidelines and these exceedances were

observed only in the samples collected at depth (15% of JACL-D samples exceeded the guidelines for ammonia).

Organic Carbon and Nitrogen

Organic carbon in Jacko Lake was mainly observed in the dissolved form and was remained consistent seasonally and with depth, ranging between 12 mg/L and 18 mg/L and exceeded the 4.0 mg/L BCWQG-Drinking Water. This guideline is applicable only to treated water sources because the presence of organic carbon can result in the formation of toxic trihalomethanes when chlorinated. Organic nitrogen concentrations were low and exhibited a slight increase with depth.

4.4.2.2 Metals and Metalloids

Total and dissolved metal concentrations within Jacko Lake have remained low over the course of the baseline water quality sampling program when compared to other sites in the local watershed. The majority of total and dissolved metal concentrations were observed below detection limits and those that were reported above the MDL were typically below the aquatic life guidelines. Isolated exceedances (i.e. fewer than 10% of samples) were observed for selenium, copper, and zinc, and manganese concentrations regularly exceed the drinking water aesthetic objectives in the samples collected at depth. Jacko Lake, unlike the Historical Mine Site Features and Inks Lake and Wallander Lake, has inlet creeks and an outlet channel, and as a result loading to the lake is moderated. Parameters in the evaporative lakes and anthropogenic features continually rise, as they are low points that receive groundwater inflows and contact water (Historical Mine Site Features), and they are effectively evaporative features with no means of load removal, except through precipitations due to natural solubility constraints.

Manganese was the only metal parameter that was continuously elevated. Concentrations were greater at depth and were generally lower in the spring immediately following spring turnover, increasing in samples collected between July and September. Exceedances of the HC-DW aesthetic objective were observed when thermal stratification was also observed. When a thermocline develops sediments and the immediately overlying water column become depleted of oxygen (anoxic) which can result in an increase in dissolved manganese as a result of reduction reactions with manganese oxide sediment deposits (Hem 1985).

4.4.3 Historical Mine Site Features Water Quality Assessment

This section of the baseline water quality report is focused on characterizing water quality in areas of the water quality study area that have been affected by previous mining activities. These features include the North Seepage Collection Pond (NSP), the historical mine rock seepage area (WR-Seep), the south catchment (S. Catchment), and the two open pit areas (west and east). All sites are recharged by groundwater and surface water inflows and outflows have not been observed. The water level in the open pit lakes are well below the natural ground surface and below observed water levels in the surrounding ground water wells and as such seepage losses to the surrounding environment from the lakes are not likely, though seepage losses are suspected from the seepage collection ponds.

4.4.3.1 Physical Parameters, Major Ions, Nutrients, and Organics

The water at all the historical mine features sites is generally characterized as neutral to basic pH, very hard with high to very high alkalinity (buffering capacity). Samples collected from S. Catchment and NSP had high pH, which frequently exceeded the upper acceptable limits of the HC-DW guideline; no samples exceeded the upper acceptable limit of the aquatic life guidelines (pH 9). The waters at each location are very high in dissolved solids and are generally considered to be brackish.

The TDS of the water at all the historical mine site feature sites is high relative to freshwater, and is generally considered brackish. TDS is a measure of the combined content of ionic constituents in water and includes calcium, phosphate, nitrate, sodium, potassium, and chloride. Typically the Ajax West-West Pit (AJWW) water is more saline than the Ajax West-East Pit (AJWE), though both are classified as moderately saline (TDS between 3,000 mg/L and 10,000 mg/L). The AJWW pit is periodically dry and cannot be sampled regularly. TDS, a measure of the combined content of substances (including calcium, phosphate, nitrate, sodium, potassium, and chloride) contained in water, was used to classify the salinity of each water body. The mine rock seepage pond (WR-Seep) to the south of Peterson Creek was classified as freshwater only during spring melt, after which it becomes slightly to moderately saline. The samples collected from NSP were moderately saline (TDS >5,000 mg/L) and the samples collected from S. Catchment were slightly to moderately saline (TDS 2,000 mg/L to 3,500 mg/L). In comparison with other water bodies in the area, Inks Lake, in the Cherry Creek watershed, is more saline than the NSP, demonstrating the high TDS of the general area of the Project. Additionally, samples from Wallander Lake demonstrated extreme TDS concentrations for an inland water feature, similar to and greater than those found in ocean water (>35,000 mg/L). These mine features and other water bodies (Wallander Lake and Inks Lake) are in effect evaporative basins in local groundwater discharge zones within a net evaporative climate and as a result the concentration of the majority of parameters will continue to rise over time. The parameters in the man-made features and the natural lakes tend to have significantly higher concentrations than the surrounding groundwater and surface water. In situations like this, parameter concentrations are generally controlled by solubility limits, and clear resolution of parameter concentrations can be hampered due to sample matrix interference and the dilution requirements for analysis.

Major Ions

The water types in the Historical Mine Site Features vary slightly between sites but are generally classified as magnesium-sulphate, though magnesium is weekly dominant in the waters from the open pit lakes and the WR-Seep and strongly dominant in the S.Catchment and NSP samples. The piper diagram is provided on Figure 4.3.

Most samples collected from the historical mine site features had sulphate concentrations that were typically greater than 1,000 mg/L and exceeded guidelines. The distribution of sulphate concentrations at each site is shown in the boxplots on Figure 4.19. The SBEB of 730 mg/L for a hardness of up to 1,377 mg/L $CaCO_3$ was recommended for surface waters where early life stages for trout are not expected to occur (Nautilus 2015). The majority of the water samples from the historical mine features exceeded the SBEB; though it should be noted that the factor of safety incorporated into the SBE was two-fold and no adverse effects were observed for concentrations of sulphate up to 1,460 mg/L (Nautilus 2015). All of the samples exceeded the drinking water guidelines (BCWQG-DW and HC-DW; both 500 mg/L) and most exceeded the 1,000 mg/L BCWQG-Livestock

and CEQG-Livestock. A few samples from WR-Seep were below the livestock guideline, typically those collected immediately following spring freshet.

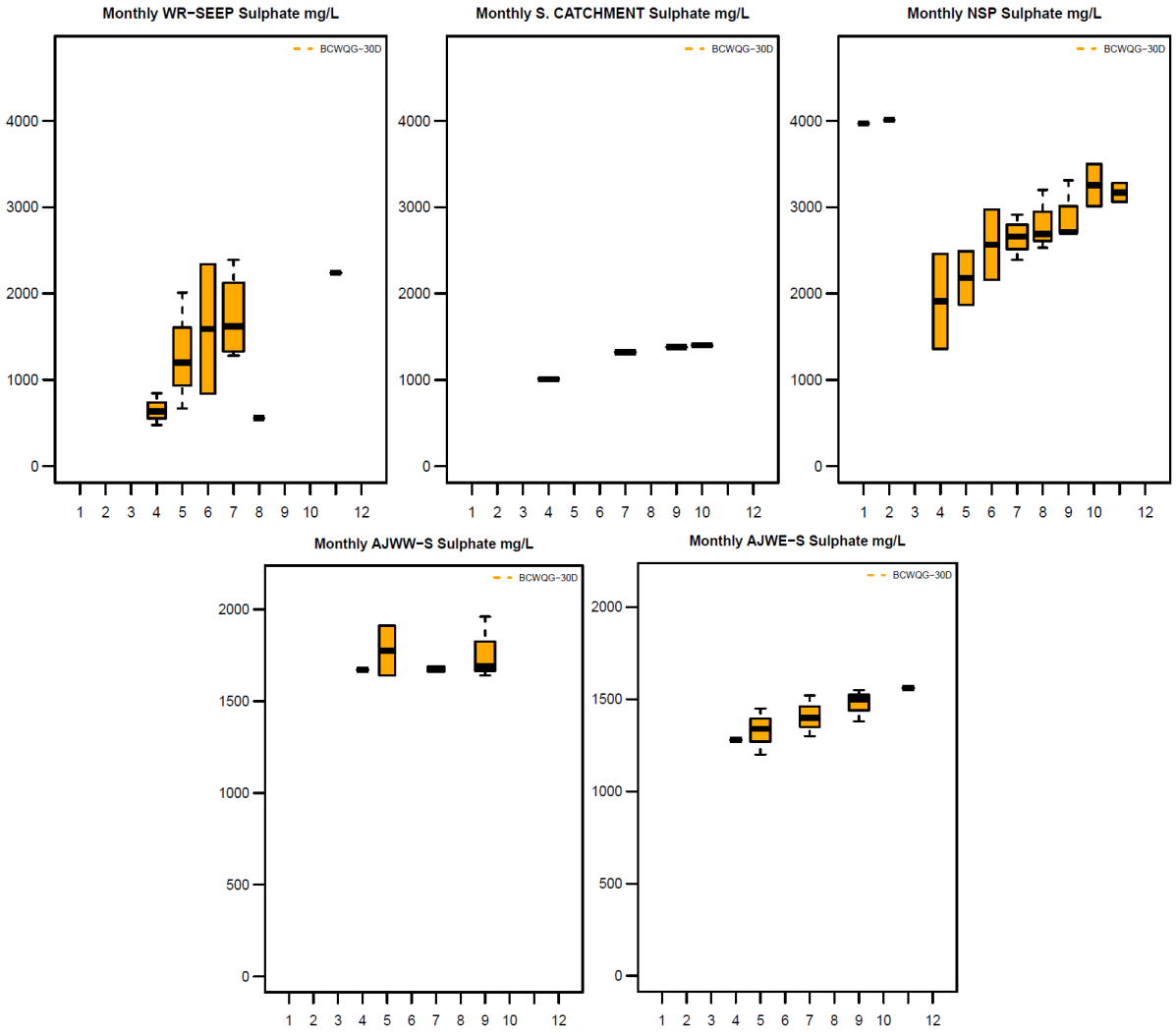


Figure 4.19 Boxplot of Sulphate at the Historical Mine Site Features

NOTES:

1. Y-AXIS UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. X-AXIS UNITS ARE MONTHS.
3. BOXPLOTS SHOW THE DISTRIBUTION OF DATA FOR EACH MONTH (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES).
4. VALUES BELOW THE DETECTION LIMIT ARE EQUATED TO HALF THE DETECTION LIMIT FOR STATISTICAL AND GRAPHING PURPOSES. BASED ON THIS METHOD, SOME VALUES SHOWN TO BE ABOVE GUIDELINES MAY NOT ACTUALLY EXCEED GUIDELINES.
5. THE BCWQG-30 D FOR SULPHATE IS DEPENDENT ON ONGOING TOXICITY TESTS; PRELIMINARY SCIENCE-BASED ENVIRONMENTAL BENCHMARK TESTING RESULTS HAVE INDICATED A RECOMMENDED LIMIT OF 730 mg/L FOR THE PROTECTION OF AQUATIC LIFE. THIS IS NOT SHOWN ON THE PLOTS.

Fluoride sample concentrations remained below the BCWQG-Max (1.57 mg/L for hardness of 108 mg/L $CaCO_3$ or greater) and exceeded the more stringent CEQG-PAL (0.12 mg/L) in almost every sample collected from the historical mine site features. The distribution of fluoride concentrations in comparison with aquatic life guidelines is shown on Figure 4.20. Fluoride occasionally exceeded the 1 mg/L BCWQG/CEQG thresholds for livestock and irrigation but remained below the BCWQG and HC thresholds for drinking water (both 1.5 mg/L).

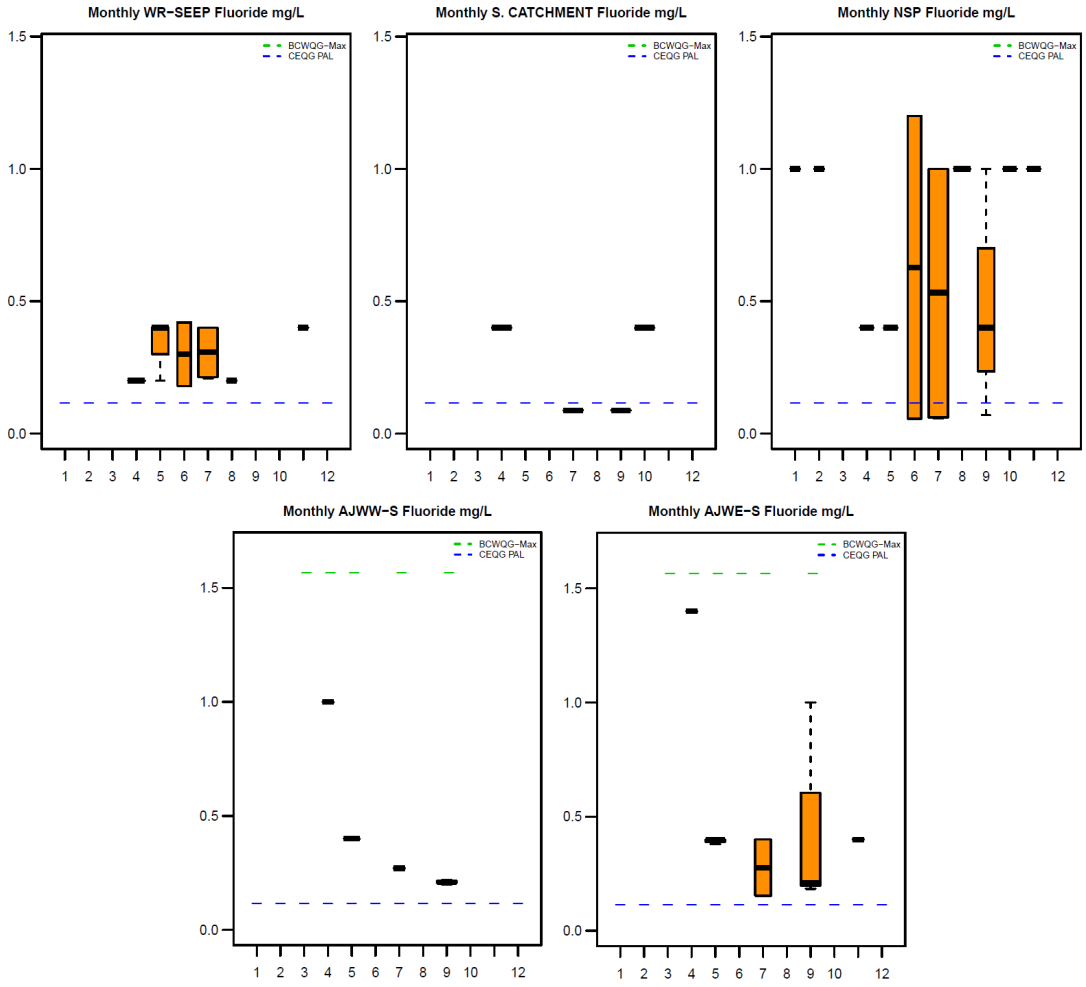


Figure 4.20 Boxplot of Fluoride at the Historical Mine Site Features

NOTES:

1. Y-AXIS UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. X-AXIS UNITS ARE MONTHS.
3. BOXPLOTS SHOW THE DISTRIBUTION OF DATA FOR EACH MONTH (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES).
4. VALUES BELOW THE DETECTION LIMIT ARE EQUATED TO HALF THE DETECTION LIMIT FOR STATISTICAL AND GRAPHING PURPOSES. BASED ON THIS METHOD, SOME VALUES SHOWN TO BE ABOVE GUIDELINES MAY NOT ACTUALLY EXCEED GUIDELINES.
5. THE CEQG-PAL FOR FLUORIDE IS 0.12 mg/L; THE BCWQG-MAX FOR FLUORIDE IS HARDNESS-DEPENDENT AND IS NOT WITHIN THE SCALE OF THIS GRAPH.

Nutrients

Nitrate and nitrite concentrations are elevated in the water samples collected from the Ajax West open pits and in the historical mine rock seepage collection pond south of Peterson Creek. In the AJWW open pit, the nitrate concentrations were continually over 60 mg/L, exceeding the 32.8 mg/L BCWQG-Max and well above the 3 mg/L CEQG-PAL and BCWQG-30 D for this parameter. Sample nitrate concentrations in the AJWE open pit were lower, with all samples below the less stringent BCWQG-Max, but still exceeded the CEQG-PAL and BCWQG-30 D. The CEQG-PAL and BCWQG-30 D referenced in this report are specific to long-term exposure and are directly relevant for the comparison with the average concentration of the 5-in-30 sampling programs. The short-term exposure limit under the CEQG-PAL is 124 mg/L; however, given the continuous nature of the exceedances in the open pit it is reasonable to apply the long-term exposure limits. All samples collected from both pits exceeded the drinking water guidelines (BCWQG-DW and HC-DW; both 1 mg/L). The range of nitrate concentrations at each site is shown on the boxplots on Figure 4.21; the sample concentrations were similar in the shallow and deep samples in both of the historical open pits so only the shallow sample results are provided graphically. Only one sample from the WR-Seep site exceeded the CEQG-PAL and BCWQG-30 D (not the BCWQG-Max).

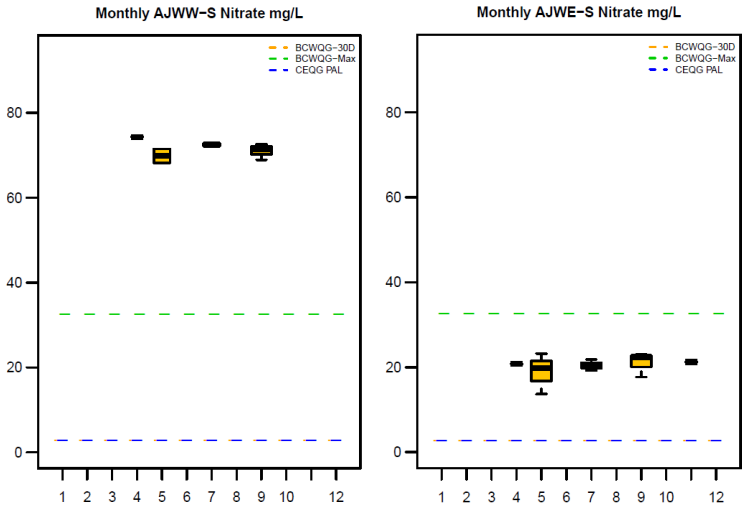


Figure 4.21 Boxplot of Nitrate at the Historical Open Pits

NOTES:

1. Y-AXIS UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. X-AXIS UNITS ARE MONTHS.
3. BOXPLOTS SHOW THE DISTRIBUTION OF DATA FOR EACH MONTH (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES).
4. VALUES BELOW THE DETECTION LIMIT ARE EQUATED TO HALF THE DETECTION LIMIT FOR STATISTICAL AND GRAPHING PURPOSES. BASED ON THIS METHOD, SOME VALUES SHOWN TO BE ABOVE GUIDELINES MAY NOT ACTUALLY EXCEED GUIDELINES.
5. THE BCWQG-MAX FOR NITRATE IS 32.8 mg/L AND THE CEQG-PAL IS 3 mg/L; GUIDELINE EXCEEDANCES WERE NOT OBSERVED; THIS GRAPH IS INCLUDED TO SHOW THE SEASONAL TREND IN NUTRIENT CONCENTRATIONS.

Nitrite concentrations in the Ajax West open pits and the WR-Seep often exceeded the 0.06 mg/L N CEQG-PAL and on several occasions exceeded the BCWQG-Max (chloride-dependent); however, none exceeded the BCWQG-30 D (3 mg/L). Chloride concentrations in the waters of the Historical

Mine Site Features were high (33 mg/L on average), resulting in much higher BCWQG-Max values (maximum guideline value of 0.6 mg/L for chloride greater than 10 mg/L).

Although nitrate and nitrite concentrations were not an issue in the NSP or the S Catchment, ammonia concentrations were elevated. All but one of the samples from the NSP exceeded the CEQG-PAL and several samples also exceeded the BCWQG-Max. The majority of the S Catchment samples exceed the CEQG-PAL, but none exceed the BCQWG-Max. The ammonia guidelines are both pH and *in situ* temperature specific, becoming more restrictive under high pH and temperature conditions. The high pH of these water features results in greater potential toxic effects from this parameter, which is further exacerbated with the high water temperatures achieved in the shallow water features during the summer months.

Phosphorus levels were elevated in samples collected from NSP, S. Catchment, and WR-Seep (all eutrophic to hyper-eutrophic) and were consistently low in samples collected from the open pit. The open pit TP concentrations were very low and indicative of oligotrophic to ultra-oligotrophic tropic status.

4.4.3.2 Metals and Metalloids

Metals were elevated in the water quality samples from the Historical Mine Site Features in the Peterson Creek watershed, which is expected based on the ion concentrations and the evaporative nature of the water bodies. As previously stated, clear resolution of parameter concentrations was hindered due to sample matrix interference and the dilution requirements for analysis of the majority of these samples, for which the greatest effects were noted for the detection of cadmium. Other parameters had similar issues, but to a lesser degree and these included copper, chromium, and selenium. Metals were predominantly present in the dissolved form and all exceedances discussed below should be assumed to apply to both the total and dissolved concentrations, unless otherwise specified. There is little seasonality to the metals analytical data and concentrations were generally high. The discussion in this section is brief and provides a summary of the exceedances as they pertain specifically to the aquatic life guidelines. The discussion of these guideline exceedances is kept brief because these waters are not fish-bearing and are not used for drinking water or for agricultural purposes. For simplicity and ease of viewing, figures showing boxplots of the range of metal parameter concentrations at each site have been summarized at the end of each section (i.e. graphs showing the range of all metal parameter concentrations for sites in each subsection are compiled into one figure at the end of the subsection). The exceedances of the other relevant guidelines will be addressed in brief.

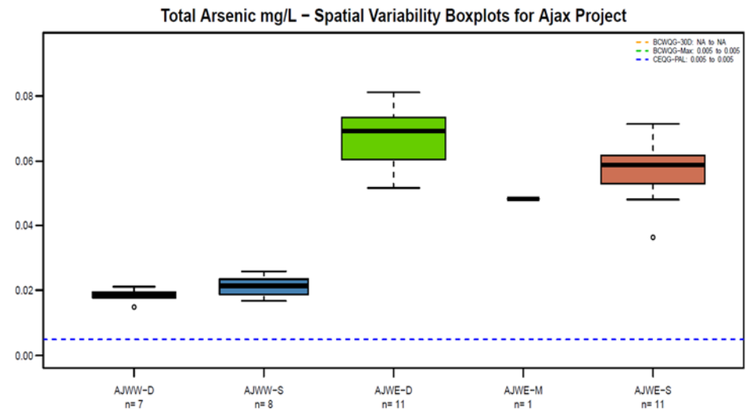
Ajax West-West and Ajax West-East Open Pits (AJWW and AJWE)

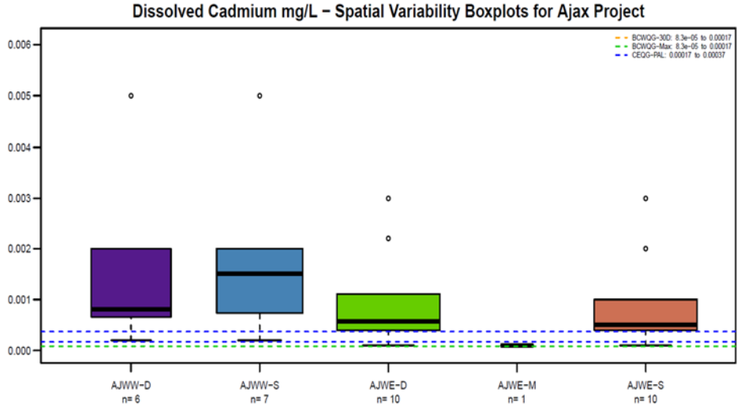
The following metals exceeded guidelines on a continuous basis (boxplots showing ranges of concentrations of metal parameters for which aquatic life guideline exceedances were observed often are shown on Figure 4.22):

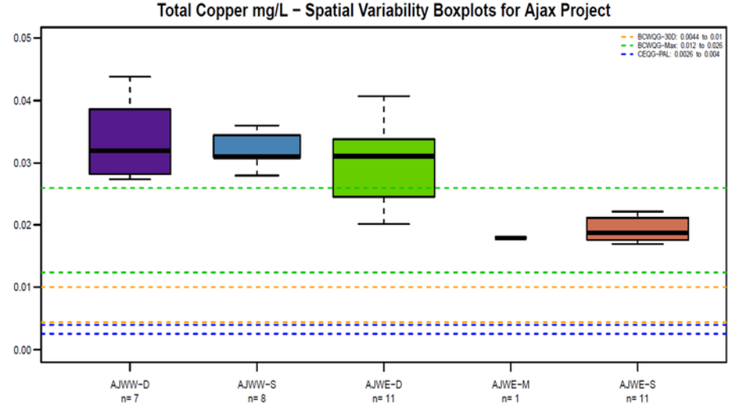
- Arsenic – Concentrations were consistently well over aquatic life guidelines (CEQG-PAL and BCWQG-Max; both 0.005 mg/L) and were higher in samples collected from AJWE than from AJWW. Drinking water and livestock water use guidelines were also exceeded in the open pit samples.
- Cadmium – Concentrations exceeded aquatic life guideline limits regularly at each site. It should be noted that many samples for this parameter were in fact below the MDL, but the MDL was

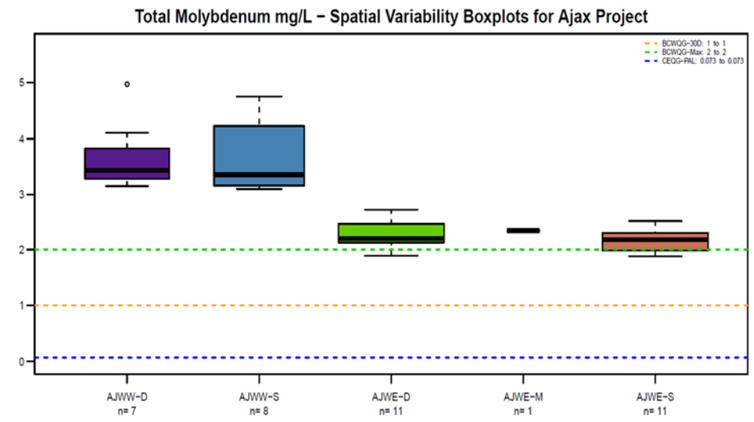
significantly higher than the guideline and other detected values. The high non-detect values were assumed to exceed guidelines, but were not used in the calculation of the average concentration to determine the exceedance factor presented above and were not highlighted as exceedances in the summary tables in Appendix C.

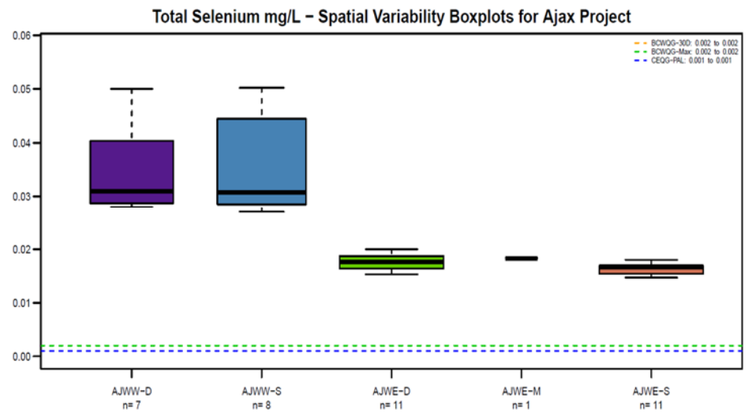
- Copper – Concentrations were higher in samples collected from AJWW than AJWE, but exceeded all three aquatic life guidelines (BCWQG-30 D, BCWQG-Max, and CEQG-PAL; in both pits). At AJWE, only the samples collected at depth exceeded the BCWQG-Max, while samples collected in the middle of the water column and from the surface were below this threshold.
- Molybdenum – Concentrations were higher in samples collected from AJWW than AJWE, but exceeded all three aquatic life guidelines (BCWQG-30 D, BCWQG-Max, and CEQG-PAL) at all sites. The open pit molybdenum concentrations also exceeded the drinking water, livestock, irrigation, and wildlife water use guidelines.
- Selenium – Concentrations were over ten times greater than the 0.002 mg/L BCWQG-30 D limit over 20 times greater than the more stringent 0.001 mg/L CEQG-PAL limit at all sites in the historical open pit, but were higher in samples collected from AJWW than from AJWE. The open pit selenium concentrations also exceeded the drinking water and agricultural (irrigation and livestock) water use guideline limits.
- Antimony – Concentrations consistently exceeded the 0.009 mg/L BCWQG in samples collected from both AJWE and AJWW. Concentrations were generally higher in the sample collected at depth and fewer guideline exceedances were observed in the shallow samples.
- Uranium – Concentrations of this parameter exceeded the BCWQG of 0.0085 mg/L in almost all samples and often exceeded the 0.01 mg/L BCWQG and CEQG for irrigation water uses. Concentrations of uranium in natural waters ranged from 0.001 mg/L to 0.010 mg/L and concentrations in excess of 1 mg/L are indicative of uranium-ore deposits nearby (Hem 1985). The concentrations present in the historical open pits are at the upper limits of the natural water range, but are not indicative of a uranium-ore deposit, though there are several known uranium deposits in the Kamloops-North Thompson Region.

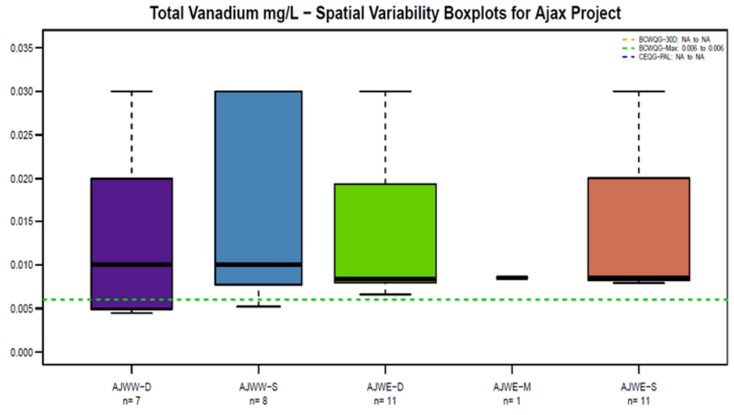












NOTES:

1. Y-AXIS UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. X-AXIS UNITS ARE BASELINE MONITORING SITES. n=NUMBER OF SAMPLES COLLECTED.
3. BOX PLOTS SHOW THE DISTRIBUTION OF DATA FOR EACH SITE (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES)
4. VALUES BELOW THE DETECTION LIMIT ARE EQUATED TO HALF THE DETECTION LIMIT FOR STATISTICAL AND GRAPHING PURPOSES. BASED ON THIS METHOD, SOME VALUES SHOWN TO BE ABOVE GUIDELINES MAY NOT ACTUALLY EXCEED GUIDELINES.
5. THE BCWQG-MAX AND THE CEQG-PAL FOR ARSENIC ARE 0.005 mg/L.
6. THE HC-DW GUIDELINE FOR ARSENIC IS 0.01 mg/L AND THE BCWQG-DW IS 0.025 mg/L.
7. AGRICULTURAL GUIDELINES (BCWQG AND CEQG-PAL) FOR ARSENIC ARE 0.1 mg/L FOR IRRIGATION USE AND 0.025 mg/L FOR LIVESTOCK DRINKING WATER.
8. CADMIUM AQUATIC LIFE GUIDELINES ARE HARDNESS-DEPENDENT (BCWQG AND CEQG-PAL) AND WERE CALCULATED BASED ON THE MEDIAN HARDNESS OF EACH SITE).
9. THE BCWQG-30 D AND BCWQG-MAX FOR CADMIUM ARE DRAFT GUIDELINES RELEASED IN JUNE 2014.
10. THE CEQG-PAL, BCWQG-MAX, AND BCWQG-30DAY THRESHOLDS FOR COPPER ARE HARDNESS-DEPENDENT AND WERE CALCULATED BASED ON THE MEDIAN MONTHLY HARDNESS OBSERVED AT EACH SITE.
11. AQUATIC LIFE GUIDELINES FOR MOLYBDENUM INCLUDE THE BCWQG-30DAY OF 1 mg/L, THE BCWQG-MAX OF 2 mg/L, AND THE CEQG-PAL OF 0.073 mg/L.
12. THE BCWQG-DW FOR MOLYBDENUM IS 0.25 mg/L..
13. THE AGRICULTURAL AND WILDLIFE GUIDELINES FOR MOLYBDENUM ARE 0.05 mg/L FOR LIVESTOCK DRINKING WATER (BCWQG AND CEQG) AND 0.02 mg/L AND 0.01 mg/L FOR IRRIGATION (BCWQG AND CEQG, RESPECTIVELY.
14. THE BCWQG-MAX FOR SELENIUM IS 0.002 mg/L AND THE CEQG-PAL IS 0.001 mg/L.
15. THE DRINKING WATER GUIDELINES FOR SELENIUM ARE 0.01 mg/L (BCWQG AND HC).

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P/A NO. VA101-246/31

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FIGURE 4.22

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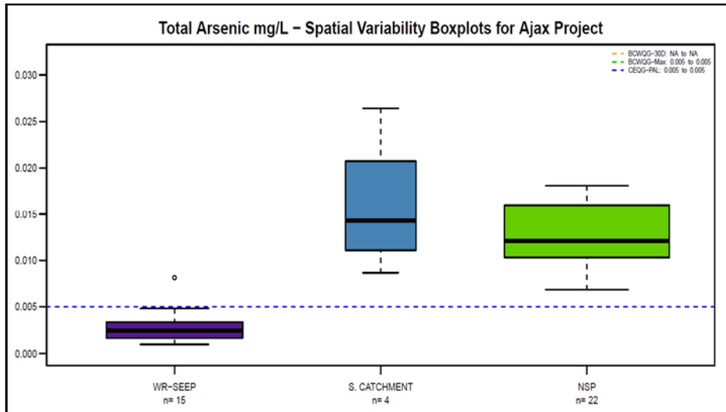
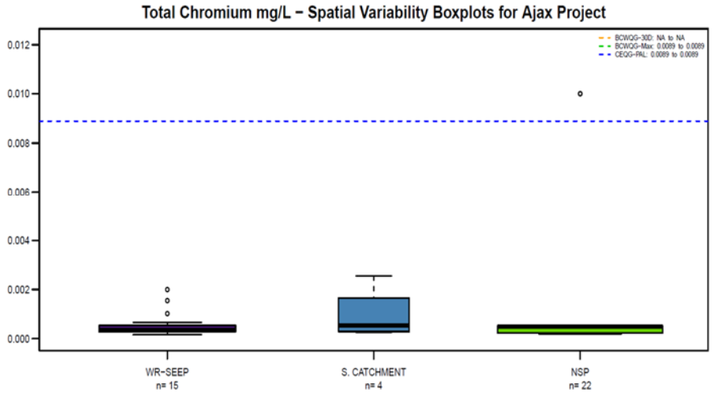
Historical Seepage Collection Ponds

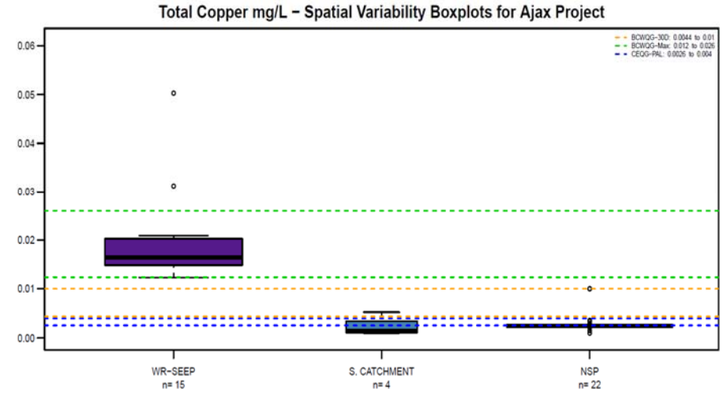
The discussion in this subsection focuses on metal parameters observed in the historical seepage collection areas, including the following sites: NSP, WR-Seep, and S. Catchment. The analysis of chemistry of the historical seepage collection ponds is complicated due to the brackish nature of the water. For simplicity, all figures have been compiled at the end of the text, on Figure 4.23, showing all boxplots of metal parameters of interest for all three sites in comparison to aquatic life guidelines (the figures do not include metals for which only sporadic guideline exceedances were observed).

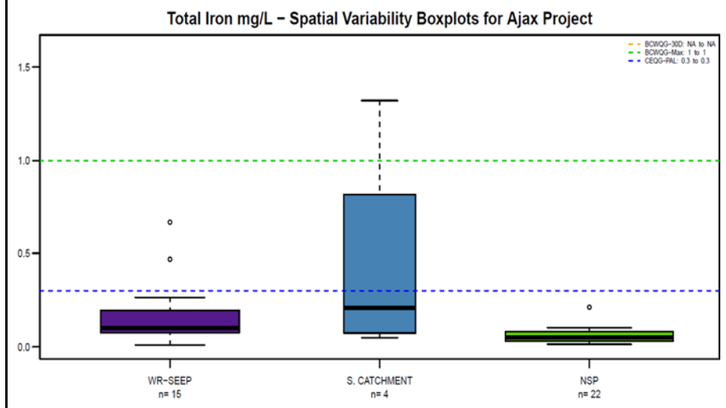
The following metals exceeded guidelines on a continuous basis:

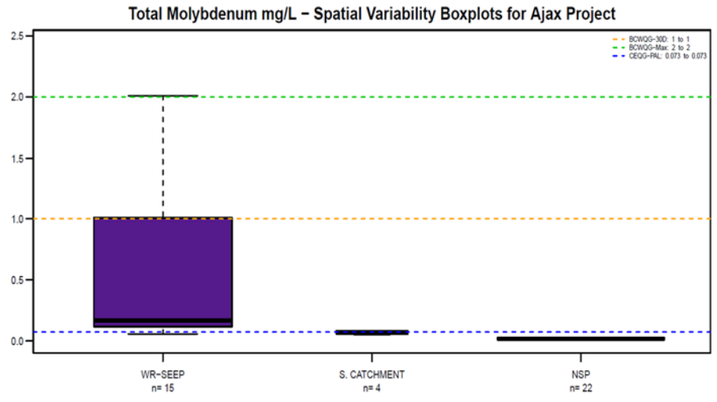
- Arsenic – Concentrations were on average two times greater than the 0.005 mg/L aquatic life guideline limits (BCWQG-Max and CEQG-PAL) in samples collected from S.Catchment and NSP; however, almost all samples collected from WR-Seep were below the guideline.
- Chromium – Exceedances of the CEQG-PAL for Cr(VI) were observed sporadically in samples collected from WR-Seep and more often in samples collected from S.Catchment.
- Copper – Concentrations exceeded the CEQG-PAL in all samples collected from WR-Seep and in several samples collected from S.Catchment and NSP. The samples collected from WR-Seep also exceeded the BCWQG-30 D, but did not exceed the BCWQG-Max. The BCWQG-30 D is relevant in this case, since concentrations were consistently over the guideline.
- Iron – Iron concentrations were below the guideline thresholds at NSP and WR-Seep, but exceeded the CEQG-PAL of 0.3 mg/L in two of the four samples collected from S.Catchment. One sample also exceeded the less stringent BCWQG-Max of 1 mg/L.
- Molybdenum – Only one sample, collected from WR-Seep, was noted to exceed the 2 mg/L BCWQG-Max limit, while several samples exceeded the 1 mg/L BCWQG-30 D, and all exceeded the 0.073 mg/L CEQG-PAL. The WR-Seep molybdenum concentrations also exceeded the drinking water and livestock and irrigation water use guideline limits. The samples collected from S.Catchment and NSP were lower and only two samples, collected from S.Catchment, exceeded the CEQG-PAL.
- Selenium – Concentrations were on average 10 times greater than the 0.002 mg/L BCWQG-30 D and 20 times greater than the 0.001 mg/L CEQG-PAL. The WR-Seep selenium concentrations were often 10 times greater than the 0.002 mg/L BCWQG-30 D and 20 times greater than the 0.001 mg/L CEQG-PAL and also exceeded the drinking water and irrigation water use guidelines. Sample concentrations observed at S.Catchment and NSP exceed the 0.01 mg/L BCWQG-Irrigation and 0.02 mg/L CEQG-Irrigation.

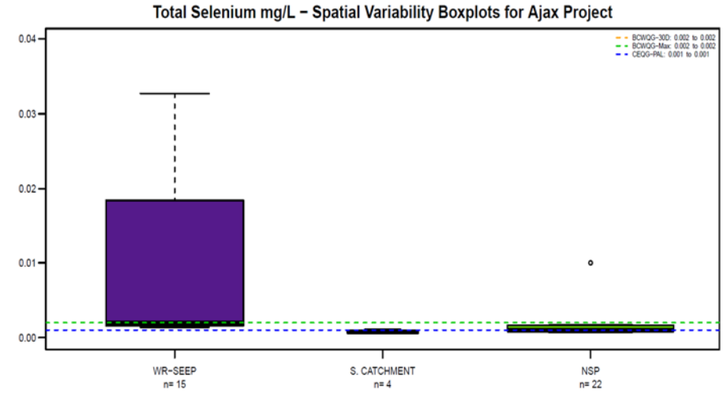


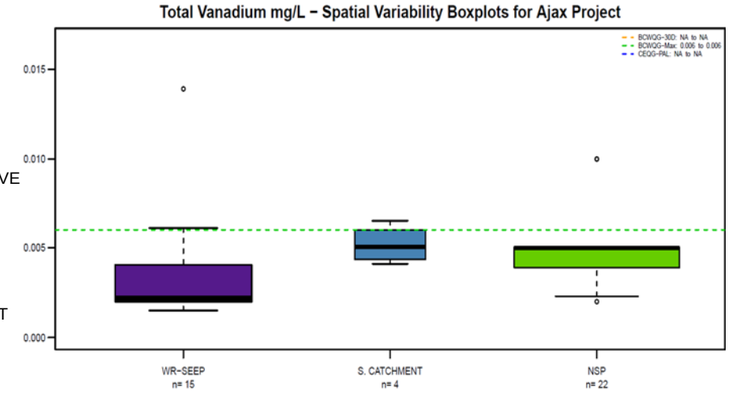












NOTES:

1. Y-AXIS UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. X-AXIS UNITS ARE BASELINE MONITORING SITES. n=NUMBER OF SAMPLES COLLECTED.
3. BOX PLOTS SHOW THE DISTRIBUTION OF DATA FOR EACH SITE (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES)
4. VALUES BELOW THE DETECTION LIMIT ARE EQUATED TO HALF THE DETECTION LIMIT FOR STATISTICAL AND GRAPHING PURPOSES. BASED ON THIS METHOD, SOME VALUES SHOWN TO BE ABOVE GUIDELINES MAY NOT ACTUALLY EXCEED GUIDELINES.
5. THE BCWQG-MAX AND THE CEQG-PAL FOR ARSENIC ARE 0.005 mg/L.
6. THE HC-DW GUIDELINE FOR ARSENIC IS 0.01 mg/L AND THE BCWQG-DW IS 0.025 mg/L.
7. AGRICULTURAL GUIDELINES (BCWQG AND CEQG-PAL) FOR ARSENIC ARE 0.1 mg/L FOR IRRIGATION USE AND 0.025 mg/L FOR LIVESTOCK DRINKING WATER.
8. THE CHROMIUM BCWQG-MAX AND CEQG-PAL THRESHOLDS FOR AQUATIC LIFE ARE 0.0089 mg/L FOR Cr(III) (SHOWN ON THE FIGURE); THE SAME GUIDELINES ARE 0.001 mg/L FOR THE CR(VI) SPECIES; THE SPECIES HAS NOT BEEN ANALYZED BUT IT IS TYPICALLY Cr(VI) IN WELL OXYGENATED WATERS AND Cr(III) IS REDUCING ENVIRONMENTS.
9. THE CEQG-PAL, BCWQG-MAX, AND BCWQG-30DAY THRESHOLDS FOR COPPER ARE HARDNESS-DEPENDENT AND WERE CALCULATED BASED ON THE MEDIAN MONTHLY HARDNESS OBSERVED AT EACH SITE.
10. THE BCWQG-MAX FOR IRON IS 1 mg/L (SPECIFIC TO TOTAL IRON) AND THE CEQG-PAL IS 0.3 mg/L.
11. THE HC-DW AESTHETIC OBJECTIVE FOR IRON IS 0.3 mg/L.
12. AQUATIC LIFE GUIDELINES FOR MOLYBDENUM INCLUDE THE BCWQG-30DAY OF 1 mg/L, THE BCWQG-MAX OF 2 mg/L, AND THE CEQG-PAL OF 0.073 mg/L.
13. THE BCWQG-DW FOR MOLYBDENUM IS 0.25 mg/L..
14. THE AGRICULTURAL AND WILDLIFE GUIDELINES FOR MOLYBDENUM ARE 0.05 mg/L FOR LIVESTOCK DRINKING WATER (BCWQG AND CEQG) AND 0.02 mg/L AND 0.01 mg/L FOR IRRIGATION (BCWQG AND CEQG, RESPECTIVELY.
15. THE BCWQG-MAX FOR SELENIUM IS 0.002 mg/L AND THE CEQG-PAL IS 0.001 mg/L.
16. THE DRINKING WATER GUIDELINES FOR SELENIUM ARE 0.01 mg/L (BCWQG AND HC).
17. THE BCWQG-MAX FOR VANADIUM IS 0.006 mg/L.

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FIGURE 4.23

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4.4.4 Tributaries to Peterson Creek – Water Quality Assessment

Two major tributaries contribute to Peterson Creek, downstream of Jacko Lake and have been included in the baseline water quality data collection program: Keynes Creek and Humphrey Creek. Both tributaries flow from south to north, away from the divide between the Peterson Creek and Anderson Creek catchment areas. Goose Lake is included in the Keynes Creek catchment area and is also within the Project footprint. The confluence of Keynes Creek with Peterson Creek is immediately downstream of PC08 (close to the outlet of Jacko Lake). The headwaters of Keynes Creek and most of the creek itself are within the Project footprint. Humphrey Creek is located downstream of the Project footprint and some of the proposed facilities are within its drainage area. The headwaters of this creek extend from Edith Lake, which was also included in the baseline water quality study. The confluence of Humphrey Creek with Peterson Creek is slightly upstream of PC02.5 and a surface connection is not evident; Humphrey Creek goes subsurface downstream of the HUMPH02 monitoring location.

4.4.4.1 Keynes Creek Watershed – Water Quality Assessment

Water quality samples have been collected from one site along Keynes Creek (KC03), upstream of the confluence with Peterson Creek. Samples have also been collected from Goose Lake (GOOSE LAKE). Goose Lake is formed at a low elevation point in this catchment and there are no surface flow channels that connect this lake to Peterson Creek, though it is considered to be in the headwaters of Keynes Creek. Six samples were collected from KC03 in March through June 2014; sampling was terminated when the site dried up early in the summer.

Physical Parameters

Water in the Keynes Creek watershed is characterized as basic, very hard, with high SpC and buffering capacity. Samples collected from Goose Lake were higher in all physical parameters (hardness, pH, SpC, alkalinity, and TDS) than samples collected from KC03. Physical parameters generally increased during the summer months, reaching maximum concentrations in the fall season. The seasonal and spatial trends in physical parameters are demonstrated for hardness and TDS on Figure 4.24. Guideline exceedances were observed in Goose Lake for pH (CEQG-PAL, BCWQG-Max, HC-DW, and BCWQG-DW); however, pH at KC03 was below guidelines in all samples. The distribution of pH of the samples collected from both sites is shown on Figure 4.25.

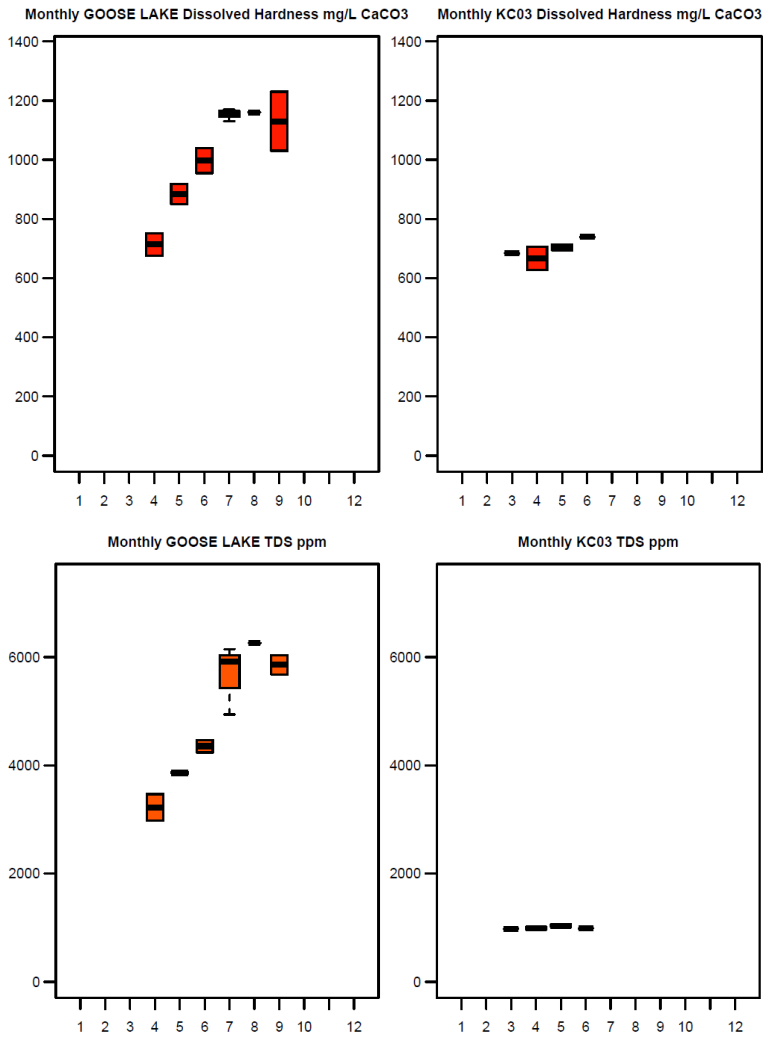


Figure 4.24 Seasonal Boxplot of Hardness and TDS Concentrations in the Keynes Creek

NOTES:

1. Y-AXIS UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. X-AXIS UNITS ARE MONTHS.
3. BOXPLOTS SHOW THE DISTRIBUTION OF DATA FOR EACH MONTH (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES).
4. VALUES BELOW THE DETECTION LIMIT ARE EQUATED TO HALF THE DETECTION LIMIT FOR STATISTICAL AND GRAPHING PURPOSES. BASED ON THIS METHOD, SOME VALUES SHOWN TO BE ABOVE GUIDELINES MAY NOT ACTUALLY EXCEED GUIDELINES.
5. THERE ARE NO AQUATIC LIFE GUIDELINES FOR HARDNESS; HOWEVER, HARDNESS GREATER THAN 250 mg/L TRIGGERS A REQUIREMENT FOR SULPHATE TOXICITY TESTING UNDER THE GUIDANCE OF THE BCWQG-30D.
6. THERE ARE NO AQUATIC LIFE GUIDELINES FOR TDS; HOWEVER, 500 mg/L IS APPLIED FOR DRINKING WATER AND IRRIGATION WATER (HC-DW, BCWQG-IRRIGATION, CEQG-IRRIGATION).

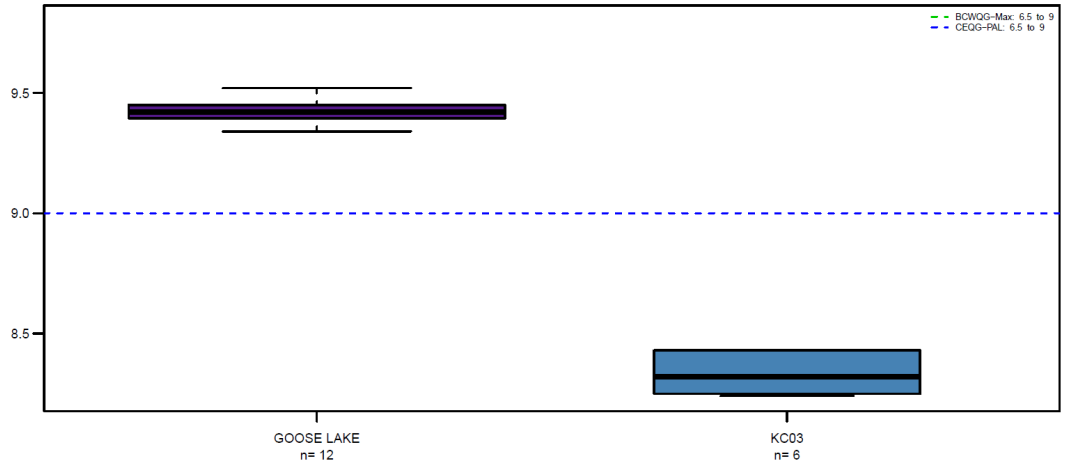


Figure 4.25 Distribution of pH in the Keynes Creek Watershed

NOTES:

1. Y-AXIS UNITS ARE pH UNITS.
2. SITE ORDER ALONG THE X-AXIS IS FROM UPSTREAM TO DOWNSTREAM.
3. BOXPLOTS SHOW THE DISTRIBUTION OF DATA AT EACH SITE (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES).
4. VALUES BELOW THE DETECTION LIMIT ARE EQUATED TO HALF THE DETECTION LIMIT FOR STATISTICAL AND GRAPHING PURPOSES. BASED ON THIS METHOD, SOME VALUES SHOWN TO BE ABOVE GUIDELINES MAY NOT ACTUALLY EXCEED GUIDELINES.
5. THE CEQG-PAL AND THE BCWQG-MAX FOR pH SPECIFY AN ACCEPTABLE pH RANGE OF 6.5 TO 9; THE ACCEPTABLE DRINKING WATER RANGE IS FROM 6.5 TO 8.5 AND IS NOT SHOWN ON THISFIGURE.

Dissolved Anions

The average water types and TDS of the samples collected Keynes Creek and Goose Lake are shown on Figure 4.4, which demonstrates the high variability in water types between the two sites in this watershed (KC03 and GOOSE LAKE). Goose Lake has very high TDS (greater than 3,000 mg/L) is classified as moderately saline, while KC03 had lower TDS (below 1,000 mg/L) and was classified as slightly saline. Samples collected from Goose Lake are of the bicarbonate-magnesium type with significant calcium and sodium, while samples collected from KC03 were of the sodium-sulphate type with significant magnesium. The outflow of Goose Lake contributes to one of the three main branches of the headwaters of Keynes Creek, but the difference in water types demonstrates that this outflow is unlikely to be the main source of water to the creek. The water type of Goose Lake is similar to that of the surrounding shallow groundwater samples (BGC14-016 and BGC14-017S), which is consistent with the expected water type of a lake located in the upper headwaters area. The water type of KC03 is more consistent with the groundwater types observed close to the site (BGC14-002S/D and in the west branch of the Keynes Creek headwaters (BGC14-011S/D).

Guideline exceedances were observed often for chloride and sulphate and the distribution of concentrations of these parameters in the Keynes Creek watershed is shown seasonally on Figure 4.26. Neither Goose Lake or Keynes Creek are surface water bodies that support early life stages of trout and therefore the SBEB of 730 mg/L for a hardness of up to 1,377 mg/L $CaCO_3$ applies (Nautilus 2015). The sulphate concentrations in Goose Lake samples were greater than 1,400 mg/L and exceeded the SBEB in all samples and consistently exceeded the 500 mg/L drinking water

guidelines (BCWQG-DW and HC-DW). Keynes Creek (KC03) sulphate sample concentrations were consistently below the SBEB and the drinking water guidelines. Chloride concentrations in Goose Lake samples increased through spring and summer and exceeded the BCWQG-30 D (150 mg/L) and the CEQG-PAL for long-term exposure (120 mg/L) by the late summer months; however, no exceedances of the short-term exposure guidelines were observed (BCWQG-Max and CEQG-PAL; 600 mg/L and 640 mg/L, respectively). Continued monitoring at this location will provide further insight into whether or not the chloride levels are above the chronic level continuously through the fall and winter months. Chloride concentrations in the Keynes Creek samples were below all applicable guidelines.

Fluoride sample concentrations remained below the hardness dependent BCWQG-Max (1.57 mg/L for hardness 180 mg/L $CaCO_3$ or greater) but exceeded the CEQG-PAL of 0.12 mg/L in all samples collected from KC03, though none of the Goose Lake samples exceeded the CEQG-PAL. For some samples, the MDL was elevated above the CEQG-PAL for this parameter due to matrix interference; however, the samples of detectable concentrations indicate that the fluoride concentrations are generally elevated above the guideline.

Nutrients and Organic Carbon

Phosphorous concentrations in samples collected from both KC03 and Goose Lake were in the eutrophic to hyper-eutrophic range (i.e. greater than 0.1 mg/L). TP in Goose Lake increased dramatically during the late summer and reached a peak of 0.4 mg/L in the August. At KC03, TP concentrations were similar, but showed less seasonality.

Nitrogen levels in the Keynes Creek watershed were low; however, ammonia exceeded the pH- and temperature-dependent CEQG-PAL in samples collected from Goose Lake.

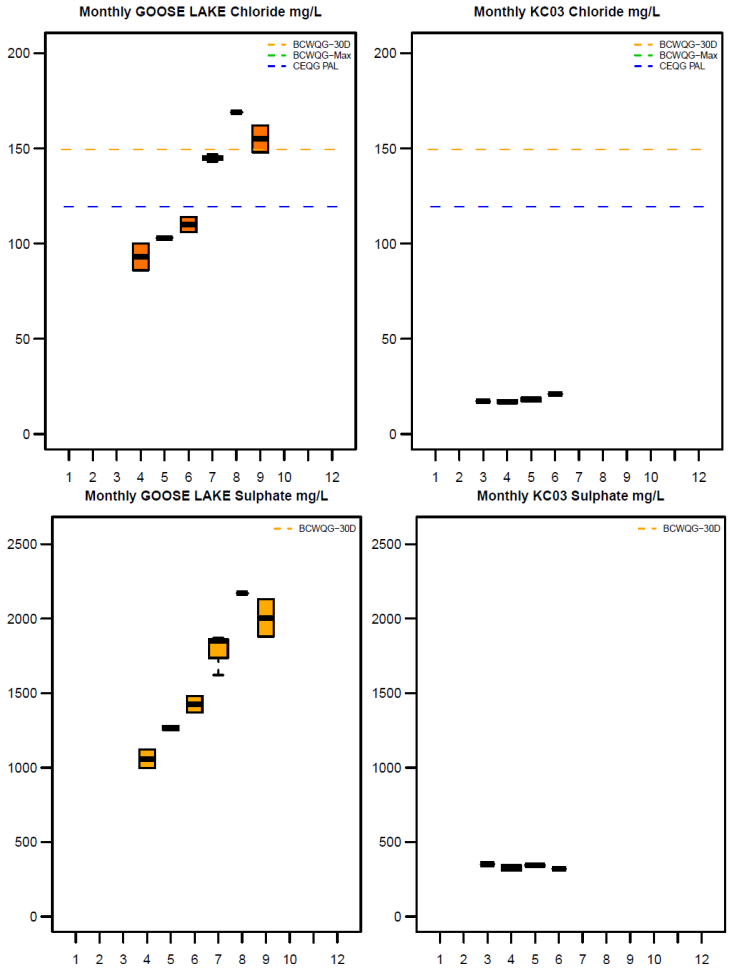


Figure 4.26 Seasonal Boxplot of Chloride and Sulphate Concentrations in the Keynes Creek Watershed

NOTES:

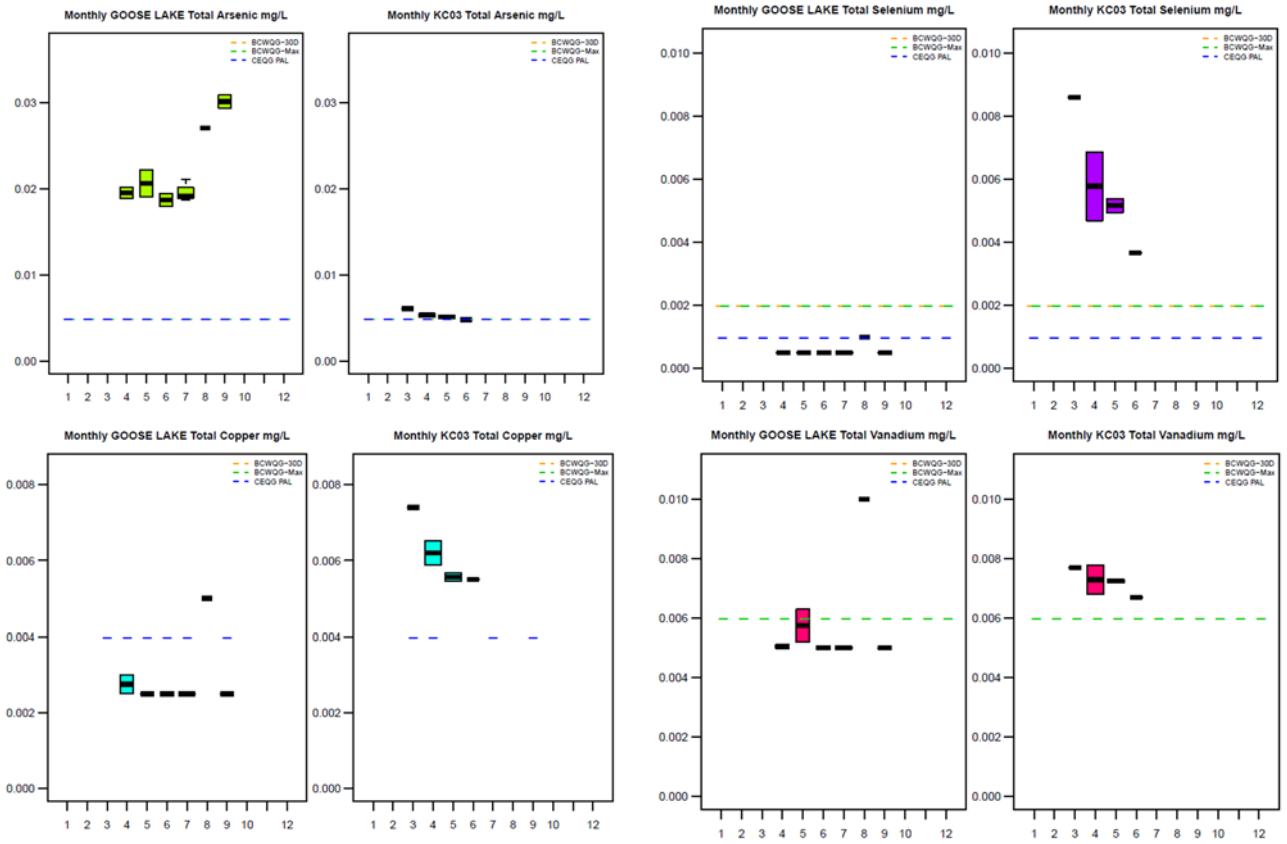
1. Y-AXIS UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. X-AXIS UNITS ARE MONTHS.
3. BOXPLOTS SHOW THE DISTRIBUTION OF DATA FOR EACH MONTH (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES).
4. VALUES BELOW THE DETECTION LIMIT ARE EQUATED TO HALF THE DETECTION LIMIT FOR STATISTICAL AND GRAPHING PURPOSES. BASED ON THIS METHOD, SOME VALUES SHOWN TO BE ABOVE GUIDELINES MAY NOT ACTUALLY EXCEED GUIDELINES.
5. CHLORIDE GRAPHS ARE SHOWN IN THE TOP ROW; SULPHATE GRAPHS ARE SHOWN ON THE BOTTOM ROW.
6. THE BCWQG-30DAY CHRONIC EXPOSURE GUIDELINE FOR CHLORIDE IS 150 mg/L; THE BCWQG-MAX IS 600 mg/L AND IS NOT WITHIN THE SCALE OF THIS GRAPH.
7. THE CEQG-PAL FOR CHLORIDE OF 120 mg/L IS SPECIFIC TO LONG-TERM EXPOSURE; THE CEQG-PAL FOR SHORT-TERM EXPOSURE IS 640 mg/L AND IS NOT WITHIN THE SCALE OF THE GRAPH.
8. THE BCWQG-30D FOR SULPHATE IS DEPENDENT ON ONGOING TOXICITY TESTS; PRELIMINARY RESULTS HAVE INDICATED A RECOMMENDED SBEB LIMIT OF 730 mg/L.

Metals

Metals in this watershed were generally present predominantly in the dissolved form. Arsenic was the only metal parameter to exceed guidelines in samples collected from Goose Lake; however, arsenic, copper, and selenium regularly exceeded aquatic life guidelines at KC03. Seasonal boxplots for metal parameters that regularly exceeded guidelines are shown on Figure 4.27. Single sample aquatic life guideline exceedances were observed in Goose Lake for aluminum, copper, and iron. Agricultural and wildlife guideline exceedances were observed for molybdenum in all samples collected from KC03 and for arsenic in a few of the samples collected from Goose Lake. Drinking water guidelines for metal parameters were not exceeded at KC03; however, all samples collected from Goose Lake exceeded arsenic and selenium drinking water guidelines.

Arsenic exceeded the aquatic life guidelines (CEQG-PAL and BCWQG-Max; both 0.005 mg/L) in all samples collected from Goose Lake and in most samples collected from KC03. The concentrations of arsenic at both sites are shown seasonally in comparison to aquatic life guidelines on Figure 4.27. All arsenic concentrations in the Goose Lake samples exceeded the HC-DW guideline of 0.01 mg/L and several samples also exceeded the BCWQG-DW of 0.025 mg/L and the livestock guidelines (BCWQG-Livestock and CEQG-Livestock; both 0.025 mg/L). The seasonal and spatial distribution of copper in the Keynes Creek watershed is shown on Figure 4.27. Copper exceeded the hardness-dependent CEQG-PAL for copper in every sample collected, but did not exceed the limits of the BCWQG for aquatic life.

Selenium was elevated in all samples collected from KC03 and exceeded the BCWQG-Max of 0.002 mg/L and the CEQG-PAL of 0.001 mg/L in all samples. The distribution of selenium concentrations in the Keynes Creek watershed is shown on Figure 4.27. Samples collected from Goose Lake did not exceed this guideline.



NOTES:

1. Y-AXIS UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. X-AXIS UNITS ARE MONTHS.
3. BOX PLOTS SHOW THE DISTRIBUTION OF DATA FOR EACH MONTH (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES)
4. VALUES BELOW THE DETECTION LIMIT ARE EQUATED TO HALF THE DETECTION LIMIT FOR STATISTICAL AND GRAPHING PURPOSES. BASED ON THIS METHOD, SOME VALUES SHOWN TO BE ABOVE GUIDELINES MAY NOT ACTUALLY EXCEED GUIDELINES.
5. THE BCWQG-MAX AND THE CEQG-PAL FOR ARSENIC ARE 0.005 mg/L.
6. THE HC-DW GUIDELINE FOR ARSENIC IS 0.01 mg/L AND THE BCWQG-DW IS 0.025 mg/L.
7. AGRICULTURAL GUIDELINES (BCWQG AND CEQG-PAL) FOR ARSENIC ARE 0.1 mg/L FOR IRRIGATION USE AND 0.025 mg/L FOR LIVESTOCK DRINKING WATER.
8. THE CEQG-PAL, BCWQG-MAX, AND BCWQG-30DAY THRESHOLDS FOR COPPER ARE HARDNESS-DEPENDENT AND WERE CALCULATED BASED ON THE MEDIAN MONTHLY HARDNESS OBSERVED AT EACH SITE.
9. THE BCWQG-MAX FOR SELENIUM IS 0.002 mg/L AND THE CEQG-PAL IS 0.001 mg/L.
10. THE DRINKING WATER GUIDELINES FOR SELENIUM ARE 0.01 mg/L (BCWQG AND HC).
11. THE BCWQG-MAX FOR VANADIUM IS 0.006 mg/L.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	10APR'15	ISSUED WITH REPORT	CJ	JEM

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AJAX PROJECT

SEASONAL BOX PLOTS FOR METALS THAT REGULARLY EXCEEDED GUIDELINES IN THE KEYNES CREEK WATERSHED

Knight Piésold CONSULTING

P/A NO. VA101-246/31 | REF NO. 3

FIGURE 4.27 | REV 0

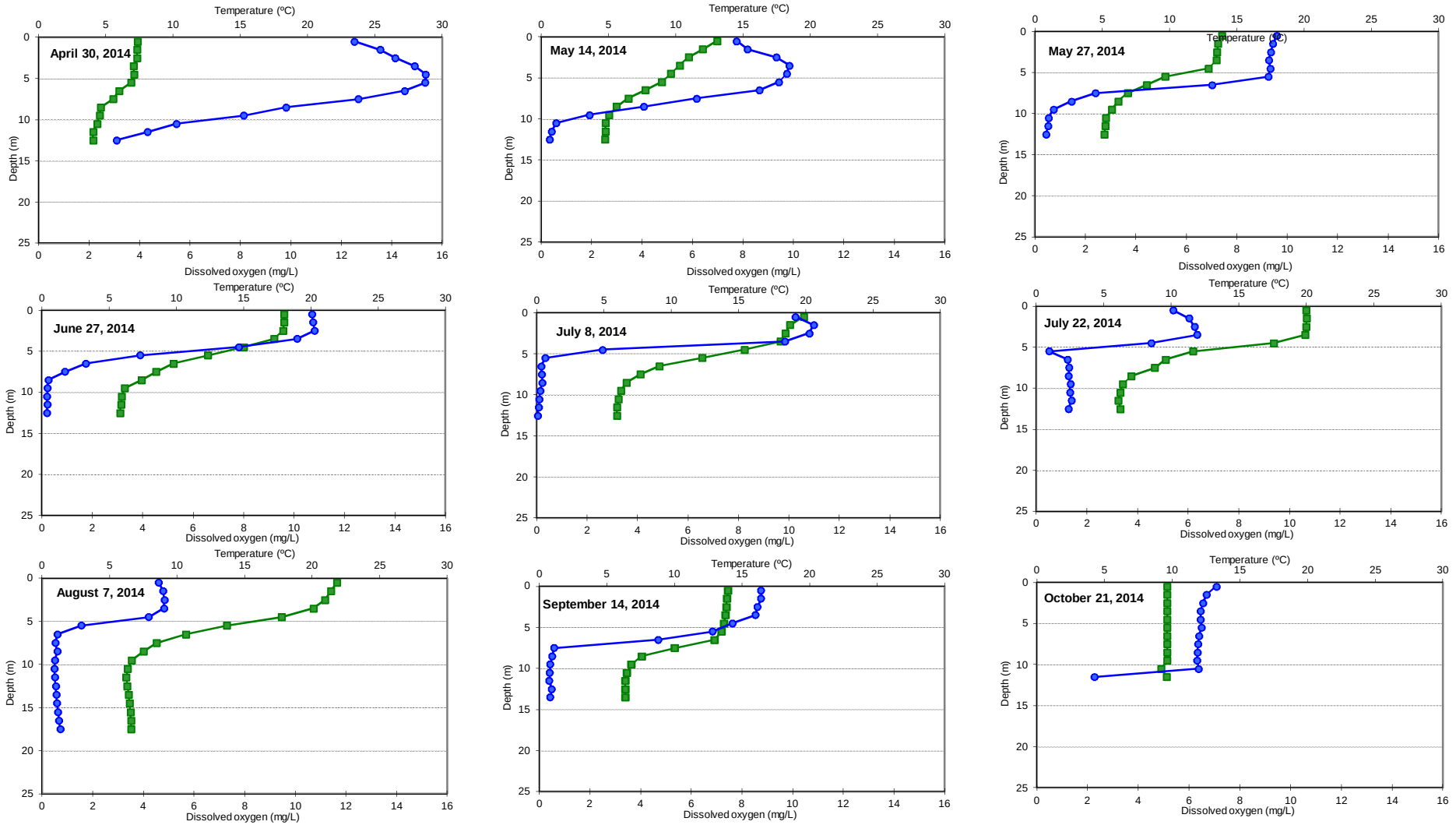
4.4.4.2 Humphrey Creek Watershed – Water Quality Assessment

Samples have been collected from the Humphrey Creek watershed in 2014 twice per month from May through September. The creek flows north from Edith Lake towards Peterson Creek but a surface connection between Humphrey Creek and Peterson Creek was not visible during the baseline program to date. This upper watershed baseline surface water site (HUMPH-10) is typically highly disturbed by livestock activity and samples are often collected from low volume, slow flowing depressions in the area. The outlet of the lake is often closed and flowing waters are understood to represent seepage from the lake through the marshy area upstream of the outlet and the sample location. Humphrey Creek goes to ground downstream of the lowest sample location and flows are understood to enter Peterson Creek through shallow groundwater flow. Edith Lake was been sampled monthly throughout the open water season in 2014 with depth profiles recorded with every sampling event. Creek samples have been collected at three sites along Humphrey Creek: HUMPH-10 (outflow of Edith Lake), HUMPH-08 (mid-creek), and HUMPH-02 (upstream of the confluence with Peterson Creek, between PC03 and PC02.5).

Physical Parameters, Dissolved Anions, and Nutrients

Water in Humphrey Creek and Edith Lake is typically slightly basic and very hard with high buffering capacity. Exceedances of the CEQG-PAL upper limit of the aquatic life guidelines for pH (pH 9) were not observed; however, exceedances of the upper drinking water acceptable limit (BCWQG-DW and HC-DW; both pH 8.5) were observed in all samples collected from the shallow site of Edith Lake, frequently in lower Humphrey Creek, and rarely at the other sites. The spatial distribution of pH values in the Humphrey Creek watershed is shown on Figure 4.30, with reference to the drinking water and aquatic life upper guidelines. The highest pH values recorded in this watershed were associated with the shallow samples of Edith Lake. Samples collected at depth and at the outflow of Edith Lake (HUMPH-10) were lower. Very little seasonal variability was observed in dissolved hardness, specific conductance and TDS in the lake samples; however, TSS in the creek samples typically increased during spring and summer, when surface water runoff was higher. TDS was elevated throughout the lake water column and exceeded the HC-DW guideline of 500 mg/L in almost every sample. Along Humphrey Creek, TDS increased with distance downstream. While TDS was elevated, it was still within the range of fresh water classification.

During spring and fall turnover, temperate lakes tend to have uniform, well-mixed conditions throughout the water column. The depth profiles for Edith Lake in 2014 are shown on (dissolved oxygen and temperature) and Figure 4.29 (pH). The Edith Lake water quality study commenced in April 2014 and is ongoing. The data collected prior to the cut-off date for data included in this report extends to the end of September; however, depth profiles were recorded only from April to August. The spring lake turnover event appears to occur in April, when temperatures are relatively constant with depth (Figure 4.28); the fall turnover event occurred after August 2014, but the precise date cannot be deciphered with the data available.



NOTES:

1. DEPTH UNITS ARE METRES BELOW SURFACE.
2. TEMPERATURE IS SHOWN ON THE PRIMARY X-AXIS.
3. DISSOLVED OXYGEN IS SHOWN ON THE SECONDARY X-AXIS.

Legend

Dissolved Oxygen (mg/L)

Temperature (˚C)

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	14APR'15	ISSUED WITH REPORT	CJ	JEM

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AJAX PROJECT

2014 EDITHLAKE DEPTH PROFILES
DISSOLVED OXYGEN AND TEMPERATURE

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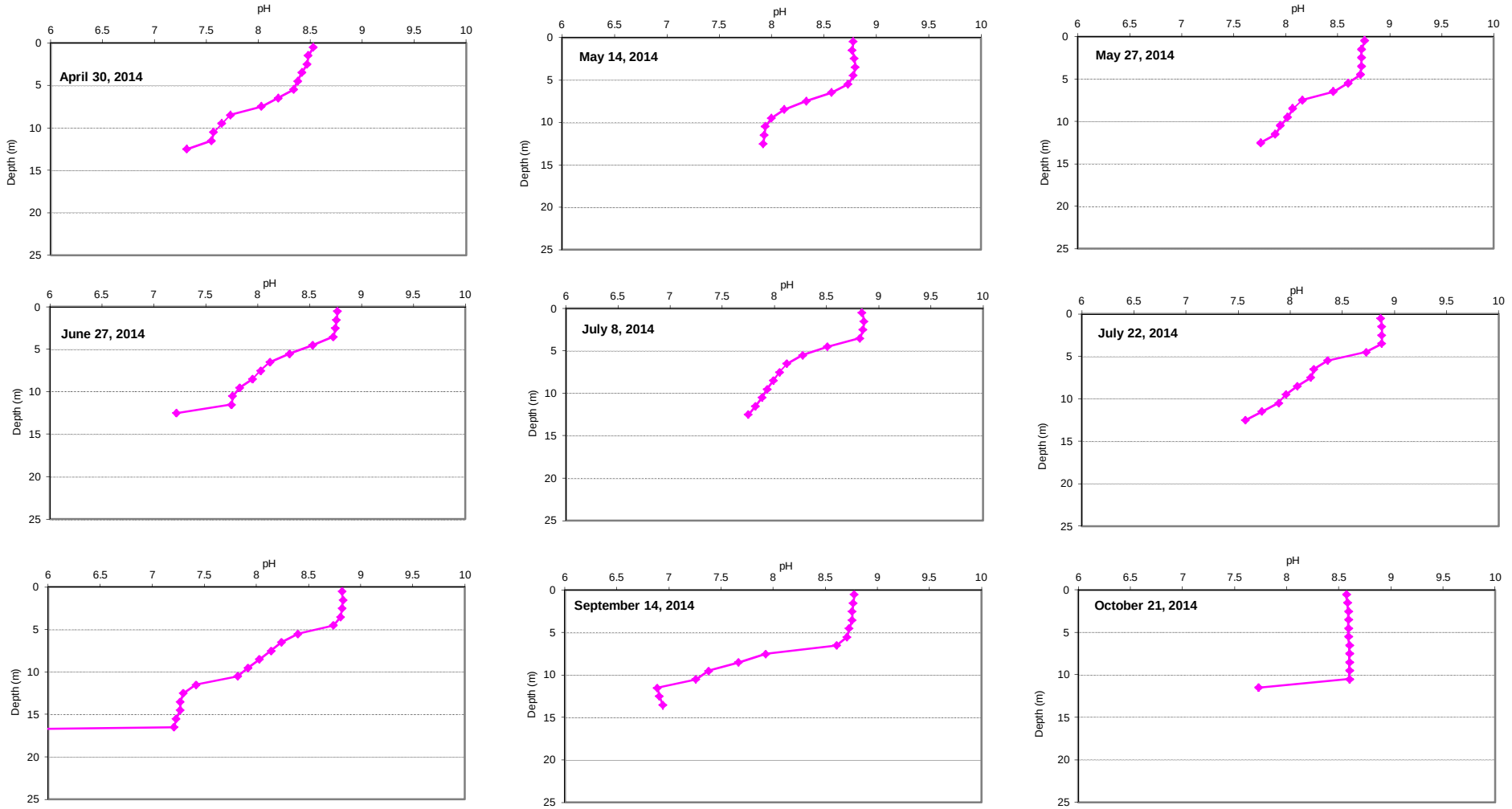
REF NO. 3

FIGURE 4.28

REV 0



NOTES:

1. DEPTH UNITS ARE METRES BELOW SURFACE.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	14APR'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

AJAX PROJECT

2014 EDITH LAKE DEPTH PROFILES
pH

Knight Piésold CONSULTING

P/A NO. VA101-246/31

REF NO. 3

FIGURE 4.29

REV 0

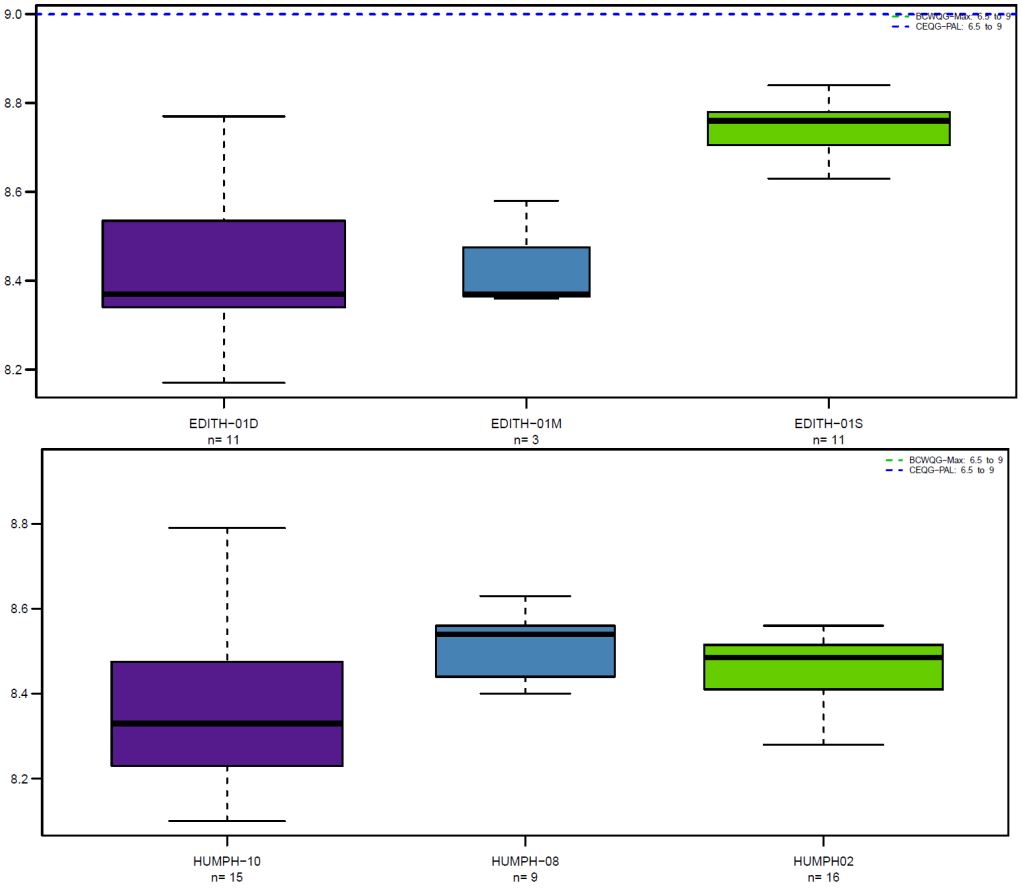


Figure 4.30 Spatial Boxplot of pH in the Humphrey Creek Watershed

NOTES:

1. Y-AXIS UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SITE ORDER ALONG THE X-AXIS IS FROM UPSTREAM TO DOWNSTREAM. n-NUMBER OF SAMPLES.
3. BOXPLOTS SHOW THE DISTRIBUTION OF DATA AT EACH SITE (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES).
4. VALUES BELOW THE DETECTION LIMIT ARE EQUATED TO HALF THE DETECTION LIMIT FOR STATISTICAL AND GRAPHING PURPOSES. BASED ON THIS METHOD, SOME VALUES SHOWN TO BE ABOVE GUIDELINES MAY NOT ACTUALLY EXCEED GUIDELINES.
5. THE CEQG-PAL AND THE BCWQG-MAX FOR pH SPECIFY AN ACCEPTABLE pH RANGE OF 6.5 TO 9; THE ACCEPTABLE DRINKING WATER RANGE IS FROM 6.5 TO 8.5 AND IS NOT SHOWN ON THISFIGURE.

Major Ions

The water type transitioned from magnesium-bicarbonate in Edith Lake and upper Humphrey Creek to magnesium-sulphate-bicarbonate with distance downstream in Humphrey Creek and TDS was noted to increase as well (Figure 4.4). The cation signature is based on a weak dominance of magnesium, with low but equal contributions of sodium and calcium at all monitoring locations.

Ion concentrations in Humphrey Creek decreased during freshet and increased during the late summer and fall, which is consistent throughout the baseline study area and generally supports the understanding that surface flows are dominantly supported by baseflow (groundwater) contributions for all months outside of the spring freshet period. Seasonality in ion concentrations in Edith Lake

was more subtle, but a muted version of the same trend was observed in the shallow samples. Fluoride was elevated in the lake and throughout Humphrey Creek, exceeding the CEQG-PAL of 0.12 mg/L, but not the less stringent BCWQG-Max (hardness-dependent).

The SBEB developed for sulphate was necessary for the assessment of Edith Lake water quality due to the hard water conditions in the lake, despite the lower sulphate concentrations (ranged from 25.6 mg/L to 42.7 mg/L); hardness was never below 250 mg/L CaCO3, which is the threshold in the BCWQG-30 D for sulphate that triggers the requirement for site specific toxicity testing. The recommended SBEB for the lake, which supports early life stages for trout, is a maximum sulphate concentration of 429 mg/L, which is the same as the current BCWQG-30 D, but with the maximum hardness adjusted up to 800 mg/L $CaCO_3$ (Nautilus 2015). No Edith Lake samples exceeded the SBEB for sulphate. Fish are not found in Humphrey Creek and the alternative SBEB of 730 mg/L for hardness up to 1,377 mg/L CaCO3 is applicable, but it should be noted that with the exception of one sample from lower Humphrey Creek (HUMPH-02), all samples are below the SBEB lower benchmark and none exceed the alternative benchmark.

Nutrients

Phosphorous was generally found in the dissolved form in Edith Lake and Humphrey Creek, although some of the TP in Humphrey Creek was found in the particulate form. Orthophosphate made up for a significant proportion of the dissolved phosphorous at each site except the shallow site on Edith Lake, where orthophosphate concentrations were very low. TP was relatively constant seasonally in the shallow Edith Lake samples and samples collected from Humphrey Creek, but varied seasonally in the depth samples collected from Edith Lake. In the samples collected from the mid- and deep depths of Edith Lake, TP was in the eutrophic range during freshet and increased drastically during the summer and fall, peaking in the hyper-eutrophic range (approximately 0.2 mg/L TP). In contrast, the shallow samples collected from Edith Lake were classified as meso-eutrophic to eutrophic throughout the season. In the upper reaches of Humphrey Creek, TP concentrations were higher than those found in the shallow samples of Edith Lake and varied seasonally, generally above the hyper-eutrophic classification threshold. Further downstream, at HUMPH-08, TP increased to a seasonal median approaching 0.25 mg/L, then decreased again at HUMPH-02, to concentrations similar to those observed at HUMPH-10.

Nitrogen levels in Humphrey Creek were generally low; however, Samples collected from the two upper sites (HUMPH-10 and HUMPH-08) sporadically exceeded the CEQG-PAL for ammonia (pH- and temperature-dependent). Nitrogen levels were also generally low in Edith Lake; however, samples collected at depth increased in ammonia concentrations throughout the summer and fall, when most samples exceeded the CEQG-PAL.

Organic Carbon and Nitrogen

Organic carbon was elevated throughout Edith Lake and Humphrey Creek and exceeded the BCWQG-DW limit of 4 mg/L in every sample. This guideline is applicable only to treated water sources because the presence of organic carbon can result in the formation of toxic trihalomethanes when chlorinated. Most of the organic carbon was in the dissolved form (DOC). Concentrations remained relatively stable seasonally at all sites.

Metals

Metal concentrations were generally low in Edith Lake, but were elevated in Humphrey Creek. Aluminum, chromium, iron, and mercury were found predominantly in the particulate form with higher concentrations observed in samples collected during freshet and with lower concentrations observed during the drier seasons. Other metals (arsenic, copper, and selenium) were predominantly in the dissolved form and were lower during freshet, increasing in the drier seasons, when surface water flow is predominantly by groundwater discharge. Metal concentrations varied spatially along Humphrey Creek, with the highest concentrations observed in the middle section (HUMPH-08) for some parameters and in the lower section (HUMPH-02) for other parameters.

Metal parameters that regularly exceeded aquatic life guidelines in the Humphrey Creek watershed include aluminum, chromium, copper, iron, mercury, and selenium, though only copper exceeded the aquatic life guidelines in Edith Lake. Sporadic aquatic life guideline exceedances were observed for arsenic, which was generally observed to be higher in samples from the HUMPH-08 compared to samples upstream (HUMPH-10) and downstream (HUMPH-02). Manganese regularly exceeded the irrigation guidelines (BCWQG-Irrigation and CEQG-Irrigation; both 0.2 mg/L) and the HC-DW aesthetic objective of 0.05 mg/L in creek and lake samples. Iron exceeded the HC-DW aesthetic objective of 0.3 mg/L. All other guideline exceedances refer only to the aquatic life guidelines, which are described in the sections below. The spatial distributions of metal parameters that exceeded aquatic life guidelines in Humphrey Creek are included following the discussion below. Monthly boxplots are shown for select metal parameters that showed seasonal trends.

Aluminum

Total aluminum concentrations exceeded the pH-dependant CEQG-PAL of 0.1 mg/L in every sample collected from HUMPH-08 and in most samples collected from the upstream and downstream sites (HUMPH-10 and HUMPH-02, respectively). Dissolved aluminum concentrations remained below the aquatic life guidelines in all samples. The distribution of aluminum concentrations in Humphrey Creek is shown on Figure 4.31.

Chromium

Chromium concentrations exceeded the aquatic life guideline for the Cr (VI) species of 0.001 mg/L in all samples collected from HUMPH-08 and in some samples collected from HUMPH-10 and HUMPH-02; however, the Cr(III) guideline of 0.0089 mg/L was not exceeded. Since species analyses have not been conducted, it is not confirmed whether the chromium present in Peterson Creek is in the Cr (III) or Cr (VI) form, though the Cr (VI) form is most likely in well oxygenated surface waters and Cr (III) in reducing conditions such as deeper groundwater sources. The species analysis often results in elevated detection limits, especially in the presence of other ions and high TDS; speciation analysis was not conducted because it was unlikely to provide results with appropriate detection limits. The distribution of chromium concentrations is shown on Figure 4.32 with reference to the Cr (III) guideline.

Copper

Copper is the only metal parameter that exceeded aquatic life guidelines in Edith Lake. Copper exceeded the hardness-dependent CEQG-PAL in some samples collected from the deeper water monitoring location in Edith Lake and in most samples collected from the Humphrey Creek sites. No samples exceeded the less stringent BCWQG-Max threshold for copper (hardness-dependent) and

samples collected from the shallower regions of Edith Lake did not exceed any guidelines. Dissolved copper concentrations increased with distance downstream in Humphrey Creek, whereas the total copper concentrations were highest at HUMPH-08 (mid-channel). The range of concentrations of total copper in Edith Lake and total and dissolved copper Humphrey Creek are shown on Figure 4.33.

Iron

Iron concentrations exceeded the CEQG-PAL of 0.3 mg/L regularly in samples collected from HUMPH-10 and HUMPH-02 and in all samples collected from HUMPH-08. The less stringent BCWQG-Max of 1 mg/L was exceeded regularly at HUMPH-08 only. Total iron concentrations were highest in the samples collected from mid-channel but dissolved concentrations were highest in the uppermost site (HUMPH-10), though dissolved concentrations were consistently below guidelines. The spatial distribution of copper in Humphrey Creek is shown on Figure 4.34.

Mercury

Mercury sample concentrations were elevated at HUMPH-10, in the upper reaches of the Humphrey Creek, just downstream of the lake outlet, but were typically below detection at all other sample locations in this watershed. This baseline surface water site is typically highly disturbed by livestock activity and samples are often collected from low volume slow flowing depressions in the area. The outlet of the lake is often closed and flowing waters are understood to represent seepage from the lake through the marshy area upstream of the outlet and the sample location. Mercury, at this site, is dominantly detected in the particulate form, though low dissolved concentrations were also reported for some of the samples. Seasonal trends are not yet fully apparent for total mercury, but several of the samples had total mercury concentrations that exceeded the CEQG-PAL (0.000026 mg/L) and the BCWQG-30 D (0.00002 mg/L) at this location. These exceedances of the BCWQG-30 D are not considered true exceedances as the average of the 5-weekly samples collected between March 12, 2014 and April 9, 2014 was 0.00002 mg/L, which is equivalent to the guideline. The total mercury concentrations measured in the three samples collected July through September 2014 were all above the BCWQG-30 D; although the sampling frequency does not satisfy the chronic guideline requirements, the understanding is that these mercury concentrations represent conditions that persist above the chronic threshold. Spatial and seasonal trends in total mercury concentrations in Humphrey Creek are shown on Figure 4.35.

Selenium

Selenium concentrations increased with distance downstream in Humphrey Creek and seasonality was evident, with highest concentrations reported for samples collected in March at lower Humphrey Creek (HUMPH-02), concentrations progressively decreased through July and then increased slightly in August and September. Selenium was predominantly present in the dissolved form and this observation would support the understanding that the loading in the lower watershed was as a result of local groundwater inflows. However, samples from monitoring wells in the Humphrey Creek catchment (BCG14-016, BGC14 013, BGC14-015S/D, BGC14-014D, and BGC14-009) were all reported with relatively low levels of selenium, so if it is groundwater that is contributing the selenium it is either through shallow infiltration or there is local enrichment that has not been intercepted with the monitoring well network in the area. Selenium sample concentrations were continuously above the 0.002 mg/L BCWQG-30D at HUMPH-02 from March 2014 through May 2014 and the average of

the five weekly freshet samples was 0.0046 mg/L. Samples collected from late June through September 2014 were all below the BCWQG-30 D at this site. Selenium concentrations did not exceed the BCWQG-30 D at HUMPH-08, but they did exceed the CEQG-PAL in a few samples. The CEQG-PAL is equivalent to the “alert level” identified in the BCWQG for aquatic life. Boxplots have been provided on Figure 4.36 to demonstrate the spatial and seasonal variability for selenium in Humphrey Creek.

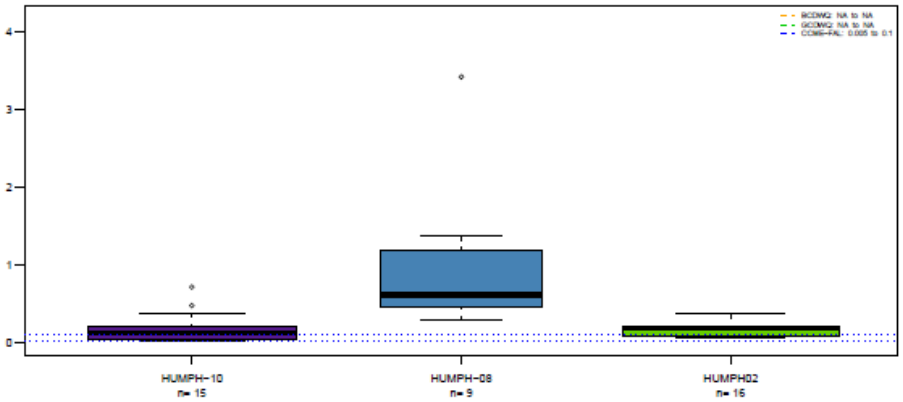


Figure 4.31 Spatial Boxplot of Total Aluminum in Humphrey Creek

NOTES:

1. Y-AXIS UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SITE ORDER ALONG THE X-AXIS IS FROM UPSTREAM TO DOWNSTREAM. n-NUMBER OF SAMPLES.
3. BOXPLOTS SHOW THE DISTRIBUTION OF DATA AT EACH SITE (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES).
4. VALUES BELOW THE DETECTION LIMIT ARE EQUATED TO HALF THE DETECTION LIMIT FOR STATISTICAL AND GRAPHING PURPOSES. BASED ON THIS METHOD, SOME VALUES SHOWN TO BE ABOVE GUIDELINES MAY NOT ACTUALLY EXCEED GUIDELINES.
5. THE BCWQG-MAX, BCWQG-30D AND CEQG-PAL FOR FRESHWATER AQUATIC LIFE FOR ALUMINUM ARE DEPENDENT ON WHETHER pH IS ABOVE OR BELOW 6.5; ALL pH VALUES ARE GREATER THAN 6.5.
6. THE BCWQG-MAX AND BCWQG-30DAY ARE SPECIFIC TO DISSOLVED (D) ALUMINUM AND THE CEQG-PAL IS SPECIFIC TO TOTAL ALUMINUM.

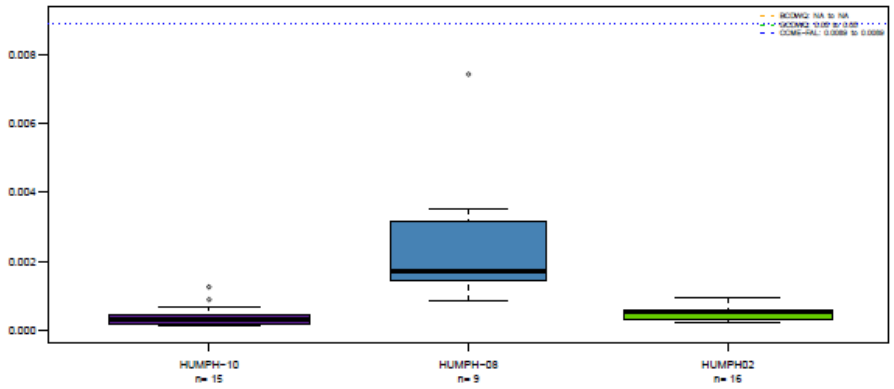


Figure 4.32 Spatial Boxplot of Total Chromium in Humphrey Creek

NOTES:

1. Y-AXIS UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SITE ORDER ALONG THE X-AXIS IS FROM UPSTREAM TO DOWNSTREAM. n-NUMBER OF SAMPLES.
3. BOXPLOTS SHOW THE DISTRIBUTION OF DATA AT EACH SITE (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES).
4. VALUES BELOW THE DETECTION LIMIT ARE EQUATED TO HALF THE DETECTION LIMIT FOR STATISTICAL AND GRAPHING PURPOSES. BASED ON THIS METHOD, SOME VALUES SHOWN TO BE ABOVE GUIDELINES MAY NOT ACTUALLY EXCEED GUIDELINES.
5. THE CHROMIUM BCWQG-MAX AND CEQG-PAL THRESHOLDS FOR AQUATIC LIFE ARE 0.0089 mg/L FOR Cr(VI) (SHOWN ON THE FIGURE); THE SAME GUIDELINES ARE 0.001 mg/L FOR THE CR(III) SPECIES; IT IS NOT KNOWN WHICH SPECIES IS PREVALENT IN THE PROJECT AREA.

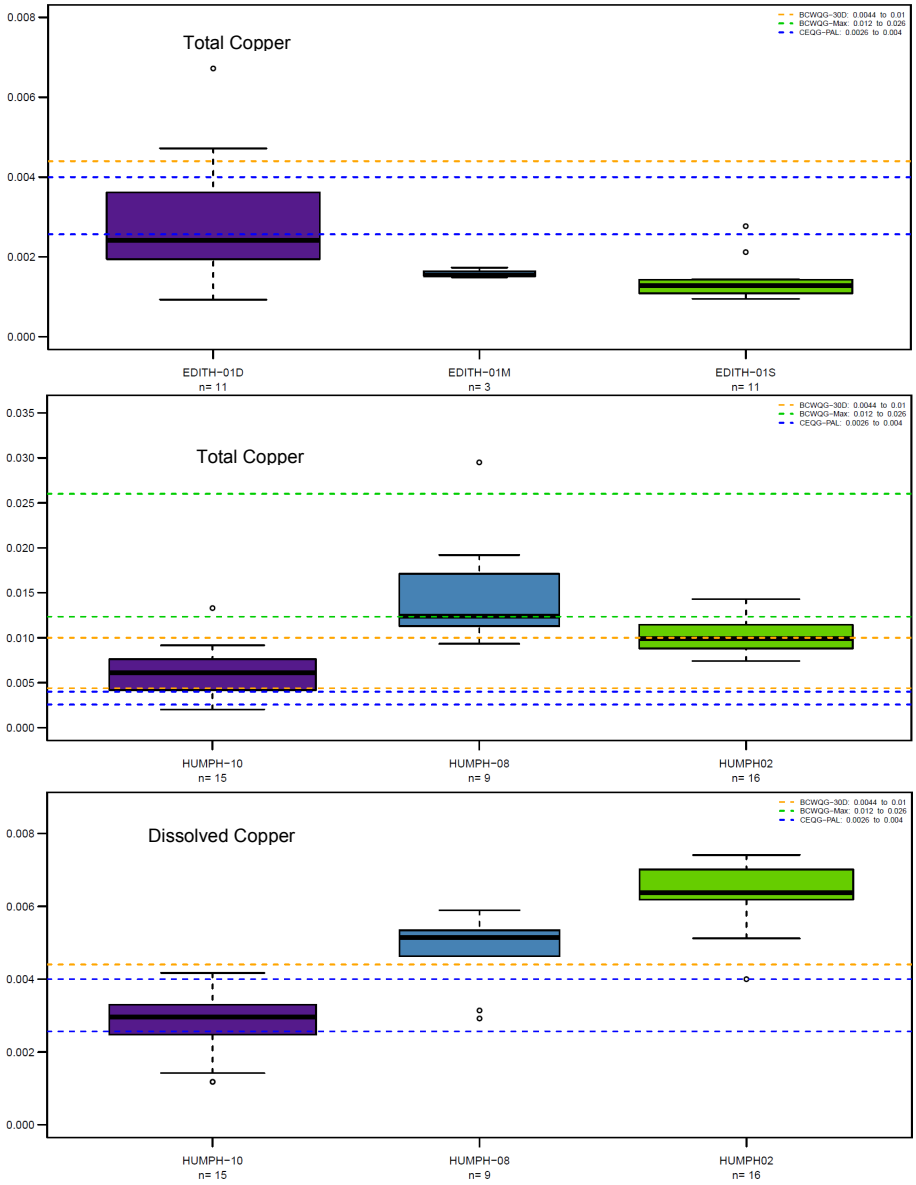


Figure 4.33 Spatial Boxplot of Total and Dissolved Copper in Humphrey Creek and Edith Lake

NOTES:

1. Y-AXIS UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SITE ORDER ALONG THE X-AXIS IS FROM UPSTREAM TO DOWNSTREAM (LAKE SITES ARE SHOWN IN ORDER OF DEEP TO SHALLOW SAMPLING LOCATIONS). n-NUMBER OF SAMPLES.
3. BOXPLOTS SHOW THE DISTRIBUTION OF DATA AT EACH SITE (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES).
4. VALUES BELOW THE DETECTION LIMIT ARE EQUATED TO HALF THE DETECTION LIMIT FOR STATISTICAL AND GRAPHING PURPOSES. BASED ON THIS METHOD, SOME VALUES SHOWN TO BE ABOVE GUIDELINES MAY NOT ACTUALLY EXCEED GUIDELINES.
5. THE CEQG-PAL, BCWQG-MAX, AND BCWQG-30D THRESHOLDS FOR COPPER ARE HARDNESS-DEPENDENT AND WERE CALCULATED BASED ON THE MEDIAN MONTHLY HARDNESS OBSERVED AT EACH SITE.

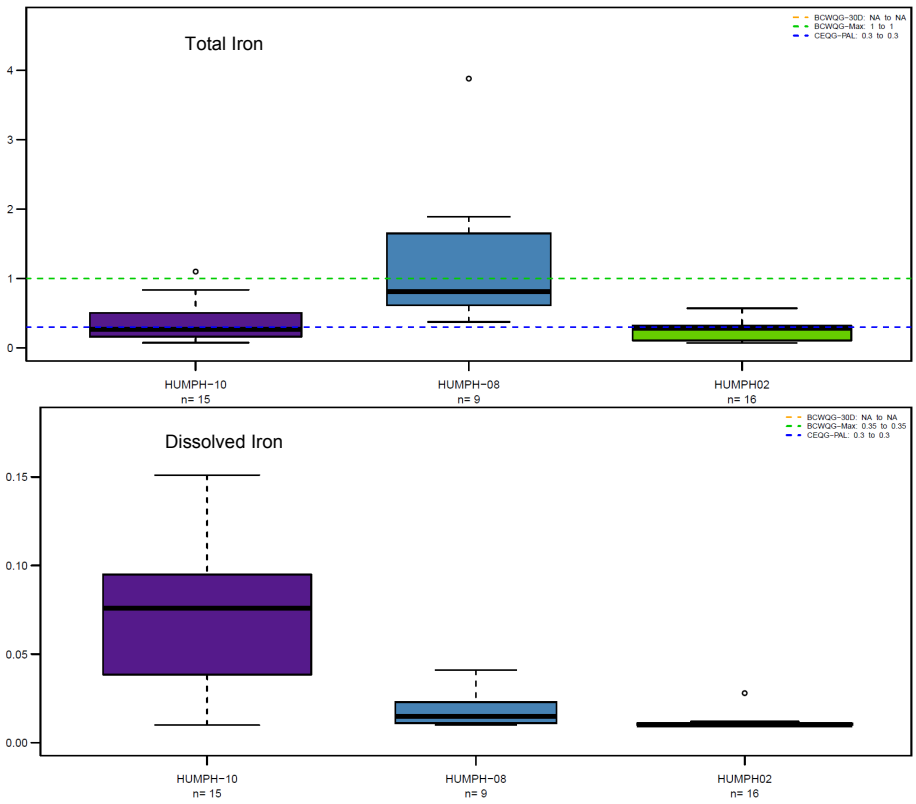


Figure 4.34 Spatial Boxplot of Iron in Humphrey Creek

NOTES:

1. Y-AXIS UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SITE ORDER ALONG THE X-AXIS IS FROM UPSTREAM TO DOWNSTREAM. n-NUMBER OF SAMPLES.
3. BOXPLOTS SHOW THE DISTRIBUTION OF DATA AT EACH SITE (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES).
4. VALUES BELOW THE DETECTION LIMIT ARE EQUATED TO HALF THE DETECTION LIMIT FOR STATISTICAL AND GRAPHING PURPOSES. BASED ON THIS METHOD, SOME VALUES SHOWN TO BE ABOVE GUIDELINES MAY NOT ACTUALLY EXCEED GUIDELINES.
5. THE BCWQG-MAX FOR TOTAL IRON IS 1 mg/L, 0.35 mg/L FOR DISSOLVED IRON, AND THE CEQG-PAL IS 0.3 mg/L.
6. THE HC-DW AESTHETIC OBJECTIVE FOR IRON IS 0.3 mg/L.

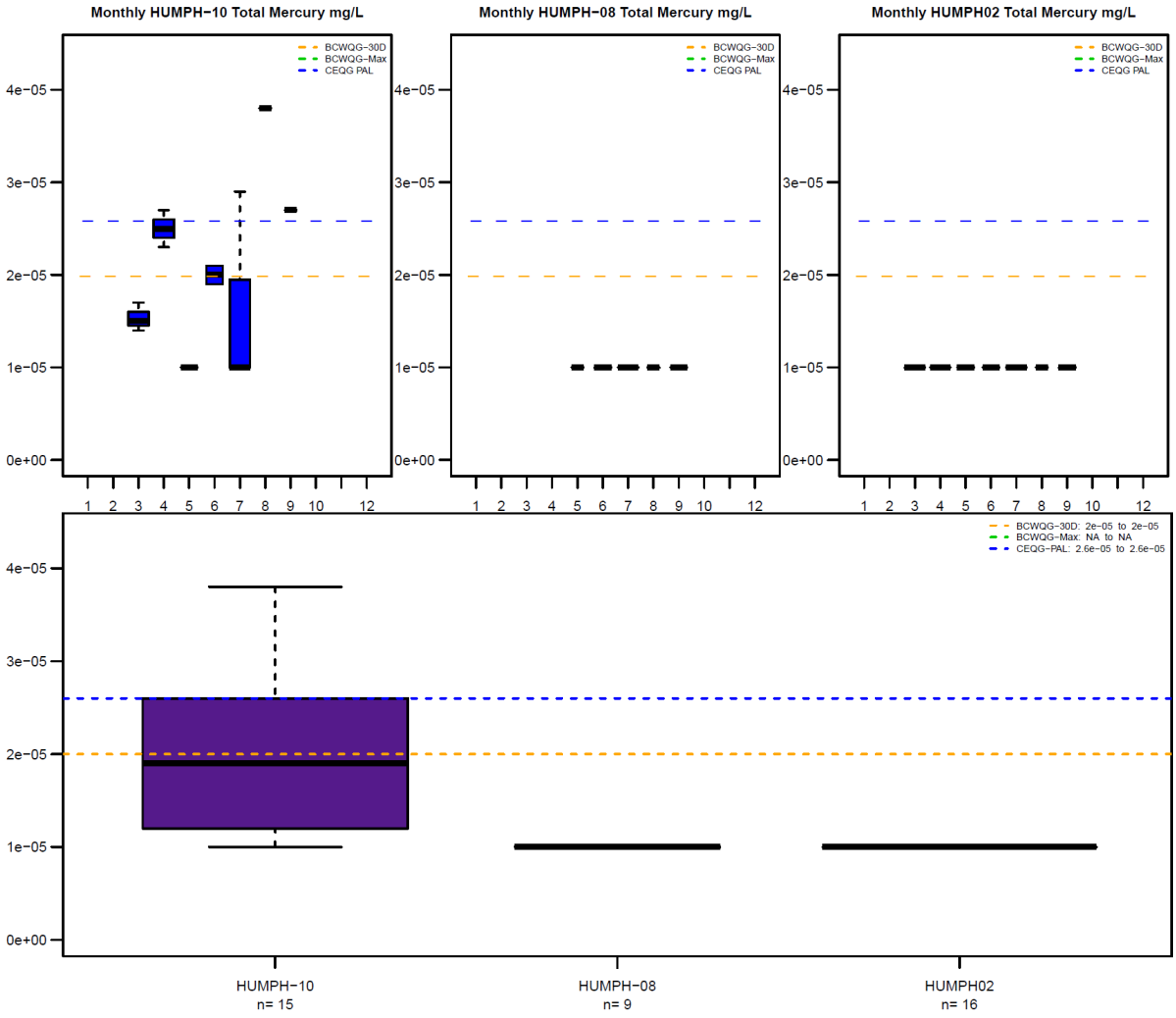


Figure 4.35 Monthly and Spatial Boxplot of Total Mercury in Humphrey Creek

NOTES:

1. Y-AXIS UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. X-AXIS UNITS ARE MONTHS FOR THE UPPER GRAPHS AND SITES (UPSTREAM TO DOWNSTREAM) FOR THE LOWER GRAPH. n-NUMBER OF SAMPLES.
3. BOXPLOTS SHOW THE DISTRIBUTION OF DATA FOR EACH MONTH (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES).
4. VALUES BELOW THE DETECTION LIMIT ARE EQUATED TO HALF THE DETECTION LIMIT FOR STATISTICAL AND GRAPHING PURPOSES. BASED ON THIS METHOD, SOME VALUES SHOWN TO BE ABOVE GUIDELINES MAY NOT ACTUALLY EXCEED GUIDELINES.
5. THE BCWQG-30D FOR MERCURY IS 0.00002 mg/L AND THE CEQG-PAL IS 0.000026 mg/L.

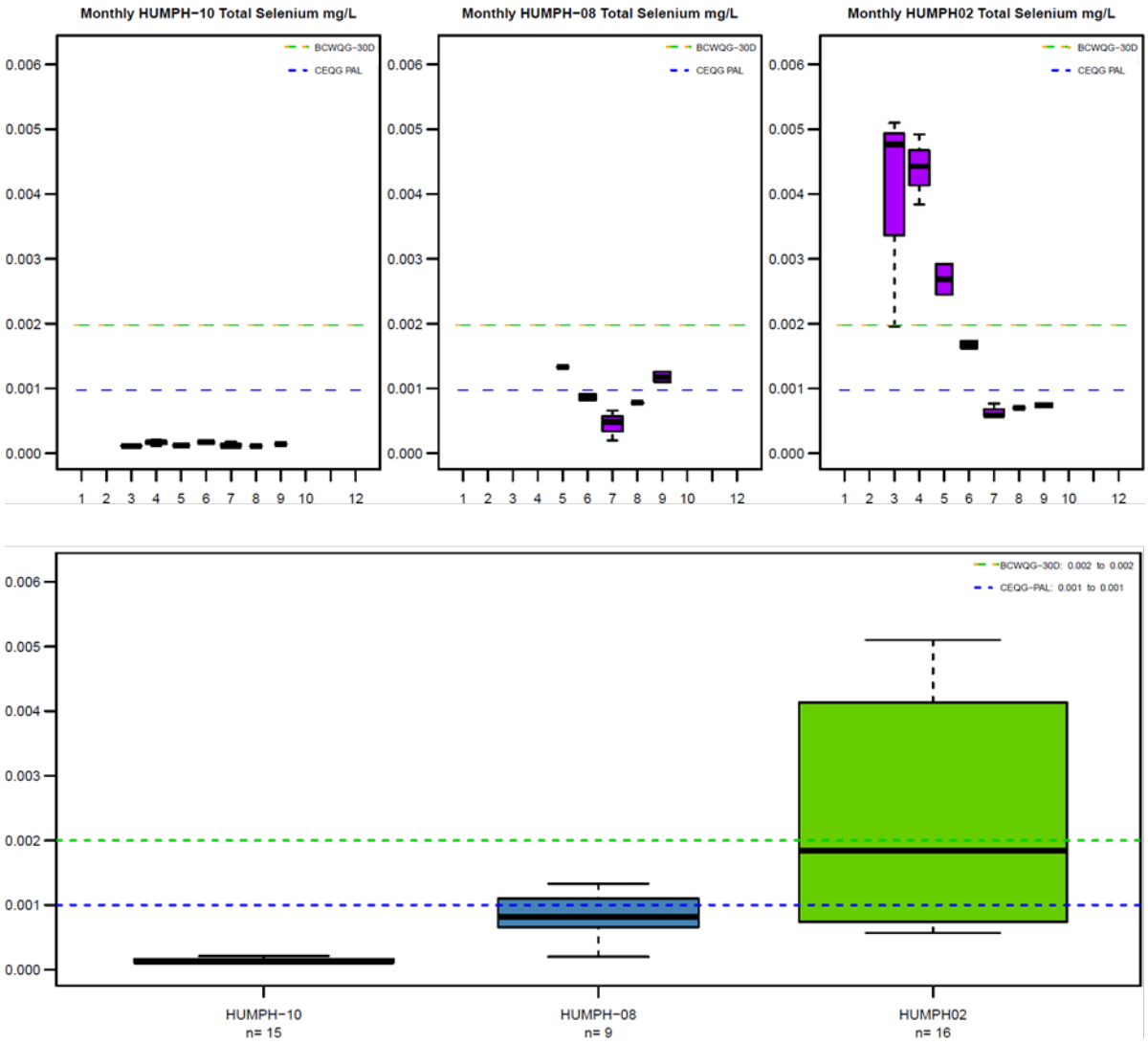


Figure 4.36 Monthly and Spatial Boxplot of Total Selenium in Humphrey Creek

NOTES:

1. Y-AXIS UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. X-AXIS UNITS ARE MONTHS FOR THE UPPER GRAPHS AND SITES (UPSTREAM TO DOWNSTREAM) FOR THE LOWER GRAPH. n-NUMBER OF SAMPLES.
3. BOXPLOTS SHOW THE DISTRIBUTION OF DATA FOR EACH MONTH (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES).
4. VALUES BELOW THE DETECTION LIMIT ARE EQUATED TO HALF THE DETECTION LIMIT FOR STATISTICAL AND GRAPHING PURPOSES. BASED ON THIS METHOD, SOME VALUES SHOWN TO BE ABOVE GUIDELINES MAY NOT ACTUALLY EXCEED GUIDELINES.
5. THE BCWQG-MAX FOR SELENIUM IS 0.002 mg/L AND THE CEQG-PAL IS 0.001 mg/L.
6. THE DRINKING WATER GUIDELINES FOR SELENIUM ARE 0.01 mg/L (BCWQG) and 0.05 mg/L (HC-DW).

4.5 CHERRY CREEK WATERSHED SURFACE WATER QUALITY

The Cherry Creek watershed borders the western extent of the Peterson Creek watershed, which encompasses the Project footprint. Four water bodies were investigated within the Cherry Creek watershed during the baseline data collection program: Cherry Creek, Alkali Creek, Inks Lake, and Wallender Lake. Cherry Creek runs adjacent to the western extent of the historical Afton Mine tailings storage facility. There are numerous water licences currently in effect in Cherry Creek, including domestic and commercial usage in the lower extent of the baseline study area. Alkali Creek is a main tributary to Cherry Creek. It lies within agricultural property and is commonly used for irrigation and livestock watering purposes. Alkali Creek is subject to intermittent flows and was often dry during the course of the baseline data collection program to date. The lower reaches of Alkali Creek are diverted around the historical Afton Mine tailings storage facility, where it drains through a swampy area into Cherry Creek. The drainage area of Cherry Creek, upstream of the confluence with Alkali Creek was estimated to be 104.1 km^2 (Rescan 2007).

Inks Lake is situated immediately northwest of the intersection of Lac La Jeune Road and Inks Lake Road. The lake is comprised of two basins: the South Basin, approximately 6.7 ha in size, is joined by an approximately 40 m long channel to a smaller basin to the north (1.3 ha). During drier seasons there is no surface flow connecting the two basins. The deepest spot in the South Basin is 5 m. Immediately northwest of Inks Lake North Basin is a small (0.3 ha), unnamed kidney-shaped pond. No surface channel is visible between this pond and Inks Lake. Although Inks Lake is within the Cherry Creek watershed, there is no surface connection between Inks Lake and Cherry Creek, or between Inks Lake and Alkali Creek (Knight Piésold Ltd 2012b). Wallender Lake is similar to Inks Lake, in that it is a very shallow water body that has no defined surface outflow channel.

Water quality sampling in the Cherry Creek watershed was initiated prior to the commencement of the current baseline water quality study, with samples collected in support of the Afton Mine water discharge permit (PE-3904), which includes sampling in Cherry Creek (two sites – CC08 and CC02), Alkali Creek, the historical TSF supernatant pond, the North West Seepage Recovery Pond (NWSRP), and the Seepage Pipe (Spring of 2012). The permit requirements for analysis were limited compared to the full suite of parameters analyzed for in the current baseline program, and earlier data are limited by higher analytical detection limits. The TSF and NWSRP water quality data are not included in this report. The historical data are not within our database, but have been submitted in support of the reclamation reports (Afton Operating Corporation 1999, 2001, 2004, and Knight Piésold Ltd 2012a).

For ease of presentation, the water quality assessment for this watershed has been divided into two main sections based on water feature characteristics and flow patterns. Alkali Creek and Cherry Creek have been presented in one sub-section and Inks Lake and Wallender Lake in another.

The guideline exceedance discussion below is related specifically to the freshwater aquatic life guidelines. The guideline exceedance tables specific to aquatic life, drinking water, agricultural use, wildlife drinking water, and recreational water use are tabulated in Appendix C. Exceedances related to these guidelines have been noted in the text, but have not been discussed at length. Summary statistics for each water quality site are also shown in Appendix C. The aquatic life and drinking water guideline exceedances have been reduced to percentage of total samples per site and are provided in Table 4.3, Table 4.4, and Table 4.5.

4.5.1 Cherry Creek and Alkali Creek Water Quality Assessment

Physical Parameters, Dissolved Anions, and Nutrients

Water in Cherry Creek and Alkali Creek is typically neutral to slightly basic and moderately hard to very hard. Dissolved hardness, specific conductance and TDS were seasonally variable, and decreased with the dilution effects of spring freshet and increased through the summer and winter as flows become increasingly influenced by the dominance of groundwater inflows. Average TDS was higher in Alkali Creek than in Cherry Creek and within Cherry Creek, TDS was higher at the downstream site (CC02) than the site upstream of the confluence with Alkali Creek (CC08). The TDS concentrations in Alkali Creek and lower Cherry Creek (CC02 – Greenstone Mountain Road and Highway #1) often exceeded the 500 mg/L drinking water and irrigation water use guideline limits. The TDS concentrations at the upper Cherry Creek (CC08) sample location generally remained well below these guidelines (average concentration of 172 mg/L), indicative of a change in contributing water quality below this point, which includes the water from Alkali Creek and groundwater inputs and run-off from the lower watershed (potential influence of historical mine workings and agricultural practices). TSS and turbidity values followed a similar pattern to other sampling sites within the area and were observed to increase during spring freshet flows.

Major Ions

All major ions showed the same seasonal and spatial trends in the Cherry Creek watershed. Ion concentrations were generally higher in Alkali Creek than in Cherry Creek and increased from upstream to downstream along Cherry Creek. Fluoride was the only major ion noted to exceed water quality guidelines in the Cherry Creek and Alkali Creek. Most of the Alkali Creek samples exceeded the 0.12 mg/L CEQG-PAL as did the majority of samples collected from CC02 during the low flow months; most samples collected from CC02 during freshet were below aquatic life guidelines for fluoride. None of the samples exceeded the BCWQG-Max hardness dependent guideline or the drinking water guidelines for this parameter.

Nutrients

Phosphorus concentrations in Cherry Creek and Alkali Creek were highly variable and generally lower during the winter months in Cherry Creek, with both creeks showing rapid increases in TP concentrations in response to spring freshet flows. Alkali Creek TP data collected support the classification of that creek within the hyper-eutrophic range. The TP concentrations in Cherry Creek extend over several trophic status ranges at each site. TP concentrations within this creek are clearly influenced by the surrounding agricultural/livestock rearing land uses, and even at the baseline level there are extreme fluctuations across multiple trophic status ranges which can induce stress on a creek system and the aquatic flora and fauna. Cherry Creek during non-freshet flows is generally classified within the meso-eutrophic to eutropic range. The downstream section of Cherry Creek was clearly influenced by greater phosphorus loading sources, including Alkali Creek. This was especially apparent during freshet, when surface runoff was higher (maximum concentration 0.87 mg/L); phosphorous concentrations at the upstream site (CC08) reached their maximum during the same sampling events where the highest concentrations were found at CC02; however, the peak concentrations were lower (maximum concentration 0.24 mg/L).

Nitrogen levels in Cherry and Alkali Creeks were observed in low concentrations. In the upper area of Cherry Creek (CC08), ammonia and total nitrogen increased during freshet, with nitrate

decreasing during the same period. In Alkali Creek (AC02) and lower Cherry Creek (CC02), ammonia, total nitrogen and nitrate decreased during freshet and increased during the fall and winter seasons.

Organic Carbon and Nitrogen

TOC and DOC concentrations varied through the sampling program and the highest concentrations were typically observed during freshet. Concentrations of TOC and DOC were higher in Alkali Creek than in Cherry Creek and exceeded the BCWQG-DW of 4 mg/L at all sites (maximum concentration 19.3 mg/L at AC02). This guideline is applicable only to treated water sources because the presence of organic carbon can result in the formation of toxic trihalomethanes when chlorinated.

Organic nitrogen concentrations in Cherry Creek and Alkali Creek do not exceed the any of the provincial or federal guidelines.

4.5.1.1 Metals

In Cherry Creek and Alkali Creek aluminum, chromium, and copper regularly exceeded aquatic life guidelines and iron and manganese regularly exceeded drinking water guidelines. Sporadic exceedances (i.e. fewer than 10% of samples) of aquatic life guidelines for arsenic, cobalt, mercury, selenium and zinc and of drinking water guidelines for arsenic and sodium were observed. Seasonal variance was evident for total metal parameters and most tended to increase through spring freshet.

Aluminum

Concentrations of aluminum in Cherry Creek increased significantly in response to freshet flows and then stabilized at much lower concentrations through the remaining part of the year while in Alkali Creek, the highest aluminum concentrations were observed during the fall season. Concentrations of aluminum were typically higher at CC02 than samples collected at CC08; dissolved aluminum concentrations were lower and did not increase as dramatically with distance downstream. Aluminum in Alkali Creek appears to be somewhat more stable, though this could be an artefact of the reduced sampling frequency achieved at this location. Dissolved aluminum rarely exceeded any guidelines; however, total aluminum concentrations exceeded the CEQG-PAL (pH-dependent) in most samples collected from Alkali Creek and frequently in samples collected from Cherry Creek (16% of samples from CC08 and 22% of samples from CC02). The seasonal/spatial distribution of total aluminum concentrations in Cherry Creek and Alkali Creek is shown on Figure 4.37 (sites are shown from upstream to downstream). Both figures, showing the spatial and seasonal trends in total aluminum are shown in comparison with aquatic life guidelines.

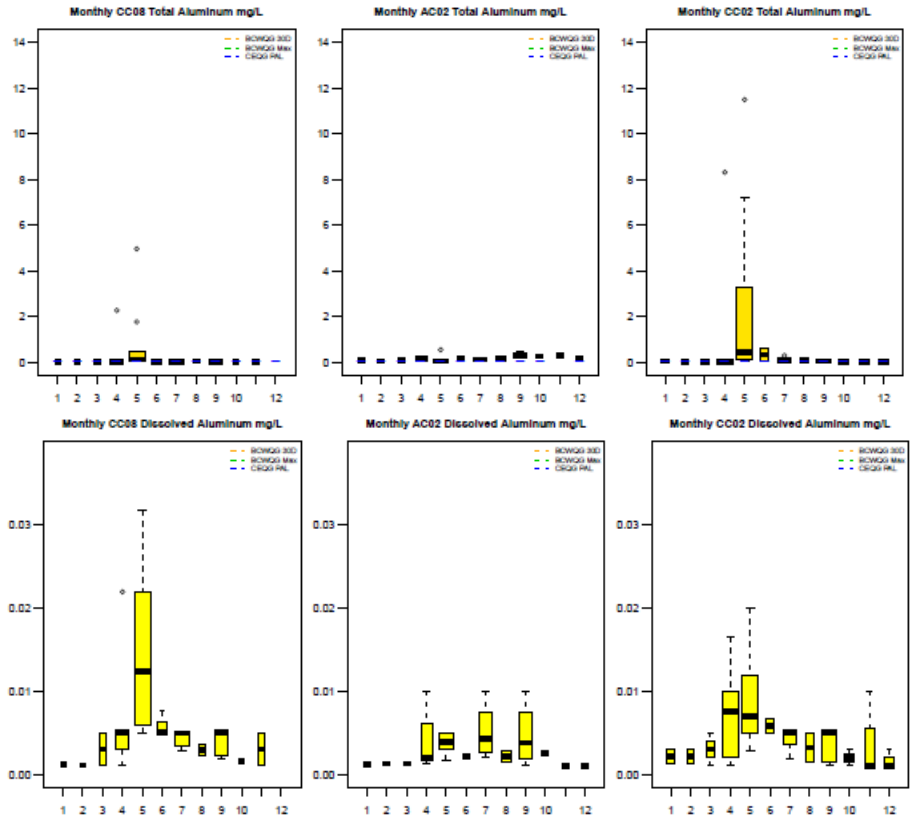


Figure 4.37 Seasonal Boxplot of Total and Dissolved Aluminum in Cherry Creek and Alkali Creek

NOTES:

1. Y-AXIS UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. X-AXIS UNITS ARE MONTHS AND SITES ARE LISTED FROM UPSTREAM TO DOWNSTREAM.
3. BOXPLOTS SHOW THE DISTRIBUTION OF DATA FOR EACH MONTH (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES).
4. VALUES BELOW THE DETECTION LIMIT ARE EQUATED TO HALF THE DETECTION LIMIT FOR STATISTICAL AND GRAPHING PURPOSES. BASED ON THIS METHOD, SOME VALUES SHOWN TO BE ABOVE GUIDELINES MAY NOT ACTUALLY EXCEED GUIDELINES.
5. THE BCWQG -MAX, BCWQG-30DAY AND CEQG-PAL FOR FRESHWATER AQUATIC LIFE FOR ALUMINUM ARE DEPENDENT ON WHETHER pH IS ABOVE OR BELOW 6.5; ALL pH VALUES ARE GREATER THAN 6.5.
6. THE BCWQG-MAX AND BCWQG-30DAY ARE SPECIFIC TO DISSOLVED (D) ALUMINUM AND THE CEQG-PAL IS SPECIFIC TO TOTAL ALUMINUM.

Chromium

Dissolved chromium did not exceed aquatic life or drinking water guidelines; however, the highest total chromium concentrations observed during freshet in both Alkali Cherry Creek exceeded the CEQG-PAL of 0.001 mg/L for Cr(VI). The CEQG-PAL for the less toxic Cr(III) is 0.0089 mg/L and was not exceeded in any samples from either creek in the Cherry Creek watershed. Since species analyses have not been conducted, it is not confirmed whether the chromium present in Cherry Creek is in the Cr(III) or Cr(VI) form, though the Cr(VI) form is most likely in well oxygenated surface waters and Cr(III) in reducing conditions such as deeper groundwater sources; therefore, samples

have been compared to both tiers of guidelines. The concentrations of total chromium were lower in samples collected from Alkali Creek than Cherry Creek and the highest concentrations were only slightly above the CEQG-PAL. Total chromium concentrations in Cherry Creek increased with distance downstream and exceeded the CEQG-PAL only sporadically during the highest flow season. The seasonal and spatial distribution boxplots for total chromium are shown on Figure 4.38, in comparison with aquatic life guidelines.

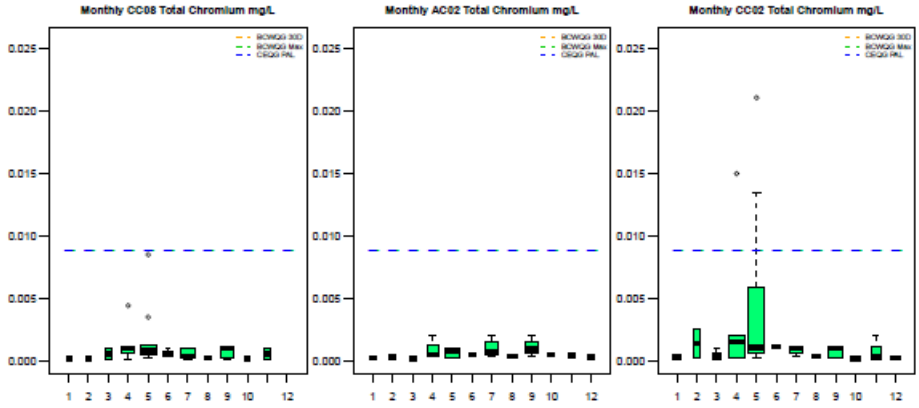


Figure 4.38 Seasonal/Spatial Boxplot of Total Chromium in Cherry Creek and Alkali Creek

NOTES:

1. Y-AXIS UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. X-AXIS UNITS ARE MONTHS AND SITES ARE LISTED FROM UPSTREAM TO DOWNSTREAM. n-NUMBER OF SAMPLES.
3. BOXPLOTS SHOW THE DISTRIBUTION OF DATA FOR EACH MONTH (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES).
4. VALUES BELOW THE DETECTION LIMIT ARE EQUATED TO HALF THE DETECTION LIMIT FOR STATISTICAL AND GRAPHING PURPOSES. BASED ON THIS METHOD, SOME VALUES SHOWN TO BE ABOVE GUIDELINES MAY NOT ACTUALLY EXCEED GUIDELINES.
5. THE BCWQG-MAX AND CEQG-PAL THRESHOLDS FOR AQUATIC LIFE ARE 0.0089 mg/L FOR Cr(VI) (SHOWN ON THE FIGURE); THE SAME GUIDELINES ARE 0.001 mg/L FOR THE CR(III) SPECIES; IT IS NOT KNOWN WHICH SPECIES IS PREVALENT.

Copper

The seasonal and spatial distribution boxplots for total copper are shown on Figure 4.39, in comparison with aquatic life guidelines. Copper concentrations in Cherry Creek followed the same seasonal trend as other metals, showing a sharp increase through spring freshet, with relatively low concentrations through the remainder of the year, though the total concentrations were higher than dissolved. Total copper concentrations in Cherry Creek increased distance downstream, yet there were more exceedances in the upper catchment samples due to lower hardness.

Copper concentrations in samples collected at each of the sites within the two creeks exceeded the hardness dependent CEQG-PAL guideline. Most guideline exceedances were limited to the most stringent CEQG-PAL; however, samples collected from the two sites on Cherry Creek frequently also exceeded the BCWQG-Max and occasionally exceeded the BCWQG-30 D, these exceedances were not sustained for the required 30 day period. Outside of the freshet period, the range of dissolved copper concentrations in Alkali Creek is similar to that of lower Cherry Creek and dissolved copper concentrations are generally higher in upper Cherry Creek than at the downstream site.

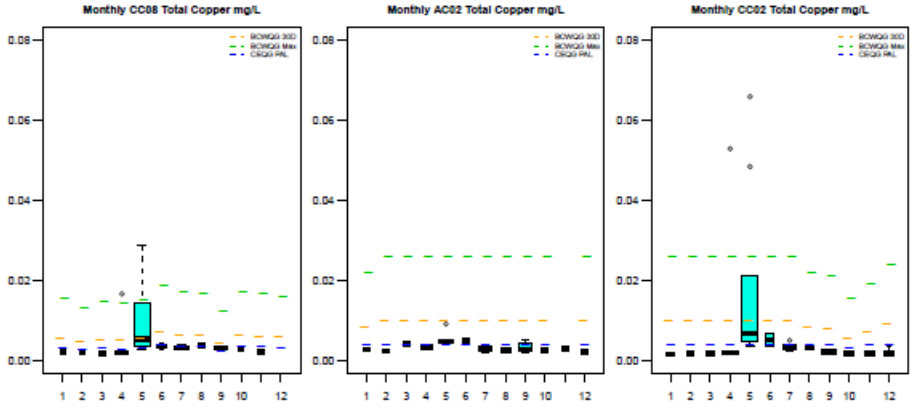


Figure 4.39 Seasonal/Spatial Boxplot of Total Copper in Cherry Creek and Alkali Creek

NOTES:

1. Y-AXIS UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. X-AXIS UNITS ARE MONTHS AND SITES ARE LISTED FROM UPSTREAM TO DOWNSTREAM. n-NUMBER OF SAMPLES.
3. BOXPLOTS SHOW THE DISTRIBUTION OF DATA FOR EACH MONTH (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES).
4. VALUES BELOW THE DETECTION LIMIT ARE EQUATED TO HALF THE DETECTION LIMIT FOR STATISTICAL AND GRAPHING PURPOSES. BASED ON THIS METHOD, SOME VALUES SHOWN TO BE ABOVE GUIDELINES MAY NOT ACTUALLY EXCEED GUIDELINES.
5. THE CEQG-PAL, BCWQG-MAX, AND BCWQG-30DAY THRESHOLDS ARE HARDNESS-DEPENDENT AND WERE CALCULATED BASED ON THE MEDIAN MONTHLY HARDNESS OBSERVED AT EACH SITE.

Iron

Iron concentrations in Cherry Creek followed the seasonal trend observed for other metals, with peak concentrations achieved in samples collected during freshet. Total iron concentrations increased with distance downstream in Cherry Creek; however Alkali Creek concentrations were generally lower than Cherry Creek. Dissolved iron concentrations remain relatively unchanged between the two sampling points in Cherry Creek. The seasonal and spatial trends in total iron concentrations are shown on Figure 4.40.

Dissolved iron did not exceed aquatic life, drinking water, or agricultural guidelines; however, total iron exceeded the CEQG-PAL in both Cherry Creek and Alkali Creek and also exceeded the BCWQG-Max and the CEQG-Irrigation in Cherry Creek only. The 0.3 mg/L HC-DW guideline was also exceeded at all sites, though it should be noted that this is an aesthetic guideline (not health-based).

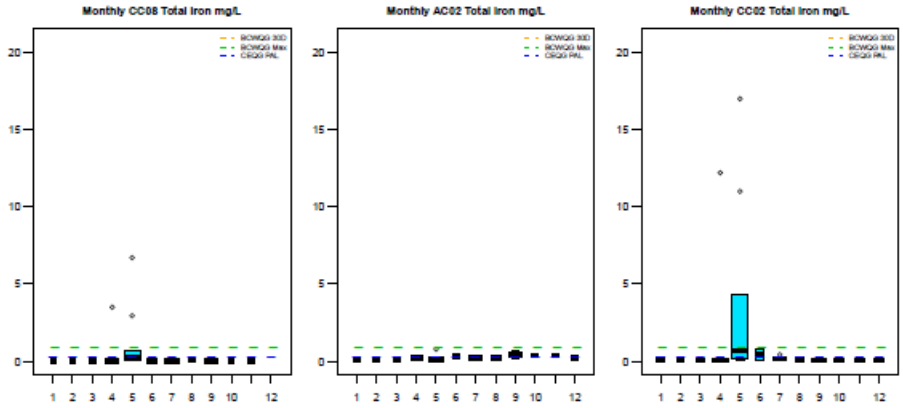


Figure 4.40 Seasonal Boxplot of Total Iron in Cherry Creek and Alkali Creek

NOTES:

1. Y-AXIS UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. X-AXIS UNITS ARE MONTHS AND SITES ARE LISTED FROM UPSTREAM TO DOWNSTREAM.
3. BOXPLOTS SHOW THE DISTRIBUTION OF DATA FOR EACH MONTH (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES).
4. VALUES BELOW THE DETECTION LIMIT ARE EQUATED TO HALF THE DETECTION LIMIT FOR STATISTICAL AND GRAPHING PURPOSES. BASED ON THIS METHOD, SOME VALUES SHOWN TO BE ABOVE GUIDELINES MAY NOT ACTUALLY EXCEED GUIDELINES.
5. THE BCWQG-MAX FOR IRON IS 1 mg/L (SPECIFIC TO TOTAL IRON) AND THE CEQG-PAL IS 0.3 mg/L.
6. THE HC-DW AESTHETIC OBJECTIVE FOR IRON IS 0.3 mg/L.

Manganese

Drinking water and irrigation guideline exceedances were observed in Cherry Creek and Alkali Creek. Manganese drinking water guidelines are for aesthetic purposes only (HC-DW 0.05 mg/L). The highest concentrations of manganese in Cherry Creek were generally associated with freshet samples, whereas Alkali Creek manganese concentrations decreased during freshet and increased in late summer and early fall. A similar distribution of concentrations was observed for dissolved manganese in Alkali Creek, indicating that this is a parameter that is dominantly present in the dissolved form in that creek. In Cherry Creek, however, the seasonal distribution of dissolved manganese was similar to that of both total and dissolved manganese in Alkali Creek and opposite to that of total manganese in Cherry Creek, indicating the presence of both particulate and dissolved manganese in this creek. Irrigation water use guidelines (BCWQG-Irrigation and CEQG-Irrigation; both 0.2 mg/L) were exceeded in almost half of the samples collected from Alkali Creek and more sporadically in samples collected from Cherry Creek.

Molybdenum

Molybdenum has been found at higher concentrations in Cherry Creek than in Alkali Creek and concentrations were generally higher in upper Cherry Creek during the winter months and higher at the lower sample location (CC02) through the summer and fall sapling events. Molybdenum concentrations are, on average, approximately five times higher in Cherry Creek than in Alkali Creek. Molybdenum concentrations were well below the aquatic life guidelines, but exceeded the CEQG-Irrigation (0.01 mg/L) on a regular basis in Cherry Creek. None of the samples exceeded the 0.02 mg/L BCWQG-Irrigation water use limit or the CEQG-Livestock, BCWQG-Livestock, or

BCWQG-Wildlife limits (all 0.05 mg/L). A similar pattern of exceedances were noted for dissolved molybdenum as this parameter was dominantly found in the dissolved form.

4.5.2 Inks Lake and Wallender Lake Water Quality Assessment

While Inks Lake and Wallender Lake are located in the Cherry Creek drainage, there is no observed connection between these lakes and Cherry Creek. It should be noted that the lower parameter concentrations encountered in the March 2011 sampling event for Inks Lake were influenced by sampling conditions. The lake was starting to thaw, so a sample was collected from shore using an extended pole sampler; however it was difficult to get a clean sample because of the ice slurry, so the values are more likely representative of the ice and snow rather than lake water.

4.5.2.1 Physical Parameters, Dissolved Anions, and Nutrients

Inks Lake and Wallender Lake have elevated TDS and are more saline than the Historical Mine Site Features in the Peterson Creek watershed (NSP (North Seepage Pond), Ajax West-West open pit lakes, and the WR-Seep located south of Peterson Creek). Similar observations related to ponds in the vicinity of the New Afton mine were made during the baseline investigation to support the Mines Act Application for that project (Rescan 2007). TDS is a measure of the ionic constituents in water and is used to define the salinity classification. A single sample from Wallander Lake had a TDS concentration of 47,900 mg/L, which is higher than that of ocean water (>35,000 mg/L). These mine features and natural water bodies (Wallander Lake and Inks Lake) are basins in local groundwater discharge zones within a net evaporative climate and as a result the concentration of the majority of parameters will continue to rise over time. The parameters in the man-made features and the natural lakes tend to have higher concentrations than the surrounding groundwater and surface water. In situations like this, parameters concentrations are generally controlled by solubility limits, and clear resolution of parameter concentrations can be hampered due to sample matrix interference and the dilution requirements for analysis. Limited samples of Wallender Lake have been collected as there was rarely water present to be sampled; the discussion below is based only four samples from this location.

Boxplots of the distribution of sample pH, dissolved hardness, and TDS are shown on Figure 4.41, Figure 4.42, and Figure 4.43, respectively. The waters in Inks Lake and Wallender Lake are slightly basic, extremely hard, with very high buffering capacity. The pH values generally exceeded the upper range (pH 8.5) for drinking water and on occasion exceeded the pH 9.0 upper range for aquatic life. TDS and turbidity exceeded the HC-DW limits of 500 mg/L and 0.1 NTU, respectively in all samples.

Dissolved oxygen (DO) at the surface of Inks Lake ranged from 0.66 mg/L on August 31, 2011 to 13.1 mg/L on March 6, 2012. DO was also profiled at lake depth on June 5, 2010 and decreased significantly with depth (from 8.80 mg/L at the surface to 0.23 mg/L at 3.5 m below surface). This was also consistent for a profile completed on June 1, 2011 (DO decreased with depth from 8.51 mg/L at the surface to 0.33 mg/L at 3.5 m below the surface) (Knight Piésold Ltd 2012b).

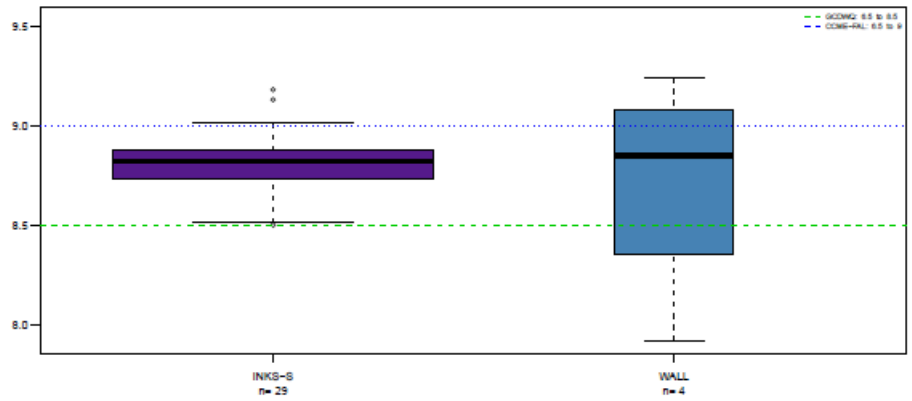


Figure 4.41 Boxplot of pH of Inks Lake and Wallander Lake

NOTES:

1. Y-AXIS UNITS ARE pH UNITS.
2. X-AXIS INDICATES SITE LOCATION.
3. BOXPLOTS SHOW THE DISTRIBUTION OF DATA AT EACH SITE (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES).
4. VALUES BELOW THE DETECTION LIMIT ARE EQUATED TO HALF THE DETECTION LIMIT FOR STATISTICAL AND GRAPHING PURPOSES. BASED ON THIS METHOD, SOME VALUES SHOWN TO BE ABOVE GUIDELINES MAY NOT ACTUALLY EXCEED GUIDELINES.
5. THE CEQG-PAL AND THE BCWQG-MAX FOR pH SPECIFY AN ACCEPTABLE pH RANGE OF 6.5 TO 9; THE ACCEPTABLE DRINKING WATER RANGE IS FROM 6.5 TO 8.5 AND IS NOT SHOWN ON THISFIGURE.

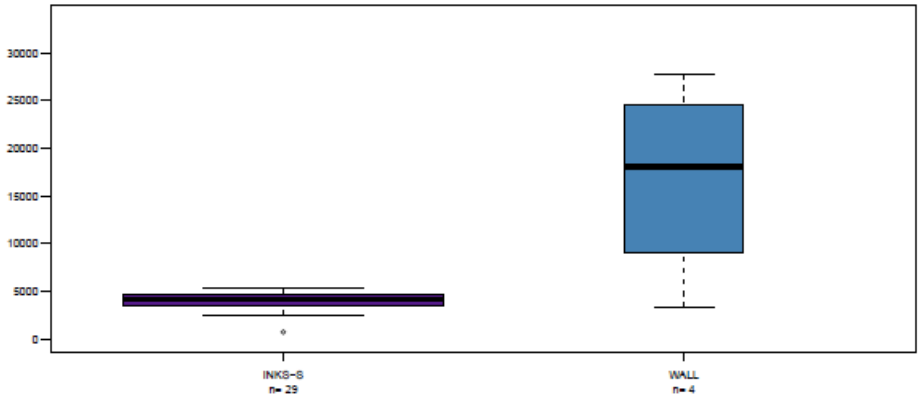


Figure 4.42 Boxplot of Hardness in Inks Lake and Wallander Lake

NOTES:

1. Y-AXIS UNITS ARE pH UNITS.
2. X-AXIS INDICATES SITE LOCATION.
3. BOXPLOTS SHOW THE DISTRIBUTION OF DATA AT EACH SITE (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES).
4. VALUES BELOW THE DETECTION LIMIT ARE EQUATED TO HALF THE DETECTION LIMIT FOR STATISTICAL AND GRAPHING PURPOSES. BASED ON THIS METHOD, SOME VALUES SHOWN TO BE ABOVE GUIDELINES MAY NOT ACTUALLY EXCEED GUIDELINES.
5. THERE ARE NO AQUATIC LIFE GUIDELINES FOR HARDNESS; HOWEVER, HARDNESS GREATER THAN 250 mg/L TRIGGERS A REQUIREMENT FOR SULPHATE TOXICITY TESTING UNDER THE GUIDANCE OF THE BCWQG-30DAY.

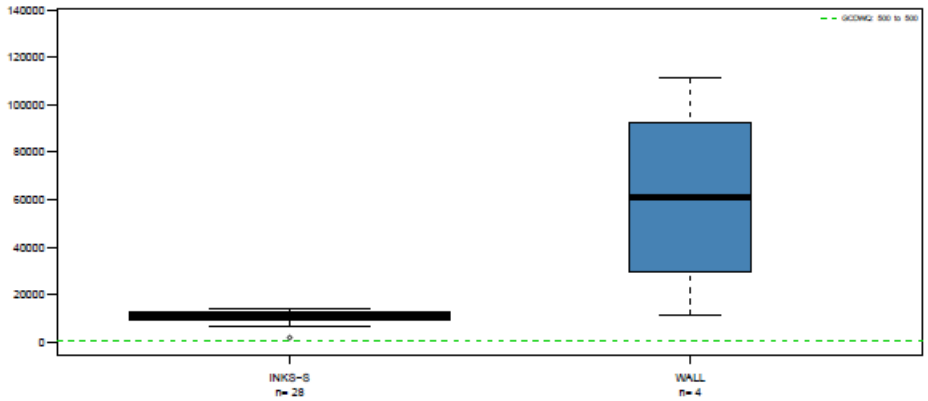


Figure 4.43 Boxplot of TDS in Inks Lake and Wallander Lake

NOTES:

1. Y-AXIS UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. X-AXIS INDICATES SITE LOCATION.
3. BOXPLOTS SHOW THE DISTRIBUTION OF DATA AT EACH SITE (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES).
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5. THERE ARE NO AQUATIC LIFE GUIDELINES FOR TDS; HOWEVER, 500 mg/L IS APPLIED FOR DRINKING WATER AND IRRIGATION WATER (HC-DW, BCWQG-IRRIGATION, CEQG-IRRIGATION).

Major Ions

Both lakes are classified as the sulphate-magnesium type with significant sodium; Inks Lake also has significant contributions of other cations (calcium) and anions (chloride and bicarbonate). The water types observed are consistent with the major water types observed in the groundwater samples in close proximity to the lakes: MW11-02, MW11-07D/S, and MW11-01S.

Sulphate concentrations are elevated in both lakes; however, higher and more variable concentrations were observed in samples collected from Wallander Lake (Figure 4.44). The recommended aquatic life toxicity limit of 730 mg/L is a preliminary estimate that may be refined based on ongoing toxicity tests; however, sample sulphate concentrations are well over this estimated limit and are unlikely to be below the toxicity threshold. Although these waters would never be used for drinking water purposes, it should be noted that all samples exceeded the 500 mg/L guideline limit.

Clear resolution on fluoride was not achieved due to elevated detection limits (greater than guideline); however, detectable concentrations at both sites indicated exceedances of the CEQG-PAL of 0.12 mg/L. Few samples exceeded the HC-DW limit of 1.5 mg/L (Figure 4.45).

The chloride concentrations measured in Wallander Lake and Inks Lake were extremely high (average 1991 mg/L and 440 mg/l, respectively) and exceeded the BCWQG-30 D (150 mg/L), the CEQG-PAL for chronic exposure (120 mg/L), the BCWQG-DW (250 mg/L), and the irrigation guidelines (BCWQG-Irrigation and CEQG-Irrigation; both 100 mg/L) in all samples. Some samples collected from Inks Lake and all samples collected from Wallander Lake also exceeded BCWQG-

Max (600 mg/L), the CEQG-PAL for short-term exposure (640 mg/L), and the BCWQG-Livestock (600 mg/L). Concentration distributions are shown for both lakes on Figure 4.46.

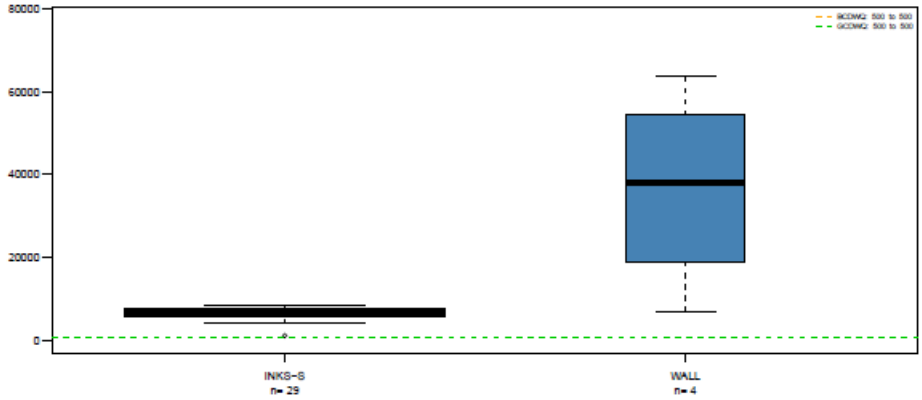


Figure 4.44 Boxplot of Sulphate in Inks Lake and Wallander Lake

NOTES:

1. Y-AXIS UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SITE ORDER ALONG THE X-AXIS IS FROM UPSTREAM TO DOWNSTREAM.
3. BOXPLOTS SHOW THE DISTRIBUTION OF DATA AT EACH SITE (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES).
4. VALUES BELOW THE DETECTION LIMIT ARE EQUATED TO HALF THE DETECTION LIMIT FOR STATISTICAL AND GRAPHING PURPOSES. BASED ON THIS METHOD, SOME VALUES SHOWN TO BE ABOVE GUIDELINES MAY NOT ACTUALLY EXCEED GUIDELINES.

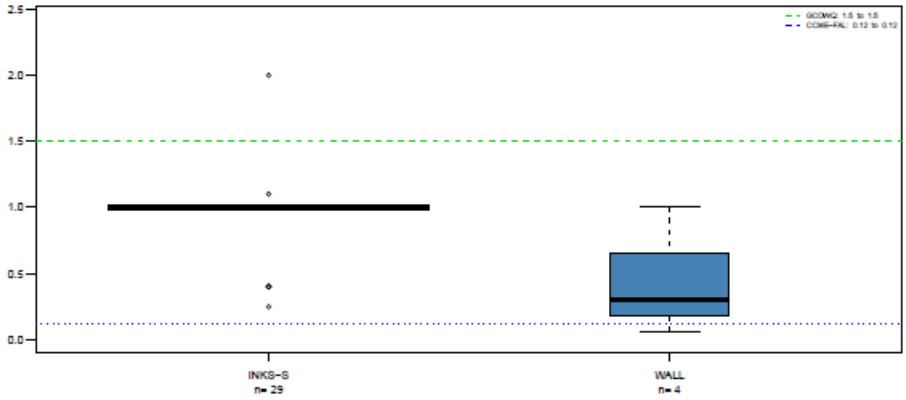


Figure 4.45 Boxplot of Fluoride in Inks Lake and Wallander Lake

NOTES:

1. Y-AXIS UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SITE ORDER ALONG THE X-AXIS IS FROM UPSTREAM TO DOWNSTREAM.
3. BOXPLOTS SHOW THE DISTRIBUTION OF DATA AT EACH SITE (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES).
4. VALUES BELOW THE DETECTION LIMIT ARE EQUATED TO HALF THE DETECTION LIMIT FOR STATISTICAL AND GRAPHING PURPOSES. BASED ON THIS METHOD, SOME VALUES SHOWN TO BE ABOVE GUIDELINES MAY NOT ACTUALLY EXCEED GUIDELINES.

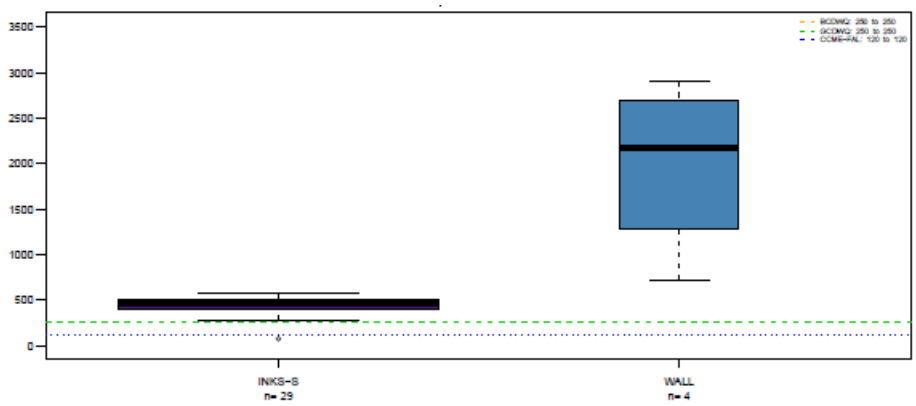


Figure 4.46 Boxplot of Chloride in Inks Lake and Wallander Lake

NOTES:

1. Y-AXIS UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SITE ORDER ALONG THE X-AXIS IS FROM UPSTREAM TO DOWNSTREAM.
3. BOXPLOTS SHOW THE DISTRIBUTION OF DATA AT EACH SITE (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES).
4. VALUES BELOW THE DETECTION LIMIT ARE EQUATED TO HALF THE DETECTION LIMIT FOR STATISTICAL AND GRAPHING PURPOSES. BASED ON THIS METHOD, SOME VALUES SHOWN TO BE ABOVE GUIDELINES MAY NOT ACTUALLY EXCEED GUIDELINES.
5. THE BCWQG-30DAY CHRONIC EXPOSURE GUIDELINE FOR CHLORIDE IS 150 mg/L; THE BCWQG-MAX IS 600 mg/L AND IS NOT SHOWN ON THIS GRAPH.
6. THE CEQG-PAL FOR CHLORIDE OF 120 mg/L IS SPECIFIC TO LONG-TERM EXPOSURE; THE CEQG-PAL FOR SHORT-TERM EXPOSURE IS 640 mg/L AND IS NOT SHOWN ON THIS GRAPH.

Nutrients

The nitrogen based inorganic nutrient (nitrite, nitrate, and ammonia) concentrations were variable in both Inks Lake and Wallander Lake and aquatic life guideline exceedances for ammonia were frequent (CEQG-PAL; pH- and temperature dependent). Exceedances of the CEQG-PAL for nitrite (3 mg/L) also occurred in samples collected from Wallander Lake.

Total phosphorus (TP) concentrations were in the hyper-eutrophic range for both lakes, but were much higher in Wallander Lake than in Inks Lake. TP varied seasonally and was highest in summer and fall.

Organic Carbon and Nitrogen

Organic carbon was generally present in the dissolved form in both lakes and was higher and more variable in samples collected from Wallander Lake than Inks Lake. Samples collected from both lakes exceeded the BCWQG-DW of 4 mg/L by at least an order of magnitude. TOC and DOC at Inks Lake varied around 50 mg/L and varied seasonally from 25 mg/L to 270 mg/L at Wallander Lake. The drinking water guideline is applicable only to treated water sources because the presence of organic carbon can result in the formation of toxic trihalomethanes when chlorinated.

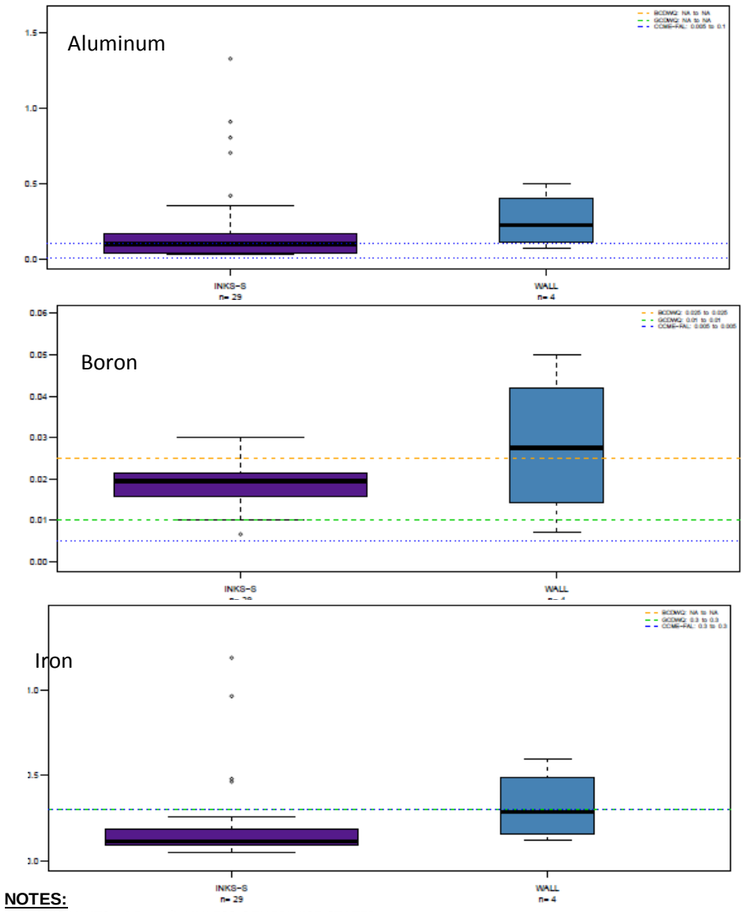
4.5.2.2 Metals

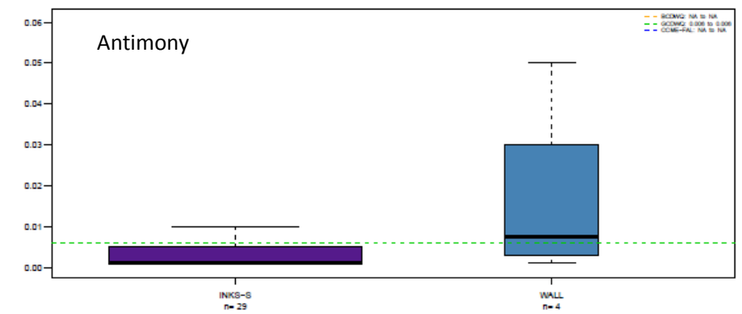
Samples collected from Inks Lake and Wallander Lake required extensive dilution for analysis because of the extremely high TDS (average 10,306 mg/L and 61,150 mg/L, respectively); as a result, several parameters tested had elevated MDLs that were greater than or equal to the

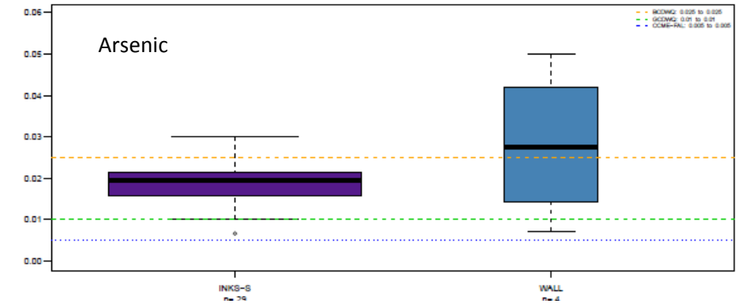
guidelines. In cases where the MDL concentration was higher than the guideline limit concentration it is not possible to determine if the sample actually exceeded guidelines. MDLs for the following parameters exceeded guideline limits during one or more sampling events: aluminum, beryllium, cadmium, chromium, cobalt, copper, lead, manganese, selenium, and thallium. Of these parameters, intermittent analytical resolution was achieved for aluminum, copper, and selenium and guidelines were generally exceeded for each true measured concentration. This was considered in the interpretation of results; however, in most cases, sample concentrations in exceedance of guidelines were greater than five times the MDL and were considered valid.

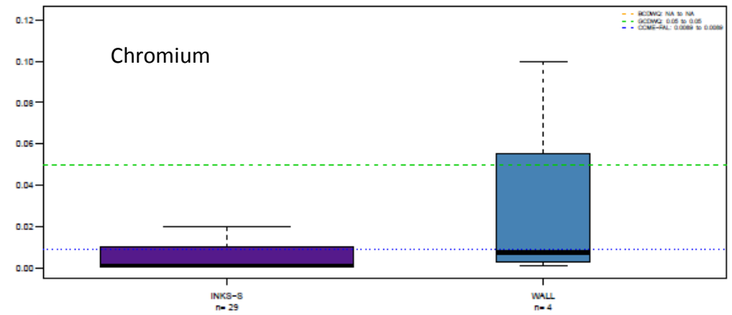
Many aquatic life guidelines were exceeded for metal parameters in Wallander Lake and Inks Lake, which is expected based on the ion concentrations and general conditions of these lakes. Concentration distributions for some metals with their guidelines are shown on boxplots on Figure 4.47 as examples; however, these guideline exceedances are not discussed in detail, since these waters are not fish-bearing and are not used for drinking water or for agricultural purposes. Rather, it should be noted that these waters may pose a risk to human, fish, and wildlife health, based on concentrations of the following metal parameters:

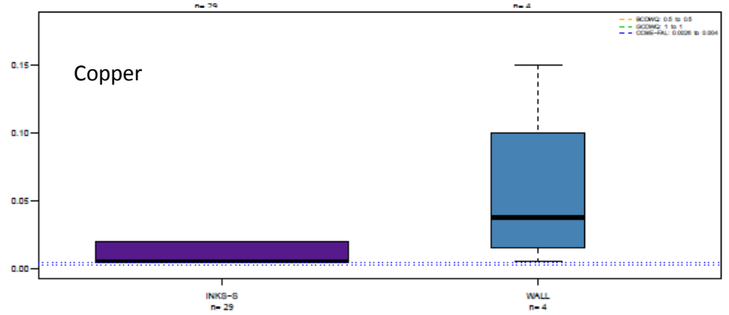
- Aluminum
- Antimony
- Arsenic
- Boron
- Chromium
- Copper
- Iron
- Manganese
- Molybdenum
- Selenium, and
- Silver.

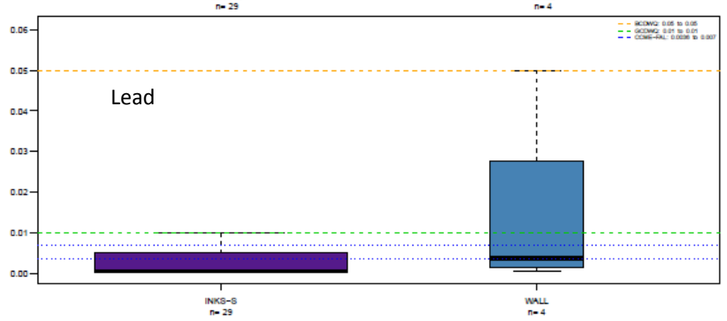


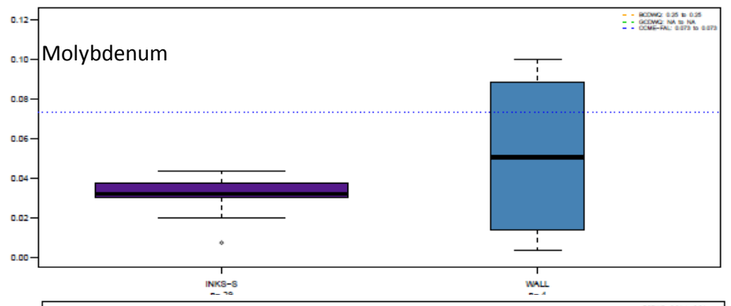


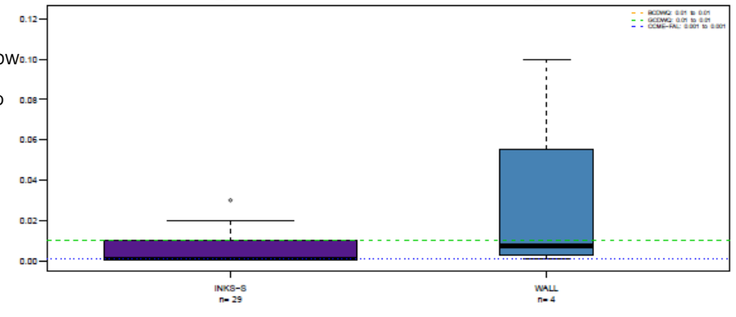












NOTES:

1. Y-AXIS UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. X-AXIS UNITS ARE BASELINE MONITORING SITES. n=NUMBER OF SAMPLES COLLECTED.
3. BOX PLOTS SHOW THE DISTRIBUTION OF DATA FOR EACH SITE (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES)
4. VALUES BELOW THE DETECTION LIMIT ARE EQUATED TO HALF THE DETECTION LIMIT FOR STATISTICAL AND GRAPHING PURPOSES. BASED ON THIS METHOD, SOME VALUES SHOWN TO BE ABOVE GUIDELINES MAY NOT ACTUALLY EXCEED GUIDELINES.
5. THE BCWQG -MAX, BCWQG-30DAY AND CEQG-PAL FOR FRESHWATER AQUATIC LIFE FOR ALUMINUM ARE DEPENDENT ON WHETHER pH IS ABOVE OR BELOW 6.5; ALL pH VALUES ARE GREATER THAN 6.5.
6. THE BCWQG-MAX AND BCWQG-30DAY ARE SPECIFIC TO DISSOLVED (D) ALUMINUM AND THE CEQG-PAL IS SPECIFIC TO TOTAL ALUMINUM.
7. THE BCWQG-MAX FOR ANTIMONY IS 0.02 mg/L.
8. THE BCWQG-MAX AND THE CEQG-PAL FOR ARSENIC ARE 0.005 mg/L.
9. THE HC-DW GUIDELINE FOR ARSENIC IS 0.01 mg/L AND THE BCWQG-DW IS 0.025 mg/L.
10. AGRICULTURAL GUIDELINES (BCWQG AND CEQG-PAL) FOR ARSENIC ARE 0.1 mg/L FOR IRRIGATION USE AND 0.025 mg/L FOR LIVESTOCK DRINKING WATER.
11. THE BCWQG-MAX FOR BORON IS 1.2 mg/L.
12. THE CHROMIUM BCWQG-MAX AND CEQG-PAL THRESHOLDS FOR AQUATIC LIFE ARE 0.0089 mg/L FOR Cr(III) (SHOWN ON THE FIGURE); THE SAME GUIDELINES ARE 0.001 mg/L FOR THE CR(VI) SPECIES; THE SPECIES HAS NOT BEEN ANALYZED BUT IT IS 13. TYPICALLY Cr(VI) IN WELL OXYGENATED WATERS AND Cr(III) IS REDUCING ENVIRONMENTS.
13. THE CEQG-PAL, BCWQG-MAX, AND BCWQG-30DAY THRESHOLDS FOR COPPER ARE HARDNESS-DEPENDENT AND WERE CALCULATED BASED ON THE MEDIAN MONTHLY HARDNESS OBSERVED AT EACH SITE.
14. THE BCWQG-MAX FOR IRON IS 1 mg/L (SPECIFIC TO TOTAL IRON) AND THE CEQG-PAL IS 0.3 mg/L.
15. THE HC-DW AESTHETIC OBJECTIVE FOR IRON IS 0.3 mg/L.

THE AQUATIC LIFE GUIDELINES FOR LEAD (BCWQG-30DAY, BCWQG-MAX, AND CEQG-PAL) ARE HARDNESS-DEPENDENT AND WERE CALCULATED BASED ON THE MEDIAN HARDNESS AT EACH SITE.

16. AQUATIC LIFE GUIDELINES FOR MOLYBDENUM INCLUDE THE BCWQG-30DAY OF 1 mg/L, THE BCWQG-MAX OF 2 mg/L, AND THE CEQG-PAL OF 0.073 mg/L.
17. THE BCWQG-DW FOR MOLYBDENUM IS 0.25 mg/L..
18. THE AGRICULTURAL AND WILDLIFE GUIDELINES FOR MOLYBDENUM ARE 0.05 mg/L FOR LIVESTOCK DRINKING WATER (BCWQG AND CEQG) AND 0.02 mg/L AND 0.01 mg/L FOR IRRIGATION (BCWQG AND CEQG, RESPECTIVELY.
19. THE BCWQG-MAX FOR SELENIUM IS 0.002 mg/L AND THE CEQG-PAL IS 0.001 mg/L.
20. THE DRINKING WATER GUIDELINES FOR SELENIUM ARE 0.01 mg/L (BCWQG AND HC).

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	10APR'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

AJAX PROJECT

SPATIAL BOX PLOTS FOR METALS THAT REGULARLY EXCEEDED GUIDELINES IN INKS LAKE AND WALLANDER LAKE

Knight Piésold CONSULTING

P/A NO. VA101-246/31

REF. NO. 3

FIGURE 4.47

REV 0

4.6 ANDERSON CREEK WATERSHED SURFACE WATER QUALITY

Anderson Creek is a recent watershed addition to the surface water quality baseline data collection program. Samples have been collected extensively in 2014 (17 sampling events) and have been used, along with assumptions based on the known characteristics of the surrounding watersheds, to characterize water quality in Anderson Creek. The sampling frequency was increased to twice monthly to improve upon the baseline characterization efforts for this watershed. Two sampling locations have been established: ANDR15 (upstream) and ANDR-10 (downstream).

Physical Parameters, Dissolved Anions, and Nutrients

Water in Anderson Creek is typically slightly basic, very hard, with high buffering capacity. TDS was elevated at both sites and frequently exceeded the HC-DW guideline (500 mg/L) and the irrigation guidelines (BCWQG and CEQG; both 500 mg/L), but was always below the 1,000 mg/L threshold for freshwater classification. Water at both sites is classified as the calcium-magnesium-bicarbonate type (shown on the Piper diagram on Figure 4.5), which is consistent with the water types observed in samples collected from the adjacent watershed (Humphrey Creek and lower Peterson Creek; Figure 4.2).

Ion concentrations generally decreased during freshet and increased throughout the summer months. Chloride concentrations were elevated at ANDR-15 at the end of winter and exceeded the BCWQG-30 D (150 mg/L) and the CEQG-PAL for long-term exposure (120 mg/L); however these concentrations decreased during freshet to below the guideline threshold (Figure 4.48). One likely contributing factor for the elevated chloride may be proximity of this site to the Coquihalla Hwy and Lac Le Jeune Road, which are salted during the winter months. Fluoride was elevated at both sites and exceeded the CEQG-PAL of 0.12 mg/L in all samples (Figure 4.49), but did not exceed the less stringent BCWQG-Max (hardness-dependent). Fluoride concentrations are very similar at both sampling locations, indicating that fluoride loading is uniform in this watershed.

Nutrients

Nitrogen-containing nutrient parameters were generally found in low concentrations; however, total phosphorous (TP) was elevated at both sites. TP concentrations were generally lower upstream and higher at the downstream site (ANDR-10). Seasonally, TP decreased during freshet, increased during the summer months, and decreased again in the fall. Waters at the upper site (ANDR-15) are characterized as meso-eutrophic in the winter and spring and eutrophic in the summer and fall. ANDR-10 is generally classified as eutrophic in the winter, spring, and fall and hyper-eutrophic in summer.

Organic Carbon and Nitrogen

TOC and DOC concentrations varied through the sampling program and the highest concentrations were typically observed during summer. Dissolved carbon made up the majority of the total carbon, which exceeded the BCWQG-DW in all samples. The BCWQG-DW limit of 4 mg/L is applicable only to treated water sources because the presence of organic carbon can result in the formation of toxic trihalomethanes when chlorinated.

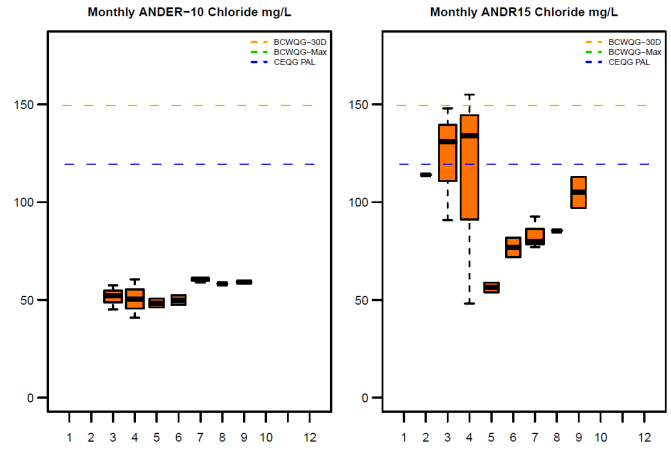


Figure 4.48 Monthly Boxplot of Chloride Concentrations in Anderson Creek

NOTES:

1. Y-AXIS UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. X-AXIS UNITS ARE MONTHS.
3. BOXPLOTS SHOW THE DISTRIBUTION OF DATA FOR EACH MONTH (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES).
4. VALUES BELOW THE DETECTION LIMIT ARE EQUATED TO HALF THE DETECTION LIMIT FOR STATISTICAL AND GRAPHING PURPOSES. BASED ON THIS METHOD, SOME VALUES SHOWN TO BE ABOVE GUIDELINES MAY NOT ACTUALLY EXCEED GUIDELINES.
5. THE BCWQG-30DAY CHRONIC EXPOSURE GUIDELINE FOR CHLORIDE IS 150 mg/L; THE BCWQG-MAX IS 600 mg/L AND IS NOT WITHIN THE SCALE OF THIS GRAPH.
6. THE CEQG-PAL FOR CHLORIDE OF 120 mg/L IS SPECIFIC TO LONG-TERM EXPOSURE; THE CEQG-PAL FOR SHORT-TERM EXPOSURE IS 640 mg/L AND IS NOT WITHIN THE SCALE OF THE GRAPH.

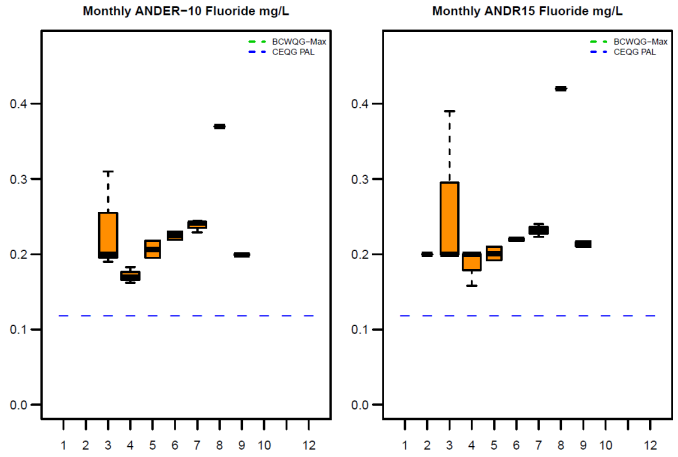


Figure 4.49 Monthly Boxplot of Fluoride Concentrations in Anderson Creek

NOTES:

1. Y-AXIS UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. X-AXIS UNITS ARE MONTHS.
3. BOXPLOTS SHOW THE DISTRIBUTION OF DATA FOR EACH MONTH (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES).
4. VALUES BELOW THE DETECTION LIMIT ARE EQUATED TO HALF THE DETECTION LIMIT FOR STATISTICAL AND GRAPHING PURPOSES. BASED ON THIS METHOD, SOME VALUES SHOWN TO BE ABOVE GUIDELINES MAY NOT ACTUALLY EXCEED GUIDELINES.
5. THE CEQG-PAL FOR FLUORIDE IS 0.12 mg/L; THE BCWQG-MAX FOR FLUORIDE IS HARDNESS-DEPENDENT AND IS NOT WITHIN THE SCALE OF THIS GRAPH.

Organic Carbon and Nitrogen

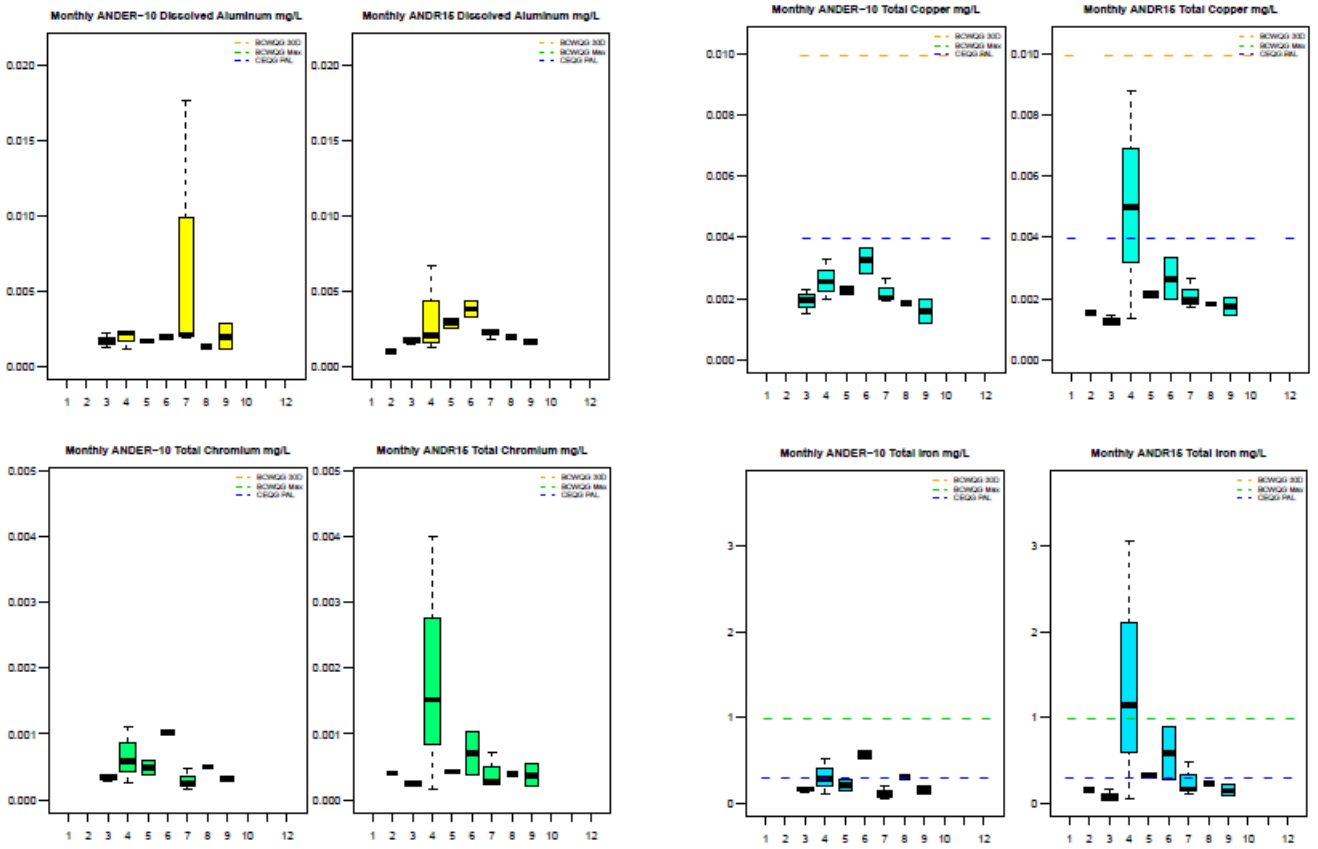
TOC and DOC concentrations varied through the sampling program and the highest concentrations were typically observed during summer. Dissolved carbon made up the majority of the total carbon, which exceeded the BCWQG-DW in all samples. The BCWQG-DW limit of 4 mg/L is applicable only to treated water sources because the presence of organic carbon can result in the formation of toxic trihalomethanes when chlorinated.

Metals

Metal parameters occurred mainly in the dissolved form in Anderson Creek and were generally detected in low concentrations that were below guidelines. These metal parameters varied seasonally with the same trend as the major ions, which are driven by local groundwater discharge: concentrations decreased during freshet and increased during the months of lower flow. Aluminum, chromium, copper, and iron were the exception and were typically measured at higher concentrations in samples collected during high flow conditions, but with low dissolved concentrations. These parameters increased during freshet with higher runoff and decreased during the seasons of lower flow. The following metals exceeded aquatic life guidelines in Anderson Creek (seasonal variability boxplots are shown on Figure 4.50):

- Aluminum
- Chromium
- Copper, and
- Iron.

Single sample exceedances of the HC-DW aesthetic objectives were reported iron and manganese were observed at both sites.



NOTES:

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2. X-AXIS UNITS ARE MONTHS.
3. BOX PLOTS SHOW THE DISTRIBUTION OF DATA FOR EACH MONTH (BOXES REPRESENT DATA BETWEEN THE 25TH PERCENTILE AND THE 75TH PERCENTILE, WITH THE MEDIAN VALUE SHOWN AS A BLACK LINE WITHIN THE BOX; ERROR BARS SHOW THE HIGHEST AND LOWEST VALUES WITHIN 1.5 TIMES THE INTERQUARTILE RANGE; OUTLIERS ARE SHOWN AS CIRCLES)
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5. THE BCWQG -MAX, BCWQG-30DAY AND CEQG-PAL FOR FRESHWATER AQUATIC LIFE FOR ALUMINUM ARE DEPENDENT ON WHETHER pH IS ABOVE OR BELOW 6.5; ALL pH VALUES ARE GREATER THAN 6.5.
THE BCWQG-MAX AND BCWQG-30DAY ARE SPECIFIC TO DISSOLVED (D) ALUMINUM AND THE CEQG-PAL IS SPECIFIC TO TOTAL ALUMINUM.
6. THE CHROMIUM BCWQG-MAX AND CEQG-PAL THRESHOLDS FOR AQUATIC LIFE ARE 0.0089 mg/L FOR Cr(VI) (SHOWN ON THE FIGURE); THE SAME GUIDELINES ARE 0.001 mg/L FOR THE CR(III) SPECIES; IT IS NOT KNOWN WHICH SPECIES IS PREVALENT IN THE LSA.
7. THE CEQG-PAL, BCWQG-MAX, AND BCWQG-30DAY THRESHOLDS FOR COPPER ARE HARDNESS-DEPENDENT AND WERE CALCULATED BASED ON THE MEDIAN MONTHLY HARDNESS OBSERVED AT EACH SITE.
8. THE BCWQG-MAX FOR IRON IS 1 mg/L (SPECIFIC TO TOTAL IRON) AND THE CEQG-PAL IS 0.3 mg/L.
THE HC-DW AESTHETIC OBJECTIVE FOR IRON IS 0.3 mg/L.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	10APR'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

AJAX PROJECT

SEASONAL BOX PLOTS FOR METALS THAT REGULARLY EXCEEDED GUIDELINES IN ANDERSON CREEK

Knight Piésold CONSULTING

P/A NO. VA101-246/31

REF NO. 3

FIGURE 4.50

REV 0

4.7 THOMPSON RIVER WATERSHED SURFACE WATER QUALITY

The Thompson River watershed encompasses a large area, most of which is not within the baseline study area. The objective of the baseline water quality study is not to characterize the whole watershed; rather, two water quality sites have been established to characterize the water quality in two water bodies in close proximity to the Project: Makaoo Lake (MAKAOO-01) and Polygon Pond (PP01). Seven sampling events have been conducted to characterize these water bodies and the results have been used to interpret a broad understanding of the water quality within the greater project area.

The physical parameters of the two water bodies (Polygon Pond and Makaoo Lake) differ, but are both defined by high pH, very high hardness, especially in Polygon Pond. Makaoo Lake is classified as freshwater, while Polygon Pond is slightly to moderately saline, with a wide range of TDS concentrations greater than 2,000 mg/L. The high TDS of Polygon Pond may be attributed to net evaporative conditions. A surface water outlet of this pond has not been discovered and it is suspected that the pond is a groundwater sink where parameter concentrations increase due to evaporative loss of water without a loss in load. Instead, parameters concentrations are likely controlled by solubility limits. The high TDS results in matrix interference in the analysis of samples and the samples often require dilution. This results in elevated MDLs, which are often higher than the guidelines. In these cases, the elevated MDLs are not considered guideline exceedances and are discussed only in cases where measured concentrations were detected over five times the MDL.

Both Polygon Pond and Makaoo Lake are classified as the calcium-magnesium-bicarbonate type, which is consistent with water types found in the project area water features. Fluoride, chloride, and sulphate were exceptionally high in Polygon Pond and exceeded aquatic life guidelines in most samples. The sulphate toxicity limit recommendation (BCWQG-30 D) is in review, based on ongoing site toxicity testing; however, preliminary data acquired in the development of an SBEB has indicated a recommended limit of 730 mg/L for aquatic life. The concentrations observed in Polygon Pond are much higher than the preliminary limit.

Nutrient parameters were elevated in both Makaoo Lake and Polygon Pond. Total phosphorous concentrations classified these water bodies as hyper-eutrophic (with phosphorous concentrations greater than 1 mg/L) and eutrophic, respectively. Ammonia exceeded the CEQG-PAL in all samples collected from MAKAOO-01 and nitrite CEQG-PAL exceedances were observed at PP01.

High concentrations of TDS in Polygon Pond resulted in elevated MDLs, due to matrix interference. For some metal parameters, the elevated MDLs exceeded guidelines. The confirmed metals parameters that exceed guidelines are aluminum and boron. Metal concentrations in Makaoo Lake were generally low and did not exceed guidelines.

5 – GROUNDWATER QUALITY ASSESSMENT

5.1 OVERVIEW

The groundwater characterization program was initiated in 2007, and with the exception of one year (2009), has continued to the present day. Groundwater monitoring well locations were strategically selected based on proximity to proposed project facilities and historical mine site features, and the monitoring well network has expanded over time as the project design changed. A total of 73 monitoring wells have been installed in the project area, 51 of which have been sampled and are the basis for the groundwater quality characterization provided in this report. Forty-six (46) of these monitoring wells continue to be sampled in the ongoing groundwater monitoring program. The focus of this report is on groundwater quality, the groundwater hydrology and detailed hydrogeological conceptual model are presented under separate cover in the BGC Engineering Inc. (BGC) *Baseline Groundwater Hydrology Assessment* report (BGC 2015a).

The primary objectives of the water quality study were to characterize the complex environment and understand the interactions between surface water and groundwater in the project area, to provide valuable insight into current and potential future stresses on surface and ground water resources and management strategies to address these issues, and to provide a basis for predicting future water quality (baseline comparison and inputs to predictive models). To facilitate this discussion, specific areas within the baseline study area are often referenced, some of which are specific to the locations of proposed project facilities and others that are not. These areas and the monitoring wells included in each are described below (project/facility area is provided for reference in brackets):

- Cherry Creek watershed (Project Site West and Jacko Lake North areas) – located west of the project area and includes monitoring wells MW11-01S, MW11-02, MW11-07D/S, and MW11-09S/D. These monitoring wells are all outside of the project facility areas and groundwater quality in this area is not expected to be affected by the future mine development.
- North Peterson Creek watershed (Jacko Lake North and EMRSF areas) – area north of Peterson Creek, excluding the historical mine area. Includes monitoring wells BGC14-006D, MW11-04D/S, MW11-05D/S, and MW11-06D/S. Monitoring wells MW11-04D/S and MW11-06D/S are north of any proposed mine facilities and groundwater quality is not expected to be affected by seepage from the future mine development. Monitoring wells MW11-05D/S and BCG14-006D in the immediate vicinity of the proposed EMRSF and groundwater quality in that area is expected to be affected by seepage from that facility and potentially due to drawdown influence from open pit dewatering.
- Upper Peterson Creek watershed (Jacko Lake South and TSF areas) – west and southwest of Jacko Lake. Includes monitoring wells BGC14-001D, BGC14-010, BGC14-012D/S, and MW11-08D. Monitoring well MW11-08 is located west of Jacko Lake and is not expected to be affected by seepage from the proposed TSF and serves as a reference site for the Jacko Lake catchment area. Monitoring wells BGC14-001D, BGC14-012D/S and BGC14-010 (listed from north to south) are located northwest of the proposed TSF and WMRSF and are located in areas where seepage may affect groundwater quality and water management ponds are proposed.
- Keynes Creek watershed (TSF area) – BGC14-002D/S, BGC14-011D/S, BGC14-016, and BGC14-017D/S. Monitoring wells BGC14-011D/S, BGC14-016, and BGC14-017D/S are located at topographic highs to the southwest, southeast and east of the proposed TSF and were situated to provide insight into groundwater quality and groundwater gradients in this vicinity of

the TSF. Monitoring well BGC14-002D/S is located adjacent to the Keynes Creek channel, down-gradient of the proposed TSF, where seepage from the TSF may affect groundwater quality and in the location of potential proposed water management pond.

- Open pit area – in the vicinity of the existing open pits and proposed open pit. Includes monitoring wells AJGW01-D, AJGW02-D/S, AJGW03-D, AJGW04-D, AJGW05-S, AJGW06-D, AJGW07-D/S, BGC11-003D/I/S, KAX-14-107S, KAX-14-108S, KAX-14-114S, KAS-14-128D, MW12-01, MW12-02, MW12-04, and PW01. Monitoring wells AJGW07D/S, KAX-14-107S, KAX-14-108S, KAX-14-114S, KAX-14-128D, and PW01 are located along the western extent of the proposed expanded open pit and installed to characterize the hydrogeological conditions between Jacko Lake and the current and proposed open pit. Monitoring wells AJGW01-D, AJGW02-D/S, AJGW03-D, AJGW04-D, AJGW05-S, and AJGW06-D were installed within the proposed open pit area to characterize groundwater quality in that area. Monitoring wells MW12-01 and MW12-02 were installed within the backfilled waste rock in the historical Ajax East Pit and MW14-04 was installed in natural ground down-gradient of the historical waste rock south of Peterson Creek in order to characterize the geochemistry associated with infiltration and flushing of waste rock for the project area and assist in geochemical source term development for future water quality predictions.
- Humphrey Creek watershed (SMRSF and TSF areas) – south of Peterson Creek. Includes monitoring wells BGC14-009, BGC14-013, BGC14-014D, and BGC14-015D/S, and residential water supply wells RES-3 and RES-6. The monitoring wells in this watershed are all down-gradient of the proposed plant site and SMRSF and were located to characterize groundwater quality and flow in this watershed, to assist in the placement of water management ponds. Residential water supplies RES-3 and RES-6 are located further east; RES-6 is not likely to be affected directly or indirectly by mine facility seepage.
- Peterson Creek aquifer area (EMRSF area) – Includes monitoring wells BGC14-005 and MW11-10D, and water supply wells RES-2 and RES-5. The Peterson Creek aquifer extended along the subsurface of Peterson Creek to the east of the project area and seepage from the TSF, SMRSF and EMRSF are likely to interact with this aquifer, as well as seepage losses from the proposed Downstream Peterson Creek Pond (DPCP).
- Davidson Creek aquifer area (not in vicinity of the project facilities) – There are no monitoring wells in this area and the characterization is based on limited samples from RES-1 and RES-4.

Emphasis in the discussion of groundwater quality is placed on dissolved concentrations in groundwater samples as this is the predominant form for transport of parameters through a groundwater formation; exceptions have been made where dissolved metal concentrations are not available, such as in the residential wells (RES-1 through RES-6). Total metals concentrations that exceed dissolved concentrations are generally found in samples as a result of entrainment of sediment during pumping. Sediments will accumulate at the bottom of most wells, despite rigorous well development, and these sediments generally contain many metals found in the local geology. Metals will also accumulate in the bottom sediments as a result of oxidation reactions that occur at the water-air interface in the well and in the stagnant well water column. Mobilization of these sediments through the well purging process tends to result in total metals concentrations exceeding dissolved concentrations. The following discussion is based on dissolved metals concentrations, unless otherwise stated.

Relevant water quality guidelines were determined based on the potential uses/receptors in the project area and are summarized in Section 3.5. These receptors/users include aquatic life, humans (domestic and drinking water), agricultural (livestock and irrigation), and wildlife drinking water. While aquatic life and wildlife are not in direct contact with groundwater sources, groundwater contributes significantly to surface water flows, particularly in the late summer, fall and winter, when runoff due to precipitation is very low in the project area. Aquatic life guidelines are specifically targeted to surface water bodies; however, they have been applied to groundwater as well, since they are generally the most stringent guidelines. Understanding groundwater chemistry in relation to aquatic life and wildlife guidelines provides an important benchmark for baseline conditions and for determining the effects of changes in groundwater on these potential receptors. Drinking water guidelines are used as a reference for groundwater quality, but for most parameters these guidelines are specific to treated water sources and are therefore not of direct relevance to raw water sources that are collected from the monitoring wells in the project area. Agricultural guidelines are directly applicable to groundwater quality in the project area due to potential extraction for irrigation and livestock watering purposes.

Groundwater quality sample results are available in Appendix D. The number of guideline exceedances at each site is summarized as a percentage of the total number of samples in exceedance of one or more of the relevant aquatic life, drinking water, and agricultural guidelines in Appendix D1 in Table D1.1 (aquatic life guideline exceedances by baseline area), Table D1.2 (aquatic life guideline exceedances by lithological unit in each baseline area), Table D1.3 (drinking water guideline exceedances), and Table D1.4 (agricultural guideline exceedances). The groundwater quality sample results are also provided in guideline comparison tables in Appendix D2, D3, D4, and D5 for aquatic life, drinking water, agriculture, and wildlife, respectively. Summary statistics for the samples from each well are in Appendix D6.

Maps showing the relative median groundwater concentrations were used to demonstrate how concentrations vary spatially and with depth between monitoring wells. The circle size represents the median concentration (or value for pH) and is directly proportional to the concentration relative to the lowest median value for all of the monitoring well data. A table of median values at each well location are embedded on each figure for reference. Where two or more monitoring wells have been installed at one location (i.e. deep, intermediate, and shallow), coloured outlines were used to differentiate results.

5.2 MONITORING WELL INSTALLATION HISTORY AND RATIONALE

The primary objectives of the hydrogeological program are to characterize the current conditions in the immediate and greater project area in order to assess the potential environmental effects of the proposed mine, and to provide input to mitigation and management features of the mine design to assist in preservation of groundwater resources in the project area. Monitoring wells were typically installed in the vicinity of proposed project facilities to provide valuable information on groundwater gradients (vertical gradients assessed through installation of wells at multiple depths at the same location), flow, and chemistry up-gradient and down-gradient and within facility footprints, in order to assess the potential seepage into and out of each facility and plan for ideal locations for seepage interception mitigation measures (i.e., water management ponds). The Project has evolved since the monitoring program was initiated in 2007 and the monitoring well installation history is provided below as a high-level overview of the evolution of the hydrogeological program as it specifically pertains to groundwater quality characterization:

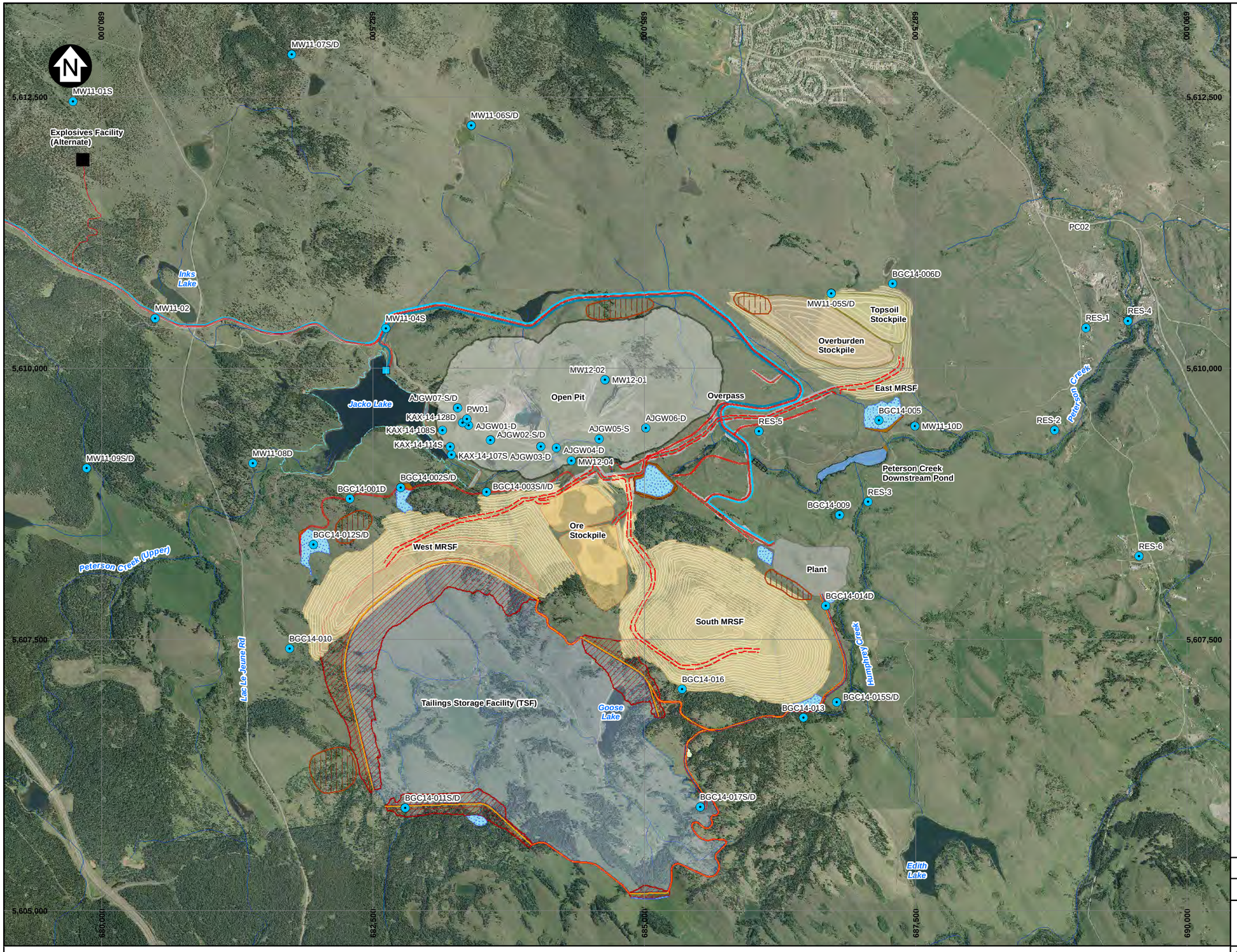
- AJGW Series Monitoring Wells – installed by KP in 2007 at seven locations in the vicinity of the historical Ajax Pit area, with paired wells (shallow (S) and deep (D)) installed at four of the locations. Four of these monitoring wells are included in the ongoing groundwater quality sampling program. Monitoring well installation logs for the AJGW series monitoring wells are provided in Appendix F1.
- MW11 Series Monitoring Wells – installed by KP in 2011 at 10 locations. Nineteen (19) monitoring wells were installed, with paired wells (shallow (S) and deep (D)) installed at nine locations. The project layout has be updated since this monitoring well installation program was conducted, but many of the wells are well placed to characterize the hydrogeological conditions in the vicinity of project facilities for the current proposed project layout. Thirteen (13) of these monitoring wells are included in the ongoing groundwater quality sampling program. Monitoring well installation logs for the MW11 series monitoring wells are provided in Appendix F2.
- MW12/L12 Series Monitoring Wells – installed by Lorax Environmental Services Ltd. (Lorax) in 2012 at three locations, with the primary objective of characterizing groundwater geochemistry in the vicinity of the historic mine waste rock (two monitoring wells installed in the waste rock backfill in the Ajax East Historic Pit and two monitoring wells installed in the vicinity of the reclaimed waste rock south of Peterson Creek). Three of these monitoring wells are included in the ongoing groundwater quality sampling program. Monitoring well installation logs for the MW12/L12 series monitoring wells are provided in Appendix F3.
- BGC14 Series Monitoring Wells – installed by BGC in 2014 for the purposes of groundwater characterization in areas that were not previously within the vicinity of project facilities in the current proposed project layout. The focus of the investigation was predominantly south of Jacko Lake and Peterson Creek, in the Keynes Creek and Humphrey Creek catchment areas, which are the locations of the proposed TSF, West Mine Rock Storage Facility (WMRSF), Ore Stockpiles, South Mine Rock Storage Facility (SMRSF), and the Plant Site. Additional monitoring wells were also installed in the vicinity of the East Mine Rock Storage Facility (EMRSF). BGC installed 29 monitoring wells at 17 locations, with paired wells (shallow (S) and deep (D)) installed at 10 locations, a shallow (S), intermediate (I), and deep (D) monitoring well and one location, and single wells installed at six locations. Twenty-one (21) of these monitoring wells are included in the ongoing groundwater quality sampling program. Monitoring well installation logs for the BGC14 series monitoring wells are provided in Appendix F4.
- KAX-14 Series Monitoring Wells – installed by Klohn Crippen Berger Ltd (KCBL) in 2014 for the primary purpose of characterizing the hydrogeological conditions between Jacko Lake and the current and proposed open pit. KCBL installed nine monitoring wells at 5 locations along the east side of Jacko Lake. Four of these monitoring wells are included in the ongoing groundwater quality sampling program. Monitoring well installation logs for the KAX-14 series monitoring wells are provided in Appendix F5.

Pressure transducers have been installed in the majority of the wells to record continuous water level and groundwater temperature data. In some cases, the monitoring wells installed were not suitable for monitoring groundwater quality (e.g. low recharge conditions or QA/QC DQOs were not met); in these cases monitoring wells were used for water levels and temperature data only and were not sampled. Generally, the wells are screened in overburden and/or in the upper fractured bedrock (shallow wells) or the bedrock-overburden interface (deeper wells). The locations of the monitoring wells that were used to sample groundwater quality are shown on Figure 5.1. The monitoring well

locations and site selection rationale are provided in Table 5.1, grouped by proximity to proposed project facilities and general project area.

5.3 GROUNDWATER QUALITY MONITORING FREQUENCY

Groundwater quality samples have been collected for the project area since 2007, and with the exception of one year (2009), have continued to the present day. The sampling frequency has typically been quarterly, targeting seasonally representative months. The sampling frequency was increase to monthly for new wells that were installed in the spring of 2014, in order to enhance the groundwater quality database for the new areas that were included in the baseline characterization at this time. A detailed sample history for the monitoring well data used in the baseline groundwater quality characterization for the Project is provided in Table 5.2.



LEGEND:

- GROUNDWATER QUALITY SITE
- RIVER/CREEK

PROPOSED STRUCTURES

- RECLAIM WATERLINE
- WATERLINE
- TAILINGS LINE
- ROAD
- ROAD - HAUL
- MINE ROCK STORAGE FACILITY (MRSF)
- PIT OUTLINE
- TAILINGS STORAGE FACILITY (TSF)
- TSF EMBANKMENT
- CUT / FILL
- OTHER INFRASTRUCTURE
- ORE STOCKPILE
- OVERBURDEN STOCKPILE
- RECLAMATION STOCKPILE
- TOPSOIL STOCKPILE

WATER MANAGEMENT

- WATER MANAGEMENT POND
- WATER MANAGEMENT BERM

JACKO LAKE

- DAM OUTLINE
- PROPOSED 894M WATER LEVEL

PETERSON CREEK

- DIVERSION INTAKE
- PETERSON CREEK DIVERSION
- DOWNSTREAM POND
- DIVERSION DISCHARGE

NOTES:

1. BASE MAP: ORTHO IMAGERY SUPPLIED BY ABACUS.
2. COORDINATE GRID IS IN METRES.
COORDINATE SYSTEM: NAD 1983 UTM ZONE 10N.
3. THIS FIGURE IS PRODUCED AT A NOMINAL SCALE OF 1:35,000 FOR 11x17 (TABLOID) PAPER. ACTUAL SCALE MAY DIFFER ACCORDING TO CHANGES IN PRINTER SETTINGS OR PRINTED PAPER SIZE.
4. MINE LAYOUT PROVIDED BY KGHM AJAX MINING INC.

300 150 0 300 600 900 1,200 1,500 m

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	REVIEWED
0	07JUL'15	ISSUED WITH REPORT	CMJ	AMD	JEM

KGHM AJAX MINING INC.

AJAX PROJECT

GROUNDWATER QUALITY MONITORING WELL LOCATIONS

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P/A NO.	REF NO.
VA101-246/31	3

FIGURE 5.1 REV 0

SAVED: M:\1\101\00246\03\A\GIS\Figs\Report3_Baseline\WaterQuality\GWSWFig5-1_GWMonitoringWells.mxd: Jul 07, 2015 9:57 AM, adinca

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TABLE 5.1

KGHM AJAX MINING INC.
AJAX PROJECT

BASELINE WATER QUALITY REPORT
GROUNDWATER QUALITY MONITORING WELL LOCATIONS AND SITE SELECTION RATIONALE

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		Coordinates [1]			Completion Zone [2]			
Nearest Proposed Facility [4]	Site ID	Easting	Northing	Elevation (masl)	From (mbgs)	To (mbgs)	Screened/Monitored Stratigraphy	Rationale Based on Proximity to Propose Facility [3, 4]
Project Site West	MW11-01S	679,734	5,612,460	928	19.4	22.4	Glacial Till	Vicinity of old TSF option
Project Site West	MW11-09S	679,860	5,609,079	910	11.5	14.5	Nicola Volcanics	Vicinity of old TSF option
Project Site West	MW11-09D	679,861	5,609,076	910	28.4	29.9	Nicola Volcanics	Vicinity of old TSF option
Project Site West	MW11-02	680,492	5,610,459	855	38.7	41.7	Nicola Volcanics	Vicinity of old TSF option
Jacko Lake North	MW11-07S	681,750	5,612,894	941	5.8	7.3	Iron Mask Hybrid	Vicinity of old MRSF option
Jacko Lake North	MW11-07D	681,751	5,612,893	941	47.9	50.9	Iron Mask Hybrid	Vicinity of old MRSF option
Jacko Lake North	MW11-04S	682,619	5,610,367	899	17.6	20.6	Iron Mask Hybrid	Proximity to Open Pit and Jacko Lake; vicinity to old MRSF option
Jacko Lake North	MW11-06S	683,404	5,612,239	943	8.3	9.8	Fluvial/Glaciofluvial	Vicinity of old MRSF option
Jacko Lake North	MW11-06D	683,405	5,612,236	943	42.3	45.3	Iron Mask Hybrid	Vicinity of old MRSF option
Jacko Lake South	MW11-08D	681,391	5,609,123	897	31.3	32.8	Nicola Volcanics	Up-gradient of proposed project - reference location.
TSF	BGC14-003D	683,544	5,608,858	897	28.4	31.4	Nicola Volcanics	Down-gradient of TSF and WMRSF; seepage and runoff
TSF	BGC14-003I	683,544	5,608,858	897	16.8	19.8	Fluvial/Glaciofluvial	Down-gradient of TSF and WMRSF; seepage and runoff
TSF	BGC14-003S	683,544	5,608,858	897	9.8	11.3	Glacial Till	Down-gradient of TSF and WMRSF; seepage and runoff
TSF	BGC14-012D	681,950	5,608,373	924	20.4	26.2	Nicola Volcanics	Down-gradient of TSF and WMRSF; seepage and runoff
TSF	BGC14-012S	681,950	5,608,373	924	2.7	3.4	Colluvium	Down-gradient of TSF and WMRSF; seepage and runoff
TSF	BGC14-002D	682,756	5,608,900	925	16.8	22.9	Nicola Volcanics	Down-gradient of TSF and WMRSF; ELFZ foot wall
TSF	BGC14-002S	682,756	5,608,900	925	9.1	15.2	Glacial Till	Down-gradient of TSF and WMRSF; ELFZ foot wall
TSF	BGC14-001D	682,286	5,608,796	936	18.0	24.1	Nicola Volcanics	Down-gradient of TSF and WMRSF; ELFZ foot wall
TSF	BGC14-010	681,730	5,607,514	979	46.0	58.2	Nicola Volcanics	Down-gradient of TSF and WMRSF; seepage and runoff
TSF	BGC14-011D	682,796	5,605,945	1029	23.5	29.6	Nicola Volcanics	Up-gradient of TSF; Potential groundwater divide location.
TSF	BGC14-011S	682,796	5,605,945	1029	15.2	18.3	Nicola Volcanics	Up-gradient of TSF; Potential groundwater divide location.
TSF	BGC14-016	685,348	5,607,041	1039	23.5	29.6	Nicola Volcanics	Down-gradient of TSF and SMRSF
TSF	BGC14-017D	685,515	5,605,954	1040	23.5	29.6	Nicola Volcanics	Down-gradient of TSF and SMRSF
TSF	BGC14-017S	685,515	5,605,954	1040	3.0	4.6	Glacial Till	Down-gradient of TSF and SMRSF
Open Pit	AJGW01-D	683,382	5,609,474	903	11.3	14.3	Glacial Till	Open Pit inflow chemistry
Open Pit	AJGW02-D	683,582	5,609,338	900	16.2	19.8	Nicola Volcanics	Open Pit inflow chemistry
Open Pit	AJGW02-S	683,581	5,609,337	900	1.8	8.2	Glacial Till	Open Pit inflow chemistry
Open Pit	AJGW03-D	684,046	5,609,278	897	22.3	25.9	Fluvial/Glaciofluvial	Open Pit inflow chemistry
Open Pit	AJGW04-D	684,191	5,609,265	890	22.9	29.0	Glacial Till	Open Pit inflow chemistry
Open Pit	AJGW05-S	684,584	5,609,348	886	9.1	15.2	Fluvial/Glaciofluvial	Open Pit inflow chemistry
Open Pit	AJGW06-D	685,013	5,609,448	903	22.9	32.0	Iron Mask Hybrid	Open Pit inflow chemistry
Open Pit	AJGW07-D	683,278	5,609,634	909	22.9	29.0	Nicola Volcanics	Open Pit inflow chemistry
Open Pit	AJGW07-S	683,280	5,609,634	909	9.8	17.5	Fluvial/Glaciofluvial	Open Pit inflow chemistry
Open Pit	KAX-14-107S	683,223	5,609,202	896	29.9	38.0	Lacustrine	Jacko Lake-Open Pit Hydrogelogical Connectivity
Open Pit	KAX-14-108S	683,140	5,609,428	901	32.3	35.4	Glacial Till	Jacko Lake-Open Pit Hydrogelogical Connectivity
Open Pit	KAX-14-114S	683,210	5,609,277	896	22.0	31.1	Glacial Till or Fluvial/Glaciolacustrine	Jacko Lake-Open Pit Hydrogelogical Connectivity
Open Pit	KAX-14-128D	683,315	5,609,490	904	71.7	90.0	Nicola Volcanics	Jacko Lake-Open Pit Hydrogelogical Connectivity
Open Pit	MW12-01	684,638	5,609,892		36.0	38.5	Waste rock backfill	Geochemistry of groundwater in historic waste rock
Open Pit	MW12-02	684,637	5,609,894		15.1	16.8	Waste rock backfill	Geochemistry of groundwater in historic waste rock
Open Pit	PW-01	683,365	5,609,531	905	33.5	199.9	Nicola Volcanics/Picrite/Sugarloaf Diorite	ELFZ; Open Pit inflows
SMRSF	BGC14-009	686,799	5,608,647	919	47.9	54.0	Iron Mask Hybrid	Down-gradient of SMRSF; seepage and runoff
SMRSF	BGC14-013	686,466	5,606,777	987	27.4	30.5	Nicola Volcanics	Down-gradient of SMRSF; seepage and runoff
SMRSF	BGC14-014D	686,672	5,607,810	986	23.5	29.6	Nicola Volcanics	Down-gradient of SMRSF; seepage and runoff
SMRSF	BGC14-015D	686,773	5,606,920	977	23.5	29.6	Nicola Volcanics	Down-gradient of SMRSF; seepage and runoff
SMRSF	BGC14-015S	686,773	5,606,920	977	8.2	11.3	Glacial Till	Down-gradient of SMRSF; seepage and runoff
SMRSF	MW12-04	684,327	5,609,146		32.0	35.5	Glacial Till	Geochemistry of groundwater in historic waste rock
EMRSF	BGC14-005	687,161	5,609,519	878	47.2	50.5	Iron Mask Hybrid	Vertical hydraulic gradients between Peterson Creek Aquifer and underlying Sugarload Hill Bedrock Aquifer
EMRSF	BGC14-006D	687,288	5,610,779	940	20.4	26.5	Iron Mask Hybrid	EMRSF seepage and runoff and interactions with Aberdeen
EMRSF	MW11-05D	686,723	5,610,692	961	25.6	28.6	Iron Mask Hybrid	Vertical hydraulic gradients and seepage from EMRSF
EMRSF	MW11-05S	686,723	5,610,689	961	12.7	14.2	Iron Mask Hybrid	Vertical hydraulic gradients and seepage from EMRSF
EMRSF	MW11-10D	687,494	5,609,466	887	76.2	79.2	Fluvial/Glaciofluvial	Vertical hydraulic gradients and seepage from EMRSF
Domestic Water Sources in Project Area								
Domestic	RES-1	689,070	5,610,372					Domestic water supply
Domestic	RES-2	688,782	5,609,430					Domestic water supply
Domestic	RES-3	687,063	5,608,767					Domestic water supply
Domestic	RES-4	689,458	5,610,436					Domestic water supply
Domestic	RES-5	686,056	5,609,419					Domestic water supply
Domestic	RES-6	688,782	560,943					Domestic water supply

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NOTES:

1. GPS COORDINATES ARE IN UTM WGS84 ZONE 10 U. GROUND SURFACE ELEVATIONS ESTIMATED FROM LIDAR. COORDINATES FOR DOMESTIC WATER SOURCES MAY NOT BE ACCURATE FOR THE WELL, BUT ARE SPECIFIC TO THE PROPERTY AREA.
2. COMPLETION ZONE IS TOP AND BOTTOM OF WELL SCREENS.
3. RATIONALE BASED ON PROXIMITY TO PROPOSED FACILITY: UP-GRADIENT MONITORING LOCATIONS TO ASSESS INTERACTIONS WITH PROJECT FACILITIES; DOWN-GRADIENT MONITORING LOCATIONS TO ASSESS POTENTIAL SEEPAGE PATHWAYS; WITHIN FACILITIES TO ASSESS BASIN CHARACTERISTICS.
4. EDITH LAKE FAULT ZONE - ELFZ, TAILINGS STORAGE FACILITY - TSF, WEST MINE ROCK STORAGE FACILITY - WMRSF, SOUTH MINE ROCK STORAGE FACILITY - SMRSF, EAST MINE ROCK STORAGE FACILITY - EMRSF

REV	DATE	DESCRIPTION	PREPD	RVWD
0	14MAY15	ISSUED WITH REPORT VA101-246/31-3	CJ	JEM

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TABLE 5.2

KGHM AJAX MINING INC.
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BASELINE WATER QUALITY REPORT
GROUNDWATER QUALITY SAMPLE SUMMARY

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Site ID	Samples Collected	2007		2008					2010				2011							2012				2013				2014							
		Sep	Dec	Mar	Apr	Jul	Sep	Nov	May	Jun	Aug	Nov	Mar	May	Jul	Aug	Oct	Nov	Dec	Feb	Jun	Aug	Dec	Mar	May	Aug	Nov	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
AJGW01-D	10	1	1	1	-	1	1	-	-	1	-	-	1	1	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-
AJGW02-D	10	1	1	1	-	1	1	-	-	1	-	-	1	1	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-
AJGW02-S	7	-	1	-	-	1	1	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-
AJGW03-D	24	1	1	1	-	1	1	-	-	1	1	1	1	1	1	-	-	1	-	1	1	1	1	1	1	1	1	1	-	1	1	-	-	1	-
AJGW04-D	8	-	-	-	1	1	1	1	-	-	-	-	1	1	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-
AJGW05-S	9	-	-	-	1	1	1	1	-	1	-	-	1	1	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-
AJGW06-D	19	-	-	-	1	1	1	1	1	-	1	1	1	1	1	-	-	-	-	-	-	-	1	1	1	1	1	1	-	1	1	-	-	1	-
AJGW07-D	22	-	-	-	1	1	1	1	-	1	1	1	1	1	1	-	1	-	-	1	1	1	1	1	1	1	1	1	-	1	1	-	-	-	-
AJGW07-S	22	-	-	-	1	1	1	1	-	1	1	1	1	1	1	-	1	-	-	1	1	1	1	1	1	1	1	1	-	1	1	-	-	-	-
BGC14-001D	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	1	1	1	-	-
BGC14-002D	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	1	1	1	-	-
BGC14-002S	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	1	1	1	-	-
BGC14-003D	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-
BGC14-003I	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	2	1	1	-	-
BGC14-003S	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	2	1	1	-	-
BGC14-005	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	-	-
BGC14-006D	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	1	1	-
BGC14-009	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	2	1	-	-
BGC14-010	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	1	1	1	-	-
BGC14-011D	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	1	1	1	-	-
BGC14-011S	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	1	1	1	-	-
BGC14-012D	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	1	1	1	-	-
BGC14-012S	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	1	1	1	-	-
BGC14-013	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	3	2	1	-	-
BGC14-014D	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	1	-	1
BGC14-015D	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	1	-	-
BGC14-015S	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	-	-
BGC14-016	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	1	1	1	-	-
BGC14-017D	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	1	-	-
BGC14-017S	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	-	-
KAX-14-107S	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-
KAX-14-108D	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
KAX-14-108S	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-
KAX-14-114S	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	-
KAX-14-128D	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
MW11-01S	13	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	1	1	1	1	1	1	1	1	1	-	-	1	-	-	1	-
MW11-02	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	1	1	1	1	1	1	1	1	1	-	-	1	-	-	1	-
MW11-04S	12	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	1	1	1	1	1	1	-	1	1	-	-	1	-	-	1	-
MW11-05D	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	1	1	1	1	1	1	1	1	-	-	1	-	-	1	-
MW11-05S	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	1	1	1	1	1	1	1	1	-	-	1	-	-	1	-
MW11-06D	12	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	1	1	1	1	1	1	1	-	1	-	1	-	-	1	-
MW11-06S	12	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	1	1	1	1	1	1	1	-	1	-	1	-	-	1	-
MW11-07D	13	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	1	1	1	1	1	1	1	1	1	-	-	1	-	-	1	-
MW11-07S	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1	1	1	1	1	1	1	1	-	-	1	-	-	1	-
MW11-08D	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	1	1	1	1	1	1	1	1	-	1	-	1	-	-	1	-
MW11-09D	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1	1	1	1	1	1	-	1	-	-	1	-	-	1	-
MW11-09S	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1	1	1	1	1	1	-	1	-	-	1	-	-	1	-
MW11-10D	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	-	-	1	-	-	1	-
MW12-01	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	1	1	1	1	-	-	1	-	-	1	-
MW12-02	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	1	1	1	1	-	-	1	-	-	1	-
MW12-04	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	1	1	1	-	1	-	1	-	-	1	-
RES-1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
RES-2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
RES-3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
RES-4	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
RES-5	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
RES-6	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
PW-01	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-

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NOTES:

1. SAMPLE COUNT DOESN NOT INCLUDE DUPLICATES.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	14MAY'15	ISSUED WITH REPORT VA101-246/31-3	CJ	JEM

5.4 REGIONAL GROUNDWATER QUALITY

Regional groundwater quality in the Thompson River watershed, in the Thompson Plateau (Interior Plateau and Highlands groundwater region of British Columbia) is described as having high levels of total dissolved solids (TDS) (>500 mg/L) and in some areas the sulphate concentrations are above the 500 mg/L Health Canada Drinking Water Standards (Zubel 2001). Water quality in the area is characterized as very hard and highly mineralized and of the carbonate to sulphate water type; however, these interpretations are based upon limited data (Zubel 2001).

Groundwater quality in the greater project area was reported by Golder Associates (2008) in a *Hydrogeological Investigation (1998 – 2000), Aberdeen Area, Kamloops, BC* report. The groundwater quality characterization covered a broad area, extending from Chuwels Mountain to the Aberdeen subdivision and included samples from monitoring wells, springs, seeps, and lakes. Groundwater was reported to generally increase in TDS and sodium with depth. Major anions ranged from sulphate to bicarbonate (alkalinity-dominated) and major cations were typically either sodium or magnesium. Chloride concentrations were reported to increase with decreasing elevation and were related to high evaporation of meteoric (rain) water. Nitrate concentrations were elevated (>0.1 mg/L) in the samples from springs and seeps in the Aberdeen area, though concentrations were not reported to increase with depth of sample location.

A *Water Quality Check Program* that was carried out by the Ministry of Environment through the late 1970s and 1990s and arsenic (BC MOE 2007a) and nitrate (BC MOE 2007b) were two parameters that were identified as elevated with respect to drinking water quality guidelines in groundwater samples from the Kamloops area.

5.5 LOCAL GROUNDWATER QUALITY

5.5.1 Overview

The groundwater quality samples from the monitoring well network for the project area have been used to characterize groundwater quality in the immediate project area (in the vicinity of proposed project facilities). Groundwater monitoring wells were installed north and west of the proposed project area based on proximity to facilities relevant to outdated project layouts. The shallow monitoring wells were typically completed in overburden (colluvium, fluviual/glaciofluvial, glacial till, lacustrine, and anthropogenic materials (waste rock)) and the deeper wells were completed in bedrock lithological units (Iron Mask Hybrid and Nicola Volcanics). Pumping well PW01 (western extent to the proposed Open Pit) was the only well that was completed in the Picrite and Sugarloaf Diorite bedrock units, but this well has a much longer completion zone (166.4 m) compared to the typical monitoring wells (3 m to 18 m) which were installed at targeted zones. Monitoring wells that were completed in the Iron Mask Hybrid bedrock unit are located in the eastern extent of the proposed Open Pit, and north and east of the Open Pit; all but one of the monitoring wells competed in this bedrock unit are located north of Peterson Creek. Monitoring wells completed in the Nicola Volcanics are located within the Open Pit area, west and south of Jacko Lake, and south of Peterson Creek.

The hydrochemical signature (facies) of water is influenced by the interactions with the lithological units that it flows through and is further influenced by the length of time it interacts with various units along a flow pathway. Groundwater quality data for the project area was assessed with respect to

the lithology of the monitoring well completion zone and was further interpreted with respect to proximity to local groundwater recharge (upland areas) and discharge zones (historical open pits, Jacko Lake, Peterson Creek, and local sloughs) and proximity to the deposit area and historic waste rock. Hydrochemical signatures were not distinct for the specific bedrock or overburden lithological units but were more easily distinguished by location in the project area. The major water types identified in the project area were sodium-sulphate, magnesium-sulphate, or sulphate type with only weakly dominant cations. Sodium was typically the dominant cation in samples from deeper monitoring wells located in the Open Pit area, and wells to the west and north of Jacko Lake; whereas magnesium was the dominant cation in samples from shallower monitoring wells located in the Open Pit area and most wells to the east and southeast of the Open Pit. Calcium was weakly dominant in samples from a few wells which were all located between Jacko Lake and the Ajax West open pits. Bicarbonate was only dominant in samples collected from monitoring wells in the upland areas of the Humphrey Creek and Keynes Creek watersheds and a few monitoring wells south of Jacko Lake, likely indicative of closer proximity to local groundwater recharge areas compared to other monitoring sites in the project area.

Groundwater quality in the project area is generally characterized as alkaline, hard to very hard, and high in dissolved solids. Groundwater TDS concentrations were typically lower in samples collected from monitoring wells at higher elevations or in the upper reaches of local catchments (local groundwater recharge areas) and higher in samples from wells at lower elevations in the project area (local groundwater discharge areas such as sloughs and creeks). Highest TDS concentrations were observed for samples from monitoring wells in the existing open pit area and the backfilled Ajax East Pit, and in samples collected from monitoring wells along Peterson Creek, in the vicinity of the Peterson Creek aquifer.

Arsenic, boron, iron, manganese, molybdenum, and selenium were metals and metalloids that were elevated in the groundwater quality baseline study area, though the spatial extent varied somewhat by parameter. Arsenic, boron, manganese, and selenium concentrations tend to be higher in samples collected from monitoring wells in the open pit area. Arsenic, molybdenum, and selenium are specifically elevated in samples collected from the monitoring wells installed in the waste rock backfill in the historical Ajax East Pit. Manganese and iron concentrations were elevated in samples from monitoring wells installed in the vicinity of the proposed EMRSF and in the lower reaches of the Humphrey Creek watershed. Aluminum, chromium, cobalt, copper, mercury, uranium, and zinc were generally low in concentration compared to the above mentioned parameters and major ions, and were generally reported at concentrations below water quality guidelines, though isolated water quality guideline exceedances were reported for each of these parameters in one or two wells in a given area of the Project, if at all.

Groundwater hydraulic gradients were assessed by BGC (2015) wherever monitoring wells and piezometers were installed at multiple depths at the same location. Groundwater quality samples from shallow, intermediate, and deep wells at these sites were compared to understand what, if any, correlation the direction of these hydraulic gradients have with concentrations of specific parameters. More samples were collected from monitoring well sets where upward hydraulic gradients or artesian conditions were observed (AJGW07-D/S, MW11-06D/S, MW11-07D/S, MW11-09D/S, BGC14-001D/S, BGC14-002D/S, BGC14-003D/I/S, BGC14-006D/S, BGC14-011D/S, BGC14-012D/S, BGC14-015D/S, and BGC14-017D/S) compared to well sets were downward hydraulic gradients were observed (MW11-05D/S and AJGW02-D/S; the dataset for AJGW02-D is

limited compared to the dataset for the shallow well at this location). General observations on parameters concentrations where upward hydraulic gradients were observed are summarized here and trends have not been summarized for downward hydraulic gradients based on the limited dataset for groundwater quality data specific to those areas. Groundwater pH was generally higher in shallower wells and hardness and alkalinity concentrations were observed to decrease with depth. Fluoride, arsenic, boron, iron, and manganese concentrations tended to increase with depth. Exceptions were noted for manganese and fluoride at the BGC14-003D/I/S monitoring location and iron at the BGC14-002D/S monitoring location; concentrations for these parameters at these monitoring sites decreased with depth. TDS and sulphate concentrations were typically similar in the samples from deep and shallow wells at the same monitoring locations. No trends were noted for selenium or molybdenum.

Trace metal and metalloid concentrations in groundwater were not well correlated with the major lithological units and the distribution appears to be more strongly influenced by local geological enrichment in specific minerals (deposit area) and by proximity to local scale groundwater discharge areas which are typically at lower elevation in the Project area (historical open pit, Peterson Creek, Peterson Creek aquifer). Correlation between parameters that are at elevated concentrations in the open pit area to specific overburden lithological units is also not obvious, with the exception of samples from wells installed in the waste rock backfill in the historical Ajax East Pit. The majority of the overburden wells are completed in either glacial till or fluvial/glaciofluvial lithological units and reported concentrations were variable within these units. The aquatic life water quality guidelines tend to be the most conservative and therefore provide the lowest common thresholds for parameters in the project area. A correlation between potential parameter enrichment and lithological unit was conducted by assessing the number of guideline exceedances in each lithologic unit. The groundwater quality sample results are summarized by area (Table 5.5) and by lithological unit (Table 5.6) with respect to aquatic life guideline exceedances and further broken down by lithological unit (Table D1.1) and project area (Table D1.2) in Appendix D. Although not directly relevant to groundwater, the aquatic life guidelines have been identified as required for comparison with baseline groundwater quality in accordance with the Application Information Requirements for the Project.

Knight Piésold CONSULTING

TABLE 5.3

KGHM AJAX MINING INC.
AJAX PROJECT

BASELINE WATER QUALITY REPORT
SUMMARY OF GROUNDWATER QUALITY SAMPLE AQUATIC LIFE GUIDELINE EXCEEDANCES BY PROJECT AREA

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Baseline Project Area	Lowest Applicable Aquatic Life Guideline [1]	PERCENT OF SAMPLES THAT EXCEEDED THE LOWEST APPLICABLE GUIDELINE FOR THE AREA SPECIFIED								PERCENT OF OF TOTAL EXCEEDANCES FOR PARAMETER SPECIFIED								PERCENTAGE OF TOTAL SAMPLES	
		Cherry CreekWatershed	N. Peterson Creek (EMRSF)	Upper Peterson Creek Watershed	Keynes Creek	Humphrey Creek	Davidson Creek Aquifer	Peterson Creek Aquifer	Open Pit Area	Cherry CreekWatershed	N. Peterson Creek (EMRSF)	Upper Peterson Creek Watershed	Keynes Creek	Humphrey Creek	Davidson Creek Aquifer	Peterson Creek Aquifer	Open Pit Area	TOTAL SAMPLES THAT EXCEEDED GUIDELINE	PERCENT EXCEEDED
Number of Samples [2]		76	64	33	32	23	4	19	143	76	64	33	32	23	4	19	143	394	
In Situ Parameters																			
pH (unitless)	BCWQG-Max and GEQG-PAL	5%	3%	3%	16%	17%	0%	26%	10%	11%	6%	3%	14%	11%	0%	14%	40%	35	9%
Physical Tests																			
pH (unitless)	BCWQG-Max and GEQG-PAL	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	100%	2	1%
Dissolved Anions																			
Chloride	BCWQG-30-D	0%	0%	0%	0%	0%	75%	0%	1%	0%	0%	0%	0%	0%	75%	0%	25%	4	1%
Fluoride	CEQG-PAL	66%	78%	85%	94%	91%	100%	42%	64%	18%	18%	10%	11%	7%	1%	3%	32%	282	72%
Sulphate	BCWQG-30 D (SBEB)	80%	80%	82%	16%	13%	50%	95%	38%	27%	23%	12%	2%	1%	1%	8%	25%	222	56%
Nutrients																			
Ammonia (Total)	CEQG-PAL	7%	3%	0%	0%	26%	0%	21%	5%	21%	8%	0%	0%	25%	0%	17%	29%	24	6%
Nitrate (as N)	BCWQG-30 D and CEQG-PAL	12%	0%	0%	0%	0%	50%	0%	13%	31%	0%	0%	0%	0%	7%	0%	62%	29	7%
Nitrite (as N)	BCWQG-30 D	12%	0%	0%	0%	0%	25%	0%	17%	26%	0%	0%	0%	0%	3%	0%	71%	34	9%
Dissolved Metals																			
Aluminum	CEQG-PAL	3%	0%	3%	3%	0%	0%	0%	7%	14%	0%	7%	7%	0%	0%	0%	71%	14	4%
Antimony	BCWQG-30-D	0%	0%	0%	0%	0%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%	100%	6	2%
Arsenic	BCWQG-Max and GEQG-PAL	29%	53%	15%	0%	13%	50%	58%	50%	15%	23%	3%	0%	2%	1%	7%	48%	149	38%
Boron	BCWQG-Max	17%	19%	39%	0%	0%	0%	0%	6%	28%	26%	28%	0%	0%	0%	0%	19%	47	12%
Cadmium	CEQG-PAL	11%	8%	3%	0%	4%	25%	5%	3%	38%	24%	5%	0%	5%	5%	5%	19%	21	5%
Chromium	BCWQG-30 D and CEQG-PAL	11%	3%	3%	13%	0%	50%	0%	3%	38%	10%	5%	19%	0%	10%	0%	19%	21	5%
Cobalt	BCWQG-30 D	0%	13%	0%	0%	9%	0%	0%	2%	0%	62%	0%	0%	15%	0%	0%	23%	13	3%
Copper	CEQG-PAL	4%	5%	6%	0%	4%	75%	11%	7%	13%	13%	8%	0%	4%	13%	8%	42%	24	6%
Iron	CEQG-PAL	12%	41%	15%	13%	17%	0%	79%	20%	10%	29%	5%	4%	4%	0%	16%	31%	91	23%
Manganese	BCWQG-30 D	5%	22%	0%	0%	0%	75%	0%	0%	19%	67%	0%	0%	0%	14%	0%	0%	21	5%
Mercury	BCWQG-30 D	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	100%	2	1%
Molybdenum	CEQG-PAL	3%	56%	0%	0%	0%	0%	0%	46%	2%	35%	0%	0%	0%	0%	0%	63%	104	26%
Selenium	BCWQG-30 D and CEQG-PAL	17%	16%	18%	0%	0%	0%	5%	40%	15%	11%	7%	0%	0%	0%	1%	66%	87	22%
Uranium	BCWQG-30 D	0%	0%	0%	0%	0%	0%	0%	11%	0%	0%	0%	0%	0%	0%	0%	100%	16	4%
Zinc	BCWQG-30 D	4%	11%	0%	3%	22%	25%	11%	0%	16%	37%	0%	5%	26%	5%	11%	0%	19	5%

M:\1\01\00246\31\A\Report\3 - Baseline Water Quality - GW SW\Rev1\Tables\[Tables 5.3 and 5.4.xlsx]T5.4 - AQUATIC LIFE BY UNIT

NOTES:

1. REFERENCE TO THE LOWEST APPLICABLE GUIDELINES - THESE GUIDELINES ARE PROVIDED IN TABLE 4.2.
2. SAMPLE COUNTS ARE INTEGER VALUES; ALL OTHER UNITS ARE %.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	14MAY'15	ISSUED WITH REPORT VA101-246/31-3	CJ	JEM

Knight Piésold CONSULTING

TABLE 5.4

KGHM AJAX MINING INC.
AJAX PROJECT

BASELINE WATER QUALITY REPORT
SUMMARY OF GROUNDWATER QUALITY SAMPLE AQUATIC LIFE GUIDELINE EXCEEDANCES BY LITHOLOGICAL UNIT

Print Jul/14/15 8:55:50

Baseline Project Area	Lowest Applicable Aquatic Life Guideline [1]	PERCENT OF SAMPLES THAT EXCEEDED THE LOWEST APPLICABLE GUIDELINE FOR THE LITHOLOGICAL UNIT SPECIFIED							PERCENT OF OF TOTAL EXCEEDANCES FOR PARAMETER SPECIFIED							PERCENTAGE OF TOTAL SAMPLES	
		Glacial Till	Fluvial/Glaciofluvial	Nicola Volcanics	Iron Mask Hybrid	Colluvium	Lacustrine	Waste Rock (Antropogenic)	Glacial Till	Fluvial/Glaciofluvial	Nicola Volcanics	Iron Mask Hybrid	Colluvium	Lacustrine	Waste Rock (Antropogenic)	TOTAL SAMPLES THAT EXCEEDED GUIDELINE	PERCENT EXCEEDED
Number of Wells Completed in Unit Specified		13	8	21	11	1	1	2	13	8	21	11	1	1	2	59	
Number of Samples		55	66	130	119	5	3	16	55	66	130	119	5	3	16	394	
In Situ Parameters																	
pH (unitless)	BCWQG-Max and GEQG-PAL	16%	8%	11%	4%	-	67%	-	26%	14%	40%	14%	-	6%	-	35	9%
Physical Tests																	
pH (unitless)	BCWQG-Max and GEQG-PAL	-	-	2%	-	-	-	-	-	-	100%	-	-	-	-	2	1%
Dissolved Anions																	
Chloride	BCWQG-30-D	5%	2%	-	-	-	-	-	75%	25%	-	-	-	-	-	4	1%
Fluoride	CEQG-PAL	76%	59%	66%	85%	80%	100%	44%	15%	14%	30%	36%	1%	1%	2%	282	72%
Sulphate	BCWQG-30 D (SBEB)	40%	50%	52%	68%	80%	-	88%	10%	15%	31%	36%	2%	-	6%	222	56%
Nutrients																	
Ammonia (Total)	CEQG-PAL	15%	3%	7%	4%	-	-	-	33%	8%	38%	21%	-	-	-	24	6%
Nitrate (as N)	BCWQG-30 D and CEQG-PAL	24%	-	-	-	-	-	100%	45%	-	-	-	-	-	55%	29	7%
Nitrite (as N)	BCWQG-30 D	27%	5%	-	-	-	-	100%	44%	9%	-	-	-	-	47%	34	9%
Dissolved Metals																	
Aluminum	CEQG-PAL	7%	3%	5%	-	-	67%	-	29%	14%	43%	-	-	14%	-	14	4%
Antimony	BCWQG-30-D	-	-	-	-	-	-	38%	-	-	-	-	-	-	100%	6	2%
Arsenic	BCWQG-Max and GEQG-PAL	24%	52%	15%	56%	-	100%	75%	9%	23%	13%	45%	-	2%	8%	149	38%
Boron	BCWQG-Max	-	8%	23%	10%	-	-	-	-	11%	64%	26%	-	-	-	47	12%
Cadmium	CEQG-PAL	5%	3%	3%	9%	-	-	6%	14%	10%	19%	52%	-	-	5%	21	5%
Chromium	BCWQG-30 D and CEQG-PAL	18%	2%	4%	4%	-	-	-	48%	5%	24%	24%	-	-	-	21	5%
Cobalt	BCWQG-30 D	2%	3%	2%	7%	-	-	-	8%	15%	15%	62%	-	-	-	13	3%
Copper	CEQG-PAL	7%	6%	2%	3%	40%	-	50%	17%	17%	8%	17%	8%	-	33%	24	6%
Iron	CEQG-PAL	16%	15%	25%	30%	-	100%	-	10%	11%	36%	40%	-	3%	-	91	23%
Manganese	BCWQG-30 D	4%	2%	3%	12%	-	-	-	10%	5%	19%	67%	-	-	-	21	5%
Mercury	BCWQG-30 D	2%	-	-	-	-	-	6%	50%	-	-	-	-	-	50%	2	1%
Molybdenum	CEQG-PAL	27%	33%	11%	31%	-	-	100%	14%	21%	13%	36%	-	-	15%	104	26%
Selenium	BCWQG-30 D and CEQG-PAL	24%	33%	17%	11%	20%	-	100%	15%	25%	25%	15%	1%	-	18%	87	22%
Uranium	BCWQG-30 D	-	-	-	-	-	-	100%	-	-	-	-	-	-	100%	16	4%
Zinc	BCWQG-30 D	5%	3%	5%	6%	-	-	-	16%	11%	37%	37%	-	-	-	19	5%

M:\1\01\00246\31\A\Report\3 - Baseline Water Quality - GW SW\Rev1\Tables\[Tables 5.3 and 5.4.xlsx]T5.4 - AQUATIC LIFE BY UNIT

NOTES:
1. REFERENCE TO THE LOWEST APPLICABLE GUIDELINES - THESE GUIDELINES ARE PROVIDED IN TABLE 4.2.
2. SAMPLE COUNTS ARE INTEGER VALUES; ALL OTHER UNITS ARE %.
3. DASH INDICATES THAT NONE OF THE SAMPLES FROM THAT LITHOLOGICAL UNIT EXCEEDED THE GUIDELINE.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	14MAY'15	ISSUED WITH REPORT VA101-246/31-3	CJ	JEM

5.5.2 Physical Parameters

The groundwater in the vicinity of the project area is typically slightly basic, hard to very hard (although several monitoring sites were classified as soft to moderately hard), and alkaline with very high buffering capacity. The spatial variability in pH, dissolved hardness and alkalinity are shown on Figure 5.2, Figure 5.3, and Figure 5.4. At locations where monitoring wells were installed at multiple depths, samples from the deeper wells were generally observed to have higher pH than the shallower wells and hardness and alkalinity concentrations were observed to decrease with depth. The shallow wells were typically completed in overburden and the deeper wells tended to be completed in either the Iron Mask Hybrid or Nicola Volcanics bedrock unit. The decrease in hardness and alkalinity with depth was less pronounced in the samples from monitoring wells in the Iron Mask Hybrid bedrock unit compared to those in the Nicola Volcanic (open pit area and western portion of the project area). Typically, the highest hardness and alkalinity were observed in samples collected from monitoring wells installed at lower elevations through the Peterson Creek valley, and concentrations of these parameters generally increased from west to east.

TDS is used to define the salinity of groundwater: freshwater is defined as having TDS concentrations less than 1,000 mg/L, slightly saline water is defined as having TDS concentrations between 1,000 mg/L and 3,000 mg/L, and water of TDS concentrations between 3,000 mg/L and 10,000 mg/L is defined as moderately saline. For reference, the TDS of ocean water is approximately 35,000 mg/L (NGWA 2010). According to this classification system, the majority of the wells (52%) produced freshwater, though typically with TDS near the upper end of this classification, and the remaining monitoring wells are installed within aquifer units that produced slightly saline (35%) to moderately saline (12%) water. Groundwater TDS concentrations were typically lower in samples collected from wells at higher elevations or in the upper reaches of local catchments (local groundwater recharge areas) and higher in samples from wells at lower elevations in the project area (local groundwater discharge areas such as sloughs and creeks). TDS concentrations tended to remain similar with depth (no noteworthy increase or decrease) where multiple monitoring wells were installed at one site. Highest TDS concentrations were observed for samples from wells in the existing open pit area and the backfilled Ajax East pit, and in samples collected from monitoring wells along Peterson Creek in the vicinity of the Peterson Creek aquifer. Median TDS concentrations are presented spatially on Figure 5.5 and with the piper diagram on Figure 5.6. TDS of all groundwater samples are provided for each monitoring well on piper diagrams in Appendix E.

Physical parameter guidelines for pH, colour, TDS, and turbidity were exceeded for many of the groundwater samples and are summarized as follows:

- The highest observed pH results were greater than the upper limit of the aquatic life guidelines (BCWQG-Max and CEQG-PAL; both pH 9) and were reported most often for samples collected from monitoring wells in the open pit area and on occasion at sites elsewhere in the baseline study area. Exceedances of the more stringent drinking water guidelines for pH (BCWQG-DW and HC-DW; both pH 8.5) were more common throughout the baseline study area.
- Colour exceeded the drinking water aesthetic objectives (BCWQG-DW and HC-DW; both 15 TCU) occasionally at in the samples collected from several groundwater monitoring wells throughout the project area.
- TDS exceeded the drinking water and irrigation guidelines (HC-DW, CEQG-Irrigation, and BCWQG-Irrigation; all 500 mg/L) at almost all samples from every groundwater monitoring well. TDS exceedances of the less stringent livestock guidelines (BCWQG-Livestock of 1,000 mg/L

and CEQG-Livestock of 3,000 mg/L) were observed more sporadically; however in the open pit area, groundwater sample TDS concentrations greater than 1,000 mg/L was commonly observed.

- Turbidity often exceeded the provincial agricultural guidelines (BCWQG-Irrigation of 10 NTU and BCWQG-Livestock of 5 NTU), particularly in the samples collected from earlier in the baseline monitoring program prior to initiation of the low-flow sampling protocols. The higher turbidity samples were typically from wells in the open pit area and along Peterson Creek.

Site	Number of Samples	MedianpH
AJGW01-D	2	8.09
AJGW02-D	2	9.26
AJGW02-S	2	7.60
AJGW03-D	21	8.12
AJGW04-D	2	7.98
AJGW05-S	4	7.78
AJGW06-D	19	8.17
AJGW07-D	21	8.18
AJGW07-S	20	8.16
BGC14-001D	5	8.20
BGC14-002D	5	8.14
BGC14-002S	5	8.09
BGC14-003D	3	8.90
BGC14-003I	5	8.38
BGC14-003S	5	8.19
BGC14-005	5	8.22
BGC14-006D	4	7.72
BGC14-009	5	8.03
BGC14-010	5	7.95
BGC14-011D	5	8.53
BGC14-011S	5	8.46
BGC14-012D	5	8.18
BGC14-012S	5	8.16
BGC14-013	5	8.27
BGC14-014D	3	7.69
BGC14-015D	4	8.38
BGC14-015S	4	8.19
BGC14-016	5	7.98
BGC14-017D	3	8.36
BGC14-017S	4	8.20
KAX-14-107S	3	8.28
KAX-14-108S	3	8.15
KAX-14-114S	4	8.44
KAX-14-128D	1	8.57
MW11-01S	13	8.41
MW11-02	13	8.05
MW11-04S	12	7.98
MW11-05D	12	8.02
MW11-05S	12	7.97
MW11-06D	12	7.86
MW11-06S	12	7.86
MW11-07D	13	8.12
MW11-07S	13	8.20
MW11-08D	13	8.23
MW11-09D	12	8.20
MW11-09S	12	8.19
MW11-10D	12	8.03
MW12-01	8	8.06
MW12-02	8	8.09
MW12-04	8	8.25
RES-1	2	8.06
RES-2	1	7.99
RES-3	1	8.35
RES-4	2	8.15
RES-5	1	7.33
RES-6	1	8.03
PW01	2	7.85

MW11-07D/S
MW11-01S
MW11-06D/S
MW11-02
MW11-04S
MW11-05D/S
BGC14-006D
RES-1
RES-4
MW12-01
MW12-02
AJGW07-D/S
KAX-14-128D
AJGW01-D
KAX-14-108S
PW01
AJGW02-D/S
AJGW06-D
AJGW05-S
AJGW03-D
KAX-14-114S
MW12-04
AJGW04-D
KAX-14-107S
BGC14-005
MW11-10D
RES-5
RES-2
MW11-09D/S
MW11-08D
BGC14-002D/S
BGC14-003D/I/S
BGC14-001D
RES-3
BGC14-009
PETERSON CREEK
HUMPHREY CREEK
BGC14-012D/S
RES-6
BGC14-014D
KEYMES CREEK
BGC14-010
BGC14-016
BGC14-015D/S
BGC14-013
BGC14-011D/S
BGC14-017D/S
5,612,000
5,610,000
5,608,000
680,000
682,000
684,000
686,000
688,000
400 200 0 400 800 1,200 1,600 2,000 m

LEGEND:

- pH
- DEEP
- SHALLOW
- INTERMEDIATE

SURFICIAL GEOLOGY

- ANTHROPOGENIC
- COLLUVIUM
- EOLIAN
- FLUVIAL/GLACOIFLUVIAL
- LACUSTRINE
- ORGANIC
- TILL
- UNDIVIDED, RECENT
- WEATHERED BEDROCK
- BEDROCK
- DAVIDSON CREEK AQUIFER
- PETERSON CREEK AQUIFER

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	REVIEWED
0	07JUL'15	ISSUED WITH REPORT	CMJ	CAC	JEM

NOTES:

1. BASE MAP: SURFICIAL GEOLOGY MAP SUPPLIED BY BGC.
2. COORDINATE GRID IS IN METRES.
COORDINATE SYSTEM: NAD 1983 UTM ZONE 10N.
3. THIS FIGURE IS PRODUCED AT A NOMINAL SCALE OF 1:35,000 FOR 11x17 (TABLOID) PAPER. ACTUAL SCALE MAY DIFFER ACCORDING TO CHANGES IN PRINTER SETTINGS OR PRINTED PAPER SIZE.
4. pH VALUES ARE SYMBOLIZED USING THE FOLLOWING RATIO:
(((pH VALUE - MIN pH VALUE) * 100) / RANGE OF pH VALUES)

KGHM AJAX MINING INC.

AJAX PROJECT

SPATIAL REPRESENTATION OF pH IN GROUNDWATER

Knight Piésold CONSULTING

P/A NO. VA101-246/31 | REF NO. 3

FIGURE 5.2 | REV 0

SAVED: M:\1\01\00246\31\A\GIS\Figs\Report3_BaselineWaterQualityGWSWFig5-2_SpatialRepresentation_pH.mxd Jul 07, 2015 9:52 AM, adinca

Site	Number of Samples	Median Hardness as $CaCO_3$ (Dissolved) (mg/L)
AJGW01-D	2	1100
AJGW02-D	2	268
AJGW02-S	2	1090
AJGW03-D	21	609
AJGW04-D	2	390
AJGW05-S	4	983
AJGW06-D	19	176
AJGW07-D	21	412
AJGW07-S	20	438
BGC14-001D	5	429
BGC14-002D	5	399
BGC14-002S	5	445
BGC14-003D	3	22
BGC14-003I	5	117
BGC14-003S	5	191
BGC14-005	5	1560
BGC14-006D	4	2405
BGC14-009	5	233
BGC14-010	5	892
BGC14-011D	5	67
BGC14-011S	5	78
BGC14-012D	5	718
BGC14-012S	5	927
BGC14-013	5	46
BGC14-014D	3	1230
BGC14-015D	4	69
BGC14-015S	4	352
BGC14-016	5	475
BGC14-017D	3	59
BGC14-017S	4	396
KAX-14-107S	3	256
KAX-14-108S	3	477
KAX-14-114S	4	277
KAX-14-128D	1	325
MW11-01S	13	367
MW11-02	13	433
MW11-04S	12	246
MW11-05D	12	590
MW11-05S	12	568
MW11-06D	12	484
MW11-06S	12	805
MW11-07D	13	273
MW11-07S	13	278
MW11-08D	13	164
MW11-09D	12	62
MW11-09S	12	106
MW11-10D	12	1580
MW12-01	8	1860
MW12-02	8	1810
MW12-04	8	415
RES-1	2	1960
RES-2	1	1100
RES-3	1	606
RES-4	2	489
RES-5	1	437
RES-6	1	1600
PW01	2	1390

LEGEND:

- CONCENTRATION
- DEEP
- SHALLOW
- INTERMEDIATE

SURFICIAL GEOLOGY

- ANTHROPOGENIC
- COLLUVIUM
- EOLIAN
- FLUVIAL/GLACOIFLUVIAL
- LACUSTRINE
- ORGANIC
- TILL
- UNDIVIDED, RECENT
- WEATHERED BEDROCK
- BEDROCK
- DAVIDSON CREEK AQUIFER
- PETERSON CREEK AQUIFER

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	REVIEWED
0	07JUL'15	ISSUED WITH REPORT	CMJ	CAC	JEM

NOTES:

1. BASE MAP: SURFICIAL GEOLOGY MAP SUPPLIED BY BGC.
2. COORDINATE GRID IS IN METRES.
COORDINATE SYSTEM: NAD 1983 UTM ZONE 10N.
3. THIS FIGURE IS PRODUCED AT A NOMINAL SCALE OF 1:35,000 FOR 11X17 (TABLOID) PAPER. ACTUAL SCALE MAY DIFFER ACCORDING TO CHANGES IN PRINTER SETTINGS OR PRINTED PAPER SIZE.
4. CIRCLE SIZES ARE DIRECTLY PROPORTIONAL TO THE MEDIAN CONCENTRATIONS.

KGHM AJAX MINING INC.

AJAX PROJECT

SPATIAL REPRESENTATION OF HARDNESS CONCENTRATIONS IN GROUNDWATER

Knight Piésold CONSULTING

P/A NO. VA101-246/31 | REF NO. 3

FIGURE 5.3 | REV 0

SAVED: M:\101\10\246\31\AG\SIF\gis\Report3_BaselineWaterQuality\GWSW\Fig5-3_SpatialRepresentation_Hardness.mxd, Jul 07, 2015 9:53 AM, adinca

Site	Number of Samples	Median Bicarbonate Alkalinity (mg/L)
AJGW01-D	2	274
AJGW02-D	2	12
AJGW02-S	2	579
AJGW03-D	21	279
AJGW04-D	2	454
AJGW05-S	4	148
AJGW06-D	19	112
AJGW07-D	21	219
AJGW07-S	20	265
BGC14-001D	5	449
BGC14-002D	5	288
BGC14-002S	5	263
BGC14-003D	3	99
BGC14-003I	5	197
BGC14-003S	5	182
BGC14-005	5	171
BGC14-006D	4	133
BGC14-009	5	136
BGC14-010	5	383
BGC14-011D	5	311
BGC14-011S	5	168
BGC14-012D	5	219
BGC14-012S	5	406
BGC14-013	5	131
BGC14-014D	3	123
BGC14-015D	4	177
BGC14-015S	4	297
BGC14-016	5	387
BGC14-017D	3	203
BGC14-017S	4	392
KAX-14-107S	3	437
KAX-14-108S	3	195
KAX-14-114S	4	315
KAX-14-128D	1	209
MW11-01S	13	143
MW11-02	13	180
MW11-04S	12	80
MW11-05D	12	398
MW11-05S	12	330
MW11-06D	12	40
MW11-06S	12	75
MW11-07D	13	127
MW11-07S	13	174
MW11-08D	13	223
MW11-09D	12	143
MW11-09S	12	123
MW11-10D	12	245
MW12-01	8	179
MW12-02	8	176
MW12-04	8	189
RES-1	2	671
RES-2	1	285
RES-3	1	488
RES-4	2	427
RES-5	1	25
RES-6	1	243
PW01	2	60

LEGEND:

- CONCENTRATION
- DEEP
- SHALLOW
- INTERMEDIATE

SURFICIAL GEOLOGY

- ANTHROPOGENIC
- COLLUVIUM
- EOLIAN
- FLUVIAL/GLACOIFLUVIAL
- LACUSTRINE
- ORGANIC
- TILL
- UNDIVIDED, RECENT
- WEATHERED BEDROCK
- BEDROCK
- DAVIDSON CREEK AQUIFER
- PETERSON CREEK AQUIFER

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	REVIEWED
0	07JUL'15	ISSUED WITH REPORT	CMJ	CAC	JEM

NOTES:

1. BASE MAP: SURFICIAL GEOLOGY MAP SUPPLIED BY BGC.
2. COORDINATE GRID IS IN METRES.
COORDINATE SYSTEM: NAD 1983 UTM ZONE 10N.
3. THIS FIGURE IS PRODUCED AT A NOMINAL SCALE OF 1:35,000 FOR 11X17 (TABLOID) PAPER. ACTUAL SCALE MAY DIFFER ACCORDING TO CHANGES IN PRINTER SETTINGS OR PRINTED PAPER SIZE.
4. CIRCLE SIZES ARE DIRECTLY PROPORTIONAL TO THE MEDIAN CONCENTRATIONS.

KGHM AJAX MINING INC.

AJAX PROJECT

SPATIAL REPRESENTATION OF ALKALINITY CONCENTRATIONS IN GROUNDWATER

Knight Piésold CONSULTING

P/A NO. VA101-246/31 | REF NO. 3

FIGURE 5.4 | REV 0

SAVED: M:\1\01\00024\63\1\A\GIS\Figs\Report3_BaselineWaterQuality\GWSWFig5-4_SpatialRepresentation_Alkalinity.mxd, Jul 07, 2015 9:53 AM, adinca

Site	Number of Samples	Median Total Dissolved Solids (mg/L)
AJGW01-D	2	1635
AJGW02-D	2	715
AJGW02-S	2	3575
AJGW03-D	21	916
AJGW04-D	2	1645
AJGW05-S	4	2140
AJGW06-D	19	486
AJGW07-D	21	621
AJGW07-S	20	639
BGC14-001D	5	618
BGC14-002D	5	854
BGC14-002S	5	921
BGC14-003D	3	573
BGC14-003I	5	463
BGC14-003S	5	454
BGC14-005	5	2830
BGC14-006D	4	4015
BGC14-009	5	625
BGC14-010	5	1270
BGC14-011D	5	648
BGC14-011S	5	489
BGC14-012D	5	1580
BGC14-012S	5	1730
BGC14-013	5	293
BGC14-014D	3	2170
BGC14-015D	4	393
BGC14-015S	4	442
BGC14-016	5	522
BGC14-017D	3	371
BGC14-017S	4	366
KAX-14-107S	3	690
KAX-14-108S	3	1400
KAX-14-114S	4	783
KAX-14-128D	1	856
MW11-01S	13	672
MW11-02	13	2240
MW11-04S	12	1480
MW11-05D	12	976
MW11-05S	12	956
MW11-06D	12	1435
MW11-06S	12	1960
MW11-07D	13	1150
MW11-07S	13	962
MW11-08D	13	1030
MW11-09D	12	1120
MW11-09S	12	1375
MW11-10D	12	2735
MW12-01	8	3280
MW12-02	8	3155
MW12-04	8	824
RES-1	2	3445
RES-2	1	1790
RES-3	1	805
RES-4	2	815
RES-5	1	3150
RES-6	1	3110
PW01	2	2785

LEGEND:

- CONCENTRATION
- DEEP
- SHALLOW
- INTERMEDIATE

SURFICIAL GEOLOGY

- ANTHROPOGENIC
- COLLUVIUM
- EOLIAN
- FLUVIAL/GLACOIFLUVIAL
- LACUSTRINE
- ORGANIC
- TILL
- UNDIVIDED, RECENT
- WEATHERED BEDROCK
- BEDROCK
- DAVIDSON CREEK AQUIFER
- PETERSON CREEK AQUIFER

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	REVIEWED
0	07JUL'15	ISSUED WITH REPORT	CMJ	CAC	JEM

NOTES:

1. BASE MAP: SURFICIAL GEOLOGY MAP SUPPLIED BY BGC.
2. COORDINATE GRID IS IN METRES.
   COORDINATE SYSTEM: NAD 1983 UTM ZONE 10N.
3. THIS FIGURE IS PRODUCED AT A NOMINAL SCALE OF 1:35,000 FOR 11X17 (TABLOID) PAPER. ACTUAL SCALE MAY DIFFER ACCORDING TO CHANGES IN PRINTER SETTINGS OR PRINTED PAPER SIZE.
4. CIRCLE SIZES ARE DIRECTLY PROPORTIONAL TO THE MEDIAN CONCENTRATIONS.

KGHM AJAX MINING INC.

AJAX PROJECT

SPATIAL REPRESENTATION OF TOTAL DISSOLVED SOLIDS CONCENTRATIONS IN GROUNDWATER

Knight Piésold CONSULTING

P/A NO.	REF NO.
VA101-246/31	3

FIGURE 5.5 REV 0

SAVED: M:\1\01\00246\31\A\GIS\Figs\Report3_BaselineWaterQuality\GWSW\Fig5-5_SpatialRepresentation_TotalDissolvedSolids.mxd; Jul 07, 2015 9:54 AM; adinca

5.5.3 Geochemical Facies and Major Ions

The hydrochemical signature (facies) of water is influenced by the interactions with the lithological units that it flows through and is further influenced by the length of time it interacts with various units along a flow pathway. Trilinear (Piper) diagrams were used to assess the groundwater types based on ionic contributions of major cations (calcium, magnesium, sodium, and potassium) and anions (chloride, bicarbonate, and sulphate) exhibited within the project area monitoring well samples. The median concentrations of the major ions at each groundwater quality monitoring site are plotted on a Piper diagram (Figure 5.7) to demonstrate these ion signatures visually and are summarized in Table 5.5. The water types are also provided in a spatial context on Figure 5.6. Piper diagrams of individual samples collected at each site are provided in Appendix E.

Sulphate was the dominant anion in the project area, with 82% of the monitoring wells sampled characterized with this dominant anion. The remaining 18% of the wells were characterized as dominantly bicarbonate or an intermediate bicarbonate-sulphate type. Chloride was proportionally very low in all of the groundwater samples. The dominant cation was sodium, typically in association with sulphate, though intermediate geochemical facies were identified with water types ranging from Na-SO4 to Na-Mg-Ca-SO_4-HCO_3 to Na-HCO_3. Magnesium was also a dominant cation but generally with significant proportions of sodium and calcium and rarely as a major contributing cation (typically never greater than 60% of the total cation contribution). Calcium was proportionally dominant in samples from a few monitoring wells, but typically only slightly greater than magnesium and/or sodium. Potassium was proportionally very low in all of the monitoring well samples.

Sodium-sulphate is the dominant water type for samples collected from monitoring wells to the north and west of Jacko Lake and for samples collected from some of the monitoring wells due east of Jacko Lake and adjacent to the existing open pits, with varying intermediate contributions of magnesium and/or calcium. The sulphate water type is dominant in most of the samples from monitoring wells in the vicinity of the exiting open pits, in the Goose Lake (Keynes Creek watershed) area, and along Peterson Creek, and magnesium was the dominant cation if sodium wasn't.

Calcium-magnesium-sulphate or calcium-sodium-sulphate water types were dominant in samples from three of the deeper wells immediately west of Jacko Lake (PW01, AJGW07-D and KAX-14-128D). Calcium is not a dominant cation in the groundwater anywhere else in the project area, with the exception of the sample from RES-2, which is further east adjacent to Peterson Creek. Calcium was also relatively dominant in the winter low flow surface water samples collected from monitoring sites in Peterson Creek, upstream of Jacko Lake (PC10 and JC03) (Figure 4.2).

The water type was more intermediate with respect to contributions from sulphate and bicarbonate and relatively lower in TDS for samples from monitoring wells in the in the upper reaches of the Keynes Creek and Humphrey Creek catchments. The higher bicarbonate contributions and lower TDS concentrations are typically indicative of close proximity to groundwater recharge areas. TDS typically increased in the groundwater samples from monitoring wells at lower elevations and at greater depths in both the Keynes Creek and Humphrey Creek catchments and the dominant anion transitioned to sulphate. Similar trends of increasing TDS and sulphate concentrations with distance downstream in Humphrey Creek was noted for the surface water samples (Figure 4.4) Magnesium and/or sodium were the dominant cations in samples from monitoring wells in these catchments.

The water types were cross-referenced with the surficial and bedrock lithological units that the monitoring wells were screened in (completion zones) in order to assess whether a specific water type was associated with specific lithological units (Table 5.4 and Table 5.5). The water types for groundwater samples collected from monitoring wells completed in overburden materials (colluvium, fluviual/glaciofluvial, glacial till, and lacustrine) were somewhat varied but sulphate was typically the dominant anion and magnesium or sodium were the dominant cations. Samples from monitoring wells completed in the Iron Mask Hybrid bedrock unit were dominantly sulphate type and sodium was the dominant cation in the samples from wells in the vicinity of Jacko Lake and the Open Pit/historical mine features, while magnesium was the dominant cation in wells located further east in the vicinity of the proposed EMRSF (North Peterson Creek watershed). Sodium was also the dominant anion in the samples collected from the majority of the monitoring wells (68%) completed in the Nicola Volcanics bedrock unit, bicarbonate was dominant in samples from a few monitoring wells (16%) completed in this unit, and the remaining samples were intermediate bicarbonate-sulphate type. Similar to all other monitoring locations, the major cations were sodium or magnesium, though samples from two of the monitoring wells completed in the Nicola Volcanics were weakly dominant in calcium (monitoring wells AJGW07-D and KAX-14-128D).

Sulphate concentrations were elevated in groundwater samples collected from throughout the baseline study area and the highest sulphate concentrations were noted for those wells that are in the vicinity of local groundwater discharge areas, such as the Ajax West open pits, sloughs, Inks Lake, and Peterson Creek. Sulphate concentrations were typically highly variable between monitoring wells in the open pit area and were more consistent between monitoring wells in the EMRSF area and the Peterson Creek aquifer. Similar to TDS, sulphate concentrations tended to be lower in samples from monitoring wells installed at higher elevations in the project area watersheds and typically concentrations increased in samples from wells installed at lower elevations or near local groundwater discharge areas (Ajax West Open Pit, Inks Lake, Peterson Creek, etc.). The spatial variability in concentration distribution of sulphate is shown on Figure 5.8. Sulphate guideline exceedances were common for the groundwater samples collected from throughout the project area. The high surface water hardness triggered a requirement to complete site specific toxicity testing for sulphate in the surface water environment (Nautilus 2015). Given that this is groundwater, the focus is on the value presented for systems where early life stages are absent which is 730 mg/L for a hardness of up to 1,377 mg/L $CaCO_3$. This SBEB was exceeded regularly in groundwater samples collected from the baseline study area, particularly in the open pit area, Peterson Creek aquifer, and the north Peterson Creek watershed. Drinking water guidelines for sulphate (BCWQG-DW and HC-DW of 500 mg/L) were exceeded in most groundwater samples collected from the baseline study area, though the higher sulphate concentrations were limited to samples from two wells (of seven) in the Humphrey Creek watershed and there were no drinking water quality guideline exceedances noted for monitoring wells in the Keynes Creek watershed. The livestock water quality guidelines for sulphate are double the drinking water guidelines (BCWQG-Livestock and CEQG-Livestock; both 1,000 mg/L) and the majority of the samples collected from monitoring wells in the Peterson Creek aquifer area and from several monitoring wells in the North Peterson Creek watershed (proposed ERMSF), Cherry Creek watershed, and historical open pit areas exceeded this guideline.

Fluoride is one of the major ions measured in groundwater quality samples from the project area. Fluoride concentrations tended to be highest in samples collected from the open pit area in monitoring wells completed in overburden units and from wells located around Jacko Lake

(completed in both the Iron Mask Hybrid and Nicola Volcanics bedrock units). Fluoride groundwater concentrations exceeded the CEQG-PAL (0.12 mg/L) throughout the baseline study area. Fluoride concentrations were reported at levels that exceeded the BCWQG-Max and the drinking water guidelines (BCWQG-DW and HC-DW; both 1.5 mg/L) in a few samples from wells in the open pit area. The spatial variability in fluoride groundwater concentrations is shown on Figure 5.9.

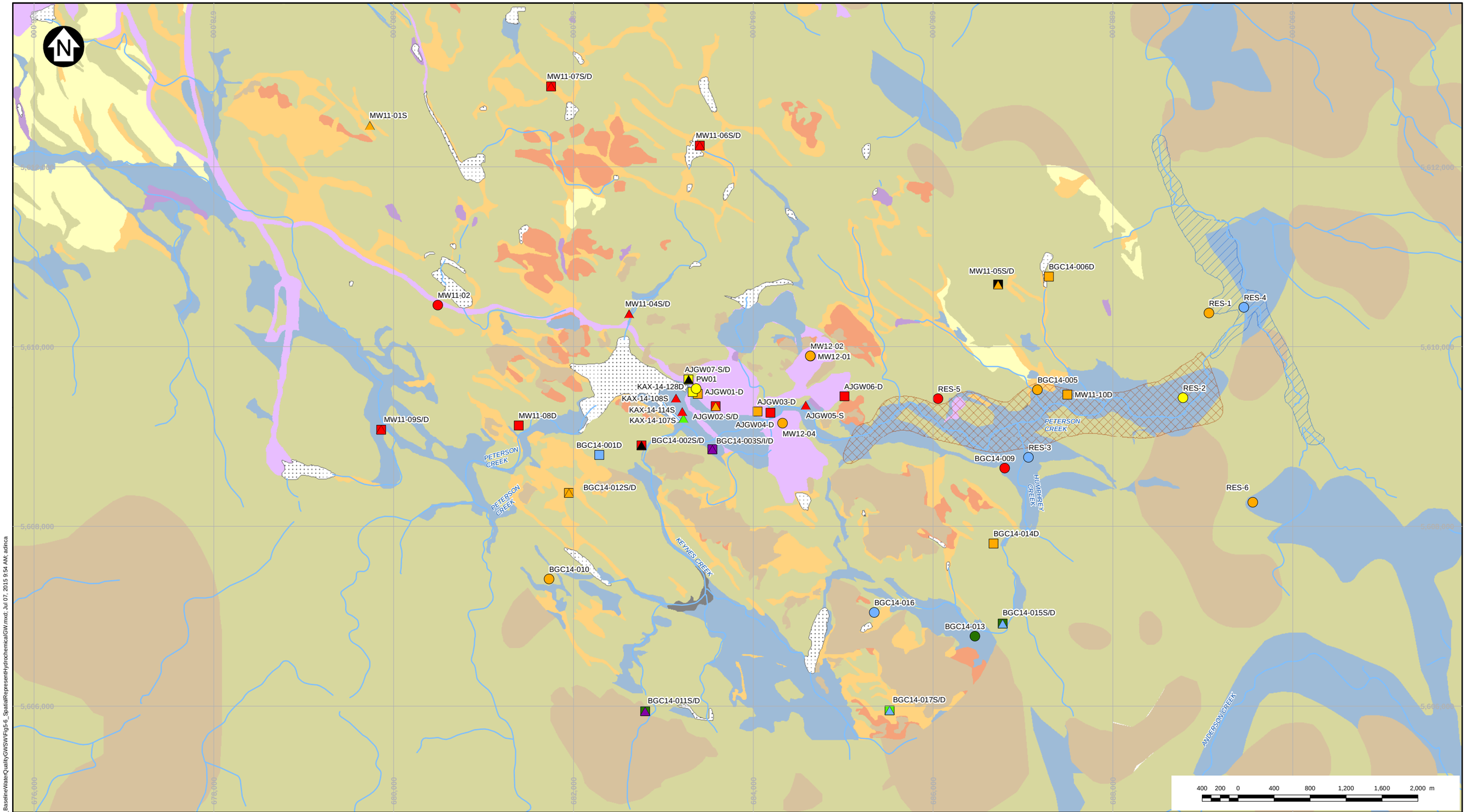
5.5.4 Nutrients, and Organic Carbon

Nitrogen based inorganic nutrients (ammonia, nitrate, and nitrite) were typically found in higher concentrations in 2007 and 2008, in association with the higher turbidity samples, with concentrations generally stabilizing since sampling methods were amended to collect more representative samples. A number of exceedances were observed for nitrate and nitrite associated with these earlier samples. More recently, nutrients were reported at concentrations that exceeded guidelines in samples from one monitoring well in the Cherry Creek watershed (MW11-01S; nitrate, nitrite and ammonia aquatic life guideline exceedances) and two monitoring wells in the open pit area (MW12-01 and MW12-02; nitrate and nitrite aquatic life guideline exceedances; nitrate drinking water guideline exceedances). Only sporadic guideline exceedances were observed elsewhere. Nitrate was identified as a parameter that was elevated in groundwater wells in the Kamloops area through the *Water Quality Check Program* that was carried out by the Ministry of Environment through the late 1970s and 1990s (BC MOE 2007b).

Organic carbon concentrations were generally low in groundwater samples from throughout the project area. However, exceedances of the drinking water guideline of 4 mg/L (BCWQG-DW) extensively in the groundwater samples collected from wells in the Cherry Creek, north Peterson Creek, and upper Peterson Creek watersheds and more sporadically in the other areas. The drinking water guideline is applicable only to treated water sources because the presence of organic carbon can result in the formation of toxic trihalomethanes when chlorinated and these exceedances are not indicative of baseline concentrations that are toxic.

5.5.5 Cyanide

Measureable concentrations of total cyanide were seldom observed; cyanide concentration that were detected have been excluded from the baseline characterization due to QA/QC issues particular to false positives due to earlier analytical methods. Cyanide species have remained below the method detection limits since the analytical methods were improved in 2012.



LEGEND:

WATER TYPE

- Na-SO4, Na-Mg-SO4, Na-Ca-SO4, Na-Mg-Ca-SO4
- Mg-SO4, Mg-Na-SO4, Mg-Ca-SO4
- Ca-Mg-SO4, Ca-Na-SO4
- Mg-HCO3, Mg-Ca-HCO3, Mg-Na-HCO3
- Na-HCO3
- Na-SO4-HCO3
- Mg-SO4-HCO3, Ca-Mg-SO4-HCO3
- Na-HCO3-SO4

- SINGLE WELL
- DEEP
- SHALLOW

SURFICIAL GEOLOGY

- ANTHROPOGENIC
- COLLUVIUM
- EOLIAN
- FLUVIAL/GLACOIFLUVIAL
- LACUSTRINE
- ORGANIC
- TILL
- UNDIVIDED, RECENT
- WEATHERED BEDROCK
- BEDROCK
- DAVIDSON CREEK AQUIFER
- PETERSON CREEK AQUIFER

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	REVIEWED
0	07JUL'15	ISSUED WITH REPORT	CMJ	AMD	JEM

NOTES:

1. BASE MAP: SURFICIAL GEOLOGY MAP SUPPLIED BY BGC.

2. COORDINATE GRID IS IN METRES.
COORDINATE SYSTEM: NAD 1983 UTM ZONE 10N.

3. THIS FIGURE IS PRODUCED AT A NOMINAL SCALE OF 1:40,000 FOR 11X17 (TABLOID) PAPER. ACTUAL SCALE MAY DIFFER ACCORDING TO CHANGES IN PRINTER SETTINGS OR PRINTED PAPER SIZE.

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AJAX PROJECT

SPATIAL REPRESENTATION OF HYDROCHEMICAL FACIES IN GROUNDWATER

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P/A NO.	REF NO.
VA101-246/31	3

FIGURE 5.6 REV 0

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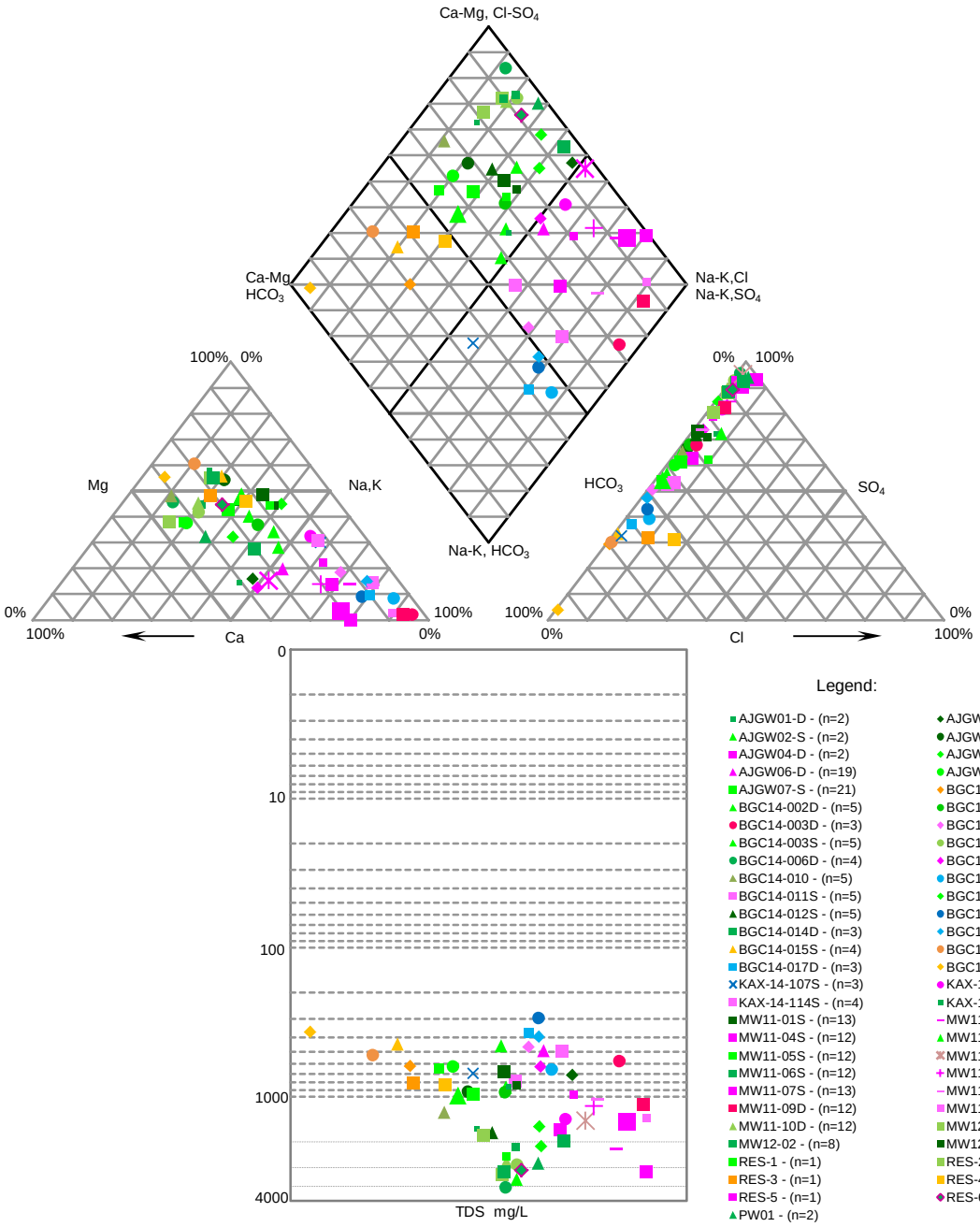

NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. DATA ARE MEDIAN VALUES, BASED ON SAMPLES COLLECTED FROM DECEMBER 2011 TO OCTOBER 2014.
3. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	07JUL'15	ISSUED WITH REPORT	CJ	JEM

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PIPER DIAGRAM OF MEDIAN GROUNDWATER CHEMISTRY

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REF. NO. 3

FIGURE 5.7

REV 0

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TABLE 5.5

KGHM AJAX MINING INC.
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BASELINE WATER QUALITY REPORT
SUMMARY OF GROUNDWATER TYPES AND MONITORING ZONE LITHOLOGY - GROUPED BY PROJECT AREA

Print Jul/13/15 15:28:02

Nearest Proposed Facility	Site ID	Screened/Monitored Stratigraphy	Groundwater Type	Groundwater Type Comments
Project Site West	MW11-01S	Glacial Till	Mg-SO4	Significant Na contributions (~29%)
Project Site West	MW11-02	Nicola Volcanics	Na-SO4	
Project Site West	MW11-09D	Nicola Volcanics	Na-SO4	
Project Site West	MW11-09S	Nicola Volcanics	Na-SO4	Slightly higher TDS and SO4 in shallow well
Jacko Lake North	MW11-04S	Iron Mask Hybrid	Na-SO4	
Jacko Lake North	MW11-06D	Iron Mask Hybrid	Na-SO4	
Jacko Lake North	MW11-06S	Fluvial/Glaciofluvial	Na-Ca-Mg-SO4	Significant contributions of Na (~41%), Ca (~31%), Mg (~28%)
Jacko Lake North	MW11-07D	Iron Mask Hybrid	Na-SO4	Slight increase in TDS with depth; higher proportion of Ca with depth.
Jacko Lake North	MW11-07S	Iron Mask Hybrid	Na-SO4	
Jacko Lake South	MW11-08D	Nicola Volcanics	Na-SO4	
TSF	BGC14-001D	Nicola Volcanics	Mg-HCO3	Mg-Na-Ca-HCO3
TSF	BGC14-002D	Nicola Volcanics	Na-Mg-SO4	slightly greater proportion of Na and HCO3 with depth
TSF	BGC14-002S	Glacial Till	Mg-Na-SO4	
TSF	BGC14-003D	Nicola Volcanics	Na-SO4	Increasing trend in Na with depth
TSF	BGC14-003I	Fluvial/Glaciofluvial	Na-SO4-HCO3	HCO3 slightly greater in "I" well compared to "S" well
TSF	BGC14-003S	Glacial Till	Na-SO4-HCO3	
TSF	BGC14-010	Nicola Volcanics	Mg-Ca-SO4	Mg proportionally greater than Ca
TSF	BGC14-011D	Nicola Volcanics	Na-HCO3-SO4	Na proportion increases with depth and Mg decreases; SO4 proportion decreases with depth and HCO3 increases.
TSF	BGC14-011S	Nicola Volcanics	Na-SO4-HCO3	
TSF	BGC14-012D	Nicola Volcanics	Mg-Na-SO4	Proportion of SO4 increases with depths and HCO3 decreases
TSF	BGC14-012S	Colluvium	Mg-SO4	Proportionally greater Ca in S well
TSF	BGC14-016	Nicola Volcanics	Mg-HCO3	Significant Ca contributions (~30%)
TSF	BGC14-017D	Nicola Volcanics	Na-HCO3	Significant HCO3 (~58%) and SO4 (~39%) contributions
TSF	BGC14-017S	Glacial Till	Mg-Ca-HCO3	Significant Mg (~55%) and Ca (~39%) contributions
Open Pit	AJGW01-D	Glacial Till	Mg-SO4	
Open Pit	AJGW02-D	Nicola Volcanics	Na-Ca-SO4	SO4 - no dominant cations; TDS decreases with depth
Open Pit	AJGW02-S	Glacial Till	Mg-Na-SO4	SO4 - no dominant cations; TDS decreases with depth
Open Pit	AJGW03-D	Fluvial/Glaciofluvial	Mg-SO4	
Open Pit	AJGW04-D	Glacial Till	Na-SO4	
Open Pit	AJGW05-S	Fluvial/Glaciofluvial	SO4	SO4 - no dominant cations
Open Pit	AJGW06-D	Iron Mask Hybrid	Na-SO4	
Open Pit	AJGW07-D	Nicola Volcanics	Ca-Mg-SO4	Significant HCO3 contributions (~38%)
Open Pit	AJGW07-S	Fluvial/Glaciofluvial	Ca-Mg-SO4-HCO3	Slightly higher SO4 and Mg with depth, but slightly lower TDS.
Open Pit	KAX-14-107S	Lacustrine	Na-HCO3	
Open Pit	KAX-14-108S	Glacial Till	Na-SO4	Significant Mg (~33%) contributions
Open Pit	KAX-14-114S	Glacial Till or Fluvial/Glaciolacustrine	Na-SO4	Significant Mg (~31%) and HCO3 (~42%)contributions
Open Pit	KAX-14-128D	Nicola Volcanics	Ca-Na-SO4	Significant HCO3 (~35%)contributions
Open Pit	MW12-01	Waste rock backfill	Mg-SO4	Significant Ca contributions (~28%)
Open Pit	MW12-02	Waste rock backfill	Mg-SO4	Significant Ca contributions (~27%)
Open Pit	PW-01	Nicola Volcanics/Picrite/Sugarloaf Diorite	Ca-Mg-SO4	
SMRSF	BGC14-009	Iron Mask Hybrid	Na-SO4	Significant Ca contributions (~37%)
SMRSF	BGC14-013	Nicola Volcanics	Na-HCO3-SO4	Greater proportion of HCO3 to SO4, but (53%:43%)
SMRSF	BGC14-014D	Nicola Volcanics	Mg-Ca-SO4	Greater proportion of Mg to Ca (~44%:36%)
SMRSF	BGC14-015D	Nicola Volcanics	Na-HCO3-SO4	Greater proportion of HCO3 to SO4 (51%:47%)
SMRSF	BGC14-015S	Glacial Till	Mg-HCO3	Significant contributions of Ca (~25%); TDS slightly higher in shallow well
SMRSF	MW12-04	Glacial Till	Mg-Na-SO4	Significant contributions of Mg (~44%), Na (~32%), Ca (~17%) and HCO3 (~25%)
EMRSF	BGC14-005	Iron Mask Hybrid	Mg-Ca-SO4	Slightly higher proportion of Mg to Ca
EMRSF	BGC14-006D	Iron Mask Hybrid	Mg-Ca-SO4	Slightly higher proportion of Mg to Ca
EMRSF	MW11-05D	Iron Mask Hybrid	Mg-SO4-HCO3	Significant contributions of Ca (~25%), Na (~21%) and HCO3 (~47%)
EMRSF	MW11-05S	Iron Mask Hybrid	Mg-SO4	Significant contributions of Mg (~44%), Ca (~30%), Na (~26%)
EMRSF	MW11-10D	Fluvial/Glaciofluvial	Mg-Ca-SO4	Significant contributions of Mg (~45%), Ca (~35%), Na (~19%)
Domestic Water Sources in Project Area				
Domestic	RES-1		Mg-Na-SO4	
Domestic	RES-2		Ca-Mg-SO4	
Domestic	RES-3		Mg-Ca-HCO3	
Domestic	RES-4		Mg-HCO3	
Domestic	RES-5		Na-SO4	
Domestic	RES-6		Mg-SO4	Significant contributions of Mg (~45%), Ca (~30%), Na (~24%)

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REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	14MAY'15	ISSUED WITH REPORT VA101-246/31-3	CJ	JEM

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TABLE 5.6

KGHM AJAX MINING INC.
AJAX PROJECT

BASELINE WATER QUALITY REPORT
SUMMARY OF GROUNDWATER TYPES AND MONITORING ZONE LITHOLOGY - GROUPED BY LITHOLOGY

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Nearest Proposed Facility	Site ID	Screened/Monitored Stratigraphy	Groundwater Type	Groundwater Type Comments
TSF	BGC14-012S	Colluvium	Mg-SO4	Proportionally greater Ca in S well
Open Pit	AJGW07-S	Fluvial/Glaciofluvial	Ca-Mg-SO4-HCO3	Slightly higher SO4 and Mg with depth, but slightly lower TDS.
EMRSF	MW11-10D	Fluvial/Glaciofluvial	Mg-Ca-SO4	Significant contributions of Mg (~45%), Ca (~35%), Na (~19%)
Open Pit	AJGW03-D	Fluvial/Glaciofluvial	Mg-SO4	
Jacko Lake North	MW11-06S	Fluvial/Glaciofluvial	Na-Ca-Mg-SO4	Significant contributions of Na (~41%), Ca (~31%), Mg (~28%)
TSF	BGC14-003I	Fluvial/Glaciofluvial	Na-SO4-HCO3	HCO3 slightly greater in "I" well compared to "S" well
Open Pit	AJGW05-S	Fluvial/Glaciofluvial	SO4	SO4 - no dominant cations
TSF	BGC14-017S	Glacial Till	Mg-Ca-HCO3	Significant Mg (~55%) and Ca (~39%) contributions
SMRSF	BGC14-015S	Glacial Till	Mg-HCO3	Significant contributions of Ca (~25%); TDS slightly higher in shallow well
TSF	BGC14-002S	Glacial Till	Mg-Na-SO4	
Open Pit	AJGW02-S	Glacial Till	Mg-Na-SO4	SO4 - no dominant cations; TDS decreases with depth
SMRSF	MW12-04	Glacial Till	Mg-Na-SO4	Significant contributions of Mg (~44%), Na (~32%), Ca (~17%) and HCO3 (~25%)
Project Site West	MW11-01S	Glacial Till	Mg-SO4	Significant Na contributions (~29%)
Open Pit	AJGW01-D	Glacial Till	Mg-SO4	
Open Pit	AJGW04-D	Glacial Till	Na-SO4	
Open Pit	KAX-14-108S	Glacial Till	Na-SO4	Significant Mg (~33%) contributions
TSF	BGC14-003S	Glacial Till	Na-SO4-HCO3	
Open Pit	KAX-14-114S	Glacial Till or Fluvial/Glaciolacustrine	Na-SO4	Significant Mg (~31%) and HCO3 (~42%)contributions
Open Pit	KAX-14-107S	Lacustrine	Na-HCO3	
EMRSF	BGC14-005	Iron Mask Hybrid	Mg-Ca-SO4	Slightly higher proportion of Mg to Ca
EMRSF	BGC14-006D	Iron Mask Hybrid	Mg-Ca-SO4	Slightly higher proportion of Mg to Ca
EMRSF	MW11-05S	Iron Mask Hybrid	Mg-SO4	Significant contributions of Mg (~44%), Ca (~30%), Na (~26%)
EMRSF	MW11-05D	Iron Mask Hybrid	Mg-SO4-HCO3	Significant contributions of Ca (~25%), Na (~21%) and HCO3 (~47%)
Jacko Lake North	MW11-07S	Iron Mask Hybrid	Na-SO4	
Jacko Lake North	MW11-07D	Iron Mask Hybrid	Na-SO4	Slight increase in TDS with depth; higher proportion of Ca with depth.
Jacko Lake North	MW11-04S	Iron Mask Hybrid	Na-SO4	
Jacko Lake North	MW11-06D	Iron Mask Hybrid	Na-SO4	
Open Pit	AJGW06-D	Iron Mask Hybrid	Na-SO4	
SMRSF	BGC14-009	Iron Mask Hybrid	Na-SO4	Significant Ca contributions (~37%)
Open Pit	AJGW07-D	Nicola Volcanics	Ca-Mg-SO4	Significant HCO3 contributions (~38%)
Open Pit	KAX-14-128D	Nicola Volcanics	Ca-Na-SO4	Significant HCO3 (~35%)contributions
TSF	BGC14-010	Nicola Volcanics	Mg-Ca-SO4	Mg proportionally greater than Ca
SMRSF	BGC14-014D	Nicola Volcanics	Mg-Ca-SO4	Greater proportion of Mg to Ca (~44%:36%)
TSF	BGC14-001D	Nicola Volcanics	Mg-HCO3	Mg-Na-Ca-HCO3
TSF	BGC14-016	Nicola Volcanics	Mg-HCO3	Significant Ca contributions (~30%)
TSF	BGC14-012D	Nicola Volcanics	Mg-Na-SO4	Proportion of SO4 increases with depths and HCO3 decreases
Open Pit	AJGW02-D	Nicola Volcanics	Na-Ca-SO4	SO4 - no dominant cations; TDS decreases with depth
TSF	BGC14-017D	Nicola Volcanics	Na-HCO3	Significant HCO3 (~58%) and SO4 (~39%) contributions
TSF	BGC14-011D	Nicola Volcanics	Na-HCO3-SO4	Na proportion increases with depth and Mg decreases; SO4 proportion decreases with depth and HCO3 increases.
SMRSF	BGC14-013	Nicola Volcanics	Na-HCO3-SO4	Greater proportion of HCO3 to SO4, but (53%:43%)
SMRSF	BGC14-015D	Nicola Volcanics	Na-HCO3-SO4	Greater proportion of HCO3 to SO4 (51%:47%)
TSF	BGC14-002D	Nicola Volcanics	Na-Mg-SO4	slightly greater proportion of Na and HCO3 with depth
Project Site West	MW11-09S	Nicola Volcanics	Na-SO4	Slightly higher TDS and SO4 in shallow well
Project Site West	MW11-09D	Nicola Volcanics	Na-SO4	
Project Site West	MW11-02	Nicola Volcanics	Na-SO4	
Jacko Lake South	MW11-08D	Nicola Volcanics	Na-SO4	
TSF	BGC14-003D	Nicola Volcanics	Na-SO4	Increasing trend in Na with depth
TSF	BGC14-011S	Nicola Volcanics	Na-SO4-HCO3	
Open Pit	PW-01	Nicola Volcanics/Picrite/Sugarloaf Diorite	Ca-Mg-SO4	
Open Pit	MW12-01	Waste rock backfill	Mg-SO4	Significant Ca contributions (~28%)
Open Pit	MW12-02	Waste rock backfill	Mg-SO4	Significant Ca contributions (~27%)
Domestic Water Sources in Local Project Area				
Domestic	RES-1		Mg-Na-SO4	
Domestic	RES-2		Ca-Mg-SO4	
Domestic	RES-3		Mg-Ca-HCO3	
Domestic	RES-4		Mg-HCO3	
Domestic	RES-5		Na-SO4	
Domestic	RES-6		Mg-SO4	Significant contributions of Mg (~45%), Ca (~30%), Na (~24%)

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	14MAY'15	ISSUED WITH REPORT VA101-246/31-3	CJ	JEM

Site	Number of Samples	Median Sulphate (mg/L)
AJGW01-D	2	799
AJGW02-D	2	425.5
AJGW02-S	2	1640
AJGW03-D	21	460
AJGW04-D	2	696.5
AJGW05-S	4	1370
AJGW06-D	19	258
AJGW07-D	21	273.5
AJGW07-S	20	255.5
BGC14-001D	5	150
BGC14-002D	5	416
BGC14-002S	5	468
BGC14-003D	3	255
BGC14-003I	5	165
BGC14-003S	5	196
BGC14-005	5	1870
BGC14-006D	4	2725
BGC14-009	5	329
BGC14-010	5	593
BGC14-011D	5	182
BGC14-011S	5	181
BGC14-012D	5	993
BGC14-012S	5	860
BGC14-013	5	83.8
BGC14-014D	3	1410
BGC14-015D	4	129
BGC14-015S	4	119.5
BGC14-016	5	134
BGC14-017D	3	100
BGC14-017S	4	12.95
KAX-14-107S	3	172
KAX-14-108S	3	835
KAX-14-114S	4	311.5
KAX-14-128D	1	291
MW11-01S	13	361
MW11-02	13	1430
MW11-04S	12	966
MW11-05D	12	389.5
MW11-05S	12	435
MW11-06D	12	959
MW11-06S	12	1305
MW11-07D	13	688
MW11-07S	13	551
MW11-08D	13	535
MW11-09D	12	659.5
MW11-09S	12	873
MW11-10D	12	1725
MW12-01	8	1725
MW12-02	8	1730
MW12-04	8	439.5
RES-1	2	1835
RES-2	1	1010
RES-3	1	209
RES-4	2	200
RES-5	1	2090
RES-6	1	1960
PW01	2	1865

MW11-07D/S
MW11-01S
MW11-06D/S
MW11-02
MW11-04S
MW11-05D/S
BGC14-006D
RES-1
RES-4
MW12-01
MW12-02
PW01
AJGW07-D/S
KAX-14-128D
AJGW01-D
AJGW04-D
AJGW06-D
AJGW02-D/S
KAX-14-108S
KAX-14-114S
AJGW05-S
MW12-04
AJGW03-D
KAX-14-107S
RES-5
BGC14-005
MW11-10D
RES-2
MW11-09D/S
MW11-08D
BGC14-002D/S
BGC14-003D/I/S
BGC14-001D
RES-3
BGC14-009
PETERSON CREEK
HUMPHREY CREEK
BGC14-012D/S
RES-6
BGC14-014D
KEYNES CREEK
BGC14-010
BGC14-016
BGC14-015D/S
BGC14-013
BGC14-011D/S
BGC14-017D/S
680,000
682,000
684,000
686,000
688,000
5,612,000
5,610,000
400 200 0 400 800 1,200 1,600 2,000 m

LEGEND:

- CONCENTRATION
- DEEP
- SHALLOW
- INTERMEDIATE

SURFICIAL GEOLOGY

- ANTHROPOGENIC
- COLLUVIUM
- EOLIAN
- FLUVIAL/GLACOIFLUVIAL
- LACUSTRINE
- ORGANIC
- TILL
- UNDIVIDED, RECENT
- WEATHERED BEDROCK
- BEDROCK
- DAVIDSON CREEK AQUIFER
- PETERSON CREEK AQUIFER

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	REVIEWED
0	07JUL'15	ISSUED WITH REPORT	CMJ	CAC	JEM

NOTES:

1. BASE MAP: SURFICIAL GEOLOGY MAP SUPPLIED BY BGC.
2. COORDINATE GRID IS IN METRES.
COORDINATE SYSTEM: NAD 1983 UTM ZONE 10N.
3. THIS FIGURE IS PRODUCED AT A NOMINAL SCALE OF 1:35,000 FOR 11X17 (TABLOID) PAPER. ACTUAL SCALE MAY DIFFER ACCORDING TO CHANGES IN PRINTER SETTINGS OR PRINTED PAPER SIZE.
4. CIRCLE SIZES ARE DIRECTLY PROPORTIONAL TO THE MEDIAN CONCENTRATIONS.

KGHM AJAX MINING INC.

AJAX PROJECT

SPATIAL REPRESENTATION OF SULPHATE CONCENTRATIONS IN GROUNDWATER

Knight Piésold CONSULTING

P/A NO. VA101-246/31

REF NO. 3

FIGURE 5.8

REV 0

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Site	Number of Samples	Median Fluoride (mg/L)
AJGW01-D	2	0.30
AJGW02-D	2	0.10
AJGW02-S	2	1.70
AJGW03-D	21	0.20
AJGW04-D	2	0.50
AJGW05-S	4	0.44
AJGW06-D	19	0.30
AJGW07-D	21	0.15
AJGW07-S	20	0.20
BGC14-001D	5	0.23
BGC14-002D	5	0.34
BGC14-002S	5	0.34
BGC14-003D	3	0.12
BGC14-003I	5	0.35
BGC14-003S	5	0.29
BGC14-005	5	0.20
BGC14-006D	4	0.23
BGC14-009	5	0.19
BGC14-010	5	0.28
BGC14-011D	5	0.66
BGC14-011S	5	0.54
BGC14-012D	5	0.28
BGC14-012S	5	0.23
BGC14-013	5	0.27
BGC14-014D	3	0.20
BGC14-015D	4	0.40
BGC14-015S	4	0.24
BGC14-016	5	0.13
BGC14-017D	3	0.30
BGC14-017S	4	0.15
KAX-14-107S	3	0.30
KAX-14-108S	3	0.25
KAX-14-114S	4	0.30
KAX-14-128D	1	0.07
MW11-01S	13	0.20
MW11-02	13	0.20
MW11-04S	12	0.55
MW11-05D	12	0.35
MW11-05S	12	0.31
MW11-06D	12	0.30
MW11-06S	12	0.20
MW11-07D	13	0.47
MW11-07S	13	0.32
MW11-08D	13	0.35
MW11-09D	12	0.41
MW11-09S	12	0.25
MW11-10D	12	0.20
MW12-01	8	0.20
MW12-02	8	0.20
MW12-04	8	0.15
RES-1	2	0.30
RES-2	1	0.32
RES-3	1	0.28
RES-4	2	0.29
RES-5	1	0.20
RES-6	1	0.10
PW01	2	0.11

LEGEND:

- CONCENTRATION
- DEEP
- SHALLOW
- INTERMEDIATE

SURFICIAL GEOLOGY

- ANTHROPOGENIC
- COLLUVIUM
- EOLIAN
- FLUVIAL/GLACOIFLUVIAL
- LACUSTRINE
- ORGANIC
- TILL
- UNDIVIDED, RECENT
- WEATHERED BEDROCK
- BEDROCK
- DAVIDSON CREEK AQUIFER
- PETERSON CREEK AQUIFER

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	REVIEWED
0	07JUL'15	ISSUED WITH REPORT	CMJ	CAC	JEM

NOTES:

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KGHM AJAX MINING INC.

AJAX PROJECT

SPATIAL REPRESENTATION OF FLUORIDE CONCENTRATIONS IN GROUNDWATER

Knight Piésold CONSULTING

P/A NO. VA101-246/31 | REF NO. 3

FIGURE 5.9 | REV 0

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5.5.6 Metals and Metalloids

Trace metal and metalloid concentrations in groundwater were not always well correlated with the major ions and their distribution appears to be more strongly influenced by local geological enrichment in specific minerals and by proximity to the open pit area (deposit area). The majority of the wells in the open pit area are completed in overburden and those that are installed in bedrock tend to be in the Nicola Volcanics. Some metals concentrations were higher in groundwater samples collected from monitoring wells in the vicinity of the open pit (deposit area) and the historical mine features (arsenic, boron, iron, manganese, molybdenum, and selenium), whereas others are elevated in groundwater samples from monitoring wells in the vicinity of the proposed EMRSF (North Peterson Creek watershed) (iron and manganese), Humphrey Creek area (manganese), Keynes Creek area (arsenic and manganese), and the Upper Peterson Creek area (arsenic, boron, and manganese). The following metals regularly exceeded guidelines in groundwater samples collected from the project area:

- Arsenic
- Boron
- Iron
- Manganese
- Molybdenum, and
- Selenium.

Infrequent or rare guideline exceedances were noted for the parameters listed below. Antimony and uranium concentrations were only elevated in samples collected from monitoring wells installed in waste rock backfill in the Ajax East Pit and one sample collected from these monitoring wells was elevated in mercury. Mercury was also elevated in one other sample from the open pit area. Nickel was only elevated in one sample from the open pit area. Aluminum, cadmium, chromium, cobalt, and copper were not specifically elevated in one area of the groundwater study area, but were measured at concentrations that occasionally exceeded guidelines in a few of the monitoring wells in the project area. The specific guidelines that were exceeded are listed below and are highlighted in the tables provided in Appendix D:

- Aquatic life guidelines: Antimony, cadmium, chromium, cobalt, copper, mercury, uranium, and zinc.
- Drinking water guidelines: Antimony and uranium.
- Agricultural guidelines: Chromium, uranium, and nickel.

Arsenic

Arsenic was identified as a parameter that was elevated in groundwater wells in the Kamloops area through the *Water Quality Check Program* that was carried out by the Ministry of Environment through the late 1970s and 1990s (BC MOE 2007a) and this is supported by the groundwater quality data collected for the project area. Arsenic concentrations were generally higher in samples collected from groundwater monitoring wells in the open pit and north Peterson Creek watershed areas than in other areas of the project, though the highest arsenic groundwater concentrations were reported for samples from a monitoring well located south of Jacko Lake (BGC14-012D). Where more than one monitoring well was installed at a single location, the higher arsenic concentrations were typically associated with the samples collected from the deeper installations or there was very little change in concentration with depth. The monitoring wells in the open pit area are predominantly completed

within overburden units or the Nicola Volcanics bedrock unit and the well to the south of Jacko Lake is also completed in the Nicola Volcanics, whereas the monitoring wells in the north Peterson Creek watershed area are predominantly installed in the Iron Mask Hybrid bedrock unit, or in deep overburden (MW11-10D). It should be noted that higher arsenic concentrations in the open pit are not pervasive, but were limited to samples from a few of monitoring wells, specifically those that were installed in and near the waste rock backfill in the Ajax East pit and those that were installed between Jacko Lake and the existing Ajax West Pits. The spatial variability in arsenic groundwater sample concentrations is demonstrated on Figure 5.10.

Aquatic life guideline exceedances (BCWQG-Max and CEQG-PAL; both 0.005 mg/L) were most common in groundwater samples collected from monitoring wells in the historical open pit area and north Peterson Creek watershed area, but were frequently observed in samples collected from MW11-10D (Peterson Creek Aquifer), BGC14-012D (upper Peterson Creek watershed/TSF area), and MW11-09D (Cherry Creek watershed). Exceedances of the aquatic life guidelines were also noted for the occasional sample from monitoring wells in the Humphrey Creek watershed (BGC14-009) and the Davidson Creek aquifer (domestic water supply wells RES-4 and RES-1). Drinking water guideline exceedances were less prevalent in the project area groundwater samples and arsenic concentrations in excess of the HC-DW (0.01 mg/L) were common for samples from some monitoring wells in the historical open pit and north Peterson Creek watershed areas, but were seldom observed in groundwater samples from other areas of the project baseline study area. Exceedances of the less stringent BCWQG-DW (0.025 mg/L) and livestock guidelines (0.025 mg/L) were reported for one sample (of eight) from MW12-02 (installed in the historic mine waste rock backfill in open pit), two of the samples (19 in total) from AJGW06-D (located south of the backfilled open pit, and all of the samples (five in total) from BGC14-012D (south of Jacko Lake). No samples exceeded the least stringent guidelines for irrigation (BCWQG-Irrigation and CEQG-Irrigation; both 0.1 mg/L).

Boron

Boron groundwater concentrations were only elevated in samples from monitoring wells in the vicinity of Jacko Lake, though not in all of the wells in that area. The highest boron concentrations were reported for samples from the deep (D) well at monitoring location BGC14-003; at this location concentrations were noted to increase with depth with median concentrations of 1.00 mg/L, 1.73 mg/L, and 8.90 mg/L for the shallow (S), intermediate (I) and deep (D) wells, respectively. The median boron concentration for samples from BGC14-003D is approximately three times higher than the median concentrations for all other wells in the baseline study area. The wells with the highest boron sample concentrations were completed within the Nicola Volcanics bedrock unit, with the exception of monitoring well MW11-04S which was completed in the Iron Mask Hybrid unit. Spatial variability in boron groundwater concentrations in the project area are depicted on Figure 5.11.

The most stringent relevant guidelines for boron are for irrigation water supply (BCWQG-Irrigation and CEQG-Irrigation; both 0.5 mg/L) and the second most stringent guidelines are for drinking water and livestock water supply (BCWQG-Livestock, CEQG-Livestock, BCWQG-DW, and HC-DW; 5 mg/L). The drinking water and livestock water supply guidelines were only exceeded for samples from the deep monitoring well installed at BGC14-003D, south of Peterson Creek in the vicinity of the proposed open pit area. The irrigation water use guidelines were exceeded regularly in samples collected from ten monitoring wells, with the highest concentrations reported for samples from four

monitoring locations in the vicinity of Jacko Lake (KAX-14-128D, BGC14-003I/D, MW11-08D, and MW11-04S).

Iron

Iron groundwater concentrations were highest in samples collected from monitoring wells installed the vicinity of the proposed EMRSF (MW11-05D/S, BGC14-006D, and BGC14-005; north Peterson Creek watershed area) and all of these wells were completed in the Iron Mask Hybrid bedrock unit. Higher iron concentrations were also reported for samples from monitoring wells installed between Jacko Lake and the historical open pit (BCC14-002S, KAX-14-107S, KAX-14-108S, KAX-14-114S, and AJGW07-D, listed from south to north), and with the exception of AJGW07-D which was completed within the Nicola Volcanics bedrock unit, these wells were all completed in overburden units (glacial till, fluvial/glacialacustrine, or lacustrine units). Higher iron concentrations were also reported for samples from monitoring wells BGC14-014D (Humphrey Creek watershed) and BGC14-010 (upper Peterson Creek watershed); both completed in the Nicola Volcanics, but otherwise physically separate with comparably lower iron concentrations in samples from nearby monitoring wells.

Iron concentrations in some or all of the samples from the above mentioned wells exceeded the aquatic life guidelines (BCWQG-Max of 0.35 mg/L; CEQG-PAL of 0.3 mg/L) and the drinking water aesthetic guideline (0.3 mg/L). Highest concentrations were reported for samples collected from monitoring wells MW11-05S/D and BGC14-006D, where median iron concentrations ranged from 1.5 mg/L to 3.6 mg/L. The spatial variability in median iron groundwater sample concentrations is shown on Figure 5.12.

Manganese

Groundwater manganese concentrations were generally elevated in the samples from monitoring wells in the vicinity of the open pit where the majority of the monitoring wells are completed in overburden. The highest manganese concentrations were for samples from monitoring wells MW11-05D/S, located in the vicinity of the proposed EMRSF, and monitoring well BGC14-014D, located in the Humphrey Creek watershed. Manganese concentrations are represented spatially on Figure 5.13. Unlike many of the other metals, higher manganese concentrations were more frequently observed in samples collected from the shallower monitoring installation depths where more than one well has been installed at a single location.

Exceedances of the hardness-dependent aquatic life guidelines for manganese (BCWQG-Max and BCWQG-30 D) were sporadic; however, manganese almost always exceeded the CEQG-Irrigation of 0.2 mg/L and the HC-DW aesthetic objective of 0.05 mg/L throughout the baseline study area. With the exception of the monitoring wells completed in the overburden units in the historical open pit area, there does not appear to be differentiation in manganese concentrations in samples collected from monitoring wells completed in the Iron Mask Hybrid or the Nicola Volcanics bedrock units.

Site	Number of Samples	Median Arsenic (mg/L)
AJGW01-D	2	0.0054
AJGW02-D	2	0.0016
AJGW02-S	2	0.0025
AJGW03-D	21	0.0057
AJGW04-D	2	0.0153
AJGW05-S	4	0.0013
AJGW06-D	19	0.0176
AJGW07-D	21	0.0012
AJGW07-S	20	0.0043
BGC14-001D	5	0.0006
BGC14-002D	5	0.0023
BGC14-002S	5	0.0025
BGC14-003D	3	0.0054
BGC14-003I	5	0.0049
BGC14-003S	5	0.0015
BGC14-005	5	0.0012
BGC14-006D	4	0.0062
BGC14-009	5	0.0050
BGC14-010	5	0.0008
BGC14-011D	5	0.0006
BGC14-011S	5	0.0012
BGC14-012D	5	0.0379
BGC14-012S	5	0.0028
BGC14-013	5	0.0034
BGC14-014D	3	0.0021
BGC14-015D	4	0.0040
BGC14-015S	4	0.0027
BGC14-016	5	0.0023
BGC14-017D	3	0.0013
BGC14-017S	4	0.0009
KAX-14-107S	3	0.0053
KAX-14-108S	3	0.0062
KAX-14-114S	4	0.0059
KAX-14-128D	1	0.0017
MW11-01S	13	0.0024
MW11-02	13	0.0029
MW11-04S	12	0.0019
MW11-05D	12	0.0066
MW11-05S	12	0.0056
MW11-06D	12	0.0135
MW11-06S	12	0.0014
MW11-07D	13	0.0045
MW11-07S	13	0.0049
MW11-08D	13	0.0029
MW11-09D	12	0.0056
MW11-09S	12	0.0048
MW11-10D	12	0.0055
MW12-01	8	0.0050
MW12-02	8	0.0149
MW12-04	8	0.0046
RES-1	2	0.0088
RES-2	1	0.0009
RES-3	1	0.0031
RES-4	2	0.0045
RES-5	1	0.0003
RES-6	1	0.0001
PW01	2	0.0237

LEGEND:

- CONCENTRATION
- DEEP
- SHALLOW
- INTERMEDIATE

SURFICIAL GEOLOGY

- ANTHROPOGENIC
- COLLUVIUM
- EOLIAN
- FLUVIAL/GLACOIFLUVIAL
- LACUSTRINE
- ORGANIC
- TILL
- UNDIVIDED, RECENT
- WEATHERED BEDROCK
- BEDROCK
- DAVIDSON CREEK AQUIFER
- PETERSON CREEK AQUIFER

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	REVIEWED
0	07JUL'15	ISSUED WITH REPORT	CMJ	CAC	JEM

NOTES:

1. BASE MAP: SURFICIAL GEOLOGY MAP SUPPLIED BY BGC.
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3. THIS FIGURE IS PRODUCED AT A NOMINAL SCALE OF 1:35,000 FOR 11X17 (TABLOID) PAPER. ACTUAL SCALE MAY DIFFER ACCORDING TO CHANGES IN PRINTER SETTINGS OR PRINTED PAPER SIZE.
4. CIRCLE SIZES ARE DIRECTLY PROPORTIONAL TO THE MEDIAN CONCENTRATIONS.

KGHM AJAX MINING INC.

AJAX PROJECT

SPATIAL REPRESENTATION OF ARSENIC CONCENTRATIONS IN GROUNDWATER

Knight Piésold CONSULTING

P/A NO.	REF NO.
VA101-246/31	3

FIGURE 5.10 REV 0

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Site	Number of Samples	Median Boron (mg/L)
AJGW01-D	2	0.050
AJGW02-D	2	0.050
AJGW02-S	2	0.260
AJGW03-D	21	0.034
AJGW04-D	2	0.120
AJGW05-S	4	0.110
AJGW06-D	19	0.220
AJGW07-D	21	0.087
AJGW07-S	20	0.055
BGC14-001D	5	0.116
BGC14-002D	5	0.504
BGC14-002S	5	0.396
BGC14-003D	3	8.900
BGC14-003I	5	1.730
BGC14-003S	5	0.997
BGC14-005	5	0.075
BGC14-006D	4	0.141
BGC14-009	5	0.125
BGC14-010	5	0.020
BGC14-011D	5	0.030
BGC14-011S	5	0.017
BGC14-012D	5	0.592
BGC14-012S	5	0.176
BGC14-013	5	0.257
BGC14-014D	3	0.077
BGC14-015D	4	0.119
BGC14-015S	4	0.063
BGC14-016	5	0.031
BGC14-017D	3	0.095
BGC14-017S	4	0.015
KAX-14-107S	3	0.670
KAX-14-108S	3	0.183
KAX-14-114S	4	0.360
KAX-14-128D	1	2.610
MW11-01S	13	0.068
MW11-02	13	1.310
MW11-04S	12	1.585
MW11-05D	12	0.055
MW11-05S	12	0.045
MW11-06D	12	0.550
MW11-06S	12	0.275
MW11-07D	13	0.293
MW11-07S	13	0.262
MW11-08D	13	2.360
MW11-09D	12	0.461
MW11-09S	12	0.459
MW11-10D	12	0.089
MW12-01	8	0.112
MW12-02	8	0.116
MW12-04	8	0.097
RES-1	2	0.224
RES-2	1	0.172
RES-3	1	0.049
RES-4	2	0.089
RES-5	1	0.466
RES-6	1	0.385
PW01	2	0.452

LEGEND:

- CONCENTRATION
- DEEP
- SHALLOW
- INTERMEDIATE

SURFICIAL GEOLOGY

- ANTHROPOGENIC
- COLLUVIUM
- EOLIAN
- FLUVIAL/GLACOIFLUVIAL
- LACUSTRINE
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- BEDROCK
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REV	DATE	DESCRIPTION	DESIGNED	DRAWN	REVIEWED
0	07JUL'15	ISSUED WITH REPORT	CMJ	CAC	JEM

KGHM AJAX MINING INC.

AJAX PROJECT

SPATIAL REPRESENTATION OF BORON CONCENTRATIONS IN GROUNDWATER

Knight Piésold CONSULTING

P/A NO.	REF NO.
VA101-246/31	3

FIGURE 5.11 REV 0

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Site	Number of Samples	Median Iron (mg/L)
AJGW01-D	2	0.0280
AJGW02-D	2	0.0150
AJGW02-S	2	0.2310
AJGW03-D	21	0.1105
AJGW04-D	2	0.0150
AJGW05-S	4	0.0390
AJGW06-D	19	0.0590
AJGW07-D	21	0.7000
AJGW07-S	20	0.0150
BGC14-001D	5	0.0380
BGC14-002D	5	0.1250
BGC14-002S	5	0.3350
BGC14-003D	3	0.0130
BGC14-003I	5	0.0050
BGC14-003S	5	0.0050
BGC14-005	5	0.5750
BGC14-006D	4	1.5450
BGC14-009	5	0.2380
BGC14-010	5	0.719
BGC14-011D	5	0.0230
BGC14-011S	5	0.0350
BGC14-012D	5	0.1910
BGC14-012S	5	0.0320
BGC14-013	5	0.0050
BGC14-014D	3	0.7650
BGC14-015D	4	0.0185
BGC14-015S	4	0.0245
BGC14-016	5	0.2050
BGC14-017D	3	0.0050
BGC14-017S	4	0.0050
KAX-14-107S	3	0.6450
KAX-14-108S	3	0.6640
KAX-14-114S	4	0.4120
KAX-14-128D	1	0.0740
MW11-01S	13	0.0050
MW11-02	13	0.0750
MW11-04S	12	0.0090
MW11-05D	12	3.5850
MW11-05S	12	2.1500
MW11-06D	12	0.0760
MW11-06S	12	0.0730
MW11-07D	13	0.2500
MW11-07S	13	0.0150
MW11-08D	13	0.1890
MW11-09D	12	0.2675
MW11-09S	12	0.0160
MW11-10D	12	0.9800
MW12-01	8	0.0050
MW12-02	8	0.0050
MW12-04	8	0.0250
RES-1	2	0.3530
RES-2	1	0.3140
RES-3	1	0.1700
RES-4	2	0.0100
RES-5	1	0.0590
RES-6	1	0.3530
PW01	2	0.5090

MW11-07D/S
MW11-01S
MW11-06D/S
MW11-02
MW11-04S
MW11-05D/S
BGC14-006D
RES-1
RES-4
MW12-02
MW12-01
AJGW07-D/S
KAX-14-128D
AJGW01-D
KAX-14-108S
PW01
AJGW03-D
AJGW05-S
AJGW06-D
RES-5
BGC14-005
MW11-10D
RES-2
MW11-09D/S
MW11-08D
KAX-14-114S
AJGW02-D/S
AJGW04-D
MW12-04
KAX-14-107S
BGC14-002D/S
BGC14-003D/I/S
BGC14-001D
RES-3
BGC14-009
PETERSON CREEK
HUMPHREY CREEK
BGC14-012D/S
RES-6
BGC14-014D
KEYNES CREEK
BGC14-010
BGC14-016
BGC14-015D/S
BGC14-013
BGC14-011D/S
BGC14-017D/S
400 200 0 400 800 1,200 1,600 2,000 m

LEGEND:

- CONCENTRATION
- DEEP
- SHALLOW
- INTERMEDIATE

SURFICIAL GEOLOGY

- ANTHROPOGENIC
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- TILL
- UNDIVIDED, RECENT
- WEATHERED BEDROCK
- BEDROCK
- DAVIDSON CREEK AQUIFER
- PETERSON CREEK AQUIFER

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	REVIEWED
0	07JUL'15	ISSUED WITH REPORT	CMJ	CAC	JEM

NOTES:

1. BASE MAP: SURFICIAL GEOLOGY MAP SUPPLIED BY BGC.
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COORDINATE SYSTEM: NAD 1983 UTM ZONE 10N.
3. THIS FIGURE IS PRODUCED AT A NOMINAL SCALE OF 1:35,000 FOR 11X17 (TABLOID) PAPER. ACTUAL SCALE MAY DIFFER ACCORDING TO CHANGES IN PRINTER SETTINGS OR PRINTED PAPER SIZE.
4. CIRCLE SIZES ARE DIRECTLY PROPORTIONAL TO THE MEDIAN CONCENTRATIONS.

KGHM AJAX MINING INC.

AJAX PROJECT

SPATIAL REPRESENTATION OF IRON CONCENTRATIONS IN GROUNDWATER

Knight Piésold CONSULTING

P/A NO. VA101-246/31 | REF NO. 3

FIGURE 5.12 | REV 0

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Molybdenum

Molybdenum concentrations were notably higher in the samples from monitoring wells MW12-01 and MW12-02 compared to all other monitoring wells in the project area. These monitoring wells were installed in the historical Ajax East Pit that was backfilled with waste rock when mining ceased under the previous operation. The median molybdenum concentrations were 3.42 mg/L and 3.33 mg/L for MW12-01 and MW12-02, respectively, compared to the site wide median concentration of 0.031 mg/L. Molybdenum concentrations were similarly elevated in the samples collected from the standing water in the Ajax West Pit lakes, and these higher concentrations are likely due to loading from precipitation flushing of oxidation products from the exposed pit walls and waste rock in combination with high rates of evaporation in the project area. Groundwater samples collected from wells in the vicinity of the historical waste rock pile to the south of Peterson Creek reported much lower concentrations of molybdenum (0.147 mg/L median concentration MW12-04), but were still higher compared to the site wide median concentration. Molybdenum concentrations were elevated in the historical seepage collection pond located down-gradient of the waste rock pile (WR Seep). Relative median concentrations for all groundwater quality monitoring sites are shown on Figure 5.14.

Molybdenum concentrations exceeded the CEQG-PAL of 0.073 mg/L and the livestock guidelines (CEQG-Livestock and BCWQG-Livestock; both 0.05 mg/L) regularly at some sites in the open pit area and north Peterson Creek watershed area and the more stringent CEQG-Irrigation of 0.01 mg/L in most samples collected from almost every site. Exceedances of the less stringent aquatic life guidelines (BCWQG-Max and BCWQG-30 D) were only reported for samples from MW12-01 and MW12-02 and exceedances of the BCWQG-DW of 0.25 mg/L were limited to several sites in the open pit area (MW12-01, MW12-02, AJGW01-D, AJGW02-D, and PW01).

Selenium

Selenium concentrations were highest in groundwater samples from monitoring wells located in the open pit area, the majority of which are completed within the overburden or waste rock backfill. Median selenium concentrations for samples from seven of the wells in the open pit area exceeded the BCWQG-30 D (0.002 mg/L) and median concentrations in four of these monitoring wells (MW12-01, MW12-02, AJGW07-S/D, and AGJW01-D) also exceeded the provincial drinking water quality guideline (BCWQG-DW; 0.01 mg/L), but did not exceed the HC drinking water guideline of 0.05 mg/L. The BCWQG-DW was also exceeded for the sample collected from the domestic water supply well RES-1, located further east in the Knutsford area and installed near or within the Davidson Creek aquifer. Selenium concentrations in the nearby domestic water supply well RES-4 exceeded the BCWQG-30 D (aquatic life) but did not exceed the drinking water guidelines. Samples from groundwater monitoring well MW11-01S were also frequently reported at concentrations that exceeded the BCWQG-30 D; monitoring well MW11-01S is located northwest in the Cherry Creek watershed area. There does not appear to be a correlation between selenium concentrations and specific bedrock or overburden units in the project area, with the exception of those monitoring wells completed in the overburden and waste rock backfill units in the open pit area. Even in the open pit area, selenium concentrations are not elevated in all of the monitoring wells. The spatial variability in selenium groundwater concentrations is demonstrated on Figure 5.15.

Site	Number of Samples	Median Manganese (mg/L)
AJGW01-D	2	0.5800
AJGW02-D	2	0.0018
AJGW02-S	2	1.7100
AJGW03-D	21	0.2915
AJGW04-D	2	0.6560
AJGW05-S	4	1.8450
AJGW06-D	19	0.0822
AJGW07-D	21	0.1395
AJGW07-S	20	0.0458
BGC14-001D	5	0.3130
BGC14-002D	5	0.8230
BGC14-002S	5	1.0300
BGC14-003D	3	0.0336
BGC14-003I	5	0.1000
BGC14-003S	5	0.1660
BGC14-005	5	0.4650
BGC14-006D	4	0.3585
BGC14-009	5	0.9200
BGC14-010	5	0.557
BGC14-011D	5	0.1230
BGC14-011S	5	0.1630
BGC14-012D	5	0.3650
BGC14-012S	5	0.0743
BGC14-013	5	0.1010
BGC14-014D	3	2.9000
BGC14-015D	4	0.1435
BGC14-015S	4	0.3325
BGC14-016	5	0.8860
BGC14-017D	3	0.0801
BGC14-017S	4	0.0084
KAX-14-107S	3	0.6460
KAX-14-108S	3	1.1300
KAX-14-114S	4	0.8235
KAX-14-128D	1	0.3390
MW11-01S	13	0.0408
MW11-02	13	1.0800
MW11-04S	12	0.4765
MW11-05D	12	3.0500
MW11-05S	12	4.2750
MW11-06D	12	0.0768
MW11-06S	12	0.3885
MW11-07D	13	0.8550
MW11-07S	13	0.5520
MW11-08D	13	0.7780
MW11-09D	12	0.8085
MW11-09S	12	0.2105
MW11-10D	12	0.3415
MW12-01	8	0.0572
MW12-02	8	0.1005
MW12-04	8	0.2640
RES-1	2	0.1629
RES-2	1	0.0370
RES-3	1	0.0231
RES-4	2	0.0054
RES-5	1	0.0136
RES-6	1	0.1580
PW01	2	0.0447

LEGEND:

- CONCENTRATION
- DEEP
- SHALLOW
- INTERMEDIATE

SURFICIAL GEOLOGY

- ANTHROPOGENIC
- COLLUVIUM
- EOLIAN
- FLUVIAL/GLACOIFLUVIAL
- LACUSTRINE
- ORGANIC
- TILL
- UNDIVIDED, RECENT
- WEATHERED BEDROCK
- BEDROCK
- DAVIDSON CREEK AQUIFER
- PETERSON CREEK AQUIFER

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	REVIEWED
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KGHM AJAX MINING INC.

AJAX PROJECT

SPATIAL REPRESENTATION OF MANGANESE CONCENTRATIONS IN GROUNDWATER

Knight Piésold CONSULTING

P/A NO. VA101-246/31 | REF NO. 3

FIGURE 5.13 | REV 0

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Site	Number of Samples	Median Molybdenum (mg/L)
AJGW01-D	2	0.5745
AJGW02-D	2	0.4345
AJGW02-S	2	0.2310
AJGW03-D	21	0.0466
AJGW04-D	2	0.0264
AJGW05-S	4	0.0794
AJGW06-D	19	0.0413
AJGW07-D	21	0.0729
AJGW07-S	20	0.1275
BGC14-001D	5	0.0098
BGC14-002D	5	0.0119
BGC14-002S	5	0.0163
BGC14-003D	3	0.0175
BGC14-003I	5	0.0168
BGC14-003S	5	0.0301
BGC14-005	5	0.0309
BGC14-006D	4	0.0048
BGC14-009	5	0.0227
BGC14-010	5	0.003
BGC14-011D	5	0.0060
BGC14-011S	5	0.0225
BGC14-012D	5	0.0164
BGC14-012S	5	0.0097
BGC14-013	5	0.0062
BGC14-014D	3	0.0312
BGC14-015D	4	0.0157
BGC14-015S	4	0.0163
BGC14-016	5	0.0037
BGC14-017D	3	0.0062
BGC14-017S	4	0.0015
KAX-14-107S	3	0.0044
KAX-14-108S	3	0.2120
KAX-14-114S	4	0.0340
KAX-14-128D	1	0.0277
MW11-01S	13	0.0500
MW11-02	13	0.0026
MW11-04S	12	0.2000
MW11-05D	12	0.0315
MW11-05S	12	0.0259
MW11-06D	12	0.0828
MW11-06S	12	0.1055
MW11-07D	13	0.0228
MW11-07S	13	0.0167
MW11-08D	13	0.0559
MW11-09D	12	0.0219
MW11-09S	12	0.0204
MW11-10D	12	0.0254
MW12-01	8	3.4150
MW12-02	8	3.3300
MW12-04	8	0.1465
RES-1	2	0.0159
RES-2	1	0.0156
RES-3	1	0.0210
RES-4	2	0.0236
RES-5	1	0.0200
RES-6	1	0.0037
PW01	2	0.2330

LEGEND:

- CONCENTRATION
- DEEP
- SHALLOW
- INTERMEDIATE

SURFICIAL GEOLOGY

- ANTHROPOGENIC
- COLLUVIUM
- EOLIAN
- FLUVIAL/GLACOIFLUVIAL
- LACUSTRINE
- ORGANIC
- TILL
- UNDIVIDED, RECENT
- WEATHERED BEDROCK
- BEDROCK
- DAVIDSON CREEK AQUIFER
- PETERSON CREEK AQUIFER

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AJAX PROJECT

SPATIAL REPRESENTATION OF MOLYBDENUM CONCENTRATIONS IN GROUNDWATER

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P/A NO. VA101-246/31

REF NO. 3

FIGURE 5.14

REV 0

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Site	Number of Samples	Median Selenium (mg/L)
AJGW01-D	2	0.0367
AJGW02-D	2	0.0010
AJGW02-S	2	0.0050
AJGW03-D	21	0.0001
AJGW04-D	2	0.0025
AJGW05-S	4	0.0025
AJGW06-D	19	0.0005
AJGW07-D	21	0.0125
AJGW07-S	20	0.0251
BGC14-001D	5	0.0031
BGC14-002D	5	0.0002
BGC14-002S	5	0.0002
BGC14-003D	3	0.0003
BGC14-003I	5	0.0008
BGC14-003S	5	0.0005
BGC14-005	5	0.0001
BGC14-006D	4	0.0001
BGC14-009	5	0.0002
BGC14-010	5	0.000
BGC14-011D	5	0.0001
BGC14-011S	5	0.0003
BGC14-012D	5	0.0001
BGC14-012S	5	0.0003
BGC14-013	5	0.0001
BGC14-014D	3	0.0007
BGC14-015D	4	0.0001
BGC14-015S	4	0.0001
BGC14-016	5	0.0002
BGC14-017D	3	0.0002
BGC14-017S	4	0.0009
KAX-14-107S	3	0.0003
KAX-14-108S	3	0.0001
KAX-14-114S	4	0.0004
KAX-14-128D	1	0.0014
MW11-01S	13	0.0037
MW11-02	13	0.0001
MW11-04S	12	0.0002
MW11-05D	12	0.0001
MW11-05S	12	0.0002
MW11-06D	12	0.0001
MW11-06S	12	0.0001
MW11-07D	13	0.0001
MW11-07S	13	0.0001
MW11-08D	13	0.0001
MW11-09D	12	0.0001
MW11-09S	12	0.0001
MW11-10D	12	0.0001
MW12-01	8	0.0424
MW12-02	8	0.0401
MW12-04	8	0.0001
RES-1	2	0.0343
RES-2	1	0.0001
RES-3	1	0.0008
RES-4	2	0.0016
RES-5	1	0.0003
RES-6	1	0.0001
PW01	2	0.0001

LEGEND:

- CONCENTRATION
- DEEP
- SHALLOW
- INTERMEDIATE

SURFICIAL GEOLOGY

- ANTHROPOGENIC
- COLLUVIUM
- EOLIAN
- FLUVIAL/GLACOIFLUVIAL
- LACUSTRINE
- ORGANIC
- TILL
- UNDIVIDED, RECENT
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KGHM AJAX MINING INC.

AJAX PROJECT

SPATIAL REPRESENTATION OF SELENIUM CONCENTRATIONS IN GROUNDWATER

Knight Piésold CONSULTING

P/A NO.	REF NO.
VA101-246/31	3

FIGURE 5.15 REV 0

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6 – CONCLUSIONS AND ONGOING STUDIES

6.1 GENERAL

Baseline water quality has been monitored within the Peterson Creek and Cherry Creek watersheds as part of the baseline program to support permitting of the proposed Ajax Project (the Project). The majority of the Project area is located near historical and present mining activities, as is evident with the presence of the recently permitted New Afton mine in the vicinity of old Afton Mine site. There are three historical open pits in the immediate project area (Peterson Creek watershed), two with lakes formed at base and one that has been backfilled with mine rock during reclamation. There are also two reclaimed mine rock piles, with seepage collection ponds, in close proximity to these open pits. Direct impacts to Peterson Creek water quality from these open pits and the northern mine rock pile are not evident; however, seepage and runoff from the mine rock pile to the south of Peterson Creek and seepage losses from the base of the seepage collection pond, down-gradient of this reclaimed facility are assumed to influence water quality in Peterson Creek. The remainder of the project area is comprised of forested land and extensive agricultural property as is evidenced by grazing cattle throughout the baseline study area. Furthermore, residential and industrial neighbourhoods are located in close proximity to the creeks.

Water quality and quantity in the project area is influenced significantly by the arid climate conditions. The lakes in the Project area are managed water features, and the outflow management strategies are not formally documented; as a result it is difficult to correlate flows with observed chemistry, though seasonality is evident. The primary objective for the management of outflows from Jacko Lake is to sustain the requirements of the numerous water licences on Peterson Creek.

Outside of the spring freshet, surface water flows are minimal in the Project area creeks (Peterson Creek, Keynes Creek, Humphrey Creek, Anderson Creek, Cherry Creek, and Alkali Creek) and groundwater is a significant contributor to flows. Concentrations of most parameters were noted to increase with distance downstream in the creeks in every watershed sampled in the baseline surface water quality program. This increase was most evident outside of spring freshet. In late summer and winter, groundwater was often observed to be the only significant source of inflows to Peterson Creek in the immediate Project area. Surface and ground water are elevated in dissolved solids and the only significant source of dilution comes from melting snow in the spring (freshet) or storm events. Dissolved solids concentrations were generally lower in surface and ground water samples collected from monitoring locations that were at higher elevations in the various watersheds within the project area and higher at lower elevations, indicating that local scale groundwater recharge is happening in the upper reaches of the smaller project area watersheds and discharge is occurring to nearby lakes, creeks and sloughs.

The baseline water quality study was strategically planned to provide insight into surface water and groundwater quality in the Project area and to provide appropriate coverage both up-gradient and down-gradient of the historical and proposed mine features, and local land uses. The primary objectives of the water quality study were to characterize the complex environment and understand the interactions between surface water and groundwater in the project area, to provide valuable insight into current and potential future stresses on surface and ground water resources and management strategies to address these issues, and to provide a basis for predicting future water quality (baseline comparison and inputs to predictive models). The water quality analytical results

have been compared against an exhaustive list of relevant guidelines as specified in the Application Information Requirements for the Project. The relevant guidelines were based on all potential water users in the project area and include aquatic life, drinking water, agricultural water uses (irrigation and livestock), wildlife, and recreation. Aquatic life guidelines tend to be the most stringent and the report discussion is generally focussed on these guidelines, though the others are discussed to provide context.

6.2 SURFACE WATER QUALITY

Surface waters in the Project area are neutral to basic pH, hard to very hard, and alkaline, with high buffering capacity. Concentrations of most parameters were noted to increase with distance downstream in the creeks in every watershed sampled in the baseline surface water quality program; this increase was most evident outside of spring freshet. Surface water quality within the Project area is highly variable depending on whether the system is a lake, slough, creek, or historical mine site feature and dissolved solids are a key parameter that differentiates these various features within the baseline study program. Inks Lake and Wallender Lake have much higher TDS than the man-made features (Historical Mine Site Features), which in turn have higher TDS than in Peterson Creek, Jacko Lake, Makaoo Lake, Alkali Creek, Anderson Creek, and Cherry Creek. With the exception of upper Cherry Creek, the specific conductance of the water in all of the baseline study area is higher than the normal range for interior streams, which is up to 500 µS/cm (RISC 1998). All of the water bodies show a sharp decrease in TDS and specific conductance in response to dilution from spring freshet flows. The creeks, Makaoo Lake, and Jacko Lake qualify as freshwater sources, with TDS that falls below 1,000 mg/L, the Historical Mine Site Features are slightly to moderately saline (1,000 mg/L to 10,000 mg/L TDS), and Inks Lake and Wallender Lake are saline, though Wallender Lake is verging upon hyper-saline (TDS >50,000 mg/L) (NGWA 2010). It should be noted that Inks Lake, Polygon Pond, and Wallender Lake differ from Jacko Lake and Makaoo Lake, in that the latter have clearly defined outlet channels and multiple inlet streams, whereas, the other lakes are akin to sloughs, with no outlet channels. Wallender Lake, Polygon Pond, Inks Lake and the historical open pits are evaporative basins, in local groundwater discharge zones. As a result of the high evaporation rates and no outlet channels for load removal, the concentrations of the majority of parameters have risen over time and may have reached equilibrium conditions in the natural features, but continue to increase in the man-made features. The parameters in the historical mine facilities and lakes tend to have higher concentrations than the surrounding groundwater and surface water.

Major ion types in surface water are generally similar to the water types observed in groundwater samples collected from the same areas and this convergence is most evident when comparing groundwater chemistry to surface water samples collected under low flow conditions. Bicarbonate and/or sulphate are the dominant anions in all surface waters; however, the dominant cations are less defined but generally magnesium was predominant with significant contributions of sodium and calcium.

Sulphate concentrations are very high in the groundwater in the greater project area and also high in the water samples from the historical mine features, including the pond down-gradient of the historical waste rock pile to the south of Peterson Creek. Sulphate levels in Inks Lake, Polygon Pond, Wallender Lake, and the Historical Mine Site Features are also very high, and generally all exceed the 1000 mg/L livestock water use guidelines. Surface water sulphate concentrations

increased with distance downstream in all of the project area creeks. The BCWQG-30 D for sulphate specifies that site specific toxicity testing is required when hardness exceeds 250 mg/L $CaCO_3$, as was generally the case in the baseline surface water environment in the project area. The toxicity testing, documented in *Testing in support of development of a science based environmental benchmark for sulphate for the Ajax Mine* – Draft Report (Nautilus 2015), resulted in a recommended science based environmental benchmark (SBEB) for a maximum sulphate concentration of 429 mg/L, which is the same as the current BCWQG-30 D, but with the maximum hardness adjusted up to 800 mg/L $CaCO_3$ which is protective of early life stages for trout (present from May through June). An alternative SBEB of 730 mg/L for a hardness of up to 1377 mg/L $CaCO_3$ was recommended for surface waters where early life stages for trout do not occur, or for periods of the year when these life stages are not expected to be present in a given reach of Peterson Creek (July through April). Early life stage for trout are expected to be present in Jacko Lake, Edith Lake, and Peterson Creek and sulphate concentrations were generally below the SBEB, though there were isolated exceedances of the SBEBs lower reaches in Peterson Creek during periods when early life stages of fish would. A more detailed assessment of seasonality in the sites in lower Peterson Creek was required as sulphate concentrations and hardness exceeded the lower benchmark under lower flow conditions (August through April) when early life stages are not expected to be present and these conditions occasionally persisted into May.

Fluoride concentrations were found at concentrations that exceeded the CEQG-PAL (aquatic life) throughout the baseline study area; however, due to elevated hardness, the BCWQG-Max was never exceeded. Chloride concentrations were elevated in baseline surface water samples collected from throughout the study area. Chloride concentrations were highest in samples collected under low flow conditions from Peterson Creek sites PC02, PC-EF-04, and JC03 and Anderson Creek site ANDR-15, all sites that are located in close proximity to highways where road salting would be common practice during the winter months. Chloride concentrations were low in all groundwater samples collected from drilled monitoring wells in the project area, but were elevated in samples collected from residential water supply wells RES-1 and RES-4, which are located in the vicinity of the Davidson Creek aquifer and near the surface water site PC02. These higher concentrations indicate that chloride is elevated in the groundwater system in that reach of Peterson Creek.

Total phosphorus concentrations in the creeks varied significantly on a seasonal basis, resulting in a wide range of trophic classification from eutrophic to hyper-eutrophic. Nutrient loading within the Project area is dominantly phosphorus related and nitrogen based inorganic nutrient (nitrite, nitrate, and ammonia) concentrations were somewhat variable in the creeks and guideline exceedances were infrequent.

In Peterson Creek (and tributaries), Anderson Creek, Cherry Creek and Alkali Creek aluminum, copper, and iron frequently exceeded the aquatic life guideline limits and molybdenum and manganese concentrations frequently exceeded the guidelines for irrigation and/or livestock water uses. Exceedances of the drinking water aesthetic objectives for iron and manganese were also common. With the exception of manganese and molybdenum, these parameters were generally elevated in response to freshet flows and dissolved concentrations were significantly lower than total concentrations. Manganese and molybdenum concentrations are elevated in local groundwater, and as such, the surface water concentrations were higher during non-freshet periods when surface water flows were predominantly sustained by groundwater inflows. Molybdenum within Peterson Creek is only elevated in water samples collected downstream of the historical mine rock pile to the

south of the creek and backfilled Ajax East Pit to the north of the creek. Elevated molybdenum concentrations were noted in the water quality samples associated with all of the Historical Mine Site Features, indicating that there is a high likelihood that the local mineralized geology is enriched in this parameter. Molybdenum concentrations decreased with distance downstream in Peterson Creek; which is atypical as the majority of the parameters increase in concentration with distance downstream in each watershed. Cadmium and selenium aquatic life guideline exceedances were also noted within the project area creeks in association with freshet flows, though less frequent than the parameters listed above. In Jacko Lake, only selenium, zinc, and aluminum were reported at concentrations that exceeded the aquatic life guidelines, though exceedances were infrequent. Metal concentrations were low in Makaoo Lake and guideline exceedances were seldom observed.

The Historical Mine Site Features water quality samples revealed elevated concentrations of arsenic, antimony, cadmium, copper, molybdenum, selenium, and uranium, and aquatic life guideline exceedances were frequent. Elevated TDS in the samples from these locations resulted in the inability to obtain MDLs that were below guideline limits for some parameters.

In Inks Lake and Wallender Lake several parameters tested had MDLs that were greater than or equal to the guidelines as a result of sample dilution required to analyze samples with high TDS. MDLs for the following parameters exceeded guideline limits during one or more sampling events: aluminum, beryllium, cadmium, chromium, cobalt, copper, lead, manganese, selenium, and thallium. Of these parameters, analytical resolution was achieved on occasion for aluminum, copper, and selenium and guidelines were generally exceeded for each true measured concentration. Those parameters that were detected and regularly exceeded guideline limits with no elevated MDL exceedances were arsenic and boron, which are also elevated in the project area groundwater samples.

6.3 GROUNDWATER QUALITY

Regional groundwater quality in the Thompson River watershed is described as having high levels of total dissolved solids (TDS) (>500 mg/L) and elevated sulphate concentrations (Zubel 2001). Groundwater quality in the Aberdeen area of Kamloops was reported by Golder Associates (2008) to be alkalinity dominated with major anions ranging from sulphate to bicarbonate and major cations typically ranging from sodium or magnesium. Groundwater was reported to generally increase in TDS and sodium with depth and nitrate concentrations were elevated in the samples from springs and seeps in the area. The groundwater quality analysis for the local study area is consistent with the description of these regional groundwater references.

Groundwater quality in the project area is characterized as alkaline, hard to very hard, and high in dissolved solids. Groundwater physical parameters typically display consistent trends with depth; at groundwater monitoring locations where wells were installed at multiple depths, samples from the deeper wells were generally observed to have higher pH than the shallower wells and hardness and alkalinity concentrations were observed to decrease with depth. The shallow wells were typically completed in overburden and the deeper wells were completed in either the Iron Mask Hybrid or Nicola Volcanics bedrock unit. Groundwater TDS concentrations were typically lower in samples collected from monitoring wells in the upper reaches of catchments (local groundwater recharge areas) and higher in samples from wells at lower elevations in the project area (local groundwater discharge areas such as sloughs and creeks), suggesting that TDS increases along the groundwater

flow path. Based on total dissolved solids concentrations, the majority of the project area monitoring wells (52%) produce freshwater, though typically with TDS near the upper end of this classification, and the remaining monitoring wells produce slightly saline (35%) to moderately saline (12%) water.

Sulphate was the dominant anion in the project area (82% of the monitoring wells) and bicarbonate or intermediate bicarbonate-sulphate anions were dominant in samples form the remaining wells. The dominant cation was sodium, typically in association with sulphate, though intermediate geochemical facies were identified. Magnesium was also a dominant cation but generally with significant proportions of sodium and calcium and rarely as a major contributing cation (typically never greater than 60% of the total cation contribution). Calcium was proportionally dominant in samples from a few monitoring wells installed immediately east of Jacko Lake, but typically only slightly greater than magnesium and/or sodium.

Hydrochemical signatures were not distinct for the specific bedrock or overburden lithological units but were more easily distinguished by location in the project area. The water types observed for specific lithological units are general described as follows:

- Overburden materials (colluvium, fluvial/glaciofluvial, glacial till, and lacustrine) - sulphate was typically the dominant anion and magnesium or sodium were the dominant cations.
- Iron Mask Hybrid - dominantly sulphate type and sodium was the dominant cation in the samples from wells in the vicinity of Jacko Lake and the Open Pit/historical mine features, while magnesium was the dominant cation in wells located further east in the vicinity of the proposed EMRSF (North Peterson Creek watershed).
- Nicola Volcanics - Sodium was also the dominant anion; though bicarbonate was dominant in samples from a few monitoring wells completed in this unit and the remaining samples were intermediate bicarbonate-sulphate type. The major cations were sodium or magnesium, though samples from two of the monitoring wells completed in this unit were weakly dominant in calcium.

Sulphate concentrations were elevated in groundwater samples collected from throughout the baseline study area and the highest sulphate concentrations were noted for those wells that are in the vicinity of local groundwater discharge areas, such as the Ajax West open pits, sloughs, Inks Lake, and Peterson Creek. Groundwater samples from monitoring wells in these areas frequently exceeded the livestock guidelines (BCWQG-Livestock and CEQG-Livestock; both 1,000 mg/L) and most of the samples exceeded the more stringent drinking water guidelines (BCWQG-DW and HC-DW of 500 mg/L). The lowest sulphate concentrations were in samples from monitoring wells in the Keynes Creek and Humphrey Creek watersheds and guideline exceedances were less frequent. This SBEB (aquatic life) was exceeded regularly in groundwater samples collected from the baseline study area, particularly in the open pit area, Peterson Creek aquifer, and the north Peterson Creek watershed.

Fluoride concentrations were elevated in groundwater samples collected from monitoring wells throughout the project area though locally enriched in the vicinity of the proposed Open Pit, where concentrations were often greater than the livestock and irrigation water use guideline limits.

Trace metal and metalloid concentrations in groundwater were not always well correlated with the major ions and the distribution appears to be more strongly influenced by local geological enrichment in specific minerals and by proximity to the open pit area. The majority of the wells in the open pit area are completed in overburden and those that are installed in bedrock tend to be in the Nicola

Volcanics. Arsenic, boron, iron, manganese, molybdenum, and selenium were metals that were elevated in the groundwater quality baseline study area and regularly exceeded guidelines, though the spatial extent varied somewhat by parameter. More sporadic or infrequent exceedances were observed for aluminum, chromium, cobalt, copper, mercury, uranium, and zinc. Arsenic, boron, manganese, and selenium concentrations tend to be higher in the open pit area, where monitoring wells are predominantly completed within the overburden units, though some wells are completed in the Nicola Volcanics bedrock unit that underlies this area. Arsenic, molybdenum, and selenium are specifically elevated in samples collected from the monitoring wells that were installed in the waste rock backfill in the historical Ajax East Pit. Manganese and iron concentrations were also elevated in samples from monitoring wells installed in the vicinity of the proposed EMRSF and in the lower reaches of the Humphrey Creek watershed.

Aquatic life guideline exceedances for groundwater quality were most common through the majority of the baseline groundwater quality study area for fluoride, sulphate, and arsenic, less common for boron, copper, iron, manganese, molybdenum, and selenium, and rare for aluminum, antimony, cadmium, chromium, cobalt, mercury, uranium, and zinc.

The groundwater in the project area is generally not suitable as a raw drinking water source and drinking water quality guideline exceedances are common for pH, TDS, sulphate, fluoride, manganese and sodium, and are less common for nitrate, ammonia, arsenic, selenium, and uranium.

Livestock water use guideline exceedances are common throughout the Project area for specific conductance, TDS, and molybdenum, and less common for sulphate, fluoride, and arsenic. Irrigation water use guideline exceedances are common for specific conductance, TDS, manganese and molybdenum, and less common for chloride, selenium, and uranium.

6.4 ON-GOING WATER QUALITY BASELINE PROGRAM

The water quality baseline data collection program is on-going through the Environmental Assessment and permitting phases of the Project schedule. The surface water quality program will sustain the monthly sampling frequency through this period and lake sampling will continue monthly through the open water period and two samples will be collected during the winter months (through the ice, provided conditions are safe for sampling). Lake sampling is intended to capture fully mixed (spring and fall turn-over) and stratified (summer and winter) conditions. Surface water sample collection in the local creeks will be conducted twice monthly until a full year of samples has been collected from all of the sites that were added into the program in 2014. The purpose of this sampling frequency is to provide a more thorough program in the limited time available to aid in characterization of the local surface water quality.

The groundwater quality program will continue with a seasonally representative sampling frequency, targeting seasonally high (post-freshet) and low (late winter) groundwater elevations and with two events during periods of intermediate groundwater elevations. A more frequent sampling schedule has been maintained for the wells that were installed in 2014 and these wells will be sampled monthly until a full year of data has been obtained. Water level monitoring will continue at all sites.

The basis for this continued program is to establish a robust database of water quality conditions prior to the establishment of the proposed Project that will provide sufficient statistical power to

detect, with greater certainty, changes to water that result from natural variability versus those that result from the Project.

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8 – CERTIFICATION

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APPENDIX A

QUALITY ASSURANCE/QUALITY CONTROL

(Pages A-1 to A-54)

APPENDIX A

2013 QUALITY ASSURANCE AND QUALITY CONTROL ANALYSIS

1 – OVERVIEW

The quality assurance and quality control (QA/QC) analysis includes a review of all groundwater and surface water data collected prior to October 2014. This appendix builds on the previous QA/QC report generated as an appendix to a previous baseline water quality report for the Project, which included water quality data collected prior to October 2012 (VA101-246/8-7).

The quality of the data obtained for a project is assessed via adherence to a set of pre-defined data quality objectives (DQOs) for the project. DQOs provide a means of assessing whether the data in question are precise, accurate, representative, and complete. The QA/QC analysis in this appendix covers three areas of operations: field data collection, laboratory analysis and office data management.

The results from QA/QC samples are reviewed to determine if sample contamination occurred. The data for any contaminated samples are then reviewed to determine if the contamination occurred during collection, handling, storage, shipping, or analysis.

The QA/QC Protocol and DQOs were compiled with reference to the following Canadian guidance documents:

- Guidance Document for the Sampling and Analysis of Metal Mining Effluents (Environment Canada, 2011).
- Canadian Council of Ministers of the Environment (CCME) Protocols Manual for Water Quality Sampling in Canada (CCME, 2011). This document is based on the Alberta and British Columbia sampling manuals (Alberta Environment, 2006; BC MWLAP, 2003).

Procedures for each area of operations are summarized in Section 2 and are described in detail within the internal manuals and during staff training to ensure the proper collection, analysis, and management of data that will meet the DQOs. A summary of the results obtained during the QA/QC analysis are provided in Section 3.

2 – PROCEDURES

Standard data collection procedures for the water quality data that meet the DQOs are described in the following subsections. In the QA/QC results section (Section 3), the actual procedures used to collect water quality data for the Ajax project are compared against the standard data collection procedures and any discrepancies are investigated to determine the validity of the data collected.

2.1 FIELD DATA COLLECTION QA/QC PROCEDURES

2.1.1 Equipment

Field water quality meters (YSI6820 or YSI6920) for measuring *in situ* parameters are rented from Pine Environmental, where they are maintained and calibrated between water sampling events. Each YSI is calibrated daily for dissolved oxygen and, in cases where water quality sampling events take more than two days, each YSI is recalibrated every three days for other *in situ* parameters using

standard solutions specific to each parameter (i.e. pH, turbidity, conductivity, and ORP). The YSI is recalibrated more often if parameter readings are suspect (ex. pH values that are inconsistent with the rest of the data).

All equipment used in water quality sampling is rinsed or cleaned with a shop towel between sites. Each YSI is rinsed with distilled water between sites or is rinsed with site water (ground- or surface water) prior to recording *in situ* parameters. The YSI is stored overnight in a sheltered environment. Equipment used for processing samples (i.e gloves, filters, and syringes) is disposable and new packaged equipment is used at each site.

2.1.2 Field Procedures

Specific work instructions are provided in KP sampling manuals, which are based on the CCME Protocols Manual for Water Quality Sampling in Canada (CCME, 2011), as well as office presentations, and on-the-job training. All staff members engaged in this work are required to read the sampling manuals prior to conducting any water or sediment quality work on-site. Staff members are also required to work with more experienced personnel during their first site visit.

Field notes and *in situ* data are recorded on waterproof paper. At the end of each day, field personnel are expected to check their field notes and sample labels to ensure that no samples are missing and that notes are complete. The laboratory provides protocols for sample labelling, preservation, and shipment and field staff are expected to adhere to these protocols. Bottles and preservatives are shipped with labels, chain of custody (COC) forms, and specific instructions. Water quality samples are labelled with their actual site name rather than an identification code since the samples are re-labelled by the lab prior to analysis (this procedure is specific to ALS laboratories and may not be relevant for all laboratories).

2.1.3 QA/QC Samples

The repeatability and reliability of sample results is evaluated by submitting duplicate water samples, field blanks, and travel blanks for the same parameters for which the primary samples are analyzed. This allows for the detection and reduction of errors that may occur due to contamination of samples. The QA/QC samples should conform to standard sampling methods, outlined by the CCME and were labelled as QA/QC samples because the laboratory adds their own labels upon sample receipt (CCME, 2011). Details regarding each type of QA/QC sample are outlined below:

Duplicate Samples - The purpose of a duplicate sample is to estimate sampling and laboratory analytical precision. At least one duplicate sample is collected for every sampling event and the total number of duplicate samples is maintained at least 5% of the total number of samples. Duplicate samples are the same as their primary sample in collection and handling and are collected at the same time or a few minutes apart from their primary sample.

Field Blank Sample - The purpose of a field blank is to identify potential sources of contamination with preservatives, field filtration, sample handling or transportation, as well as any potential contamination from analytical procedures. Field blanks are prepared from distilled/deionized (DDI) water provided by the laboratory. The DDI water is filtered and preserved using the same methods as for sampling site water. At least one field blank sample is collected for every sampling event and the total number of field blank samples should be maintained at 5% of the total number of samples collected.

Equipment Blank Sample - The purpose of an equipment blank is to identify potential sources of contamination associated with non-disposable equipment used to collect samples. Equipment blanks are prepared from DDI water provided by the laboratory. The DDI water is exposed to the non-disposable sampling equipment, mimicking the sampling procedure as much as possible. The DDI water is then filtered and preserved using the same methods as for sampling site water. At least one equipment blank is prepared on each site visit where non-disposable equipment is used.

Travel Blank Sample - The purpose of a travel blank is to identify potential sources of contamination associated with sample containers, shipping, storage, and analysis. These samples are prepared by the laboratory with DDI water and are never opened on site. Travel blanks travel with the sample bottles sent from the laboratory to the field site, and back to the laboratory. Travel blank samples are not required for each site visit, but should be collected when shipping, storage, and analytical procedures are altered.

2.2 EXTERNAL LABORATORY ANALYSIS QA/QC PROCEDURES

ALS Environmental (ALS) was retained for the analysis of the samples collected from the project site. ALS is an accredited laboratory for water quality analysis with rigorous internal QA/QC procedures. In the event of a failed internal QA/QC test, both laboratories re-run all analyses affected by the same factors as the failed internal QA/QC sample.

Sample integrity issues are highlighted on the sample receipt confirmation (SRC) reports that are provided to Knight Piésold Ltd. following receipt of samples at the laboratory. Where sample integrity issues are identified, correspondence between ALS and Knight Piésold Ltd. results is used to identify corrective actions or resolve causes of the issues.

2.3 OFFICE DATA MANAGEMENT QA/QC PROCEDURES

The FULCRUM data management system is used to organize and store data received from ALS laboratories. In FULCRUM, data are transferred electronically into the database through the use of electronic data files. Data received from SRC is transferred to a Microsoft Excel spreadsheet electronically to avoid transcription errors. All original lab data files are saved and used to check the database.

Upon receipt of laboratory results, several data validation checks are conducted and any QA/QC issues are recorded in a tracking document. If the QA/QC results do not meet the DQOs, results associated with the QA/QC samples in question are flagged and further inspected. If the issue with the QA/QC sample is determined to compromise the validity of the sample results associated with it, data are rejected. Rejected results are not used in the statistical analysis of the data. The validation checks used to determine whether data should be flagged or rejected are outlined below:

Hold time exceedances – hold time exceedances occur when the time period between the sample collection time and the sample analysis time is greater than the recommended maximum holding time. These time frames range from 0.25 hr to 6 months and represent the maximum length of time that should not be exceeded or sample degradation may occur. Reasons for hold time exceedances are determined and, wherever possible, revised to prevent future exceedances. The validity of the results is determined on a case by case basis.

pH – high groundwater pH values (in situ and laboratory values greater than 10) often indicate grout contamination of the well. Grout contamination may compromise the analysis of all parameters. Groundwater quality samples for which the measured pH is greater than 10 should be rejected and removed from the dataset.

Turbidity – the accepted methods for groundwater quality sampling (MOE, 2012) indicate low turbidity (i.e. less than 50 NTU) as a criterion for representative groundwater samples. Both in situ and laboratory turbidity readings should be compared to the decision flow chart in Figure A.1 (adapted from MOE, 2012). Samples unacceptable turbidity values may be rejected from the dataset or used to interpret parameters other than metals.

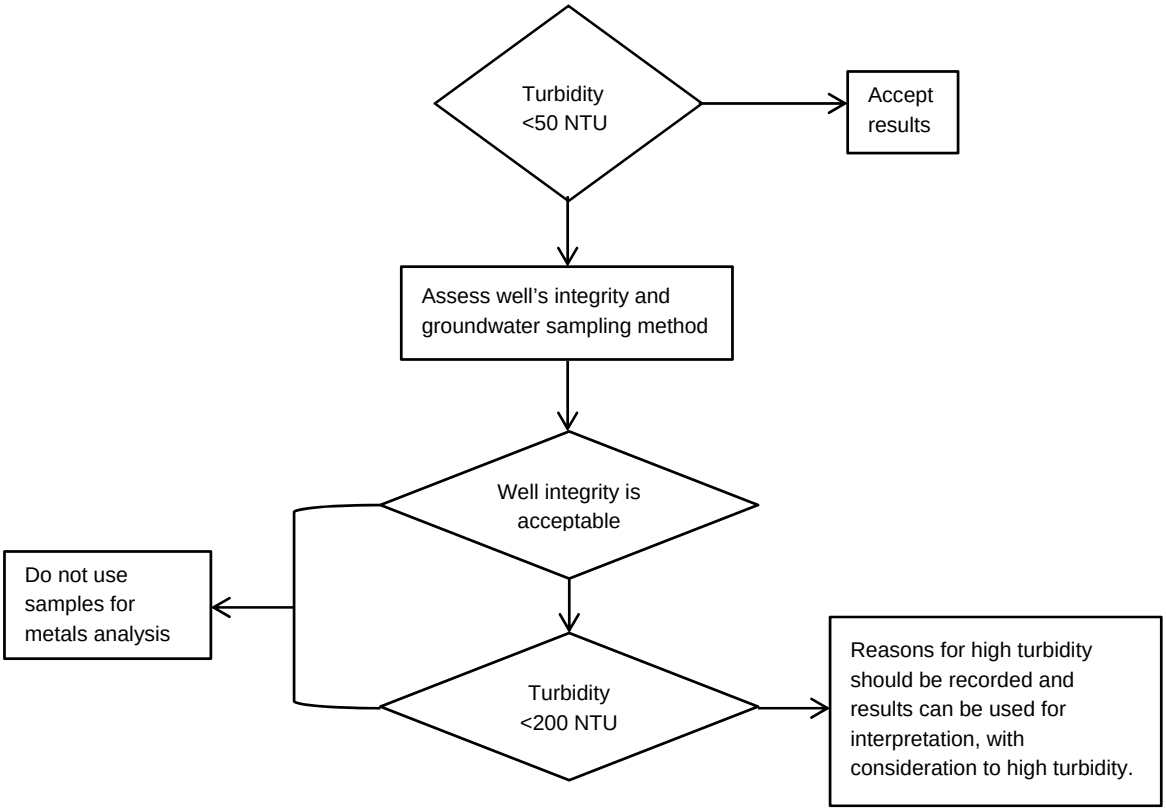

Figure A.1 Decision Flow Chart for Turbidity in Groundwater Samples (adapted from BC MOE, 2012)

Sample Blanks – results of blank samples are used to assess the potential sources of contamination associated with the sample containers, preservatives, and sample handling and transportation, as well as any potential contamination from the analytical procedures. Blank sample results are highlighted if any analyte exceeds the method detection limit (MDL) and are flagged if the result exceeds five times the MDL. Following an investigation to determine the source of error, field sampling and handling procedures may be modified to prevent similar errors from occurring in future sampling events. Highlighted blank sample results that are greater than the MDL, but lower than five times the MDL may not always indicate potential contamination because of the uncertainty of results near the MDL. Common occurrences of these results should prompt in discussions with the lab about uncertainty. Flagged blank results also may or may not indicate sample contamination and

should be assessed in detail to determine the likely cause of the result exceeding five times the MDL. The assessment of these results is summarized in the decision matrix shown in Table A.1.

Table A.1 Decision Matrix for the Assessment of Flagged Blank Samples

Case	Travel Blank	Field Blank (unfiltered)	Field Blank (filtered)	Likely Cause	Actions Taken
1	>5xMDL	>5xMDL	>5xMDL	Contamination during transport, storage, or analysis of samples.	If the results were greater than 10% of the average of the results for samples collected on site, data were rejected.
2	>MDL	>MDL	>MDL	Some uncertainty associated with the MDL and the analysis.	Data were accepted, but the lab was consulted for a discussion on the uncertainty.
3	>5xMDL	-	-	Contamination at the laboratory or contamination of DDW	Discussions with laboratory on potential contamination of DDW. Results were accepted.
4	-	>5xMDL	-	Contamination due to sampling procedures or leaching from bottles.	See Case 1
5	-	-	>5xMDL	Contamination due to filters or filtering process.	See Case 1
6	>5xMDL	>5xMDL	-	Potential contamination of DDW, contamination from the bottles, or a combination of contamination sources.	See Case 1
7		>5xMDL	>5xMDL	Contamination due to sampling methods or contaminated DDW water.	See Case 1
8	>5xMDL		>5xMDL	Contamination from two sources.	See Case 1

Duplicate Samples – duplicate samples are used to estimate sampling and laboratory precision. Analytical results obtained for two samples collected from the same site at the same time are flagged if the relative percent difference (RPD) is greater than 20% and one or both of the measured concentrations are greater than five times the MDL. The RPD is the absolute difference in concentrations of the two duplicate samples divided by the average of the two values. Flagged results are further reviewed to determine whether the high RPD is a result of naturally variable conditions or sampling error. If the latter case is suspected, efforts are made to prevent similar errors from occurring in the future and results associated with the result in question may be rejected. If the high RPD is most likely a result of natural variability in the water body from which the duplicate samples are collected, flagged data are noted as a point of discussion, but are not rejected.

Detection Limits – detection limits are examined on a regular basis to ensure that they coincide with guideline limits. If detection limits exceed the guideline limits, the laboratory is contacted and efforts are made to adjust the analytical procedures to achieve lower detection limits. Detection limits are often increased due to sample matrix interference and efforts are made to adjust laboratory methodology, although lower detection limits are not always possible.

Cation/Anion Balances – ion balances are calculated to detect error associated with the analysis of the major ionic species in the groundwater samples. The major cations in water are calcium, magnesium, potassium, and sodium. The major anions in water are bicarbonate, sulphate, and chloride. The error between the sum of the cation species and the sum of the anion species should

be less than 10%. An error greater than 10% could indicate an analytical error or an unaccounted major ionic species.

Dissolved and Total Metals Concentrations – dissolved and total metal concentrations in all site samples are compared and highlighted if the reported concentration of a dissolved metal is greater than reported concentration of the total metal. Samples are flagged if the RPD between the total and dissolved concentrations of the highlighted sample is greater than 20% and one or both results exceed five times the MDL. Analytical results between one and five times the MDL may be affected by analytical error. Flagged analyses for metals are further investigated and may be rejected if the flagged result is an outlier, exceeds guidelines, or is very different from the expected results, given other samples collected at the same site or in the same area.

2.3.1 Data Analysis

An online database and data management tool (FULCRUM) is used for data storage and statistical calculations. Results that are below the MDL are set to equal half the MDL for all statistical analyses. *In situ* and laboratory results are compared with previous results for the same sites and with expected data trends. Any data outliers are confirmed with the laboratory for validity. Results that do not fit within the expected range, relative to other samples collected from the same or similar sites, are flagged and may be rejected if the likely cause of the discrepancy is determined to be a methodology error. For all analytes, annual statistics and monthly mean values are calculated. Several of the calculations are checked at random using a calculator to proof the Excel spreadsheet calculations.

3 – RESULTS

QA/QC results have been used to verify data and identify any data that should be rejected and also to identify where procedural improvements should be made. These results include procedural results and results of the analysis of QA/QC samples. Procedural results summarize the detailed qualitative review of all data and of field, laboratory, or office procedures that could affect the validity of the data collected. As part of a standard QA/QC protocol, any results that appeared suspicious for any reason were flagged and evaluated in a QA/QC tracking document. Results of the analysis of the QA/QC samples are quantitative results that have been used to identify specific data that did not meet the DQOs.

3.1 FIELD PROCEDURES ANALYSIS

3.1.1 Field Equipment

Field equipment was maintained either in the field or at Pine Environmental, where equipment was rented. *In-situ* probes (YSI 6920 and YSI 6820) were calibrated at Pine Environmental prior to shipping to site. Calibration records have been stored with the field notes. Dissolved oxygen was calibrated on site at the beginning of each sampling event and every time the atmospheric pressure or elevation of the sampling site changed significantly. Other parameters were recalibrated every three to five days, or when the probes detected readings that were unexpected and did not fit within the range of other samples collected from the same site. Multi-parameter probes, groundwater pumps, and lake depth samplers were rinsed with DDI water between sampling sites or with site

water prior to use. All other equipment used in sampling (ex. syringes, filters, gloves) was disposable and new equipment was used at each site.

3.1.2 Field Procedures

Site-specific challenges, namely low surface water flow rates and low groundwater recharge rates, sometimes resulted in the use of alternative sampling methods. In the case of surface water samples, samples were sometimes collected using a syringe rather than submerging the bottle. Groundwater collection often required the use of the low-recharge method for groundwater sampling, described in Appendix B. The alternative methods for both surface- and groundwater sampling are acceptable methods; however, the use of these methods was considered in the interpretation of the data.

Groundwater and surface water samples have been collected by various consultants and sub-consultants since the program began in 2007 and groundwater sampling methods have changed over time as research regarding the validity of methods has been altered. The current acceptable methods for collecting groundwater involve the use of a submersible low-flow pump and are outlined in Appendix B. The acceptable groundwater sampling methods have been used to collect groundwater samples, under the direction of KP, since 2008; samples collected prior to 2008 were collected using bailers or foot valves, both of which are not considered acceptable methods for collecting representative samples. The validity of the analytical results collected using such methods have been evaluated based on turbidity and comparisons with other samples from the same dataset. Data were not rejected on the basis of unacceptable sampling methods alone; rather, samples collected using outdated sampling methods were evaluated more rigorously and were accepted or rejected on the basis of turbidity.

3.1.3 Turbidity

Samples were evaluated for validity based on laboratory and *in situ* turbidity readings using the framework shown on Figure A.1. Samples with turbidity greater than 200 NTU were rejected for all analyses. Sixteen such samples were identified (Table A.2), most of which were collected in 2007 and 2008, using outdated sampling methods (i.e. foot valves, which cause elevated turbidity) and are not expected to be representative of the groundwater. Samples with turbidity higher than the acceptable 50 NTU, but lower than the unacceptable 200 NTU were further investigated, but were not rejected entirely; rather, the metals analyses of such samples were compared with those of other samples collected from the same well and were rejected if the concentrations were outside the expected range. Rejected analyses are listed in Table A.3.

Table A.2 Sample Turbidity in Exceedance of the DQO (>200 NTU)

Site	Date	Turbidity (NTU)
AJGW01-D	Sep-07	*N/A*
AJGW01-D	Dec-07	>4000
AJGW01-D	Jul-08	1040
AJGW01-D	Sep-08	772
AJGW02-D	Sep-07	*N/A*
AJGW02-D	Dec-07	>4000
AJGW02-D	Mar-08	241
AJGW02-D	Sep-08	294
AJGW02-S	Dec-07	543
AJGW03-D	Sep-07	*N/A*
AJGW03-D	Dec-07	1180
AJGW03-D	Mar-08	>4000
AJGW04-D	Apr-08	1610
AJGW04-D	Jul-08	327
AJGW05-S	Jul-08	323
BGC14-006S	May-14	277

NOTES:
1. N/A INDICATES THAT TURBIDITY WAS NOT MEASURED, BUT IS SUSPECTED TO BE HIGH BASED ON THE TURBIDITY OF OTHER SAMPLES COLLECTED FROM THE SAME WELL DURING THE SAME YEAR.
2. ALL TURBIDITY MEASUREMENTS ARE LABORATORY MEASUREMENTS; *IN SITU* MEASUREMENTS WERE NOT REPORTED FOR ALL HISTORIC SAMPLES.

Table A.3 Analyses Rejected Based on High Turbidity (50 NTU to 200 NTU)

Site	Date	Turbidity (NTU)	Analyses	Notes
AJGW04-D	Sep-08	93.4	Dissolved Manganese	The dissolved manganese result for this sample (2.9 mg/L) was much higher than the lower turbidity sample collected from the same site (0.65 mg/L) and was rejected.
MW11-05D	Aug-12	50.9	Dissolved Chromium	The dissolved chromium result for this sample (0.0016 mg/L) was ten times higher than the lower turbidity samples collected from the same site and was rejected.
MW11-10D	Dec-11	68.1	Dissolved Selenium Dissolved Uranium	The dissolved selenium and uranium results for this sample were higher than the lower turbidity samples collected from the same site and were rejected.
AJGW03-D	Jul-08	128	Dissolved Aluminum Dissolved Cadmium	The dissolved aluminum and cadmium results for this sample were higher than the lower turbidity samples collected from the same site and were rejected.

NOTES:
1. ALL TURBIDITY MEASUREMENTS ARE LABORATORY MEASUREMENTS; IN SITU MEASUREMENTS WERE NOT REPORTED FOR ALL HISTORIC SAMPLES.

3.1.4 Measured pH

Seven samples were rejected on the basis of pH values greater than 10, which is indicative of grout contamination of the well. These samples, listed in Table A.4, may not be representative of baseline groundwater and should not be included in the data interpretation.

Table A.4 Analyses Rejected on the Basis of High pH

Site	Date	*In Situ* pH	Laboratory pH
AJGW02-D	Sep-07		11
AJGW02-D	Dec-07	11.8	11.4
BGC14-008D	May-14		12.4
KAX-14-121	May-14		11.6
MW11-01D	Oct-11	10.3	9.48
MW11-04D	Aug-11	11.1	10.8
MW11-04D	Oct-11	10.8	10.2

NOTES:

1. UNITS ARE pH UNITS.

3.2 ION BALANCE RESULTS

Almost all groundwater samples met the DQO for the ion balance criterion of 10%. Several samples collected in August 2012 were not analyzed for calcium and magnesium and were not included in the ion balance; rather, the ion balance of other samples collected from the same sites was used to provide an overview of the validity of the entire dataset. The ion balance results that did not meet the DQO are listed in Table A.5 and the results for all samples are listed in **Error! Reference source not found.**. Three of the samples flagged for ion balances were collected from BGC14-017S (maximum error 15%), which had high magnesium and calcium concentrations relative to samples collected from the deeper well in the same location, making the sum of common cations greater than that of anions. The highest ion balance error observed in the dataset was for a sample collected from AJGW02-S (21.8%) which had a very high sulphate concentration (2020 mg/L), causing a high sum of common anions. A second sample collected from the same well indicated a lower sulphate concentration (1260 mg/L), but still higher than the samples collected from other sites.

Table A.5 Ion Balance Exceedances of the DQO

Site ID	Date	Cation				Anion				Cation					Anion					Error
		Ca	Mg	Na	K	Cl	SO4	NO3	CaCO3	Ca	Mg	Na	K	sum+	Cl	SO4	NO3	HCO3	sum-	
		(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(meq/L)	(meq/L)	(meq/L)	(meq/L)	(meq/L)	(meq/L)	(meq/L)	(meq/L)	(meq/L)	(meq/L)	
AJGW02-S	Jul-08	177	157	280	30.7	152	2020	0.35	469	9E-03	1E-02	1E-02	8E-04	3.5E-02	4E-03	4E-02	1E-05	8E-03	5.4E-02	21.8%
BGC14-001D	Mar-14	60.6	71.3	99.9	7.35	2.5	185	0.282	424	3E-03	6E-03	4E-03	2E-04	1.3E-02	7E-05	4E-03	9E-06	7E-03	1.1E-02	10.5%
BGC14-017S	May-14	65	54.7	9.25	2.24	1.25	13.9	0.277	350	3E-03	5E-03	4E-04	6E-05	8.2E-03	4E-05	3E-04	9E-06	6E-03	6.1E-03	15.0%
BGC14-017S	Jun-14	65.8	56.4	9.32	2.44	0.8	13	0.245	392	3E-03	5E-03	4E-04	6E-05	8.4E-03	2E-05	3E-04	8E-06	6E-03	6.7E-03	11.0%
BGC14-017S	Jul-14	67	56.7	9.56	2.35	1.25	12.9	0.248	391	3E-03	5E-03	4E-04	6E-05	8.5E-03	4E-05	3E-04	8E-06	6E-03	6.7E-03	11.6%

3.3 LABORATORY OPERATIONS ANALYSIS

ALS has their own internal QA/QC methods for verifying data. Laboratory QA/QC results were reported for matrix spikes, method blanks, laboratory control samples, reference materials, and duplicates/replicates. ALS laboratory reports also provided details regarding sampling hold times and sample integrity issues, a summary of major sample integrity issues are listed below.

- Container broken in transit
- Discrepancy between Chain of Custody (COC) and label
- Extra samples/bottles received but not listed on the COC
- Preservation incompatible with test
- Sample listed on COC but not received
- Temperature > 10 Celsius upon arrival at the lab

3.3.1 Laboratory Qualifiers

Very few of the results reported by the laboratories were categorized as rejected. In most cases where data were flagged by the laboratory, the issue resulted in an adjustment of the MDL and did not result in the exclusion of results from the statistical analysis. Reasons for the MDL adjustment included the requirement of further dilution of samples prior to analysis, the detection of an analyte in the Method Blank, and sample matrix effects. On several occasions, dissolved concentrations exceeded total concentrations; these were confirmed by re-analysis and were flagged, but not removed from the data set.

3.4 DETECTION LIMITS

The method detection limits of the laboratory analytical procedures are generally not higher than the relevant guidelines for any of the parameters except dissolved bromide, beryllium, cadmium, and selenium. Some water quality sites have very high TDS and matrix interference in the samples result in elevated MDL values, which exceed guidelines for some of the other parameters. All elevated MDL values are shown in tables in the data appendices, but are not shown as guideline exceedances. These potential guideline exceedances are specific to individual sites and are discussed in the text of the report. MDL guideline exceedances for bromide, beryllium, and cadmium apply to all samples.

3.4.1 Bromide

The BC drinking water working guideline for bromide and the HC drinking water guideline for bromate are 0.05 mg/L and 0.01 mg/L, respectively, while the MDL was 0.05 mg/L. Water within the project area is not considered a source of long-term drinking water for humans; however, the drinking water guidelines are used for reference but were excluded from the assessment reporting. The high MDL for bromide is currently being investigated and may be in part due to dilutions required because of other parameters that can cause matrix effects, such as chloride and sulphate.

3.4.2 Beryllium

The BC aquatic life working water quality guidelines were recently updated and the beryllium BCWQG-Max was lowered from the previous threshold of 0.053 mg/L to 0.00013 mg/L. The MDL for this parameter generally ranges from 0.0001 mg/L to 0.005 mg/L and many sample-specific MDL

values exceeded the guideline. ALS is currently in the process of refining their laboratory procedures to accommodate for this guideline.

3.4.3 Cadmium

There are both long-term and short-term exposure CEQG cadmium guidelines, which are hardness dependent. The long-term exposure values range from 0.0000679 mg/L up to 0.000170 mg/L and the short-term exposure values range from 0.000283 mg/L to 0.001640 mg/L (both for hardness values that range from 20.2 mg/L $CaCO_3$ to 2700 mg/L $CaCO_3$). The MDL for cadmium results ranged from 0.00001 mg/L to 0.000085 mg/L (total cadmium and dissolved cadmium).

KP has been working closely with ALS to achieve lower detection limits to investigate if the presence of cadmium was not being detected due to sample matrix interference with other analytes. A new method has recently been adopted for the analysis of samples with high non-detected levels of cadmium which have been adapted from “Recommended Guideline for Measuring Metals in Puget Sound Marin Water, Sediment and Tissue Samples” referred to as Puget Sound Protocols, EPA 6020A, Total Metals in Seawater by SPE ICPMS. Directly quoted from the ALS laboratory Certificate of Analysis reports for all samples analyzed by this method: A suspended particulate resin (SPR), consisting of immobilized iminodiacetate (IDA) on a divinylbenzene polymer, is used to chelated and preconcentrate metals in seawater. Instrumental analysis is by inductively coupled plasma mass spectrometry (ICPMS). This method was described through personal communication with Andre Langlais (ALS Environmental, Burnaby, BC) to result in the reduction of conductivity in the sample and leave behind at least 95% of the sample cadmium and results in clear ICPMS resolution of the cadmium signature. Cadmium sample concentrations that have resulted from this method are available for various samples collected between May 2014 and September 2014. The MDL achieved at these sites from 0.00002 mg/L for all sites during all sampling events, which was below both the long-term and short-term exposure guidelines. Cadmium concentrations that were reported by the seawater extract method (SWE) were typically greater than half the high non-detect MDL but less that the value equivalent to the MDL.

3.4.4 Selenium

Prior to October 2011, the MDL for selenium was equal to or half the guideline thresholds (BCWQG of 0.002 mg/L and the CEQG of 0.001 mg/L), depending on matrix interference. During this time, several guideline exceedances were observed that were close to the MDL. These results have not been rejected, but the high MDL has been considered in the interpretation of the data. After October 2011, the MDL was reduced to 0.0001 mg/L.

One outlier analysis for selenium was rejected (JACL-D; September 2008; dissolved and total concentrations of 0.0107 mg/L and 0.0171 mg/L, respectively) because the concentration was over 100 times most of the other detected values in the dataset. This result was reported at a time when elevated MDLs were common and, since it is within five times the MDL, it is considered an uncertain result.

3.4.5 Cyanide

The laboratory method used for cyanide analysis was updated in December 2011 and was fully implemented in May 2012. The main disadvantage of the previous method was that the presence of

thiocyanate and organics caused interference, which could have resulting in false positives. The updated method mitigates interference and increases the certainty in the data. Prior to May 2012, measureable concentrations of total cyanide were sporadically observed in water quality samples in association with samples that were analyzed using the superseded method. No concentrations above the MDL were observed in samples analyzed using the updated method. The concentrations that were measured above the MDL using the superseded method are likely false positives, given that all of the samples analyzed using the new method were below the MDL (ALS, 2015). Suspected false positive data is not discussed in the report; however, since the actual concentrations could not be confirmed, the results are still shown in the appendix tables, with the guideline exceedance highlighting not shown.

3.5 OFFICE DATA MANAGEMENT OPERATIONS

In the office, all *in situ* data and laboratory results from ALS laboratories were entered into FULCRUM. This task was completed by the field personnel who collected the samples and the entered data was checked regularly by other staff members. On the few occasions where an error in data entry was noted, the error was most commonly a unit conversion error. In these cases, the field personnel were informed of the non-conformance and the error was corrected.

3.6 QA/QC SAMPLE RESULTS

3.6.1 Blank Samples

A summary of the field blanks analyses that were flagged (i.e. samples with detectable parameters concentrations in excess of five times the MDL) are summarized in Table A.6 and all results of field blank analyses, including results below the MDL and results between the MDL and five times the MDL, are shown in Table A.6. Equipment blank results are provided in Table A.9.

The equipment blank collected on Sept 4th, 2013 had a result of 0.301 mg/L for dissolved sodium and 0.373 mg/L for total sodium, both of which are over five times the MDL of 0.05 mg/L. Similarly the equipment blank collected on Sept 24th, 2014 had a result of 0.343 mg/L for dissolved calcium and 0.385 mg/L for total calcium, both of which are over five times the MDL of 0.05 mg/L. Out of the 18 equipment blanks collected, five samples had analytes which were higher than five times the MDL. Analytes that were higher than five times the MDL in the equipment blanks include barium, manganese, calcium, copper, sodium, molybdenum, strontium and selenium. The contamination may have been cause by the improper decontamination of field sampling equipment prior to the collection of the sample.

Since May 2007, 95 field blanks have been collected and a total of seven samples collected had analytes which were higher than five times the MDL. The concentrations in the samples associated with the contaminated blank samples were not higher than the concentrations in other samples in the data set, therefore the results were not rejected.

Table A.6 Flagged Field Blank Sample Analyses

Sample Type	Date	Lab ID	Analyte	MDL	Blank Concentration (mg/L)
FIELD BLANK	9-Jul-08	L653846-3	Turbidity NTU	0.1	0.65
FIELD BLANK	18-May-11	L1007006-5	Manganese	5E-005 to 0.0015	0.00135
FIELD BLANK	10-Jan-12	L1103104-6	Zinc	0.001 to 0.006	0.013
FIELD BLANK	12-Jul-12	L1178283-5	Zinc	0.001 to 0.006	0.0013
FIELD BLANK	5-Sep-13	L1358626-4	Barium	5E-005 to 0.02	0.000275
FIELD BLANK	19-Nov-13	L1394041-3	Barium	5E-005 to 0.02	0.000086
			Carbon Organic (Dissolved)	0.5 to 5	3.2
			Calcium	0.05 to 0.1	0.067
FIELD BLANK	13-May-14	L1454705-3	Molybdenum	5E-005 to 0.005	0.000417

3.6.2 Duplicate Samples

A summary of duplicate sample results for which the RPD between samples was greater than 20%, where one or both sample concentrations was greater than five times the MDL are listed in Table A.10 and A.11. There are several possible reasons for duplicate sample RPDs exceeding 20%. Natural variability in the water quality in surface water systems is a probably cause. Inconsistent sampling methods are another possibility. Detailed sampling procedure manuals and field staff training were used to minimize the chances of the latter. All data associated with duplicate samples exceeding the acceptable RPD of 20% for analyses higher in concentration than five times the MDL was flagged and further examined, but neither the site sample data nor the site data associated with the flagged duplicates were removed from the dataset used in the statistical analysis of results.

3.6.3 Metals Analysis

Sample analyses were flagged when dissolved concentrations of metals exceeded total concentrations of the same metals and one or both concentrations exceeded five times the MDL. Data were inspected when the difference was greater than 30%. In cases where the analytical result was different from the rest of the dataset (ex. total concentration was lower and dissolved concentration was higher than the other data), both the total and dissolved data were rejected. In certain instances the dissolved metals concentrations were replaced by the total metals concentration. A summary of the sample analyses that were flagged and qualified is shown in Table A.7.

Table A.7 Flagged data based on dissolved and total analysis

Sample ID	Sample Date	Lab ID	Analyte	MDL	Dissolved	Total	% Difference	Corrective Action
SURFACE WATER								
AC02	24/05/2012	L1152500-10	Zinc (Zn)	0.001	0.0059	<0.003	65	Flagged
AJWE-D	03/05/2007	L502198-2	Cadmium (Cd)	9E-05	0.00111	0.00065	53	Flagged
AJWW-S	01/05/2014	L1450350-4	Aluminum (Al)	0.001	0.0065	<0.003	74	Flagged
	01/05/2014	L1450350-4	Manganese (Mn)	5E-05	0.00237	0.00129	59	Flagged
ANDER-10	17/06/2014	L1472862-1	Zinc (Zn)	0.001	0.0068	<0.003	78	Flagged
	15/07/2014	L1488139-1	Aluminum (Al)	0.001	0.0176	<0.003	142	Flagged
	15/07/2014	L1488139-1	Iron (Fe)	0.01	0.094	0.051	59	Flagged
ANDR15	04/06/2014	L1465478-4	Zinc (Zn)	0.001	0.0062	<0.003	70	Rejected
CC02	13/02/2012	L1114029-4	Zinc (Zn)	0.003	0.0256	0.0033	154	Flagged
CC08	12/07/2012	L1178283-2	Zinc (Zn)	0.001	0.0059	<0.003	65	Rejected
EDITH-01D	08/07/2014	L1483419-6	Sulphur (S)	0.5	19.9	14.5	31	Flagged
	20/08/2014	L1506521-3	Selenium (Se)	0.0001	0.00052	0.0001	135	Flagged
	20/08/2014	L1506521-3	Sulphur (S)	0.5	119	13.2	160	Rejected
	30/09/2014	L1526071-6	Selenium (Se)	0.0001	0.00791	<0.0001	195	Rejected
	30/09/2014	L1526071-6	Sulphur (S)	0.5	150	11	173	Rejected
EDITH-01M	14/09/2014	L1518246-2	Sulphur (S)	0.5	113	11.4	163	Rejected
JACL-D	29/04/2008	L624228-4	Uranium (U)	0.0002	0.00109	0.00077	34	Flagged
	11/07/2012	L1177597-2	Selenium (Se)	0.0001	0.00059	0.00013	128	Flagged
	08/08/2012	L1191600-2	Selenium (Se)	0.0001	0.00068	0.00012	140	Flagged
	04/09/2013	L1358222-2	Sulphur (S)	0.5	29.9	18.3	48	Flagged
	20/08/2014	L1506521-6	Sulphur (S)	0.5	64.8	18	113	Rejected
	14/09/2014	L1518246-6	Sulphur (S)	0.5	70.1	16.4	124	Rejected
	30/09/2014	L1526071-3	Selenium (Se)	0.0001	0.00139	<0.0001	173	Rejected
	30/09/2014	L1526071-3	Sulphur (S)	0.5	38.9	16.5	81	Flagged
JACL-S	29/04/2008	L624228-1	Uranium (U)	0.0002	0.00116	0.00079	38	Flagged
	01/06/2011	L1012627-3	Zinc (Zn)	0.005	0.0386	<0.005	154	Rejected
	10/01/2012	L1103104-3	Zinc (Zn)	0.003	0.164	0.0295	139	Rejected
	06/09/2012	L1206738-3	Zinc (Zn)	0.001	0.0122	<0.003	121	Flagged
	13/05/2014	L1454705-1	Copper (Cu)	0.0002	0.00132	0.00096	32	Flagged
NSP	02/09/2014	L1511703-2	Sodium (Na)	0.1	1030	586	55	Rejected
PC02	05/02/2013	L1265809-7	Zinc (Zn)	0.001	0.005	<0.003	50	Flagged
	02/04/2014	L1439467-3	Aluminum (Al)	0.001	0.0153	<0.003	134	Flagged
	02/04/2014	L1439467-3	Iron (Fe)	0.01	0.061	0.02	101	Flagged
PC02.5	10/07/2012	L1176520-2	Zinc (Zn)	0.001	0.0095	<0.003	104	Flagged
	05/02/2013	L1265809-6	Zinc (Zn)	0.001	0.0063	<0.003	71	Flagged
PC08	28/07/2011	L1038168-6	Cadmium (Cd)	2E-05	0.000149	2.5E-05	143	Rejected
	10/07/2012	L1176520-4	Manganese (Mn)	5E-05	0.0128	0.00689	60	Flagged
PC10	30/07/2014	L1495443-7	Chromium (Cr)	0.0001	0.00261	0.00049	137	Rejected
WR-SEEP	07/11/2013	L1389979-4	Aluminum (Al)	0.002	0.057	<0.006	162	Rejected
	07/11/2013	L1389979-4	Iron (Fe)	0.01	0.085	<0.01	158	Rejected
GROUNDWATER								
AJGW02-D	17/09/2007	L555226-2	Barium (Ba)	0.02	0.278	0.188	39	Flagged
	03/09/2008	L678703-5	Magnesium (Mg)	0.1	20.5	8.03	87	Flagged
AJGW03-D	10/02/2012	L1113319-5	Cobalt (Co)	0.0001	0.00066	0.00018	114	Flagged
AJGW04-D	27/04/2008	L623639-1	Molybdenum (Mo)	0.005	0.103	0.0754	31	Flagged
AJGW07-D	19/11/2008	L710078-6	Selenium (Se)	0.001	0.0255	0.0113	77	Flagged
	19/11/2008	L710078-6	Uranium (U)	0.0002	0.00138	0.00099	33	Flagged
	01/06/2010	L892818-4	Selenium (Se)	0.002	0.0301	0.0206	37	Flagged
AJGW07-S	01/06/2010	L892818-3	Selenium (Se)	0.002	0.0396	0.029	31	Flagged
	24/08/2010	L924086-4	Copper (Cu)	0.001	0.0144	0.0034	124	Rejected

Sample ID	Sample Date	Lab ID	Analyte	MDL	Dissolved	Total	% Difference	Corrective Action
	28/03/2011	L990458-1	Selenium (Se)	0.001	0.0305	0.0211	36	Flagged
BGC14-002S	12/06/2014	L1470495-1	Zinc (Zn)	0.001	0.0132	0.0096	32	Flagged
BGC14-003S	14/07/2014	L1486405-4	Zinc (Zn)	0.001	0.0067	0.0044	41	Flagged
BGC14-014D	09/05/2014	L1459061-3	Selenium (Se)	0.0001	0.003	0.00057	136	Rejected
	31/07/2014	L1496798-1	Selenium (Se)	0.0001	0.00119	0.00059	67	Rejected
BGC14-015D	22/05/2014	L1459725-2	Zinc (Zn)	0.001	0.0059	<0.003	65	Flagged
BGC14-015S	22/05/2014	L1459725-1	Cadmium (Cd)	1E-05	0.00009	2.7E-05	108	Rejected
	22/05/2014	L1459725-1	Zinc (Zn)	0.001	0.0059	<0.003	65	Flagged
BGC14-017D	29/07/2014	L1494504-3	Aluminum (Al)	0.001	0.0882	0.0081	166	Rejected
	29/07/2014	L1494504-3	Iron (Fe)	0.01	0.131	<0.01	172	Flagged
KAX-14-107S	17/07/2014	L1488886-10	Sulphur (S)	0.5	81	58.8	32	Flagged
	13/08/2014	L1502282-3	Selenium (Se)	0.0001	0.00053	0.00012	126	Flagged
	13/08/2014	L1502282-3	Sulphur (S)	0.5	95.4	54.6	54	Flagged
	10/09/2014	L1516148-3	Sulphur (S)	0.5	104	57.3	58	Flagged
KAX-14-108S	16/07/2014	L1488886-8	Zinc (Zn)	0.001	0.0176	0.0115	42	Flagged
KAX-14-128D	11/09/2014	L1517413-4	Selenium (Se)	0.0001	0.00138	<0.0001	173	Flagged
	11/09/2014	L1517413-4	Sulphur (S)	0.5	415	103	120	Flagged
MW11-01D	29/10/2011	L1079375-1	Nickel (Ni)	0.001	0.0196	0.0129	41	Flagged
MW11-05S	29/08/2012	L1202478-2	Selenium (Se)	0.0001	0.00063	0.00026	83	Flagged
MW11-07D	18/06/2014	L1473868-2	Aluminum (Al)	0.001	0.0117	0.0048	84	Flagged
MW11-07S	05/09/2014	L1513822-1	Zinc (Zn)	0.001	0.0095	0.0037	88	Flagged
MW12-04	07/09/2014	L1514758-2	Aluminum (Al)	0.001	0.0193	0.0036	137	Flagged
	07/09/2014	L1514758-2	Iron (Fe)	0.01	0.081	0.056	37	Flagged

NOTES:

1. UNITS ARE mg/L UNLESS OTHERWISE STATED.

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AJAX PROJECT

APPENDIX A QA/QC
TABLE A.8 ION BALANCE ERROR
(PAGE 1 OF 4)

		Cation				Anion				Cation				Anion						
Site ID	Date	Ca	Mg	Na	K	Cl	SO4	NO3	CaCO3	Ca	Mg	Na	K	sum+	Cl	SO4	NO3	HCO3	sum-	Error
		(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(meq/L)	(meq/L)	(meq/L)	(meq/L)	(meq/L)	(meq/L)	(meq/L)	(meq/L)	(meq/L)	(meq/L)	
AJGW01-D	Mar-08	135	180	64.2	47.5	62	763	35.3	293	7E-03	1E-02	3E-03	1E-03	2.6E-02	2E-03	2E-02	1E-03	5E-03	2.4E-02	4.0%
AJGW01-D	Jun-10	139	188	63.3	50.1	41.6	835	25.7	254	7E-03	2E-02	3E-03	1E-03	2.6E-02	1E-03	2E-02	8E-04	4E-03	2.4E-02	5.8%
AJGW02-D	Jul-08	53.2	26.7	72.1	29.5	3.38	367	0.0025	59.8	3E-03	2E-03	3E-03	8E-04	8.7E-03	1E-04	8E-03	8E-08	1E-03	8.7E-03	0.1%
AJGW02-D	Jun-10	96.1	12.7	116	29.2	2.5	484	0.063	0.5	5E-03	1E-03	5E-03	7E-04	1.2E-02	7E-05	1E-02	2E-06	8E-06	1.0E-02	6.8%
AJGW02-S	Jul-08	177	157	280	30.7	152	2020	0.35	469	9E-03	1E-02	1E-02	8E-04	3.5E-02	4E-03	4E-02	1E-05	8E-03	5.4E-02	21.8%
AJGW02-S	Sep-08	203	211	279	25.8	104	1260	0.25	688	1E-02	2E-02	1E-02	7E-04	4.0E-02	3E-03	3E-02	8E-06	1E-02	4.0E-02	0.2%
AJGW03-D	Jul-08	73.3	97.8	64.6	17.6	8.29	415	0.0025	292	4E-03	8E-03	3E-03	5E-04	1.5E-02	2E-04	9E-03	8E-08	5E-03	1.4E-02	4.6%
AJGW03-D	Sep-08	73.8	97.9	64.2	17.7	7.25	414	0.0025	281	4E-03	8E-03	3E-03	5E-04	1.5E-02	2E-04	9E-03	8E-08	5E-03	1.3E-02	5.5%
AJGW03-D	Jun-10	79.3	109	69.1	19.4	7.3	446	0.025	277	4E-03	9E-03	3E-03	5E-04	1.6E-02	2E-04	9E-03	8E-07	5E-03	1.4E-02	7.9%
AJGW03-D	Aug-10	78	106	68.8	19.1	9.1	458	0.025	275	4E-03	9E-03	3E-03	5E-04	1.6E-02	3E-04	1E-02	8E-07	5E-03	1.4E-02	5.9%
AJGW03-D	Nov-10	74.8	99.4	66.8	18.1	8.1	459	0.025	275	4E-03	8E-03	3E-03	5E-04	1.5E-02	2E-04	1E-02	8E-07	5E-03	1.4E-02	3.3%
AJGW03-D	Mar-11	75.8	100	67.6	17.8	9.9	457	0.025	276	4E-03	8E-03	3E-03	5E-04	1.5E-02	3E-04	1E-02	8E-07	5E-03	1.4E-02	3.7%
AJGW03-D	May-11	77.7	102	67.6	17.6	11.1	465	0.025	286	4E-03	8E-03	3E-03	5E-04	1.6E-02	3E-04	1E-02	8E-07	5E-03	1.5E-02	3.2%
AJGW03-D	Jul-11	76.1	104	62.9	17.6	10.7	496	0.078	287	4E-03	9E-03	3E-03	5E-04	1.6E-02	3E-04	1E-02	3E-06	5E-03	1.5E-02	0.7%
AJGW03-D	Nov-11	76	102	69.5	20.2	8.3	463	0.074	272	4E-03	8E-03	3E-03	5E-04	1.6E-02	2E-04	1E-02	2E-06	4E-03	1.4E-02	4.6%
AJGW03-D	Feb-12	73	100	63.5	18.7	8.5	428	0.025	282	4E-03	8E-03	3E-03	5E-04	1.5E-02	2E-04	9E-03	8E-07	5E-03	1.4E-02	4.6%
AJGW03-D	Jun-12	75.1	98.8	57.4	16.9	8.7	448	0.025	272	4E-03	8E-03	2E-03	4E-04	1.5E-02	2E-04	9E-03	8E-07	4E-03	1.4E-02	2.7%
AJGW03-D	Aug-12	77.8	106	67.1	20.5	9.6	460	0.025	284	4E-03	9E-03	3E-03	5E-04	1.6E-02	3E-04	1E-02	8E-07	5E-03	1.5E-02	5.1%
AJGW03-D	Dec-12	73.9	103	62.3	18.8	9.1	466	0.025	279	4E-03	8E-03	3E-03	5E-04	1.5E-02	3E-04	1E-02	8E-07	5E-03	1.5E-02	2.7%
AJGW03-D	Mar-13	75.2	104	57.8	18.7	8.4	451	0.025	275	4E-03	9E-03	3E-03	5E-04	1.5E-02	2E-04	9E-03	8E-07	5E-03	1.4E-02	4.0%
AJGW03-D	May-13	70	93.1	55.6	17.2	8.9	419	0.025	257	3E-03	8E-03	2E-03	4E-04	1.4E-02	3E-04	9E-03	8E-07	4E-03	1.3E-02	3.0%
AJGW03-D	Aug-13	78.9	99.6	62.6	18.4	9.2	464	0.025	293	4E-03	8E-03	3E-03	5E-04	1.5E-02	3E-04	1E-02	8E-07	5E-03	1.5E-02	2.0%
AJGW03-D	Nov-13	75.1	104	63.3	18.5	9.2	462	0.025	289	4E-03	9E-03	3E-03	5E-04	1.6E-02	3E-04	1E-02	8E-07	5E-03	1.5E-02	3.0%
AJGW03-D	Mar-14	76.5	105	58.9	18.3	8.9	462	0.025	279	4E-03	9E-03	3E-03	5E-04	1.5E-02	3E-04	1E-02	8E-07	5E-03	1.4E-02	3.5%
AJGW03-D	May-14	71.6	103	61.5	17.1	9.4	466	0.025	288	4E-03	8E-03	3E-03	4E-04	1.5E-02	3E-04	1E-02	8E-07	5E-03	1.5E-02	1.6%
AJGW03-D	Jun-14	77.6	103	60.8	19.1	11	468	0.025	294	4E-03	8E-03	3E-03	5E-04	1.5E-02	3E-04	1E-02	8E-07	5E-03	1.5E-02	2.0%
AJGW03-D	Sep-14	75.7	102	64.6	18.4	9.7	471	0.025	278	4E-03	8E-03	3E-03	5E-04	1.5E-02	3E-04	1E-02	8E-07	5E-03	1.5E-02	2.7%
AJGW04-D	Sep-08	96.8	46.9	379	42.4	41	642	0.125	523	5E-03	4E-03	2E-02	1E-03	2.6E-02	1E-03	1E-02	4E-06	9E-03	2.3E-02	6.4%
AJGW04-D	Nov-08	77.2	36.9	341	39.3	40	751	0.125	384	4E-03	3E-03	1E-02	1E-03	2.3E-02	1E-03	2E-02	4E-06	6E-03	2.3E-02	0.7%
AJGW05-S	Apr-08	251	109	217	26	31	1450	0.675	82.1	1E-02	9E-03	9E-03	7E-04	3.2E-02	9E-04	3E-02	2E-05	1E-03	3.2E-02	1.3%
AJGW05-S	Sep-08	205	116	344	36.6	25	1570	0.25	141	1E-02	1E-02	1E-02	9E-04	3.6E-02	7E-04	3E-02	8E-06	2E-03	3.6E-02	0.1%
AJGW05-S	Nov-08	196	118	218	29.8	30	1260	0.125	155	1E-02	1E-02	9E-03	8E-04	3.0E-02	8E-04	3E-02	4E-06	3E-03	3.0E-02	0.2%
AJGW05-S	Jun-10	186	121	208	32.4	20	1290	0.05	174	9E-03	1E-02	9E-03	8E-04	2.9E-02	6E-04	3E-02	2E-06	3E-03	3.0E-02	2.0%
AJGW06-D	Apr-08	35.7	14.7	91.6	2.1	1.51	241	0.0025	84.9	2E-03	1E-03	4E-03	5E-05	7.0E-03	4E-05	5E-03	8E-08	1E-03	6.5E-03	4.3%
AJGW06-D	Jul-08	29.9	13.1	90	2	1.55	235	0.0025	79.9	1E-03	1E-03	4E-03	5E-05	6.5E-03	4E-05	5E-03	8E-08	1E-03	6.2E-03	2.3%
AJGW06-D	Sep-08	34.8	15.9	87.2	1	1.56	247	0.0025	91.8	2E-03	1E-03	4E-03	3E-05	6.9E-03	4E-05	5E-03	8E-08	2E-03	6.7E-03	1.3%
AJGW06-D	Nov-08	34	15.6	83.7	1	1.39	234	0.0025	94.9	2E-03	1E-03	4E-03	3E-05	6.6E-03	4E-05	5E-03	8E-08	2E-03	6.5E-03	1.4%
AJGW06-D	May-10	37.1	16.4	91.2	1	1.72	239	0.0025	109	2E-03	1E-03	4E-03	3E-05	7.2E-03	5E-05	5E-03	8E-08	2E-03	6.8E-03	2.7%
AJGW06-D	Aug-10	39.7	18.1	97	1	2.5	252	0.025	109	2E-03	1E-03	4E-03	3E-05	7.7E-03	7E-05	5E-03	8E-07	2E-03	7.1E-03	4.1%
AJGW06-D	Nov-10	37.7	17.5	97.3	1	1.96	237	0.0025	107	2E-03	1E-03	4E-03	3E-05	7.6E-03	6E-05	5E-03	8E-08	2E-03	6.7E-03	5.8%
AJGW06-D	Mar-11	41.3	19	100	1	2.5	249	0.025	123	2E-03	2E-03	4E-03	3E-05	8.0E-03	7E-05	5E-03	8E-07	2E-03	7.3E-03	4.8%
AJGW06-D	May-11	44	20.4	102	1	4.1	259	0.0125	126	2E-03	2E-03	4E-03	3E-05	8.3E-03	1E-04	5E-03	4E-07	2E-03	7.6E-03	4.8%
AJGW06-D	Jul-11	44.1	19.6	95.6	1	3.5	278	0.0125	125	2E-03	2E-03	4E-03	3E-05	8.0E-03	1E-04	6E-03	4E-07	2E-03	7.9E-03	0.4%
AJGW06-D	Dec-12	40.7	18.1	93.3	1.36	2.5	265	0.025	112	2E-03	1E-03	4E-03	3E-05	7.6E-03	7E-05	6E-03	8E-07	2E-03	7.4E-03	1.3%
AJGW06-D	Mar-13	40.6	18.3	87.5	1.38	2.13	258	0.0025	159	2E-03	2E-03	4E-03	4E-05	7.4E-03	6E-05	5E-03	8E-08	3E-03	8.0E-03	4.3%
AJGW06-D	May-13	42.1	18.8	84.7	1.45	2.5	270	0.025	115	2E-03	2E-03	4E-03	4E-05	7.4E-03	7E-05	6E-03	8E-07	2E-03	7.6E-03	1.4%
AJGW06-D	Aug-13	41.2	18.2	89.7	1.35	1.25	265	0.0125	122	2E-03	1E-03	4E-03	3E-05	7.5E-03	4E-05	6E-03	4E-07	2E-03	7.6E-03	0.4%
AJGW06-D	Nov-13	40.1	17.4	87.6	1.36	3.3	278	0.0125	117	2E-03	1E-03	4E-03	3E-05	7.3E-03	9E-05	6E-03	4E-07	2E-03	7.8E-03	3.5%
AJGW06-D	Mar-14	41.6	17.8	89.4	1.39	2.5	274	0.025	106	2E-03	1E-03	4E-03	4E-05	7.5E-03	7E-05	6E-03	8E-07	2E-03	7.5E-03	0.3%
AJGW06-D	May-14	41.5	18.7	90.4	1.34	2.51	258	0.0025	108	2E-03	2E-03	4E-03	3E-05	7.6E-03	7E-05	5E-03	8E-08	2E-03	7.2E-03	2.5%
AJGW06-D	Jun-14	41.1	18.6	86.7	1.38	2.67	260	0.0102	112	2E-03	2E-03	4E-03	4E-05	7.4E-03	8E-05	5E-03	3E-07	2E-03	7.3E-03	0.4%
AJGW06-D	Sep-14	40	17.4	94.5	1.21	2.5	277	0.025	113	2E-03	1E-03	4E-03	3E-05	7.6E-03	7E-05	6E-03	8E-07	2E-03	7.7E-03	0.8%
AJGW07-D	Apr-08	100	48.1	40.6	7.9	5.85	288	0.0724	217	5E-03	4E-03	2E-03	2E-04	1.1E-02	2E-04	6E-03	2E-06	4E-03	9.7E-03	5.8%
AJGW07-D	Jul-08	92.3	47.6	41.7	8	5.94	289	0.0264	208	5E-03	4E-03	2E-03	2E-04	1.1E-02	2E-04	6E-03	9E-07	3E-03	9.6E-03	4.7%
AJGW07-D	Sep-08	97.7	48.2	39.3	8.2	5.7	283	0.0413	214	5E-03	4E-03	2E-03	2E-04	1.1E-02	2E-04	6E-03	1E-06	4E-03	9.6E-03	5.9%
AJGW07-D	Nov-08	92.4	46.8	41.6	8.9	5.86	273	0.0025	224	5E-03	4E-03	2E-03	2E-04	1.0E-02	2E-04	6E-03	8E-08	4E-03	9.5E-03	4.9%
AJGW07-D	Jun-10	90.5	46.1	39.5	7.7	4.3	258	0.0125	228	5E-03	4E-03	2E-03	2E-04	1.0E-02	1E-04	5E-03	4E-07	4E-03	9.2E-03	5.1%
AJGW07-D	Nov-10	88.8	45.2	42.5	8.4	2.5	264	0.025	211	4E-03	4E-03	2E-03	2E-04	1.0E-02	7E-05	5E-03	8E-07	3E-03	9.0E-03	6.2%
AJGW07-D	Mar-11	88.1	44.6	41.4	7.7	6.8	251	0.025	227	4E-03	4E-03	2E-03	2E-04	1.0E-02	2E-04	5E-03	8E-07	4E-03	9.1E-03	4.8%
AJGW07-D	May-11	89.6	45.9	41.5	7.6	5.8	262	0.0125	230	4E-03	4E-03	2E-03	2E-04	1.0E-02	2E-04	5E-03	4E-07	4E-03	9.4E-03	4.4%
AJGW07-D	Jul-11	90.2	46.1	38.6	8	5.6	291	0.025	220	5E-03	4E-03	2E-03	2E-04	1.0E-02	2E-04	6E-03	8E-07	4E-03	9.8E-03	1.8%
AJGW07-D	Oct-11	86.1	48	42.2	8.65	2.5	274	0.025	232	4E-03	4E-03	2E-03	2E-04	1.0E-02	7E-05	6E-03	8E-07	4E-03	9.6E-03	3.6%
AJGW07-D	Feb-12	86.6	47.1	46.6	8.9	5.3	297	0.025	225	4E-03	4E-03	2E-03	2E-04	1.0E-02	1E-04	6E-03	8E-07	4E-03	1.0E-02	2.1%
AJGW07-D	Jun-12	83.3	46.1	42.3	8.04	5.2	269	0.025	219	4E-03	4E-03	2E-03	2E-04	1.0E-02	1E-04	6E-03	8E-07	4E-03	9.3E-03	3.4%
AJGW07-D	Dec-12	84.1	46.9	41.8	8.45	2.5	258	0.025	222	4E-03	4E-03	2E-03	2E-04	1.0E-02	7E-05	5E-03	8E-07	4E-03	9.1E-03	5.3%
AJGW07-D	Mar-13	83.6	46.8	42.9	8.59	2.5	271	0.025	231	4E-03	4E-03	2E-03	2E-04	1.0E-02	7E-05	6E-03	8E-07	4E-03	9.5E-03	3.1%
AJGW07-D	May-13	84	48.2	42.1	8.2	6.8	296	0.025	207	4E-03	4E-03	2E-03	2E-04	1.0E-02	2E-04	6E-03	8E-07	3E-03	9.7E-03	2.3%
AJGW07-D	Nov-13	86.1	49.8	42.8	8.68	6.3	314	0.025	216	4E-03	4E-03	2E-03	2E-04	1.0E-02	2E-04	7E-03	8E-07	4E-03	1.0E-02	1.1%
AJGW07-D	Mar-14	83.4	49.5	46.6	9.02	2.5	290	0.025	211	4E-03	4E-03	2E-03	2E-04	1.0E-02	7E-05	6E-03	8E-07	3E-03	9.6E-03	4.6%
AJGW07-D	May-14	67.1	47.5	42.8	7.75	5.3	272	0.025	209	3E-03	4E-03	2E-03	2E-04	9.3E-03	1E-04	6E-03	8E-07	3E-03	9.2E-03	0.4%
AJGW07-D	Jun-14	71.5	47.5	38.4	8.67	7.4	260	0.0125	182	4E-03	4E-03	2E-03	2E-04	9.4E-03	2E-04	5E-03	4E-07	3E-03	8.6E-03	4.2%
AJGW07-S	Apr-08	105	48.8	34.5	6.9	6.63	281	0.0383	230	5E-03	4E-03	2E-03	2E-04	1.1E-02	2E-04	6E-03	1E-06	4E-03	9.8E-03	5.4%
AJGW07-S	Jul-08	92.3	47.6	42.9	7.5	4.92	252	0.0025	268	5E-03	4E-03	2E-03	2E-04	1.1E-02	1E-04	5E-03	8E-08	4E-03	9.8E-03	3.9%
AJGW07-S	Sep-08	99.8	49.1	41.2	7.5	5.18	258	0.017	240	5E-03	4E-03	2E-03	2E-04	1.1E-02	1E-04	5E-03	5E-07	4E-03	9.5E-03	7.6%
AJGW07-S	Nov-08	94.2	48.1	41.9	8	4.89	249	0.0174	254	5E-03	4E-03	2E-03	2E-04	1.1E-02	1E-04	5E-03	6E-07	4E-03	9.5E-03	6.0%
AJGW07-S	Jun-10	91.7	50.2	44	7.6	3.8	255	0.025	266	5E-03	4E-03	2E-03	2E-04	1.1E-02	1E-04	5E-03	8E-07	4E-03	9.8E-03	5.0%
AJGW07-S	Aug-10	95.3	52	46.9	8.6	5.7	256	0.025	270	5E-03	4E-03	2E-03	2E-04	1.1E-02	2E-04	5E-03	8E-07	4E-03	9.9E-03	6.5%
AJGW07-S	3/Nov/2010	90.8	49.3	43.7	7.7	2.5	251	0.025	256	5E-03	4E-03	2E-03	2E-04	1.1E-02	7E-05	5E-03	8E-07	4E-03	9.5E-03	5.9%
AJGW07-S	Mar-11	92.5	48.1	44.7	7.6	6	252	0.025	256	5E-03	4E-03	2E-03	2E-04	1.1E-02	2E-04	5E-03	8E-07	4E-03	9.6E-03	5.4%
AJGW07-S	May-11	94.3	49.9	45.8	7.6	5.3	254	0.0125	268	5E-03	4E-03	2E-03	2E-04	1.1E-02	1E-04	5E-03	4E-07	4E-03	9.8E-03	5.6%
AJGW07-S	Jul-11	94.3	49.9	43.5	8	2.5	264	0.078	274	5E-03	4E-03	2E-03	2E-04	1.1E-02	7E-05	5E-03	3E-06	4E-03	1.0E-02	4.0%
AJGW07-S	Oct-11	93.5	50.5	42.8	7.52	2.5	263	0.025	265	5E-03	4E-03	2E-03	2E-04	1.1E-02	7E-05	5E-03	8E-07	4E-03	9.9E-03	4.7%
AJGW07-S	Feb-12	89.4	49.2	45.2	7.68	5.9	259	0.025	259	4E-03	4E-03	2E-03	2E-04	1.1E-02	2E-04	5E-03	8E-07	4E-03	9.8E-03	4.2%
AJGW07-S	Jun-12	90.8	48.2	40.8	7.07	7.9	260	0.025	254	5E-03	4E-03	2E-03	2E-04	1.0E-02	2E-04	5E-03	8E-07	4E-03	9.8E-03	3.2%
AJGW07-S	Mar-13	93	49.8	43.3	7.82	2.5	264	0.025	265	5E-03	4E-03	2E-03	2E-04	1.1E-02	7E-05	5E-03	8E-07	4E-03	9.9E-03	4.4%
AJGW07-S	May-13	90.5	49.5	41.4	7.76	5.2	262	0.025	258	5E-03	4E-03	2E-03	2E-04	1.1E-02	1E-04	5E-03	8E-07	4E-03	9.8E-03	3.7%
AJGW07-S	Nov-13	91.7	52.1	41.2	8.02	5.3	246	0.025	286	5E-03	4E-03	2E-03	2E-04	1.1E-02	1E-04	5E-03	8E-07	5E-03	1.0E-02	4.3%
AJGW07-S	Mar-14	93	50.2	42.4	8.05	2.5	247	0.025	271	5E-03	4E-03	2E-03	2E-04	1.1E-02	7E-05	5E-03	8E-07	4E-03	9.7E-03	5.7%
AJGW07-S	May-14	92	50.6	42.4	7.59	2.5	248	0.025	293	5E-03	4E-03	2E-03	2E-04	1.1E-02	7E-05	5E-03	8E-07	5E-03	1.0E-02	3.6%
AJGW07-S	Jun-14	97.4	51.3	40.1	8.32	9.4	254	0.056	271	5E-03	4E-03	2E-03	2E-04	1.1E-02	3E-04	5E-03	2E-06	4E-03	1.0E-02	5.0%
BGC14-001D	Mar-14	60.6	71.3	99.9	7.35	2.5	185	0.282	424	3E-03	6E-03	4E-03	2E-04	1.3E-02	7E-05	4E-03	9E-06	7E-03	1.1E-02	10.5%
BGC14-001D	May-14	57.1	63.6	85.3	6.51	2.5	154	0.27	437	3E-03	5E-03	4E-03	2E-04	1.2E-02	7E-05	3E-03	9E-06	7E-03	1.0E-02	6.7%
BGC14-001D	Jun-14	60.2	70.2	81.3	7.57	2.5	150	0.301	451	3E-03	6E-03	4E-03	2E-04	1.3E-02	7E-05	3E-03	1E-05	7E-03	1.1E-02	8.3%
BGC14-001D	Jul-14	58.6	66.9	81.4	7.72	2.5	147	0.313	449	3E-03	6E-03	4E-03	2E-04	1.2E-02	7E-05	3E-03	1E-05	7E-03	1.0E-02	7.4%
BGC14-001D	Aug-14	57.7	69.3	76.8	7.46	2.5	142	0.299	457	3E-03	6E-03	3E-03	2E-04	1.2E-02	7E-05	3E-03	1E-05	7E-03	1.1E-02	7.0%
BGC14-002D	Mar-14	64.4	60.4	148	8.9	6.3	419	0.025	288	3E-03	5E-03	6E-03	2E-04	1.5E-02	2E-04	9E-03	8E-07	5E-03	1.4E-02	4.3%

KGHM AJAX MINING INC.
AJAX PROJECT

APPENDIX A QA/QC
TABLE A.8 ION BALANCE ERROR
(PAGE 2 OF 4)

		Cation				Anion				Cation				Anion						
Site ID	Date	Ca	Mg	Na	K	Cl	SO4	NO3	CaCO3	Ca	Mg	Na	K	sum+	Cl	SO4	NO3	HCO3	sum-	Error
		(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(meq/L)	(meq/L)	(meq/L)	(meq/L)	(meq/L)	(meq/L)	(meq/L)	(meq/L)	(meq/L)	(meq/L)	
BGC14-002D	May-14	63.1	55.3	148	8.31	7.1	405	0.025	291	3E-03	5E-03	6E-03	2E-04	1.4E-02	2E-04	8E-03	8E-07	5E-03	1.3E-02	3.4%
BGC14-002D	Jun-14	62.6	58.9	131	9.26	6	418	0.025	287	3E-03	5E-03	6E-03	2E-04	1.4E-02	2E-04	9E-03	8E-07	5E-03	1.4E-02	1.2%
BGC14-002D	Jul-14	59.9	59	132	8.91	5.5	399	0.025	287	3E-03	5E-03	6E-03	2E-04	1.4E-02	2E-04	8E-03	8E-07	5E-03	1.3E-02	2.4%
BGC14-002D	Aug-14	59.4	60.9	136	9.55	5.4	416	0.025	290	3E-03	5E-03	6E-03	2E-04	1.4E-02	2E-04	9E-03	8E-07	5E-03	1.4E-02	2.1%
BGC14-002S	Mar-14	86.7	71.8	126	13.3	8.4	494	0.025	266	4E-03	6E-03	5E-03	3E-04	1.6E-02	2E-04	1E-02	8E-07	4E-03	1.5E-02	3.8%
BGC14-002S	May-14	73.3	63.1	128	12.7	9.2	468	0.025	262	4E-03	5E-03	6E-03	3E-04	1.5E-02	3E-04	1E-02	8E-07	4E-03	1.4E-02	1.5%
BGC14-002S	Jun-14	73.7	66.8	122	14.4	8.5	484	0.025	279	4E-03	5E-03	5E-03	4E-04	1.5E-02	2E-04	1E-02	8E-07	5E-03	1.5E-02	0.1%
BGC14-002S	Jul-14	67.8	65	116	13.2	6.8	448	0.025	260	3E-03	5E-03	5E-03	3E-04	1.4E-02	2E-04	9E-03	8E-07	4E-03	1.4E-02	1.2%
BGC14-002S	Aug-14	67.7	67	121	13.9	6.8	457	0.025	263	3E-03	6E-03	5E-03	4E-04	1.5E-02	2E-04	1E-02	8E-07	4E-03	1.4E-02	1.7%
BGC14-003D	Jun-14	5.15	2.24	163	10.2	9.33	254	0.0025	138	3E-04	2E-04	7E-03	3E-04	7.8E-03	3E-04	5E-03	8E-08	2E-03	7.8E-03	0.1%
BGC14-003D	Jul-14	5.09	2.13	166	9.95	9.2	268	0.025	135	3E-04	2E-04	7E-03	3E-04	7.9E-03	3E-04	6E-03	8E-07	2E-03	8.1E-03	0.9%
BGC14-003D	Aug-14	4.73	2.04	161	9.45	8.4	255	0.025	136	2E-04	2E-04	7E-03	2E-04	7.6E-03	2E-04	5E-03	8E-07	2E-03	7.8E-03	0.8%
BGC14-003I	Mar-14	21.3	17.5	110	9.95	3	172	0.0125	200	1E-03	1E-03	5E-03	3E-04	7.5E-03	8E-05	4E-03	4E-07	3E-03	6.9E-03	4.1%
BGC14-003I	May-14	19.8	16.7	110	9.58	2.61	165	0.0025	196	1E-03	1E-03	5E-03	2E-04	7.4E-03	7E-05	3E-03	8E-08	3E-03	6.7E-03	4.8%
BGC14-003I	Jun-14	19.1	16.4	105	9.59	2.6	169	0.0125	202	1E-03	1E-03	5E-03	2E-04	7.1E-03	7E-05	4E-03	4E-07	3E-03	6.9E-03	1.5%
BGC14-003I	Jul-14	19.1	16.7	110	9.85	2.5	158	0.025	199	1E-03	1E-03	5E-03	3E-04	7.4E-03	7E-05	3E-03	8E-07	3E-03	6.6E-03	5.3%
BGC14-003I	Aug-14	19.2	16.8	105	9.72	2.5	164	0.0025	202	1E-03	1E-03	5E-03	2E-04	7.2E-03	7E-05	3E-03	8E-08	3E-03	6.8E-03	2.6%
BGC14-003S	Mar-14	38.4	26.2	81.8	8.95	4.1	200	0.0125	182	2E-03	2E-03	4E-03	2E-04	7.9E-03	1E-04	4E-03	4E-07	3E-03	7.3E-03	3.9%
BGC14-003S	May-14	37.9	25.4	82.6	8.57	4.9	212	0.0125	182	2E-03	2E-03	4E-03	2E-04	7.8E-03	1E-04	4E-03	4E-07	3E-03	7.5E-03	1.7%
BGC14-003S	Jun-14	35.2	24.5	74	8.45	3.7	196	0.0125	183	2E-03	2E-03	3E-03	2E-04	7.2E-03	1E-04	4E-03	4E-07	3E-03	7.2E-03	0.2%
BGC14-003S	Jul-14	34.5	25.4	76	9.16	2.5	186	0.025	174	2E-03	2E-03	3E-03	2E-04	7.4E-03	7E-05	4E-03	8E-07	3E-03	6.8E-03	3.9%
BGC14-003S	Aug-14	34.3	24.9	74.6	8.66	3	180	0.0025	173	2E-03	2E-03	3E-03	2E-04	7.2E-03	8E-05	4E-03	8E-08	3E-03	6.7E-03	4.0%
BGC14-005	Apr-14	297	204	192	11.1	13	1840	0.05	159	1E-02	2E-02	8E-03	3E-04	4.0E-02	4E-04	4E-02	2E-06	3E-03	4.1E-02	1.3%
BGC14-005	May-14	294	201	171	12.1	10	1870	0.05	177	1E-02	2E-02	7E-03	3E-04	3.9E-02	3E-04	4E-02	2E-06	3E-03	4.2E-02	3.9%
BGC14-005	Jun-14	283	200	169	12.1	5	1850	0.05	163	1E-02	2E-02	7E-03	3E-04	3.8E-02	1E-04	4E-02	2E-06	3E-03	4.1E-02	3.9%
BGC14-005	Jul-14	301	202	187	13.7	5	1880	0.05	171	2E-02	2E-02	8E-03	4E-04	4.0E-02	1E-04	4E-02	2E-06	3E-03	4.2E-02	2.4%
BGC14-005	Aug-14	293	197	181	13.7	5	1890	0.05	172	1E-02	2E-02	8E-03	4E-04	3.9E-02	1E-04	4E-02	2E-06	3E-03	4.2E-02	4.0%
BGC14-006D	May-14	453	322	131	6.15	12	2740	0.05	137	2E-02	3E-02	6E-03	2E-04	5.5E-02	3E-04	6E-02	2E-06	2E-03	6.0E-02	4.1%
BGC14-006D	Jul-14	446	304	145	6.05	11	2710	0.05	108	2E-02	3E-02	6E-03	2E-04	5.4E-02	3E-04	6E-02	2E-06	2E-03	5.9E-02	4.3%
BGC14-006D	Aug-14	461	294	154	5.95	5	2720	0.05	131	2E-02	2E-02	7E-03	2E-04	5.4E-02	1E-04	6E-02	2E-06	2E-03	5.9E-02	4.3%
BGC14-006D	Sep-14	477	306	155	6.38	10	2730	0.05	135	2E-02	3E-02	7E-03	2E-04	5.6E-02	3E-04	6E-02	2E-06	2E-03	5.9E-02	3.0%
BGC14-009	Apr-14	52.8	10.6	97.1	0.79	7.5	250	0.0125	121	3E-03	9E-04	4E-03	2E-05	7.8E-03	2E-04	5E-03	4E-07	2E-03	7.4E-03	2.3%
BGC14-009	May-14	74.5	15	111	0.98	11.2	374	0.025	125	4E-03	1E-03	5E-03	3E-05	9.8E-03	3E-04	8E-03	8E-07	2E-03	1.0E-02	1.7%
BGC14-009	Jul-14	70.4	14.7	115	0.93	7.8	368	0.025	136	4E-03	1E-03	5E-03	2E-05	9.7E-03	2E-04	8E-03	8E-07	2E-03	1.0E-02	1.8%
BGC14-009	Jul-14	69.6	14.4	103	0.91	6.7	329	0.025	146	3E-03	1E-03	4E-03	2E-05	9.2E-03	2E-04	7E-03	8E-07	2E-03	9.4E-03	1.5%
BGC14-009	Aug-14	69.8	14.1	108	0.83	6.2	324	0.025	150	3E-03	1E-03	5E-03	2E-05	9.4E-03	2E-04	7E-03	8E-07	2E-03	9.4E-03	0.1%
BGC14-010	Mar-14	166	117	41.1	11.5	8.2	573	0.025	383	8E-03	1E-02	2E-03	3E-04	2.0E-02	2E-04	1E-02	8E-07	6E-03	1.8E-02	4.0%
BGC14-010	May-14	160	111	40.4	11.3	9.5	579	0.025	392	8E-03	9E-03	2E-03	3E-04	1.9E-02	3E-04	1E-02	8E-07	6E-03	1.9E-02	1.1%
BGC14-010	Jun-14	163	116	47.9	12	8.8	593	0.025	377	8E-03	1E-02	2E-03	3E-04	2.0E-02	2E-04	1E-02	8E-07	6E-03	1.9E-02	3.3%
BGC14-010	Jul-14	164	117	42.7	11.8	7.7	607	0.025	371	8E-03	1E-02	2E-03	3E-04	2.0E-02	2E-04	1E-02	8E-07	6E-03	1.9E-02	2.7%
BGC14-010	Aug-14	168	118	44.4	12.3	7.9	619	0.025	386	8E-03	1E-02	2E-03	3E-04	2.0E-02	2E-04	1E-02	8E-07	6E-03	1.9E-02	2.3%
BGC14-011D	Mar-14	7.44	9.67	200	5.17	20.2	172	0.025	321	4E-04	8E-04	9E-03	1E-04	1.0E-02	6E-04	4E-03	8E-07	5E-03	9.4E-03	3.0%
BGC14-011D	May-14	9.78	9.95	191	5.95	18.6	173	0.025	318	5E-04	8E-04	8E-03	2E-04	9.8E-03	5E-04	4E-03	8E-07	5E-03	9.3E-03	2.2%
BGC14-011D	Jun-14	10.7	10.6	191	6.18	19.5	182	0.025	331	5E-04	9E-04	8E-03	2E-04	9.9E-03	6E-04	4E-03	8E-07	5E-03	9.8E-03	0.5%
BGC14-011D	Jul-14	10.9	10.8	197	6.14	19.1	185	0.025	323	5E-04	9E-04	9E-03	2E-04	1.0E-02	5E-04	4E-03	8E-07	5E-03	9.7E-03	2.4%
BGC14-011D	Aug-14	9.49	10.4	203	5.81	19.5	189	0.025	328	5E-04	9E-04	9E-03	1E-04	1.0E-02	6E-04	4E-03	8E-07	5E-03	9.9E-03	2.2%
BGC14-011S	Mar-14	9.85	11.8	130	6.19	11.9	158	0.0125	194	5E-04	1E-03	6E-03	2E-04	7.3E-03	3E-04	3E-03	4E-07	3E-03	6.8E-03	3.3%
BGC14-011S	May-14	10.2	12.7	127	6.26	11.9	185	0.0025	179	5E-04	1E-03	6E-03	2E-04	7.2E-03	3E-04	4E-03	8E-08	3E-03	7.1E-03	0.8%
BGC14-011S	Jun-14	9.09	11.3	112	5.69	11.9	178	0.0025	157	5E-04	9E-04	5E-03	1E-04	6.4E-03	3E-04	4E-03	8E-08	3E-03	6.6E-03	1.6%
BGC14-011S	Jul-14	10.5	13	125	5.9	12.7	181	0.0125	174	5E-04	1E-03	5E-03	2E-04	7.2E-03	4E-04	4E-03	4E-07	3E-03	7.0E-03	1.4%
BGC14-011S	Aug-14	11.1	13.4	124	5.89	13.5	194	0.025	178	6E-04	1E-03	5E-03	2E-04	7.2E-03	4E-04	4E-03	8E-07	3E-03	7.3E-03	0.9%
BGC14-012D	Mar-14	71.6	131	226	6.71	5	993	0.05	219	4E-03	1E-02	1E-02	2E-04	2.4E-02	1E-04	2E-02	2E-06	4E-03	2.4E-02	0.1%
BGC14-012D	May-14	66.6	121	207	5.97	12	995	0.05	220	3E-03	1E-02	9E-03	2E-04	2.2E-02	3E-04	2E-02	2E-06	4E-03	2.5E-02	4.7%
BGC14-012D	Jun-14	71.3	135	218	6.76	5	995	0.05	213	4E-03	1E-02	9E-03	2E-04	2.4E-02	1E-04	2E-02	2E-06	3E-03	2.4E-02	0.1%
BGC14-012D	Jul-14	70.9	127	217	6.74	5	974	0.05	212	4E-03	1E-02	9E-03	2E-04	2.4E-02	1E-04	2E-02	2E-06	3E-03	2.4E-02	0.6%
BGC14-012D	Aug-14	70.1	132	208	6.66	5	985	0.05	221	3E-03	1E-02	9E-03	2E-04	2.4E-02	1E-04	2E-02	2E-06	4E-03	2.4E-02	1.5%
BGC14-012S	Mar-14	39.1	46.5	63.5	12	2.5	237	0.025	190	2E-03	4E-03	3E-03	3E-04	8.8E-03	7E-05	5E-03	8E-07	3E-03	8.1E-03	4.3%
BGC14-012S	May-14	98	110	115	17.3	14.1	671	0.025	286	5E-03	9E-03	5E-03	4E-04	1.9E-02	4E-04	1E-02	8E-07	5E-03	1.9E-02	0.9%
BGC14-012S	Jun-14	152	174	162	24.9	16	1030	0.05	406	8E-03	1E-02	7E-03	6E-04	3.0E-02	5E-04	2E-02	2E-06	7E-03	2.9E-02	1.8%
BGC14-012S	Jul-14	140	155	155	25.3	13	939	0.05	411	7E-03	1E-02	7E-03	6E-04	2.7E-02	4E-04	2E-02	2E-06	7E-03	2.7E-02	0.9%
BGC14-012S	Aug-14	128	148	155	25.4	11	860	0.05	455	6E-03	1E-02	7E-03	6E-04	2.6E-02	3E-04	2E-02	2E-06	7E-03	2.6E-02	0.5%
BGC14-013	Mar-14	12.9	5.86	75.1	2.85	5.11	82.7	0.0025	142	6E-04	5E-04	3E-03	7E-05	4.5E-03	1E-04	2E-03	8E-08	2E-03	4.2E-03	3.1%
BGC14-013	Jun-14	12.8	5.73	73.2	2.7	5.3	88.3	0.0025	141	6E-04	5E-04	3E-03	7E-05	4.4E-03	1E-04	2E-03	8E-08	2E-03	4.3E-03	0.7%
BGC14-013	Jul-14	9.62	4.41	72.8	2.25	4.98	86.1	0.0025	132	5E-04	4E-04	3E-03	6E-05	4.1E-03	1E-04	2E-03	8E-08	2E-03	4.1E-03	0.4%
BGC14-013	Jul-14	10.6	4.76	77.6	2.62	4.77	83.8	0.0025	131	5E-04	4E-04	3E-03	7E-05	4.4E-03	1E-04	2E-03	8E-08	2E-03	4.0E-03	4.0%
BGC14-013	Aug-14	9.65	4.49	75.9	2.49	4.69	82.6	0.0025	130	5E-04	4E-04	3E-03	6E-05	4.2E-03	1E-04	2E-03	8E-08	2E-03	4.0E-03	2.8%
BGC14-014D	May-14	208	145	131	16.6	18	1370	0.05	131	1E-02	1E-02	6E-03	4E-04	2.8E-02	5E-04	3E-02	2E-06	2E-03	3.1E-02	4.6%
BGC14-014D	Jul-14	216	168	127	18.4	5	1410	0.05	109	1E-02	1E-02	6E-03	5E-04	3.1E-02	1E-04	3E-02	2E-06	2E-03	3.1E-02	1.1%
BGC14-014D	Aug-14	220	168	131	17.9	5	1420	0.05	123	1E-02	1E-02	6E-03	5E-04	3.1E-02	1E-04	3E-02	2E-06	2E-03	3.2E-02	1.2%
BGC14-015D	May-14	9.05	10.1	98.6	1.26	2.6	127	0.0025	167	5E-04	8E-04	4E-03	3E-05	5.6E-03	7E-05	3E-03	8E-08	3E-03	5.5E-03	1.3%
BGC14-015D	Jul-14	9.41	11	99.2	1.29	2.68	128	0.0025	179	5E-04	9E-04	4E-03	3E-05	5.7E-03	8E-05	3E-03	8E-08	3E-03	5.7E-03	0.4%
BGC14-015D	Jul-14	10.4	11	109	1.34	2.83	131	0.0025	180	5E-04	9E-04	5E-03	3E-05	6.2E-03	8E-05	3E-03	8E-08	3E-03	5.8E-03	3.7%
BGC14-015D	Aug-14	9.86	10.7	107	1.26	2.73	130	0.0025	176	5E-04	9E-04	5E-03	3E-05	6.1E-03	8E-05	3E-03	8E-08	3E-03	5.7E-03	3.3%
BGC14-015S	May-14	42.4	60.4	33.4	7.68	2.7	121	0.0125	299	2E-03	5E-03	1E-03	2E-04	8.7E-03	8E-05	3E-03	4E-07	5E-03	7.5E-03	7.6%
BGC14-015S	Jun-14	42.6	57.5	35.3	7.38	2.5	119	0.025	296	2E-03	5E-03	2E-03	2E-04	8.6E-03	7E-05	2E-03	8E-07	5E-03	7.4E-03	7.4%
BGC14-015S	Jul-14	43.3	59	36.1	8.05	1.25	120	0.0125	296	2E-03	5E-03	2E-03	2E-04	8.8E-03	4E-05	2E-03	4E-07	5E-03	7.4E-03	8.7%
BGC14-015S	Aug-14	43.2	59.5	34.4	7.72	2.03	118	0.0025	298	2E-03	5E-03	1E-03	2E-04	8.7E-03	6E-05	2E-03	8E-08	5E-03	7.4E-03	8.3%
BGC14-016	Mar-14	61.3	78.8	22.1	2.16	2.5	135	0.025	387	3E-03	6E-03	1E-03	6E-05	1.1E-02	7E-05	3E-03	8E-07	6E-03	9.2E-03	6.7%
BGC14-016	May-14	64.4	77.4	20.9	2.33	2.5	123	0.025	388	3E-03	6E-03	9E-04	6E-05	1.1E-02	7E-05	3E-03	8E-07	6E-03	9.0E-03	8.0%
BGC14-016	Jun-14	60.2	74.1	23.3	2.25	2.5	134	0.025	383	3E-03	6E-03	1E-03	6E-05	1.0E-02	7E-05	3E-03	8E-07	6E-03	9.1E-03	5.4%
BGC14-016	Jul-14	60.7	78.6	24.2	2.24	2.5	134	0.025	395	3E-03	6E-03	1E-03	6E-05	1.1E-02	7E-05	3E-03	8E-07	6E-03	9.3E-03	6.4%
BGC14-016	Aug-14	60.6	76.9	28.9	2.33	2.5	145	0.025	380	3E-03	6E-03	1E-03	6E-05	1.1E-02	7E-05	3E-03	8E-07	6E-03	9.3E-03	6.8%
BGC14-017D	May-14	13.8	6.5	119	1.27	8.6	134	0.0125	205	7E-04	5E-04	5E-03	3E-05	6.4E-03	2E-04	3E-03	4E-07	3E-03	6.4E-03	0.3%
BGC14-017D	Jul-14	12	6.99	108	1.12	4.43	100	0.0025	210	6E-04	6E-04	5E-03	3E-05	5.9E-03	1E-04	2E-03	8E-08	3E-03	5.6E-03	2.2%
BGC14-017D	Jul-14	11.9	7.14	102	1.24	4.08	98.1	0.0025	200	6E-04	6E-04	4E-03	3E-05	5.6E-03	1E-04	2E-03	8E-08	3E-03	5.4E-03	1.9%
BGC14-017S	May-14	65	54.7	9.25	2.24	1.25	13.9	0.277	350	3E-03	5E-03	4E-04	6E-05	8.2E-03	4E-05	3E-04	9E-06	6E-03	6.1E-03	15.0%
BGC14-017S	Jun-14	65.8	56.4	9.32	2.44	0.8	13	0.245	392	3E-03	5E-03	4E-04	6E-05	8.4E-03	2E-05	3E-04	8E-06	6E-03	6.7E-03	11.0%
BGC14-017S	Jul-14	67	56.7	9.56	2.35	1.25	12.9	0.248	391	3E-03	5E-03	4E-04	6E-05	8.5E-03	4E-05	3E-04	8E-06	6E-03	6.7E-03	11.6%
BGC14-017S	Aug-14	65.3	56.5	9.87	2.3	0.81	12.8	0.259	401	3E-03	5E-03	4E-04	6E-05	8.4E-03	2E-05	3E-04	8E-06	7E-03	6.9E-03	10.0%
KAX-14-107S	Jul-14	30.3	44	150	13.9	8.2	175	0.025	424	2E-03	4E-03	7E-03	4E-04	1.2E-02	2E-04	4E-03	8E-07	7E-03	1.1E-02	5.2%
KAX-14-107S	May-14	29.7	44.1	158	13.9	8.3	162	0.025	441	1E-03	4E-03	7E-03	4E-04	1.2E-02	2E-04	3E-03	8E-07	7E-03	1.1E-02	6.5%
KAX-14-107S	Sep-14	28.6	43.3	146	14	8.2	172	0.025	437	1E-03	4E-03	6E-03	4E-04	1.2E-02	2E-04	4E-03	8E-07	7E-03	1.1E-02	3.2%
KAX-14-108S	Jul-14	57.7	82.5	234	33	22	835	0.05	194	3E-03	7E-03	1E-02	8E-04	2.1E-02	6E-04	2E-02	2E-06	3E-03	2.1E-02	1.2%
KAX-14-108S	Aug-14	56.5	81.6	246	32.2	24	873	0.05	201	3E-03	7E-03	1E-02	8E-04	2.1E-02	7E-04	2E-02	2E-06	3E-03	2.2E-02	2.5%
KAX-14-108S	Sep-14	55.2	80.8	227	33.6	18	762	0.05	195	3E-03	7E-03	1E-02	9E-04	2.0E-02	5E-04	2E-02	2E-06	3E-03	2.0E-02	1.4%
KAX-14-114S	Jun-14	31.2	50.2	150	23	17.4	340	0.025	287	2E-03	4E-03	7E-03	6E-04	1.3E-02	5E-04	7E-03	8E-07	5E-03	1.2E-02	2.1%

KGHM AJAX MINING INC.
AJAX PROJECT

APPENDIX A QA/QC
TABLE A.8 ION BALANCE ERROR
(PAGE 3 OF 4)

		Cation				Anion				Cation				Anion						
Site ID	Date	Ca	Mg	Na	K	Cl	SO4	NO3	CaCO3	Ca	Mg	Na	K	sum+	Cl	SO4	NO3	HCO3	sum-	Error
		(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(meq/L)	(meq/L)	(meq/L)	(meq/L)	(meq/L)	(meq/L)	(meq/L)	(meq/L)	(meq/L)	(meq/L)	
KAX-14-114S	Jul-14	32.9	46.3	152	24.9	15	313	0.025	334	2E-03	4E-03	7E-03	6E-04	1.3E-02	4E-04	7E-03	8E-07	5E-03	1.2E-02	1.1%
KAX-14-114S	Aug-14	32.7	48.5	159	21	20.2	310	0.064	328	2E-03	4E-03	7E-03	5E-04	1.3E-02	6E-04	6E-03	2E-06	5E-03	1.2E-02	2.6%
KAX-14-114S	Sep-14	31.5	47.2	153	20.8	14.8	310	0.025	320	2E-03	4E-03	7E-03	5E-04	1.3E-02	4E-04	6E-03	8E-07	5E-03	1.2E-02	2.1%
KAX-14-128D	Sep-14	95.8	20.9	103	31.3	13.1	291	0.025	209	5E-03	2E-03	4E-03	8E-04	1.2E-02	4E-04	6E-03	8E-07	3E-03	9.9E-03	8.9%
MW11-01S	Jul-11	36	50.3	71.4	17.7	2.5	351	0.025	129	2E-03	4E-03	3E-03	5E-04	9.5E-03	7E-05	7E-03	8E-07	2E-03	9.5E-03	0.0%
MW11-01S	Oct-11	50.7	25.5	8.3	1.35	1	17.3	0.0025	232	3E-03	2E-03	4E-04	3E-05	5.0E-03	3E-05	4E-04	8E-08	4E-03	4.2E-03	9.0%
MW11-01S	Feb-12	31.6	56.9	75.5	22.9	2.5	345	8.81	124	2E-03	5E-03	3E-03	6E-04	1.0E-02	7E-05	7E-03	3E-04	2E-03	9.6E-03	2.8%
MW11-01S	Jun-12	33.3	65	77.8	21.5	2.5	344	9.01	148	2E-03	5E-03	3E-03	5E-04	1.1E-02	7E-05	7E-03	3E-04	2E-03	9.9E-03	4.8%
MW11-01S	Aug-12	37.2	66.5	74.9	20.6	19.6	390	10.8	141	2E-03	5E-03	3E-03	5E-04	1.1E-02	6E-04	8E-03	3E-04	2E-03	1.1E-02	1.0%
MW11-01S	Dec-12	39.8	68.7	77.1	20.1	2.5	356	9.42	159	2E-03	6E-03	3E-03	5E-04	1.2E-02	7E-05	7E-03	3E-04	3E-03	1.0E-02	5.1%
MW11-01S	Mar-13	37.7	71.5	74.9	19.6	2.5	361	11.9	153	2E-03	6E-03	3E-03	5E-04	1.2E-02	7E-05	8E-03	4E-04	3E-03	1.0E-02	4.8%
MW11-01S	May-13	39.9	69.4	72.5	20	2.5	371	11.4	152	2E-03	6E-03	3E-03	5E-04	1.1E-02	7E-05	8E-03	4E-04	2E-03	1.1E-02	3.2%
MW11-01S	Aug-13	38.8	67.4	76.6	18.9	2.5	365	9.13	159	2E-03	6E-03	3E-03	5E-04	1.1E-02	7E-05	8E-03	3E-04	3E-03	1.1E-02	3.3%
MW11-01S	Nov-13	38.4	66.3	72	19.7	2.5	361	6.43	146	2E-03	5E-03	3E-03	5E-04	1.1E-02	7E-05	8E-03	2E-04	2E-03	1.0E-02	3.9%
MW11-01S	Mar-14	39.6	64.9	71.5	19.3	2.5	369	3.73	148	2E-03	5E-03	3E-03	5E-04	1.1E-02	7E-05	8E-03	1E-04	2E-03	1.0E-02	2.9%
MW11-01S	Jun-14	40.8	65.1	68.9	20.3	2.8	359	2	161	2E-03	5E-03	3E-03	5E-04	1.1E-02	8E-05	7E-03	6E-05	3E-03	1.0E-02	3.1%
MW11-01S	Sep-14	39.9	64.6	72.1	20.5	2.5	367	1.37	161	2E-03	5E-03	3E-03	5E-04	1.1E-02	7E-05	8E-03	4E-05	3E-03	1.0E-02	2.7%
MW11-02	Aug-11	84.8	52.6	551	2.7	17	1340	0.05	220	4E-03	4E-03	2E-02	7E-05	3.3E-02	5E-04	3E-02	2E-06	4E-03	3.2E-02	0.9%
MW11-02	Nov-11	92.9	56.3	627	2.31	16	1460	0.05	203	5E-03	5E-03	3E-02	6E-05	3.7E-02	5E-04	3E-02	2E-06	3E-03	3.4E-02	3.4%
MW11-02	Feb-12	86.3	51.6	528	2.66	16	1360	0.05	218	4E-03	4E-03	2E-02	7E-05	3.2E-02	5E-04	3E-02	2E-06	4E-03	3.2E-02	1.2%
MW11-02	Jun-12	88.5	55.6	547	1.61	16	1430	0.05	177	4E-03	5E-03	2E-02	4E-05	3.3E-02	5E-04	3E-02	2E-06	3E-03	3.3E-02	0.5%
MW11-02	Aug-12	91.5	56.9	530	1.37	25	1460	0.25	186	5E-03	5E-03	2E-02	4E-05	3.2E-02	7E-04	3E-02	8E-06	3E-03	3.4E-02	2.7%
MW11-02	Dec-12	84.7	53.6	538	1.22	16	1430	0.05	180	4E-03	4E-03	2E-02	3E-05	3.2E-02	5E-04	3E-02	2E-06	3E-03	3.3E-02	1.7%
MW11-02	Mar-13	83.3	54.3	542	1.14	16	1440	0.05	195	4E-03	4E-03	2E-02	3E-05	3.2E-02	5E-04	3E-02	2E-06	3E-03	3.4E-02	2.1%
MW11-02	May-13	84.5	52.2	523	1.09	17	1430	0.05	176	4E-03	4E-03	2E-02	3E-05	3.1E-02	5E-04	3E-02	2E-06	3E-03	3.3E-02	2.9%
MW11-02	Aug-13	83.1	54.9	510	1.06	15	1410	0.05	165	4E-03	5E-03	2E-02	3E-05	3.1E-02	4E-04	3E-02	2E-06	3E-03	3.2E-02	2.5%
MW11-02	Nov-13	82.1	56.1	517	1.07	16	1420	0.05	192	4E-03	5E-03	2E-02	3E-05	3.1E-02	5E-04	3E-02	2E-06	3E-03	3.3E-02	3.0%
MW11-02	Mar-14	83.7	54.5	545	1.03	16	1480	0.05	176	4E-03	4E-03	2E-02	3E-05	3.2E-02	5E-04	3E-02	2E-06	3E-03	3.4E-02	2.6%
MW11-02	Jun-14	86	55.3	533	1.02	17	1470	0.05	182	4E-03	5E-03	2E-02	3E-05	3.2E-02	5E-04	3E-02	2E-06	3E-03	3.4E-02	3.1%
MW11-02	Sep-14	83.7	53.3	564	0.95	16	1440	0.11	173	4E-03	4E-03	2E-02	2E-05	3.3E-02	5E-04	3E-02	4E-06	3E-03	3.3E-02	0.2%
MW11-04D	Jun-12	14.4	0.51	175	10.2	26.1	356	0.025	48.9	7E-04	4E-05	8E-03	3E-04	8.6E-03	7E-04	7E-03	8E-07	8E-04	9.0E-03	1.8%
MW11-04D	Dec-12	16.3	0.59	170	9.73	25.7	349	0.025	50.5	8E-04	5E-05	7E-03	2E-04	8.5E-03	7E-04	7E-03	8E-07	8E-04	8.8E-03	1.8%
MW11-04D	Aug-13	82.1	7.77	357	7.08	21	941	0.05	71.1	4E-03	6E-04	2E-02	2E-04	2.0E-02	6E-04	2E-02	2E-06	1E-03	2.1E-02	2.2%
MW11-04S	Jul-11	87.6	9.41	391	8.6	23	967	0.05	81.9	4E-03	8E-04	2E-02	2E-04	2.2E-02	6E-04	2E-02	2E-06	1E-03	2.2E-02	0.6%
MW11-04S	Oct-11	100	9.89	373	11.3	24	986	0.05	106	5E-03	8E-04	2E-02	3E-04	2.2E-02	7E-04	2E-02	2E-06	2E-03	2.3E-02	1.4%
MW11-04S	Feb-12	88.6	9.05	357	8.06	28	990	0.05	99	4E-03	7E-04	2E-02	2E-04	2.1E-02	8E-04	2E-02	2E-06	2E-03	2.3E-02	4.8%
MW11-04S	Jun-12	83.8	8.85	382	7.8	24	972	0.05	91.8	4E-03	7E-04	2E-02	2E-04	2.2E-02	7E-04	2E-02	2E-06	2E-03	2.2E-02	1.6%
MW11-04S	Aug-12	85.4	7.91	340	7.29	23	934	0.05	80.9	4E-03	7E-04	1E-02	2E-04	2.0E-02	6E-04	2E-02	2E-06	1E-03	2.1E-02	3.7%
MW11-04S	Dec-12	75.5	7.8	343	7.39	22	921	0.13	84.5	4E-03	6E-04	1E-02	2E-04	2.0E-02	6E-04	2E-02	4E-06	1E-03	2.1E-02	4.1%
MW11-04S	Mar-13	81.7	7.8	343	7.28	22	952	0.05	75.7	4E-03	6E-04	1E-02	2E-04	2.0E-02	6E-04	2E-02	2E-06	1E-03	2.2E-02	4.5%
MW11-04S	May-13	79.5	7.73	341	7.07	23	924	0.05	77.1	4E-03	6E-04	1E-02	2E-04	2.0E-02	6E-04	2E-02	2E-06	1E-03	2.1E-02	3.8%
MW11-04S	Nov-13	83.3	8.07	351	7.48	25	960	0.05	80.1	4E-03	7E-04	2E-02	2E-04	2.0E-02	7E-04	2E-02	2E-06	1E-03	2.2E-02	4.1%
MW11-04S	Mar-14	82.6	7.41	374	6.84	21	965	0.05	71.7	4E-03	6E-04	2E-02	2E-04	2.1E-02	6E-04	2E-02	2E-06	1E-03	2.2E-02	1.6%
MW11-04S	Jun-14	85.9	8.09	347	7.3	21	970	0.05	68.7	4E-03	7E-04	2E-02	2E-04	2.0E-02	6E-04	2E-02	2E-06	1E-03	2.2E-02	4.0%
MW11-04S	Sep-14	85.8	8.13	381	6.96	22	1010	0.13	53.8	4E-03	7E-04	2E-02	2E-04	2.2E-02	6E-04	2E-02	4E-06	9E-04	2.3E-02	1.9%
MW11-05D	Oct-11	86.9	88.7	134	53	27	597	0.05	275	4E-03	7E-03	6E-03	1E-03	1.9E-02	8E-04	1E-02	2E-06	5E-03	1.8E-02	3.1%
MW11-05D	Feb-12	86.8	99.4	116	25.9	19.7	560	0.025	313	4E-03	8E-03	5E-03	7E-04	1.8E-02	6E-04	1E-02	8E-07	5E-03	1.7E-02	2.5%
MW11-05D	Jun-12	82.4	108	113	11.5	15.5	518	0.025	364	4E-03	9E-03	5E-03	3E-04	1.8E-02	4E-04	1E-02	8E-07	6E-03	1.7E-02	2.9%
MW11-05D	Aug-12	92.8	108	151	11.4	14.4	509	0.025	431	5E-03	9E-03	7E-03	3E-04	2.0E-02	4E-04	1E-02	8E-07	7E-03	1.8E-02	6.0%
MW11-05D	Dec-12	80.3	102	120	9.99	10.8	456	0.025	439	4E-03	8E-03	5E-03	3E-04	1.8E-02	3E-04	9E-03	8E-07	7E-03	1.7E-02	2.5%
MW11-05D	Mar-13	81	101	113	8.43	9	399	0.073	441	4E-03	8E-03	5E-03	2E-04	1.7E-02	3E-04	8E-03	2E-06	7E-03	1.6E-02	5.1%
MW11-05D	May-13	76.9	96.6	97.1	8.15	8.5	380	0.051	416	4E-03	8E-03	4E-03	2E-04	1.6E-02	2E-04	8E-03	2E-06	7E-03	1.5E-02	4.0%
MW11-05D	Aug-13	73.7	93.6	88.9	6.36	5.4	359	0.025	419	4E-03	8E-03	4E-03	2E-04	1.5E-02	2E-04	7E-03	8E-07	7E-03	1.4E-02	3.1%
MW11-05D	Nov-13	75.6	98.2	81.2	6.05	8	353	0.025	402	4E-03	8E-03	4E-03	2E-04	1.6E-02	2E-04	7E-03	8E-07	7E-03	1.4E-02	4.6%
MW11-05D	Mar-14	73.4	93.7	78.4	6.06	7.8	344	0.119	398	4E-03	8E-03	3E-03	2E-04	1.5E-02	2E-04	7E-03	4E-06	7E-03	1.4E-02	3.6%
MW11-05D	Jun-14	75.7	94.4	72.8	5.4	2.5	339	0.025	315	4E-03	8E-03	3E-03	1E-04	1.5E-02	7E-05	7E-03	8E-07	5E-03	1.2E-02	9.4%
MW11-05D	Sep-14	70.7	89.9	68.2	4.68	2.5	327	0.06	375	4E-03	7E-03	3E-03	1E-04	1.4E-02	7E-05	7E-03	2E-06	6E-03	1.3E-02	3.6%
MW11-05S	Nov-11	103	73.8	85.4	10.2	14.9	437	0.025	268	5E-03	6E-03	4E-03	3E-04	1.5E-02	4E-04	9E-03	8E-07	4E-03	1.4E-02	4.4%
MW11-05S	Feb-12	104	84.5	118	7.79	25.1	573	0.025	286	5E-03	7E-03	5E-03	2E-04	1.7E-02	7E-04	1E-02	8E-07	5E-03	1.7E-02	0.4%
MW11-05S	Jun-12	93.7	88.1	133	6.8	26.4	573	0.025	292	5E-03	7E-03	6E-03	2E-04	1.8E-02	7E-04	1E-02	8E-07	5E-03	1.7E-02	1.2%
MW11-05S	Aug-12	100	86.8	118	7.69	16.9	511	0.025	318	5E-03	7E-03	5E-03	2E-04	1.7E-02	5E-04	1E-02	8E-07	5E-03	1.6E-02	3.4%
MW11-05S	Dec-12	89.7	83.6	118	7.96	15.3	489	0.025	339	4E-03	7E-03	5E-03	2E-04	1.7E-02	4E-04	1E-02	8E-07	6E-03	1.6E-02	1.6%
MW11-05S	Mar-13	97.7	85.8	101	7.96	12.8	450	0.078	330	5E-03	7E-03	4E-03	2E-04	1.7E-02	4E-04	9E-03	3E-06	5E-03	1.5E-02	4.4%
MW11-05S	May-13	90	82.1	99.2	7.82	13.4	433	0.025	298	4E-03	7E-03	4E-03	2E-04	1.6E-02	4E-04	9E-03	8E-07	5E-03	1.4E-02	4.9%
MW11-05S	Aug-13	89	80.7	90.1	6.26	9.8	416	0.025	284	4E-03	7E-03	4E-03	2E-04	1.5E-02	3E-04	9E-03	8E-07	5E-03	1.4E-02	5.5%
MW11-05S	Nov-13	83.8	56.5	93	1.02	11.9	415	0.025	347	4E-03	5E-03	4E-03	3E-05	1.3E-02	3E-04	9E-03	8E-07	6E-03	1.5E-02	6.4%
MW11-05S	Mar-14	92.1	82.7	76.3	7.85	7.9	399	0.051	337	5E-03	7E-03	3E-03	2E-04	1.5E-02	2E-04	8E-03	2E-06	6E-03	1.4E-02	3.0%
MW11-05S	Jun-14	93	79.5	81.3	5.65	9	415	0.025	338	5E-03	7E-03	4E-03	1E-04	1.5E-02	3E-04	9E-03	8E-07	6E-03	1.4E-02	1.5%
MW11-05S	Sep-14	88	78.5	88.4	5.59	8.8	405	0.059	330	4E-03	6E-03	4E-03	1E-04	1.5E-02	2E-04	8E-03	2E-06	5E-03	1.4E-02	2.6%
MW11-06D	Jul-11	47.6	9.39	162	1	11.8	476	0.025	48.2	2E-03	8E-04	7E-03	3E-05	1.0E-02	3E-04	1E-02	8E-07	8E-04	1.1E-02	3.8%
MW11-06D	Oct-11	42.5	8.2	156	1.08	9.1	423	0.025	42.9	2E-03	7E-04	7E-03	3E-05	9.6E-03	3E-04	9E-03	8E-07	7E-04	9.8E-03	0.8%
MW11-06D	Jun-12	119	31	234	1	12	918	0.05	38.6	6E-03	3E-03	1E-02	3E-05	1.9E-02	3E-04	2E-02	2E-06	6E-04	2.0E-02	3.6%
MW11-06D	Aug-12	164	42.9	269	1	12	1040	0.05	41.3	8E-03	4E-03	1E-02	3E-05	2.3E-02	3E-04	2E-02	2E-06	7E-04	2.3E-02	1.7%
MW11-06D	Dec-12	55.7	13.7	162	1.19	9.8	520	0.025	42.3	3E-03	1E-03	7E-03	3E-05	1.1E-02	3E-04	1E-02	8E-07	7E-04	1.2E-02	3.6%
MW11-06D	Mar-13	46.9	9.53	148	0.98	9.1	476	0.025	39.7	2E-03	8E-04	6E-03	3E-05	9.6E-03	3E-04	1E-02	8E-07	7E-04	1.1E-02	6.0%
MW11-06D	May-13	60.4	13	168	1.13	11.7	558	0.025	40.4	3E-03	1E-03	7E-03	3E-05	1.1E-02	3E-04	1E-02	8E-07	7E-04	1.3E-02	5.0%
MW11-06D	Aug-13	153	42.7	240	1.82	11	1080	0.05	41.2	8E-03	4E-03	1E-02	5E-05	2.2E-02	3E-04	2E-02	2E-06	7E-04	2.3E-02	4.1%
MW11-06D	Nov-13	167	53.6	256	2.05	14	1190	0.05	42.4	8E-03	4E-03	1E-02	5E-05	2.4E-02	4E-04	2E-02	2E-06	7E-04	2.6E-02	3.9%
MW11-06D	Apr-14	143	45.2	242	1.96	17	1000	0.05	27.8	7E-03	4E-03	1E-02	5E-05	2.1E-02	5E-04	2E-02	2E-06	5E-04	2.2E-02	0.8%
MW11-06D	Jun-14	171	54.6	253	2.15	12	1220	0.05	39.7	9E-03	4E-03	1E-02	5E-05	2.4E-02	3E-04	3E-02	2E-06	7E-04	2.6E-02	4.6%
MW11-06D	Sep-14	169	56.3	264	2.2	11	1230	0.05	39.9	8E-03	5E-03	1E-02	6E-05	2.5E-02	3E-04	3E-02	2E-06	7E-04	2.7E-02	3.8%
MW11-06S	Jul-11	176	84.3	288	8.9	38	1290	0.05	83.9	9E-03	7E-03	1E-02	2E-04	2.8E-02	1E-03	3E-02	2E-06	1E-03	2.9E-02	1.4%
MW11-06S	Oct-11	168	96.2	275	8.67	33	1290	0.05	78.4	8E-03	8E-03	1E-02	2E-04	2.8E-02	9E-04	3E-02	2E-06	1E-03	2.9E-02	1.0%
MW11-06S	Jun-12	164	96.6	272	8.3	29	1270	0.05	59.5	8E-03	8E-03	1E-02	2E-04	2.8E-02	8E-04	3E-02	2E-06	1E-03	2.8E-02	0.1%
MW11-06S	Aug-12	167	90.4	275	9	31	1280	0.05	77.2	8E-03	7E-03	1E-02	2E-04	2.8E-02	9E-04	3E-02	2E-06	1E-03	2.9E-02	1.5%
MW11-06S	Dec-12	170	74.2	261	8.71	29	1310	0.05	77.4	8E-03	6E-03	1E-02	2E-04	2.6E-02	8E-04	3E-02	2E-06	1E-03	2.9E-02	5.8%
MW11-06S	Mar-13	175	75.9	255	7.91	28	1320	0.05	75.3	9E-03	6E-03	1E-02	2E-04	2.6E-02	8E-04	3E-02	2E-06	1E-03	3.0E-02	5.8%
MW11-06S	May-13	171	94.1	255	8.34	31	1340	0.05	72.8	9E-03	8E-03	1E-02	2E-04	2.8E-02	9E-04	3E-02	2E-06	1E-03	3.0E-02	4.1%
MW11-06S	Aug-13	170	89.4	253	8.09	28	1300	0.05	74.4	8E-03	7E-03	1E-02	2E-04	2.7E-02	8E-04	3E-02	2E-06	1E-03	2.9E-02	3.6%
MW11-06S	Nov-13	169	92.9	257	8.19	30	1300	0.05	76.8	8E-03	8E-03	1E-02	2E-04	2.7E-02	8E-04	3E-02	2E-06	1E-03	2.9E-02	3.0%
MW11-06S	Apr-14	175	96.8	269	8.73	34	1320	0.05	104	9E-03	8E-03	1E-02	2E-04	2.9E-02	1E-03	3E-02	2E-06	2E-03	3.0E-02	2.6%
MW11-06S	Jun-14	175	94.1	264	8.87	28	1330	0.05	54.7	9E-03	8E-03	1E-02	2E-04	2.8E-02	8E-04	3E-02	2E-06	9E-04	2.9E-02	2.1%
MW11-06S	Sep-14	170	93	262	7.94	29	1310	0.1	56.2	8E-03	8E-03	1E-02	2E-04	2.8E-02	8E-04	3E-02	3E-06	9E-04	2.9E-02	2.3%
MW11-07D	Jul-11	71.1	32.1	255	4.7	16.5	695	0.025	126	4E-03	3E-03	1E-02	1E-04	1.7E-02	5E-04	1E-02	8E-07	2E-03	1.7E-02	1.2%
MW11-07D	Oct-11	69.8	30.4	237	3.32	17	714	0.05	124	3E-03	3E-03	1E-02	8E-05	1.6E-02	5E-04	1E-02	2E-06	2E-03	1.7E-02	3.0%
MW11-07D	Feb-12	68.2	29	261	3.23	19.9	688	0.025	132	3E-03	2E-03	1E-02	8E-05	1.7E-02	6E-04	1E-02	8E-07	2E-03	1.7E-02	0.5%

KGHM AJAX MINING INC.
AJAX PROJECT

APPENDIX A QA/QC
TABLE A.8 ION BALANCE ERROR
(PAGE 4 OF 4)

		Cation				Anion				Cation				Anion					
Site ID	Date	Ca	Mg	Na	K	Cl	SO4	NO3	CaCO3	Ca	Mg	Na	K	sum+	Cl	SO4	NO3	HCO3	sum-	Error
		(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(meq/L)	(meq/L)	(meq/L)	(meq/L)	(meq/L)	(meq/L)	(meq/L)	(meq/L)	(meq/L)	(meq/L)	
MW11-07D	Jun-12	68	27.9	241	2.5	21	711	0.05	120	3E-03	2E-03	1E-02	6E-05	1.6E-02	6E-04	1E-02	2E-06	2E-03	1.7E-02	3.4%
MW11-07D	Dec-12	63.7	26.5	243	3.5	17	683	0.05	126	3E-03	2E-03	1E-02	9E-05	1.6E-02	5E-04	1E-02	2E-06	2E-03	1.7E-02	2.3%
MW11-07D	Mar-13	64.9	28.1	214	2.74	15.5	676	0.025	195	3E-03	2E-03	9E-03	7E-05	1.5E-02	4E-04	1E-02	8E-07	3E-03	1.8E-02	8.5%
MW11-07D	May-13	65.1	26.8	223	2.39	18.4	722	0.025	112	3E-03	2E-03	1E-02	6E-05	1.5E-02	5E-04	2E-02	8E-07	2E-03	1.7E-02	6.7%
MW11-07D	Aug-13	62.5	26.8	217	2.31	14.7	678	0.025	119	3E-03	2E-03	9E-03	6E-05	1.5E-02	4E-04	1E-02	8E-07	2E-03	1.6E-02	5.3%
MW11-07D	Nov-13	58.9	26.2	220	7.49	17	673	0.025	134	3E-03	2E-03	1E-02	2E-04	1.5E-02	5E-04	1E-02	8E-07	2E-03	1.7E-02	5.8%
MW11-07D	Mar-14	62.5	25.9	249	8.11	15.5	670	0.025	128	3E-03	2E-03	1E-02	2E-04	1.6E-02	4E-04	1E-02	8E-07	2E-03	1.6E-02	0.6%
MW11-07D	Jun-14	63.6	26.9	228	10	16	708	0.05	131	3E-03	2E-03	1E-02	3E-04	1.6E-02	5E-04	1E-02	2E-06	2E-03	1.7E-02	5.4%
MW11-07D	Sep-14	64.6	26.9	232	8.7	15.5	673	0.025	134	3E-03	2E-03	1E-02	2E-04	1.6E-02	4E-04	1E-02	8E-07	2E-03	1.7E-02	2.8%
MW11-07S	Aug-11	46.5	39.3	206	2.7	10.9	530	0.05	170	2E-03	3E-03	9E-03	7E-05	1.5E-02	3E-04	1E-02	2E-06	3E-03	1.4E-02	1.6%
MW11-07S	Oct-11	48.7	38.2	210	2.03	10.5	578	0.025	167	2E-03	3E-03	9E-03	5E-05	1.5E-02	3E-04	1E-02	8E-07	3E-03	1.5E-02	1.0%
MW11-07S	Feb-12	49.3	40	214	5.79	11.2	579	0.025	182	2E-03	3E-03	9E-03	1E-04	1.5E-02	3E-04	1E-02	8E-07	3E-03	1.5E-02	0.5%
MW11-07S	Jun-12	42.3	40.7	207	2.2	10.8	551	0.025	161	2E-03	3E-03	9E-03	6E-05	1.5E-02	3E-04	1E-02	8E-07	3E-03	1.4E-02	0.4%
MW11-07S	Dec-12	48.6	40.3	215	2.2	11.3	616	0.074	155	2E-03	3E-03	9E-03	6E-05	1.5E-02	3E-04	1E-02	2E-06	3E-03	1.6E-02	1.7%
MW11-07S	Mar-13	38.9	36.2	188	1.41	9	494	0.1	177	2E-03	3E-03	8E-03	4E-05	1.3E-02	3E-04	1E-02	3E-06	3E-03	1.3E-02	1.2%
MW11-07S	May-13	40.3	36.9	187	1.25	10.7	480	0.025	204	2E-03	3E-03	8E-03	3E-05	1.3E-02	3E-04	1E-02	8E-07	3E-03	1.4E-02	1.6%
MW11-07S	Aug-13	89.7	48.2	40.6	7.61	2.5	243	0.025	284	4E-03	4E-03	2E-03	2E-04	1.0E-02	7E-05	5E-03	8E-07	5E-03	9.8E-03	3.1%
MW11-07S	Nov-13	44.2	39.8	204	1.44	12.9	594	0.025	170	2E-03	3E-03	9E-03	4E-05	1.4E-02	4E-04	1E-02	8E-07	3E-03	1.6E-02	3.8%
MW11-07S	Mar-14	49.7	39.8	219	1.72	11.2	587	0.025	163	2E-03	3E-03	1E-02	4E-05	1.5E-02	3E-04	1E-02	8E-07	3E-03	1.5E-02	0.4%
MW11-07S	Jun-14	44.4	39.7	206	1.63	10.9	539	0.066	183	2E-03	3E-03	9E-03	4E-05	1.4E-02	3E-04	1E-02	2E-06	3E-03	1.5E-02	0.2%
MW11-07S	Sep-14	43.5	39.8	197	1.31	10	519	0.025	194	2E-03	3E-03	9E-03	3E-05	1.4E-02	3E-04	1E-02	8E-07	3E-03	1.4E-02	0.8%
MW11-08D	Aug-11	32.1	27.1	341	26.1	15	696	0.05	204	2E-03	2E-03	1E-02	7E-04	1.9E-02	4E-04	1E-02	2E-06	3E-03	1.8E-02	2.9%
MW11-08D	Nov-11	30.6	25.5	296	13.2	12	626	0.05	219	2E-03	2E-03	1E-02	3E-04	1.7E-02	3E-04	1E-02	2E-06	4E-03	1.7E-02	0.4%
MW11-08D	Feb-12	30.9	24.9	300	12.6	15	626	0.05	234	2E-03	2E-03	1E-02	3E-04	1.7E-02	4E-04	1E-02	2E-06	4E-03	1.7E-02	1.0%
MW11-08D	Jun-12	28.7	25.5	281	11.4	14	578	0.05	233	1E-03	2E-03	1E-02	3E-04	1.6E-02	4E-04	1E-02	2E-06	4E-03	1.6E-02	0.6%
MW11-08D	Aug-12	25.1	24.6	271	10	11	553	0.05	237	1E-03	2E-03	1E-02	3E-04	1.5E-02	3E-04	1E-02	2E-06	4E-03	1.6E-02	1.3%
MW11-08D	Dec-12	23.7	23.9	284	9.91	9.2	538	0.025	235	1E-03	2E-03	1E-02	3E-04	1.6E-02	3E-04	1E-02	8E-07	4E-03	1.5E-02	1.4%
MW11-08D	Mar-13	23.2	24.7	274	10.4	8.8	530	0.025	225	1E-03	2E-03	1E-02	3E-04	1.5E-02	2E-04	1E-02	8E-07	4E-03	1.5E-02	1.3%
MW11-08D	May-13	22.2	25.9	274	10.2	8.4	535	0.025	216	1E-03	2E-03	1E-02	3E-04	1.5E-02	2E-04	1E-02	8E-07	4E-03	1.5E-02	1.7%
MW11-08D	Aug-13	21.5	25.4	264	9.89	8	530	0.025	213	1E-03	2E-03	1E-02	3E-04	1.5E-02	2E-04	1E-02	8E-07	3E-03	1.5E-02	0.5%
MW11-08D	Nov-13	21.3	25.6	254	11.2	9.6	528	0.025	231	1E-03	2E-03	1E-02	3E-04	1.5E-02	3E-04	1E-02	8E-07	4E-03	1.5E-02	1.8%
MW11-08D	Apr-14	22.4	26.4	251	9.87	14.6	535	0.025	223	1E-03	2E-03	1E-02	3E-04	1.4E-02	4E-04	1E-02	8E-07	4E-03	1.5E-02	2.5%
MW11-08D	Jun-14	22.2	26.2	243	10.4	8.7	526	0.025	219	1E-03	2E-03	1E-02	3E-04	1.4E-02	2E-04	1E-02	8E-07	4E-03	1.5E-02	2.4%
MW11-08D	Sep-14	21.3	25.3	256	9.84	8.8	535	0.025	232	1E-03	2E-03	1E-02	3E-04	1.5E-02	2E-04	1E-02	8E-07	4E-03	1.5E-02	2.2%
MW11-09D	Aug-11	25.8	5.21	381	3.8	32	705	0.12	116	1E-03	4E-04	2E-02	1E-04	1.8E-02	9E-04	1E-02	4E-06	2E-03	1.7E-02	2.5%
MW11-09D	Oct-11	33.3	7.02	432	3.82	41	830	0.05	163	2E-03	6E-04	2E-02	1E-04	2.1E-02	1E-03	2E-02	2E-06	3E-03	2.1E-02	0.0%
MW11-09D	Feb-12	19.5	4.37	331	1.75	21	672	0.05	134	1E-03	4E-04	1E-02	4E-05	1.6E-02	6E-04	1E-02	2E-06	2E-03	1.7E-02	3.1%
MW11-09D	Jun-12	22	5.13	352	1.68	30	713	0.05	143	1E-03	4E-04	2E-02	4E-05	1.7E-02	8E-04	1E-02	2E-06	2E-03	1.8E-02	3.3%
MW11-09D	Aug-12	18.6	4.39	320	1.69	20	662	0.17	145	9E-04	4E-04	1E-02	4E-05	1.5E-02	6E-04	1E-02	5E-06	2E-03	1.7E-02	4.6%
MW11-09D	Dec-12	17	4.01	327	1.44	17	650	0.05	144	8E-04	3E-04	1E-02	4E-05	1.5E-02	5E-04	1E-02	2E-06	2E-03	1.6E-02	2.9%
MW11-09D	Mar-13	17.1	4.05	318	1.34	17	673	0.05	137	9E-04	3E-04	1E-02	3E-05	1.5E-02	5E-04	1E-02	2E-06	2E-03	1.7E-02	5.3%
MW11-09D	May-13	16.7	4.17	340	1.33	20	657	0.05	142	8E-04	3E-04	1E-02	3E-05	1.6E-02	6E-04	1E-02	2E-06	2E-03	1.7E-02	1.8%
MW11-09D	Aug-13	17.1	4.05	325	1.24	15	636	0.05	143	9E-04	3E-04	1E-02	3E-05	1.5E-02	4E-04	1E-02	2E-06	2E-03	1.6E-02	2.1%
MW11-09D	Mar-14	18.4	4.44	335	1.3	16	624	0.05	185	9E-04	4E-04	1E-02	3E-05	1.6E-02	5E-04	1E-02	2E-06	3E-03	1.6E-02	1.8%
MW11-09D	Jun-14	15.8	3.82	303	1.1	14	599	0.025	173	8E-04	3E-04	1E-02	3E-05	1.4E-02	4E-04	1E-02	8E-07	3E-03	1.6E-02	4.6%
MW11-09D	Sep-14	16.2	3.87	319	1.11	13.5	571	0.025	171	8E-04	3E-04	1E-02	3E-05	1.5E-02	4E-04	1E-02	8E-07	3E-03	1.5E-02	0.1%
MW11-09S	Aug-11	39.9	9.05	456	1	36	979	0.05	153	2E-03	7E-04	2E-02	3E-05	2.3E-02	1E-03	2E-02	2E-06	3E-03	2.4E-02	2.8%
MW11-09S	Oct-11	37.5	7.95	418	1.59	23	881	0.05	134	2E-03	7E-04	2E-02	4E-05	2.1E-02	6E-04	2E-02	2E-06	2E-03	2.1E-02	1.1%
MW11-09S	Feb-12	32.5	7.04	399	1.25	23	859	0.05	139	2E-03	6E-04	2E-02	3E-05	2.0E-02	6E-04	2E-02	2E-06	2E-03	2.1E-02	3.0%
MW11-09S	Jun-12	29.8	7.16	397	1	24	874	0.05	121	1E-03	6E-04	2E-02	3E-05	1.9E-02	7E-04	2E-02	2E-06	2E-03	2.1E-02	3.7%
MW11-09S	Dec-12	29.8	6.78	394	1.03	19	841	0.05	117	1E-03	6E-04	2E-02	3E-05	1.9E-02	5E-04	2E-02	2E-06	2E-03	2.0E-02	1.9%
MW11-09S	Mar-13	30.2	7.01	387	1.14	19	876	0.05	124	2E-03	6E-04	2E-02	3E-05	1.9E-02	5E-04	2E-02	2E-06	2E-03	2.1E-02	4.7%
MW11-09S	May-13	30.6	7.12	407	1.03	20	866	0.05	123	2E-03	6E-04	2E-02	3E-05	2.0E-02	6E-04	2E-02	2E-06	2E-03	2.1E-02	1.9%
MW11-09S	Aug-13	29.9	7.01	398	0.99	19	865	0.05	111	1E-03	6E-04	2E-02	3E-05	1.9E-02	5E-04	2E-02	2E-06	2E-03	2.0E-02	2.4%
MW11-09S	Mar-14	29.5	6.88	387	1	20	872	0.05	110	1E-03	6E-04	2E-02	3E-05	1.9E-02	6E-04	2E-02	2E-06	2E-03	2.1E-02	4.1%
MW11-09S	Jun-14	30.5	7.2	374	1.02	21	881	0.05	129	2E-03	6E-04	2E-02	3E-05	1.8E-02	6E-04	2E-02	2E-06	2E-03	2.1E-02	6.7%
MW11-09S	Sep-14	30.4	7.14	398	1.04	21	852	0.05	122	2E-03	6E-04	2E-02	3E-05	1.9E-02	6E-04	2E-02	2E-06	2E-03	2.0E-02	2.2%
MW11-10D	Dec-11	262	213	161	14.8	5	1720	0.05	208	1E-02	2E-02	7E-03	4E-04	3.8E-02	1E-04	4E-02	2E-06	3E-03	3.9E-02	1.8%
MW11-10D	Feb-12	244	195	183	17.9	5	1640	0.05	152	1E-02	2E-02	8E-03	5E-04	3.7E-02	1E-04	3E-02	2E-06	2E-03	3.7E-02	0.2%
MW11-10D	Jun-12	265	214	163	15.2	5	1660	0.05	174	1E-02	2E-02	7E-03	4E-04	3.8E-02	1E-04	3E-02	2E-06	3E-03	3.8E-02	1.0%
MW11-10D	Aug-12	262	224	167	14.3	5	1740	0.05	228	1E-02	2E-02	7E-03	4E-04	3.9E-02	1E-04	4E-02	2E-06	4E-03	4.0E-02	1.2%
MW11-10D	Dec-12	272	195	169	14.4	5	1700	0.05	243	1E-02	2E-02	7E-03	4E-04	3.7E-02	1E-04	4E-02	2E-06	4E-03	4.0E-02	2.8%
MW11-10D	Mar-13	280	226	163	13.9	5	1740	0.05	245	1E-02	2E-02	7E-03	4E-04	4.0E-02	1E-04	4E-02	2E-06	4E-03	4.0E-02	0.5%
MW11-10D	May-13	284	219	166	14.3	5	1730	0.05	230	1E-02	2E-02	7E-03	4E-04	4.0E-02	1E-04	4E-02	2E-06	4E-03	4.0E-02	0.2%
MW11-10D	Aug-13	288	218	163	14.4	5	1720	0.05	247	1E-02	2E-02	7E-03	4E-04	4.0E-02	1E-04	4E-02	2E-06	4E-03	4.0E-02	0.3%
MW11-10D	Nov-13	299	223	161	13.8	10	1760	0.05	266	1E-02	2E-02	7E-03	4E-04	4.1E-02	3E-04	4E-02	2E-06	4E-03	4.1E-02	0.8%
MW11-10D	Mar-14	281	217	156	14.4	5	1730	0.05	245	1E-02	2E-02	7E-03	4E-04	3.9E-02	1E-04	4E-02	2E-06	4E-03	4.0E-02	1.4%
MW11-10D	Jun-14	291	218	159	13.7	5	1770	0.05	256	1E-02	2E-02	7E-03	4E-04	4.0E-02	1E-04	4E-02	2E-06	4E-03	4.1E-02	1.8%
MW11-10D	Sep-14	278	201	174	14.1	5	1720	0.05	245	1E-02	2E-02	8E-03	4E-04	3.8E-02	1E-04	4E-02	2E-06	4E-03	4.0E-02	2.1%
MW12-01	Dec-12	245	279	151	41.7	18	1670	88.2	175	1E-02	2E-02	7E-03	1E-03	4.3E-02	5E-04	3E-02	3E-03	3E-03	4.1E-02	2.2%
MW12-01	Mar-13	243	247	147	41.2	17	1660	80.6	178	1E-02	2E-02	6E-03	1E-03	4.0E-02	5E-04	3E-02	3E-03	3E-03	4.1E-02	0.8%
MW12-01	May-13	238	295	145	41.3	19	1700	88.4	173	1E-02	2E-02	6E-03	1E-03	4.4E-02	5E-04	4E-02	3E-03	3E-03	4.2E-02	2.2%
MW12-01	Aug-13	242	296	144	44.1	17	1720	89.4	177	1E-02	2E-02	6E-03	1E-03	4.4E-02	5E-04	4E-02	3E-03	3E-03	4.2E-02	2.0%
MW12-01	Nov-13	240	310	150	49.5	20	1730	88.5	189	1E-02	3E-02	7E-03	1E-03	4.5E-02	6E-04	4E-02	3E-03	3E-03	4.3E-02	3.1%
MW12-01	Mar-14	258	317	151	46.8	17	1790	90.3	183	1E-02	3E-02	7E-03	1E-03	4.7E-02	5E-04	4E-02	3E-03	3E-03	4.4E-02	3.4%
MW12-01	Jun-14	254	298	132	45.8	19	1790	88	185	1E-02	2E-02	6E-03	1E-03	4.4E-02	5E-04	4E-02	3E-03	3E-03	4.4E-02	0.5%
MW12-01	Sep-14	245	318	148	46.6	17	1800	87.1	179	1E-02	3E-02	6E-03	1E-03	4.6E-02	5E-04	4E-02	3E-03	3E-03	4.4E-02	2.6%
MW12-02	Dec-12	233	278	153	38.1	15	1650	76.3	171	1E-02	2E-02	7E-03	1E-03	4.2E-02	4E-04	3E-02	2E-03	3E-03	4.0E-02	2.5%
MW12-02	Mar-13	235	279	160	44.8	15	1710	69.6	171	1E-02	2E-02	7E-03	1E-03	4.3E-02	4E-04	4E-02	2E-03	3E-03	4.1E-02	2.0%
MW12-02	May-13	232	291	159	39.4	17	1720	83.4	176	1E-02	2E-02	7E-03	1E-03	4.3E-02	5E-04	4E-02	3E-03	3E-03	4.2E-02	1.9%
MW12-02	Aug-13	243	291	145	37.9	15	1740	82.6	174	1E-02	2E-02	6E-03	1E-03	4.3E-02	4E-04	4E-02	3E-03	3E-03	4.2E-02	1.4%
MW12-02	Nov-13	235	303	154	42.4	19	1720	77.7	186	1E-02	2E-02	7E-03	1E-03	4.4E-02	5E-04	4E-02	3E-03	3E-03	4.2E-02	2.9%
MW12-02	Mar-14	230	321	154	56.9	15	1800	77.7	169	1E-02	3E-02	7E-03	1E-03	4.6E-02	4E-04	4E-02	3E-03	3E-03	4.3E-02	3.2%
MW12-02	Jun-14	238	296	135	44.2	16	1790	83.3	188	1E-02	2E-02	6E-03	1E-03	4.3E-02	5E-04	4E-02	3E-03	3E-03	4.3E-02	0.3%
MW12-02	Sep-14	237	312	152	41	17	1760	87.2	181	1E-02	3E-02	7E-03	1E-03	4.5E-02	5E-04	4E-02	3E-03	3E-03	4.3E-02	2.6%
MW12-04	Dec-12	43.4	72	92.2	43.7	6.5	436	0.025	219	2E-03	6E-03	4E-03	1E-03	1.3E-02	2E-04	9E-03	8E-07	4E-03	1.3E-02	1.4%
MW12-04	Mar-13	51.4	71.4	101	42.3	5.6	457	0.025	222	3E-03	6E-03	4E-03	1E-03	1.4E-02	2E-04	1E-02	8E-07	4E-03	1.3E-02	2.2%
MW12-04	May-13	40.3	62.8	116	37.5	14.6	436	0.025	193	2E-03	5E-03	5E-03	1E-03	1.3E-02	4E-04	9E-03	8E-07	3E-03	1.3E-02	2.1%
MW12-04	Aug-13	41.7	70.6	106	36.9	18.5	443	0.025	182	2E-03	6E-03	5E-03	9E-04	1.3E-02	5E-04	9E-03	8E-07	3E-03	1.3E-02	2.7%
MW12-04	Nov-13	45.4	79.4	97.8	40.8	23.1	471	0.025	202	2E-03	7E-03	4E-03	1E-03	1.4E-02	7E-04	1E-02	8E-07	3E-03	1.4E-02	1.2%
MW12-04	Apr-14	47.6	82.7	91.3	39	28.2	484	0.025	185	2E-03	7E-03	4E-03	1E-03	1.4E-02	8E-04	1E-02	8E-07	3E-03	1.4E-02	0.9%
MW12-04	Jun-14	45.7	73.1	92.4	39.7	24.6	436	0.025	186	2E-03	6E-03	4E-03	1E-03	1.3E-02	7E-04	9E-03	8E-07	3E-03	1.3E-02	1.9%
MW12-04	Sep-14	45.7	74.1	89.9	38	26.6	423	0.025	189	2E-03	6E-03	4E-03	1E-03	1.3E-02	8E-04	9E-03	8E-07	3E-03	1.3E-02	2.3%

Site ID Analytes	MDL	EQUIPMENT BLANK 17-Jul-07	EQUIPMENT BLANK 1-May-08	EQUIPMENT BLANK 2-Jun-10	EQUIPMENT BLANK 24-Aug-10	EQUIPMENT BLANK 31-Aug-10	EQUIPMENT BLANK 7-Feb-13	EQUIPMENT BLANK 4-Sep-13	EQUIPMENT BLANK 7-Nov-13	EQUIPMENT BLANK 27-May-14	EQUIPMENT BLANK 10-Jun-14	EQUIPMENT BLANK 27-Jun-14	EQUIPMENT BLANK 8-Jul-14
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1		**1.1**	**2.7**	**2.3**								
Alkalinity (Total as CaCO3)	1 to 2	<2	<2	<2	<2	<2	<2	<2	<2	<1	**1.1**	**1.4**	<1
Bicarbonate Alkalinity	1 to 2		<2	<2	<2		<2	<2	<2	<1	**1.1**	**1.4**	<1
Carbonate Alkalinity	1 to 2		<2	<2	<2		<2	<2	<2	<1	<1	<1	<1
Color TCU	5	<5	<5	<5	<5	<5	<5	<5					
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	<0.7	<0.7	<1.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Hydroxide Alkalinity	1 to 2		<2	<2	<2		<2	<2	<2	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1	5.56	5.55	5.78	5.87	5.82	5.82	5.32	5.89	5.86	5.5	6.04	5.56
Specific Conductivity µS/cm	2									<2		**2.8**	<2
Total Dissolved Solids	1 to 2	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Total Suspended Solids	3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Turbidity NTU	0.1		**0.2**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.23**	<0.1
Dissolved Anions													
Bromide	0.05 to 2.495	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.05
Chloride	0.5 to 1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5
Fluoride	0.02 to 0.4		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.03	<0.02
Sulphate	0.5 to 1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5
Nutrients													
Ammonia (Total)	0.005 to 0.05	**0.022**	<0.02	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrate (as N)	0.005 to 0.1	**0.0075**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.005
Nitrite (as N)	0.001 to 0.02	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.02	<0.001
Nitrogen (Dissolved)	0.05 to 0.1						<0.05	<0.1					
Nitrogen (Total)	0.0025 to 0.11			<0.06	<0.0025	<0.05	<0.05	<0.05	<0.05				
Nitrogen Kjeldahl (Total)	0.05 to 0.2	<0.05	**0.07**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Orthophosphate (Dissolved)	0.001 to 0.01	<0.001	**0.0012**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	**0.0019**	<0.001
Phosphorus - Dissolved	0.002 to 0.02				<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Phosphorus - Total	0.002 to 0.02	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	<0.002	<0.002	<0.002	<0.002
Cyanide													
Cyanide (Free)	0.005		<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005		<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	0.001 to 0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	**0.003**	<0.001	<0.001
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium	5E-005 to 0.02	<0.02	<0.02	<0.02	<0.02	<0.02	**0.000121**	**0.000102**	<0.00005	**0.00047**	**0.000107**	**0.000106**	**0.000065**
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2						<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium	1E-005 to 8.5E-005	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.069**	<0.05	<0.05	<0.05	**0.113**	**0.079**	**0.058**
Chromium	0.0001 to 0.018	<0.001	**0.0025**	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	0.0002 to 0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Dissolved Cadmium (by saltwater extraction)	0.00002												
Iron	0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Magnesium	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Manganese	5E-005 to 0.0015	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	**0.000073**	**0.000144**	<0.00005	**0.000159**	**0.000214**	**0.000141**	**0.000116**
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel	0.0005 to 0.005	<0.001	**0.0015**	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Phosphorus	0.05 to 0.3						<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	0.05 to 2	<2	<2	<2	<2	<2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Selenium	0.0001 to 0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	**0.00085**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Silicon	0.05						<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	<2	<2	<2	<2	<2	<0.05	**0.301**	<0.05	<0.05	<0.05	<0.05	<0.05
Strontium	0.0001 to 0.005						**0.00051**	**0.00043**	<0.0002	**0.00082**	**0.00073**	**0.00051**	**0.00034**
Sulphur	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Vanadium	0.001 to 0.03	<0.03	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	0.001 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.005	**0.0037**	**0.0011**	<0.001	<0.001	<0.001	**0.002**	<0.001
Total Metals													
Aluminum	0.003 to 0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium	5E-005 to 0.02	<0.02	<0.02	<0.02	<0.02	<0.02	**0.000068**	**0.000107**	<0.00005	**0.000141**	<0.00005	**0.000193**	**0.000066**
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2						<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium	1E-005 to 8.5E-005	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	**0.087**	<0.05	<0.05	<0.05	**0.105**	<0.05
Chromium	0.0001 to 0.005	<0.001	**0.0025**	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	0.0005 to 0.007	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Iron	0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	**0.000191**	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Magnesium	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Manganese	5E-005 to 0.0015	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.00005	**0.000309**	<0.00005	<0.00005	**0.00014**	**0.000238**	**0.00012**
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel	0.0005 to 0.005	<0.001	**0.002**	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Phosphorus	0.05 to 0.3						<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	0.05 to 2	<2	<2	<2	<2	<2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Selenium	0.0001 to 0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	**0.00028**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Silicon	0.05						<0.05	<0.05	**0.06**	<0.05	<0.05	<0.05	<0.05
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	<2	<2	<2	<2	<2	<0.05	**0.373**	<0.05	<0.05	<0.05	**0.07**	<0.05
Strontium	0.0001 to 0.005						**0.00028**	**0.00107**	<0.0002	<0.0002	**0.00026**	**0.00067**	**0.00024**
Sulphur	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002												
Uranium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Vanadium	0.001 to 0.03	<0.03	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	0.003 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics													
Carbon Organic (Dissolved)	0.5 to 5	<0.5	<0.5	**0.23**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon Organic (Total)	0.5 to 5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nitrogen Organic (Dissolved)	0.05 to 0.26						<0.05	<0.1					
Nitrogen Organic (Total)	0.05 to 0.3						<0.06	<0.06					
Percent of sample > MDL		**2.70%**	**9.76%**	**2.44%**	**1.19%**	**0.00%**	**7.22%**	**13.54%**	**1.08%**	**4.30%**	**9.78%**	**16.13%**	**7.53%**
ALS LAB ID		**L532402-7**	**L624954-3**	**L893847-3**	**L924086-6**	**L927439-3**	**L1266846-2**	**L1358222-3**	**L1389979-9**	**L1461081-5**	**L1469099-5**	**L1478913-5**	**L1483419-2**

Site ID	EQUIPMENT BLANK	EQUIPMENT BLANK	EQUIPMENT BLANK	EQUIPMENT BLANK	EQUIPMENT BLANK	EQUIPMENT BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK
Analytes	22-Jul-14	7-Aug-14	20-Aug-14	15-Sep-14	24-Sep-14	30-Sep-14	3-May-07	26-Mar-08	9-Jul-08	7-Sep-08	19-Nov-08	2-Jun-10	5-Jun-10	5-Jun-10
Physical Tests														
Acidity to pH 8.3 (as CaCO3)								**1.1**	<1		<1	**2.5**	**2.8**	<1
Alkalinity (Total as CaCO3)	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Bicarbonate Alkalinity	<2	<2	<2	<2	<2	<2		<2	<2	<2	<2	<2	<2	<2
Carbonate Alkalinity	<2	<2	<2	<2	<2	<2		<2	<2	<2	<2	<2	<2	<2
Color TCU								<5	<5	<5	<5	<5	<5	<5
Hardness as CaCO3 (Dissolved)	<0.5	**0.85**	<0.5	<0.5	**2.45**	**0.89**	<0.7	<0.7	<0.7	<0.7	<0.7	<1.1	<1.1	<1.1
Hydroxide Alkalinity	<2	<2	<2	<2	<2	<2		<2	<2	<2	<2	<2	<2	<2
pH (unitless)	6.11	5.73	5.8	5.98	5.19	5.74	5.83	5.6	6.32	5.63	5.6	5.74	5.63	8.27
Specific Conductivity µS/cm		<2	<2	<2	<2	<2								
Total Dissolved Solids	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Total Suspended Solids	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Turbidity NTU	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		**0.44**	**0.65**	<0.1		<0.1	<0.1	<0.1
Dissolved Anions														
Bromide	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloride	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Sulphate	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nutrients														
Ammonia (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.02	<0.02	<0.02	<0.02	<0.005	<0.01	<0.01	<0.01
Nitrate (as N)	<0.005	<0.005	<0.005	<0.005	**0.0066**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrite (as N)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen (Dissolved)														
Nitrogen (Total)												<0.06	<0.06	<0.06
Nitrogen Kjeldahl (Total)	<0.05	**0.075**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.05
Orthophosphate (Dissolved)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001
Phosphorus - Dissolved	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002					<0.002		<0.002	<0.002
Phosphorus - Total	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002		
Cyanide														
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005			<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005			<0.005	<0.005	<0.005
Dissolved Metals														
Aluminum	<0.001	**0.0019**	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Antimony	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Barium	**0.000105**	**0.000394**	**0.000213**	**0.000077**	**0.0001**	**0.000145**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005								
Boron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	<0.00001	**0.000034**	<0.00001	<0.00001	<0.00001	<0.00001	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
Calcium	**0.088**	**0.144**	<0.05	**0.067**	**0.343**	**0.127**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Copper	<0.0002	**0.00173**	<0.0002	<0.0002	**0.00079**	<0.0002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Dissolved Cadmium (by saltwater extraction)														
Iron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Lithium	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Magnesium	<0.1	**0.12**	<0.1	<0.1	**0.39**	**0.14**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Manganese	**0.000062**	**0.000747**	**0.000104**	**0.000178**	<0.00005	**0.000489**	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001
Molybdenum	<0.00005	<0.00005	<0.00005	<0.00005	**0.00424**	**0.000477**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nickel	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05								
Potassium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<2	<2	<2	<2	<2	<2	<2
Selenium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05								
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	**0.073**	**0.115**	<0.05	<0.05	**0.302**	**0.118**	<2	<2	<2	<2	<2	<2	<2	<2
Strontium	**0.00058**	**0.00089**	**0.00023**	**0.00036**	**0.00479**	**0.00112**								
Sulphur	<0.5	<0.5	<0.5	<0.5	**0.83**	<0.5								
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.03	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	<0.001	**0.0047**	**0.0013**	<0.001	**0.0013**	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Metals														
Aluminum	<0.003	**0.0031**	<0.003	<0.003	<0.003	<0.003	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005
Antimony	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005
Arsenic	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005
Barium	**0.000241**	**0.000157**	**0.000064**	<0.00005	<0.00005	**0.000063**	<0.02	<0.02	<0.02	<0.02	<0.02		<0.02	<0.02
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005								
Boron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1	<0.1
Cadmium	<0.00001	**0.000019**	<0.00001	<0.00001	<0.00001	<0.00001	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017		<0.000017	<0.000017
Calcium	**0.089**	**0.068**	<0.05	<0.05	**0.385**	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1	<0.1
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001
Cobalt	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003		<0.0003	<0.0003
Copper	<0.0005	**0.00078**	<0.0005	<0.0005	**0.00053**	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001
Iron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.03	<0.03	<0.03	<0.03	<0.03		<0.03	<0.03
Lead	<0.00005	**0.000061**	<0.00005	<0.00005	<0.00005	<0.00005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005
Lithium	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005
Magnesium	<0.1	<0.1	<0.1	<0.1	**0.37**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1	<0.1
Manganese	**0.000089**	**0.000453**	**0.000099**	**0.000112**	**0.000086**	**0.000134**	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003		<0.0003	<0.0003
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002		<0.00001	<0.00001
Molybdenum	<0.00005	<0.00005	<0.00005	<0.00005	**0.00276**	**0.00007**	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001
Nickel	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05								
Potassium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<2	<2	<2	<2		<2	<2
Selenium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001
Silicon	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05								
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002		<0.00002	<0.00002
Sodium	**0.078**	**0.055**	<0.05	<0.05	**0.21**	<0.05	<2	<2	<2	<2	<2		<2	<2
Strontium	**0.00059**	**0.00043**	<0.0002	<0.0002	**0.00315**	**0.00021**								
Sulphur	<0.5	<0.5	<0.5	<0.5	**0.68**	<0.5								
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01
Total Cadmium (by saltwater extraction)														
Uranium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.03	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001
Zinc	<0.003	**0.0032**	<0.003	<0.003	<0.003	<0.003	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005
Organics														
Carbon Organic (Dissolved)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.2	<0.2
Carbon Organic (Total)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5								
Nitrogen Organic (Dissolved)														
Nitrogen Organic (Total)														
Percent of sample > MDL	**10.87%**	**23.66%**	**6.45%**	**5.38%**	**20.43%**	**12.90%**	**0.00%**	**2.44%**	**1.22%**	**0.00%**	**0.00%**	**1.89%**	**1.20%**	**0.00%**
ALS LAB ID	**L1490937-6**	**L1499202-1**	**L1506521-7**	**L1518246-8**	**L1523985-8**	**L1526071-8**	**L502198-6**	**L614221-4**	**L653846-3**	**L679955-7**	**L710078-2**	**L893847-6**	**L894378-5**	**L894378-6**

Site ID	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK
Analytes	**28-Mar-11**	**14-Apr-11**	**20-Apr-11**	**28-Apr-11**	**5-May-11**	**12-May-11**	**18-May-11**	**1-Jun-11**	**28-Jun-11**	**27-Jul-11**	**28-Jul-11**	**4-Aug-11**	**31-Aug-11**	**28-Sep-11**	**26-Oct-11**
Physical Tests															
Acidity to pH 8.3 (as CaCO3)	**1.4**						**1.2**			**2.8**	**3.1**			**2.1**	
Alkalinity (Total as CaCO3)	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2		<2	<2	<2
Bicarbonate Alkalinity	<2		<2				<2			<2				<2	
Carbonate Alkalinity	<2		<2				<2			<2				<2	
Color TCU	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	<5	<5
Hardness as CaCO3 (Dissolved)	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Hydroxide Alkalinity	<2		<2				<2			<2				<2	
pH (unitless)	5.81	6.01	5.81	5.64	5.62		5.74	5.6	6.03	5.6	5.89	5.62	7.37	5.66	5.63
Specific Conductivity µS/cm												<2			
Total Dissolved Solids	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	<10	<10
Total Suspended Solids	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Turbidity NTU	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.12**	<0.1	<0.1	<0.1	<0.1		<0.1		<0.1
Dissolved Anions															
Bromide	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloride	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Sulphate	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nutrients															
Ammonia (Total)	<0.005	<0.005	<0.005	**0.0062**	<0.005	<0.005	<0.005	**0.009**	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005
Nitrate (as N)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrite (as N)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen (Dissolved)				**0.1**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.05
Nitrogen (Total)	<0.0025	<0.0025	<0.05	<0.0025	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	
Nitrogen Kjeldahl (Total)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		**0.052**	<0.05	<0.05
Orthophosphate (Dissolved)	<0.001						<0.001	<0.001	<0.001		<0.001		<0.001		<0.001
Phosphorus - Dissolved		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	<0.002	<0.002
Phosphorus - Total	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	<0.002	<0.002
Cyanide															
Cyanide (Free)	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005			<0.005	<0.005
Cyanide (Total)	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005			<0.005	<0.005
Cyanide (WAD)	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005			<0.005	<0.005
Dissolved Metals															
Aluminum	<0.005	<0.005	<0.005	<0.005	<0.005			<0.005	<0.005	<0.005	<0.005	<0.003	<0.005	<0.005	<0.003
Antimony	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005			<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	<0.0005	<0.0005	<0.0001
Arsenic	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005			<0.0005	<0.0005	<0.0005	<0.0005	<0.00003	<0.0005	<0.0005	<0.0001
Barium	<0.02	<0.02	<0.02	<0.02	<0.02			<0.02	<0.02	<0.02	<0.02	<0.00005	<0.02	<0.02	<0.00005
Beryllium	<0.001	<0.001	<0.001	<0.001	<0.001			<0.001	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0001
Bismuth	<0.2	<0.2	<0.2	<0.2	<0.2			<0.2	<0.2	<0.2	<0.2	<0.0005	<0.2	<0.2	<0.0005
Boron	<0.1	<0.1	<0.1	<0.1	<0.1			<0.1	<0.1	<0.1	<0.1	<0.001	<0.1	<0.1	<0.01
Cadmium	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017			<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.00001
Calcium	<0.1	<0.1	<0.1	<0.1	<0.1			<0.1	<0.1	<0.1	<0.1	<0.02	<0.1	<0.1	<0.05
Chromium	<0.001	<0.001	<0.001	<0.001	<0.001			<0.001	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001
Cobalt	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003			<0.0003	<0.0003	<0.0003	<0.0003	<0.0001	<0.0003	<0.0003	<0.0001
Copper	<0.001	<0.001	<0.001	<0.001	<0.001			<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0005
Dissolved Cadmium (by saltwater extraction)															
Iron	<0.03	<0.03	<0.03	<0.03	<0.03			<0.03	<0.03	<0.03	<0.03	<0.01	<0.03	<0.03	<0.03
Lead	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005			<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	<0.0005	<0.0005	<0.00005
Lithium	<0.005	<0.005	<0.005	<0.005	<0.005			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0005
Magnesium	<0.1	<0.1	<0.1	<0.1	<0.1			<0.1	<0.1	<0.1	<0.1	<0.005	<0.1	<0.1	<0.1
Manganese	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003			<0.0003	<0.0003	<0.0003	<0.0003	<0.00005	<0.0003	<0.0003	<0.00005
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	<0.001	<0.001	<0.001	<0.001	<0.001			<0.001	<0.001	<0.001	<0.001	<0.00005	<0.001	<0.001	<0.00005
Nickel	<0.001	<0.001	<0.001	<0.001	<0.001			<0.001	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0005
Phosphorus	<0.3	<0.3	<0.3	<0.3	<0.3			<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	<2	<2	<2	<2	<2			<2	<2	<2	<2	<0.05	<2	<2	<0.05
Selenium	<0.001	<0.001	<0.001	<0.001	<0.001			<0.001	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001
Silicon	<0.05	<0.05	<0.05	<0.05	<0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Silver	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002			<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00002	<0.00002	<0.00001
Sodium	<2	<2	<2	<2	<2			<2	<2	<2	<2	<0.01	<2	<2	<0.05
Strontium	<0.005	<0.005	<0.005	<0.005	<0.005			<0.005	<0.005	<0.005	<0.005	<0.0001	<0.005	<0.005	**0.00014**
Sulphur															
Thallium	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.00005	<0.0002	<0.0002	<0.00001
Tin	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005			<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01			<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.0002	<0.0002	<0.00001
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001			<0.001	<0.001	<0.001	<0.001	<0.00005	<0.001	<0.001	<0.001
Zinc	<0.005	<0.005	<0.005	<0.005	<0.005			<0.005	<0.005	<0.005	<0.005	<0.003	<0.005	<0.005	<0.003
Total Metals															
Aluminum	<0.005	<0.005	<0.005	<0.005	<0.005		**0.0174**	<0.005	<0.005	<0.005	<0.005	<0.003	<0.005	<0.005	<0.003
Antimony	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	<0.0005	<0.0005	<0.0001
Arsenic	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00003	<0.0005	<0.0005	<0.0001
Barium	<0.02	<0.02	<0.02	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.00005	<0.02	<0.02	<0.00005
Beryllium	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0001
Bismuth	<0.2	<0.2	<0.2	<0.2	<0.2		<0.2	<0.2	<0.2	<0.2	<0.2	<0.0005	<0.2	<0.2	<0.0005
Boron	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.001	<0.1	<0.1	<0.01
Cadmium	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017		<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.00001
Calcium	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.02	<0.1	<0.1	<0.05
Chromium	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001
Cobalt	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003		<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0001	<0.0003	<0.0003	<0.0001
Copper	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0005
Iron	<0.03	<0.03	<0.03	<0.03	<0.03		<0.03	<0.03	<0.03	<0.03	<0.03	<0.01	<0.03	<0.03	<0.03
Lead	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	<0.0005	<0.0005	<0.00005
Lithium	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0005
Magnesium	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.005	<0.1	<0.1	<0.1
Manganese	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003		**0.00135**	<0.0003	<0.0003	<0.0003	<0.0003	<0.00005	<0.0003	<0.0003	<0.00005
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.00005	<0.001	<0.001	<0.00005
Nickel	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0005
Phosphorus	<0.3	<0.3	<0.3	<0.3	<0.3		<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	<2	<2	<2	<2	<2		<2	<2	<2	<2	<2	<0.05	<2	<2	<0.05
Selenium	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.0001
Silicon	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Silver	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002		<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00002	<0.00002	<0.00001
Sodium	<2	<2	<2	<2	<2		<2	<2	<2	<2	<2	<0.01	<2	<2	<0.05
Strontium	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.0001	<0.005	<0.005	<0.0001
Sulphur															
Thallium	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00005	<0.0002	<0.0002	<0.00001
Tin	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)															
Uranium	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.0002	<0.0002	<0.00001
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.00005	<0.001	<0.001	<0.001
Zinc	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.003	<0.005	<0.005	<0.003
Organics															
Carbon Organic (Dissolved)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5
Carbon Organic (Total)		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5
Nitrogen Organic (Dissolved)				**0.094**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.05
Nitrogen Organic (Total)		<0.06		<0.06	<0.05	<0.06	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.05
Percent of sample > MDL	**1.10%**	**0.00%**	**0.00%**	**3.30%**	**0.00%**	**0.00%**	**6.45%**	**1.09%**	**0.00%**	**1.05%**	**1.08%**	**0.00%**	**1.12%**	**1.06%**	**1.10%**
ALS LAB ID	**L990458-13**	**L995583-11**	**L997645-8**	**L999654-9**	**L1002049-9**	**L1005044-10**	**L1007006-5**	**L1012627-6**	**L1025075-9**	**L1037497-2**	**L1038168-10**	**BLANK**	**L1052924-4**	**L1066047-3**	**L1077732-4**

Site ID	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK
Analytes	**3-Nov-11**	**5-Dec-11**	**6-Dec-11**	**10-Jan-12**	**14-Feb-12**	**7-Mar-12**	**10-Apr-12**	**26-Apr-12**	**4-May-12**	**11-May-12**	**16-May-12**	**24-May-12**	**12-Jul-12**	**8-Aug-12**	**30-Aug-12**
Physical Tests															
Acidity to pH 8.3 (as CaCO3)															**2.3**
Alkalinity (Total as CaCO3)	<2	<2	<2	<2	**1.8**	<2	<2	<2	<2	<2	<1	<1	<2	<1	<2
Bicarbonate Alkalinity				<2	<2	<2	<2	<2	<2	<2	<1	<1	<2	<1	
Carbonate Alkalinity				<2	<2	<2	<2	<2	<2	<2	<1	<1	<2	<1	
Color TCU	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hardness as CaCO3 (Dissolved)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Hydroxide Alkalinity				<2	<2	<2	<2	<2	<2	<2	<1	<1	<2	<1	
pH (unitless)	5.78	5.54	5.77	5.69	5.67	5.66	5.7	6.3	5.97	5.84	5.87	5.8	5.63	5.79	5.89
Specific Conductivity µS/cm															
Total Dissolved Solids	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Total Suspended Solids	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Turbidity NTU	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dissolved Anions															
Bromide	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloride	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Sulphate	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nutrients															
Ammonia (Total)	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrate (as N)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrite (as N)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen (Dissolved)	<0.05			<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Nitrogen (Total)	<0.05	<0.05	<0.05	<0.0025	<0.04	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025		<0.05	<0.05
Nitrogen Kjeldahl (Total)	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Orthophosphate (Dissolved)					<0.001			<0.001							<0.001
Phosphorus - Dissolved	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	
Phosphorus - Total	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Cyanide															
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals															
Aluminum	<0.003	<0.003		<0.003	<0.003	<0.003	<0.003		<0.003	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001
Antimony	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Beryllium	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	<0.01	<0.01		<0.01	<0.01	<0.01	<0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	<0.05	<0.05		<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chromium	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002
Dissolved Cadmium (by saltwater extraction)															
Iron	<0.03	<0.03		<0.03	<0.03	<0.03	<0.03		<0.03	<0.03	<0.03	<0.01	<0.01	<0.01	<0.01
Lead	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Magnesium	<0.1	<0.1		<0.1	<0.1	<0.1	<0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Manganese	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury	<0.00001			<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
Molybdenum	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Phosphorus	<0.3	<0.3		<0.3	<0.3	<0.3	<0.3		<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.05
Potassium	<0.05	<0.05		<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1
Selenium	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Silicon	<0.05	<0.05		<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Silver	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	<0.05	<0.05		<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Strontium	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Sulphur															
Thallium	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01		<0.01	<0.01	<0.01	<0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Vanadium	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	<0.003	<0.003		**0.013**	<0.003	<0.003	<0.003		<0.003	<0.003	<0.003	<0.001	**0.0013**	<0.001	<0.001
Total Metals															
Aluminum	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Antimony	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Iron	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.01	<0.01	<0.01	<0.01
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Magnesium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Manganese	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
Molybdenum	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Phosphorus	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.05
Potassium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1
Selenium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Silicon	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Strontium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Sulphur															
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)															
Uranium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics															
Carbon Organic (Dissolved)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon Organic (Total)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nitrogen Organic (Dissolved)	<0.05			<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Nitrogen Organic (Total)	<0.05	<0.05	<0.05	<0.06	<0.3	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	
Percent of sample > MDL	**0.00%**	**0.00%**	**0.00%**	**1.06%**	**1.05%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**1.08%**	**0.00%**	**1.15%**
ALS LAB ID	**L1081228-2**	**L1092368-6**	**L1092874-2**	**L1103104-6**	**L1114498-3**	**L1122039-9**	**L1133342-9**	**L1140194-14**	**L1143149-6**	**L1146570-7**	**L1148880-10**	**L1152500-11**	**L1178283-5**	**L1191600-6**	**L1202478-8**

Site ID	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK
Analytes	**6-Sep-12**	**11-Oct-12**	**7-Nov-12**	**2-Dec-12**	**4-Dec-12**	**7-Dec-12**	**8-Jan-13**	**5-Feb-13**	**6-Mar-13**	**8-Mar-13**	**2-Apr-13**	**7-May-13**	**23-May-13**	**5-Jun-13**	**2-Jul-13**
Physical Tests															
Acidity to pH 8.3 (as CaCO3)													**1.7**		
Alkalinity (Total as CaCO3)	<1	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<2	<2	**1.2**
Bicarbonate Alkalinity	<1	<2	<2		<2	<2	<2	<2	<2	<2	<1	<2	<2	<2	**1.2**
Carbonate Alkalinity	<1	<2	<2		<2	<2	<2	<2	<2	<2	<1	<2	<2	<2	<1
Color TCU	<5	<5	<5		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hardness as CaCO3 (Dissolved)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Hydroxide Alkalinity	<1	<2	<2		<2	<2	<2	<2	<2	<2	<1	<2	<2	<2	<1
pH (unitless)	5.47	5.63	5.82	5.74	5.78	6	6.19	5.83	5.6	6.6	6.01	5.68	5.88	6.14	5.67
Specific Conductivity µS/cm									<2		<2				<2
Total Dissolved Solids	<10	<10		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Total Suspended Solids	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Turbidity NTU	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dissolved Anions															
Bromide	<0.05	<0.05	<1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloride	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	<0.02	<0.02	<0.4	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Sulphate	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nutrients															
Ammonia (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrate (as N)	<0.005	<0.005	<0.1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrite (as N)	<0.001	<0.001	<0.02	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen (Dissolved)	<0.05	<0.05	<0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05				
Nitrogen (Total)	<0.05	<0.05	<0.11	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrogen Kjeldahl (Total)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Orthophosphate (Dissolved)		<0.001		<0.001											
Phosphorus - Dissolved	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Phosphorus - Total	<0.002	<0.002	<0.002		<0.002	<0.002		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Cyanide															
Cyanide (Free)	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals															
Aluminum	**0.0014**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Antimony	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Dissolved Cadmium (by saltwater extraction)															
Iron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Magnesium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Manganese	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Phosphorus	<0.3	<0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Selenium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Silicon	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Strontium	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Sulphur			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)															
Uranium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Total Metals															
Aluminum	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Antimony	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Iron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Magnesium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Manganese	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Phosphorus	<0.3	<0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Selenium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Silicon	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Strontium	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Sulphur			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)															
Uranium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics															
Carbon Organic (Dissolved)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon Organic (Total)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nitrogen Organic (Dissolved)	<0.05	<0.05	<0.05		<0.05	<0.05			<0.05	<0.05	<0.05				
Nitrogen Organic (Total)	<0.06	<0.06	<0.06		<0.06		<0.06	<0.06	<0.05	<0.06	<0.06				
Percent of sample > MDL	**1.06%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**1.06%**	**1.05%**	**0.00%**	**0.00%**	**1.03%**	**0.00%**	**1.06%**	**0.00%**	**2.13%**
ALS LAB ID	**L1206738-6**	**L1222966-4**	**L1235306-3**	**L1245169-5**	**L1245799-6**	**L1247459-4**	**L1256678-8**	**L1265809-8**	**L1276517-4**	**L1277099-7**	**L1285503-5**	**L1298960-12**	**L1306577-8**	**L1312719-3**	**L1326032-8**

Site ID	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK
Analytes	**7-Aug-13**	**15-Aug-13**	**5-Sep-13**	**9-Oct-13**	**7-Nov-13**	**19-Nov-13**	**9-Jan-14**	**4-Feb-14**	**13-Mar-14**	**21-Mar-14**	**21-Mar-14**	**28-Mar-14**	**3-Apr-14**	**11-Apr-14**	**24-Apr-14**
Physical Tests															
Acidity to pH 8.3 (as CaCO3)		<1	<1												
Alkalinity (Total as CaCO3)	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Bicarbonate Alkalinity	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Carbonate Alkalinity	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Color TCU	<5	<5	<5	<5			<5								
Hardness as CaCO3 (Dissolved)	<0.5		<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Hydroxide Alkalinity	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
pH (unitless)	5.6	5.73	5.66	5.92	6.15	5.73	5.5	5.9	5.63	5.75	5.5	5.77	6.13	5.78	5.74
Specific Conductivity µS/cm							<2	<2	<2	<2	<2	<2	<2	<2	<2
Total Dissolved Solids	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Total Suspended Solids	<3	<3	<3	<3	<3		<3	<3	<3		<3	<3	<3	<3	<3
Turbidity NTU	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1	<0.1	<0.1		<0.1	<0.1	<0.1	<0.1	<0.1
Dissolved Anions															
Bromide	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloride	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Sulphate	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nutrients															
Ammonia (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrate (as N)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrite (as N)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen (Dissolved)	<0.05														
Nitrogen (Total)	<0.05	<0.05	<0.05	<0.05	<0.05										
Nitrogen Kjeldahl (Total)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Orthophosphate (Dissolved)			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Phosphorus - Dissolved	<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Phosphorus - Total	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Cyanide															
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals															
Aluminum	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Antimony	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium	<0.00005	<0.00005	**0.000275**	<0.00005	<0.00005	**0.000086**	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	<0.05	<0.05	<0.05	<0.05	<0.05	**0.067**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Dissolved Cadmium (by saltwater extraction)															
Iron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Magnesium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Manganese	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001
Molybdenum	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel	**0.00058**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Selenium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Silicon	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Strontium	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Sulphur	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	<0.001	**0.0018**	**0.0018**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Metals															
Aluminum	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Antimony	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Iron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Magnesium	<0.1	<0.1	**0.14**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Manganese	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001
Molybdenum	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Selenium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Silicon	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	<0.05	<0.05	**0.21**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Strontium	<0.0002	<0.0002	**0.00069**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Sulphur	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)															
Uranium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics															
Carbon Organic (Dissolved)	<0.5	<0.5	<0.5	<0.5	<0.5	**3.2**	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5
Carbon Organic (Total)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nitrogen Organic (Dissolved)															
Nitrogen Organic (Total)															
Percent of sample > MDL	**1.06%**	**1.06%**	**5.26%**	**0.00%**	**0.00%**	**3.33%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**
ALS LAB ID	**L1344180-7**	**L1348395-3**	**L1358626-4**	**L1375698-8**	**L1389979-8**	**L1394041-3**	**L1410216-7**	**L1418933-5**	**L1432163-8**	**L1435486-4**	**L1435186-6**	**L1437642-2**	**L1439655-7**	**L1442672-12**	**L1447300-8**

Site ID	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK
Analytes	**30-Apr-14**	**7-May-14**	**8-May-14**	**13-May-14**	**21-May-14**	**2-Jun-14**	**3-Jun-14**	**4-Jun-14**	**17-Jun-14**	**18-Jun-14**	**22-Jun-14**	**2-Jul-14**	**3-Jul-14**	**16-Jul-14**	**16-Jul-14**
Physical Tests															
Acidity to pH 8.3 (as CaCO3)															
Alkalinity (Total as CaCO3)	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<2	<2	<1	<1
Bicarbonate Alkalinity	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<2	<2	<1	<1
Carbonate Alkalinity	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<2	<2	<1	<1
Color TCU		<5													
Hardness as CaCO3 (Dissolved)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Hydroxide Alkalinity	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<2	<2	<1	<1
pH (unitless)	5.69	5.62	5.86	6.09	5.56	5.98	5.87	5.19	5.43	5.58	5.39	5.9	5.91	5.63	5.61
Specific Conductivity µS/cm	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Total Dissolved Solids	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Total Suspended Solids	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Turbidity NTU	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dissolved Anions															
Bromide	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloride	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Sulphate	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nutrients															
Ammonia (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrate (as N)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrite (as N)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen (Dissolved)															
Nitrogen (Total)					<0.05										
Nitrogen Kjeldahl (Total)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Orthophosphate (Dissolved)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Phosphorus - Dissolved	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Phosphorus - Total	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Cyanide															
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals															
Aluminum	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Antimony	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	<0.05	<0.05	<0.05	**0.085**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	<0.0002	<0.0002	<0.0002	**0.00023**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Dissolved Cadmium (by saltwater extraction)															
Iron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Magnesium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Manganese	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	<0.00005	<0.00005	<0.00005	**0.000417**	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Selenium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Silicon	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	<0.05	<0.05	<0.05	**0.118**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Strontium	<0.0002	<0.0002	<0.0002	**0.00088**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Sulphur	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	**0.0014**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Metals															
Aluminum	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Antimony	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium	<0.00005	<0.00005	<0.00005	**0.000096**	<0.00005	<0.00005	<0.00005	<0.00005	**0.000212**	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	<0.0005	<0.0005	<0.0005	**0.00064**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Iron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Magnesium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Manganese	**0.000075**	<0.00005	<0.00005	**0.000096**	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	<0.00005	<0.00005	<0.00005	**0.000199**	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Selenium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Silicon	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	<0.05	<0.05	<0.05	**0.061**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Strontium	<0.0002	<0.0002	<0.0002	**0.00032**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Sulphur	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)															
Uranium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics															
Carbon Organic (Dissolved)	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5		<0.5			<0.5	<0.5	
Carbon Organic (Total)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nitrogen Organic (Dissolved)															
Nitrogen Organic (Total)															
Percent of sample > MDL	**2.15%**	**0.00%**	**0.00%**	**11.83%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**1.09%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**
ALS LAB ID	**L1449318-3**	**L1452368-3**	**L1453031-5**	**L1454705-3**	**L1458340-5**	**L1464552-2**	**L1465108-4**	**L1465478-7**	**L1472814-3**	**L1473827-9**	**L1475661-1**	**L1481200-2**	**L1481215-15**	**L1488886-2**	**L1488886-9**

Site ID	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK
Analytes	**23-Jul-14**	**28-Jul-14**	**29-Jul-14**	**5-Aug-14**	**11-Aug-14**	**15-Aug-14**	**25-Aug-14**	**27-Aug-14**	**2-Sep-14**	**2-Sep-14**	**9-Sep-14**	**30-Sep-14**	**1-May-07**	**2-Jun-10**	**4-Jun-10**
Physical Tests															
Acidity to pH 8.3 (as CaCO3)													**1.6**	**2.6**	
Alkalinity (Total as CaCO3)	<1	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<2	<2	<2
Bicarbonate Alkalinity	<1	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<2	<2	<2
Carbonate Alkalinity	<1	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<2	<2	<2
Color TCU													<5	<5	<5
Hardness as CaCO3 (Dissolved)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.7		<1.1
Hydroxide Alkalinity	<1	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<2	<2	<2
pH (unitless)	5.7	5.56	5.73	5.64	5.94	5.88	5.74	6.12	5.98	7.09	5.72	5.63	5.63	5.77	8.01
Specific Conductivity µS/cm	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2			
Total Dissolved Solids	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Total Suspended Solids	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Turbidity NTU	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1	<0.1
Dissolved Anions															
Bromide	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloride	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Sulphate	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nutrients															
Ammonia (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.02	<0.01	<0.01
Nitrate (as N)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrite (as N)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen (Dissolved)															
Nitrogen (Total)														<0.06	<0.06
Nitrogen Kjeldahl (Total)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Orthophosphate (Dissolved)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001
Phosphorus - Dissolved	<0.002	<0.002	<0.002	<0.002		<0.002	<0.002	<0.002	<0.002	**0.0021**		<0.002			
Phosphorus - Total		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Cyanide															
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals															
Aluminum	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	**0.0012**	<0.001	<0.001	<0.001	<0.001			
Antimony	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001			
Arsenic	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001			
Barium	<0.00005	<0.00005	<0.00005	<0.00005	**0.00017**	<0.00005	<0.00005	**0.000066**	**0.000105**	<0.00005	<0.00005	<0.00005			
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001			
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005			
Boron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Cadmium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001			
Calcium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05			
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001			
Cobalt	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001			
Copper	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002			
Dissolved Cadmium (by saltwater extraction)															
Iron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005			
Lithium	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005			
Magnesium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			
Manganese	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005			
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001			
Molybdenum	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005			
Nickel	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005			
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.3	<0.05	<0.05			
Potassium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1			
Selenium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001			
Silicon	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05			
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001			
Sodium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05			
Strontium	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002			
Sulphur	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5			
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001			
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001			
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
Uranium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001			
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
Zinc	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	**0.0012**	<0.001	<0.001	<0.001	<0.001			
Total Metals															
Aluminum	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.005	<0.005	<0.005
Antimony	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005
Arsenic	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005
Barium	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.02	<0.02	<0.02
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005			
Boron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.1	<0.1
Cadmium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000017	<0.000017	<0.000017
Calcium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.1	<0.1
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001
Cobalt	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0003	<0.0003	<0.0003
Copper	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001
Iron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.03	<0.03	<0.03
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0005	<0.0005	<0.0005
Lithium	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.005	<0.005
Magnesium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Manganese	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0003	<0.0003	<0.0003
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001
Molybdenum	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.001	<0.001	<0.001
Nickel	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.3	<0.05	<0.05			
Potassium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<2	<2	<2
Selenium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001
Silicon	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05			
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002
Sodium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<2	<2	<2
Strontium	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002			
Sulphur	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5			
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	<0.0002	<0.0002
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)															
Uranium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	<0.0002	<0.0002
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.03	<0.001	<0.001
Zinc	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.005	<0.005	<0.005
Organics															
Carbon Organic (Dissolved)		<0.5	<0.5		<0.5				<0.5			<0.5		<0.2	**0.21**
Carbon Organic (Total)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
Nitrogen Organic (Dissolved)															
Nitrogen Organic (Total)															
Percent of sample > MDL	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**1.09%**	**0.00%**	**0.00%**	**3.26%**	**1.08%**	**1.11%**	**0.00%**	**0.00%**	**1.96%**	**1.92%**	**1.89%**
ALS LAB ID	**L1491785-4**	**L1494516-2**	**L1494491-6**	**L1497579-3**	**L1500711-2**	**L1503481-6**	**L1508557-4**	**L1509422-4**	**L1511703-4**	**L1512652-2**	**L1516193-2**	**L1526071-7**	**L501128-6**	**L893847-5**	**L894162-2**

Site ID	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK
Analytes	**24-Aug-10**	**2-Sep-10**	**24-Nov-10**	**28-Mar-11**	**14-Apr-11**	**20-Apr-11**	**28-Apr-11**	**5-May-11**	**12-May-11**	**19-May-11**	**1-Jun-11**	**28-Jun-11**	**28-Jul-11**	**30-Aug-11**	**28-Sep-11**
Physical Tests															
Acidity to pH 8.3 (as CaCO3)	**2.3**		**1.5**	**1.2**						**3**			**3.1**		**3.4**
Alkalinity (Total as CaCO3)	<2	<2	<1	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Bicarbonate Alkalinity	<2		<1	<2		<2									<2
Carbonate Alkalinity	<2		<1	<2		<2									<2
Color TCU	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hardness as CaCO3 (Dissolved)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5
Hydroxide Alkalinity	<2		<1	<2		<2									<2
pH (unitless)	5.81	5.95	5.87	5.82	5.95	5.8	5.66	5.67		5.75	5.59	5.68	5.75	5.59	5.53
Specific Conductivity µS/cm															
Total Dissolved Solids	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Total Suspended Solids	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Turbidity NTU	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
Dissolved Anions															
Bromide	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloride	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Sulphate	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nutrients															
Ammonia (Total)	<0.005	<0.005	**0.006**	<0.005	<0.005	<0.005	**0.006**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrate (as N)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrite (as N)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen (Dissolved)							**0.1**	<0.05	<0.05	<0.05		<0.05	<0.05		<0.05
Nitrogen (Total)	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.05	<0.0025	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**0.12**	<0.05
Nitrogen Kjeldahl (Total)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**0.083**	<0.05
Orthophosphate (Dissolved)	<0.001	<0.001	<0.001	<0.001							<0.001	<0.001	<0.001		
Phosphorus - Dissolved	<0.002	<0.002			<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Phosphorus - Total	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Cyanide															
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005
Dissolved Metals															
Aluminum															
Antimony															
Arsenic															
Barium															
Beryllium															
Bismuth															
Boron															
Cadmium															
Calcium															
Chromium															
Cobalt															
Copper															
Dissolved Cadmium (by saltwater extraction)															
Iron															
Lead															
Lithium															
Magnesium															
Manganese															
Mercury															
Molybdenum															
Nickel															
Phosphorus															
Potassium															
Selenium															
Silicon															
Silver															
Sodium															
Strontium															
Sulphur															
Thallium															
Tin															
Titanium															
Uranium															
Vanadium															
Zinc															
Total Metals															
Aluminum	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Antimony	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Barium	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Beryllium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth				<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Boron	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
Calcium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Copper	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Iron	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Lead	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Lithium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Magnesium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Manganese	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nickel	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Phosphorus				<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Selenium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon				<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Silver	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Strontium				<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Sulphur															
Thallium	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)															
Uranium	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Organics															
Carbon Organic (Dissolved)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5		<0.5
Carbon Organic (Total)					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nitrogen Organic (Dissolved)							**0.094**	<0.05	<0.05	<0.05		<0.05	<0.05		<0.05
Nitrogen Organic (Total)					<0.06		<0.06	<0.05	<0.06	<0.05	<0.05	<0.05	<0.05	**0.117**	<0.05
Percent of sample > MDL	**1.82%**	**0.00%**	**3.70%**	**1.72%**	**0.00%**	**0.00%**	**5.17%**	**0.00%**	**0.00%**	**1.69%**	**0.00%**	**0.00%**	**1.69%**	**5.88%**	**1.64%**
ALS LAB ID	**L924086-5**	**L927930-8**	**L957406-5**	**L990458-5**	**L995583-12**	**L997645-7**	**L999654-8**	**L1002049-8**	**L1005044-8**	**L1007395-2**	**L1012627-7**	**L1025075-10**	**L1038168-11**	**L1052387-7**	**L1066047-8**

Site ID	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK
Analytes	**17-Oct-11**	**26-Oct-11**	**2-Dec-11**	**6-Dec-11**	**10-Jan-12**	**14-Feb-12**	**15-Feb-12**	**6-Mar-12**	**10-Apr-12**	**25-Apr-12**	**4-May-12**	**11-May-12**	**16-May-12**	**24-May-12**	**9-Jun-12**
Physical Tests															
Acidity to pH 8.3 (as CaCO3)															
Alkalinity (Total as CaCO3)	<2	<2	<2	<2	<2	**1.8**	<2	<2	<2	<2	<2	<2	<1	<1	**1.8**
Bicarbonate Alkalinity					<2	<2	<2	<2	<2	<2	<2	<2	<1	<1	**1.8**
Carbonate Alkalinity					<2	<2	<2	<2	<2	<2	<2	<2	<1	<1	<1
Color TCU	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hardness as CaCO3 (Dissolved)		<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5				<0.5		<0.5
Hydroxide Alkalinity					<2	<2	<2	<2	<2	<2	<2	<2	<1	<1	<1
pH (unitless)	5.67	5.61	5.69	5.65	5.54	5.65	5.64	5.62	5.59	5.54	5.76	5.81	5.56	5.5	6.24
Specific Conductivity µS/cm															
Total Dissolved Solids	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Total Suspended Solids	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Turbidity NTU	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dissolved Anions															
Bromide	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloride	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Sulphate	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nutrients															
Ammonia (Total)	**0.0057**	<0.005	<0.005	<0.005	<0.005	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrate (as N)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrite (as N)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen (Dissolved)													<0.05		
Nitrogen (Total)	<0.05		<0.05	<0.05	<0.0025	<0.04	<0.04	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Nitrogen Kjeldahl (Total)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Orthophosphate (Dissolved)		<0.001					<0.001								
Phosphorus - Dissolved	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Phosphorus - Total	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Cyanide															
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals															
Aluminum															
Antimony															
Arsenic															
Barium															
Beryllium															
Bismuth															
Boron															
Cadmium															
Calcium															
Chromium															
Cobalt															
Copper															
Dissolved Cadmium (by saltwater extraction)															
Iron															
Lead															
Lithium															
Magnesium															
Manganese															
Mercury															
Molybdenum															
Nickel															
Phosphorus															
Potassium															
Selenium															
Silicon															
Silver															
Sodium															
Strontium															
Sulphur															
Thallium															
Tin															
Titanium															
Uranium															
Vanadium															
Zinc															
Total Metals															
Aluminum	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.005
Antimony	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005
Arsenic	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005
Barium	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.02
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.2
Boron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1
Cadmium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000017
Calcium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Cobalt	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0003
Copper	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Iron	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.01	<0.03
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0005
Lithium	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005
Magnesium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Manganese	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0003
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.001
Nickel	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Phosphorus	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<2
Selenium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Silicon	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002
Sodium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<2
Strontium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.005
Sulphur															
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0002
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)															
Uranium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0002
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.005
Organics															
Carbon Organic (Dissolved)													<0.5		
Carbon Organic (Total)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nitrogen Organic (Dissolved)													<0.05		
Nitrogen Organic (Total)	<0.05	<0.05	<0.05	<0.05		<0.3	<0.3	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06
Percent of sample > MDL	**1.85%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**1.75%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**3.45%**
ALS LAB ID	**L1081228-1**	**L1077732-5**	**L1092368-7**	**L1092874-3**	**L1103104-5**	**L1114498-4**	**L1115110-2**	**L1122039-10**	**L1133342-10**	**L1140194-11**	**L1143149-7**	**L1146570-8**	**L1148880-11**	**L1152500-12**	**L1160966-11**

Site ID	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK
Analytes	**10-Jul-12**	**12-Jul-12**	**7-Aug-12**	**29-Aug-12**	**5-Sep-12**	**6-Sep-12**	**11-Oct-12**	**12-Oct-12**	**5-Nov-12**	**4-Dec-12**	**5-Dec-12**	**9-Jan-13**	**7-Feb-13**	**6-Mar-13**	**11-Mar-13**
Physical Tests															
Acidity to pH 8.3 (as CaCO3)				**3.1**	**2.2**			**1.1**							
Alkalinity (Total as CaCO3)	<2	<2		<2	<2	<1	<2	**1.4**	<2	<2	<2	<2	<2	<2	<2
Bicarbonate Alkalinity	<2	<2			<2	<1	<2	**1.4**	<2	<2	<2	<2	<2	<2	<2
Carbonate Alkalinity	<2	<2			<2	<1	<2	<1	<2	<2	<2	<2	<2	<2	<2
Color TCU	<5	<5		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hardness as CaCO3 (Dissolved)		<0.5		<0.5	<0.5		<0.5					<0.5	<0.5	<0.5	
Hydroxide Alkalinity	<2	<2			<2	<1	<2	<1	<2	<2	<2	<2	<2	<2	<2
pH (unitless)	5.58	5.65		5.99	7.05	5.8	5.81	5.57	5.84	6.11	6.02	5.6	6.01	6.19	5.61
Specific Conductivity µS/cm														<2	
Total Dissolved Solids	<10	<10		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Total Suspended Solids	<3	<3		<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Turbidity NTU	<0.1	<0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.11**	<0.1	<0.1	<0.1	<0.1
Dissolved Anions															
Bromide	<0.05	<0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloride	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.79**	<0.5	<0.5	<0.5	<0.5
Fluoride	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Sulphate	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.7**	<0.5	<0.5	<0.5	<0.5
Nutrients															
Ammonia (Total)	<0.005	<0.005	**0.0078**	<0.005	**0.0054**	**0.006**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrate (as N)	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	**0.0795**	<0.005	**0.688**	<0.005	<0.005	<0.005	<0.005
Nitrite (as N)	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen (Dissolved)									<0.05		<0.05	<0.05		<0.05	<0.05
Nitrogen (Total)	<0.0025			<0.05		<0.05	<0.05	<0.05	**0.079**	<0.05	**0.688**	<0.05	<0.05	<0.05	<0.05
Nitrogen Kjeldahl (Total)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Orthophosphate (Dissolved)				<0.001			<0.001	<0.001							
Phosphorus - Dissolved	<0.002	<0.002			<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Phosphorus - Total	<0.002	<0.002		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Cyanide															
Cyanide (Free)	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals															
Aluminum															
Antimony															
Arsenic															
Barium															
Beryllium															
Bismuth															
Boron															
Cadmium															
Calcium															
Chromium															
Cobalt															
Copper															
Dissolved Cadmium (by saltwater extraction)															
Iron															
Lead															
Lithium															
Magnesium															
Manganese															
Mercury															
Molybdenum															
Nickel															
Phosphorus															
Potassium															
Selenium															
Silicon															
Silver															
Sodium															
Strontium															
Sulphur															
Thallium															
Tin															
Titanium															
Uranium															
Vanadium															
Zinc															
Total Metals															
Aluminum	<0.003	<0.003		<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Antimony	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Beryllium	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	<0.01	<0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	<0.05	<0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chromium	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	**0.00013**	<0.0001	<0.0001	<0.0001
Cobalt	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Iron	<0.01	<0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Magnesium	<0.1	<0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Manganese	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury	<0.00001	<0.00001			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Phosphorus	<0.3	<0.3		<0.05	<0.05	<0.3	<0.3	<0.3	<0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	<0.05	<0.05		<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Selenium	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Silicon	<0.05	<0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Silver	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	<0.05	<0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Strontium	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Sulphur										<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)															
Uranium	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Vanadium	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	<0.003	<0.003		<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics															
Carbon Organic (Dissolved)									<0.5		<0.5				
Carbon Organic (Total)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nitrogen Organic (Dissolved)									<0.05		<0.05			<0.05	<0.05
Nitrogen Organic (Total)	<0.06	<0.06			<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.05	<0.05
Percent of sample > MDL	**0.00%**	**0.00%**	**33.33%**	**1.85%**	**3.45%**	**1.75%**	**0.00%**	**5.08%**	**3.33%**	**0.00%**	**8.20%**	**1.67%**	**0.00%**	**0.00%**	**0.00%**
ALS LAB ID	**L1176520-9**	**L1178283-4**	**L1190914-9**	**L1202478-9**	**L1205273-5**	**L1206738-5**	**L1222966-5**	**L1223406-4**	**L1233797-5**	**L1245799-7**	**L1246516-4**	**L1256679-6**	**L1266846-1**	**L1276517-5**	**L1277798-8**

Site ID	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK
Analytes	**4-Apr-13**	**8-May-13**	**29-May-13**	**5-Jun-13**	**3-Jul-13**	**7-Aug-13**	**15-Aug-13**	**3-Sep-13**	**4-Sep-13**	**9-Oct-13**	**6-Nov-13**	**19-Nov-13**	**9-Jan-14**	**5-Feb-14**	**14-Mar-14**
Physical Tests															
Acidity to pH 8.3 (as CaCO3)							**1.4**				<1				
Alkalinity (Total as CaCO3)	<2	**1.6**	<2	<2	**1.4**	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Bicarbonate Alkalinity		**1.6**	<2	<2	**1.4**	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Carbonate Alkalinity		<1	<2	<2	<1	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Color TCU	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5		
Hardness as CaCO3 (Dissolved)	<0.5		<0.5	<0.5	<0.5	<0.5		<0.5		<0.5	<0.5		<0.5	<0.5	<0.5
Hydroxide Alkalinity		<1	<2	<2	<1	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
pH (unitless)	5.73	6.11	5.62	5.65	6.18	6.45	5.58	6.36	5.89	5.73	5.53	6.17	5.52	5.88	5.89
Specific Conductivity µS/cm			<2		<2								<2	<2	<2
Total Dissolved Solids	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Total Suspended Solids	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3		<3	<3	<3
Turbidity NTU	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1	<0.1	<0.1
Dissolved Anions															
Bromide	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloride	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Sulphate	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nutrients															
Ammonia (Total)	**0.0085**	<0.005	<0.005	**0.0167**	<0.005	<0.005	**0.0245**	<0.005		<0.005	<0.005	<0.005	<0.005	**0.0131**	<0.005
Nitrate (as N)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrite (as N)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen (Dissolved)						<0.05		<0.05							
Nitrogen (Total)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05				
Nitrogen Kjeldahl (Total)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**0.074**	<0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Orthophosphate (Dissolved)									<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Phosphorus - Dissolved	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Phosphorus - Total	<0.002	<0.002		<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Cyanide															
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals															
Aluminum															
Antimony															
Arsenic															
Barium															
Beryllium															
Bismuth															
Boron															
Cadmium															
Calcium															
Chromium															
Cobalt															
Copper															
Dissolved Cadmium (by saltwater extraction)															
Iron															
Lead															
Lithium															
Magnesium															
Manganese															
Mercury															
Molybdenum															
Nickel															
Phosphorus															
Potassium															
Selenium															
Silicon															
Silver															
Sodium															
Strontium															
Sulphur															
Thallium															
Tin															
Titanium															
Uranium															
Vanadium															
Zinc															
Total Metals															
Aluminum	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003		<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Antimony	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	**0.00019**	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Iron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Magnesium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Manganese	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Selenium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Silicon	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Strontium	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Sulphur	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)															
Uranium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003		<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics															
Carbon Organic (Dissolved)			<0.5				<0.5	<0.5		<0.5			<0.5		<0.5
Carbon Organic (Total)	<0.5	**0.88**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nitrogen Organic (Dissolved)															
Nitrogen Organic (Total)	<0.06														
Percent of sample > MDL	**1.79%**	**5.26%**	**0.00%**	**1.72%**	**3.39%**	**0.00%**	**6.67%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**1.72%**	**0.00%**
ALS LAB ID	**L1286585-6**	**L1299444-3**	**L1308855-3**	**L1312719-12**	**L1327102-6**	**L1344180-5**	**L1348395-4**	**L1357647-4**	**L1358222-8**	**L1375698-9**	**L1388680-7**	**L1394041-2**	**L1410216-8**	**L1419486-2**	**L1432661-3**

Site ID	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK	TRAVEL BLANK
Analytes	**20-Mar-14**	**21-Mar-14**	**27-Mar-14**	**2-Apr-14**	**10-Apr-14**	**24-Apr-14**	**7-May-14**	**21-May-14**	**27-May-14**	**25-Jun-14**	**4-Jul-14**	**28-Jul-14**	**2-Sep-14**	**17-Sep-14**
Physical Tests														
Acidity to pH 8.3 (as CaCO3)														
Alkalinity (Total as CaCO3)	<2	<2	<2	<2	<2	<2	<2	<2	<1	<1	<1	<2	<2	<1
Bicarbonate Alkalinity	<2	<2	<2	<2	<2	<2	<2	<2	<1	<1	<1	<2	<2	<1
Carbonate Alkalinity	<2	<2	<2	<2	<2	<2	<2	<2	<1	<1	<1	<2	<2	<1
Color TCU							<5							
Hardness as CaCO3 (Dissolved)		<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Hydroxide Alkalinity	<2	<2	<2	<2	<2	<2	<2	<2	<1	<1	<1	<2	<2	<1
pH (unitless)	5.69	5.52	5.78	5.63	5.82	5.75	5.65	5.63	5.77	5.56	5.67	5.52	6.65	5.45
Specific Conductivity µS/cm	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Total Dissolved Solids	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Total Suspended Solids		<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Turbidity NTU		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dissolved Anions														
Bromide	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloride	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Sulphate	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nutrients														
Ammonia (Total)	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	**0.0267**	<0.005	<0.005	**0.0622**	<0.005	**0.0143**	<0.005
Nitrate (as N)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrite (as N)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen (Dissolved)														
Nitrogen (Total)								<0.05						
Nitrogen Kjeldahl (Total)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.25	<0.05	<0.05	**0.151**	<0.05	<0.05	<0.05
Orthophosphate (Dissolved)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Phosphorus - Dissolved	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Phosphorus - Total	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Cyanide														
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals														
Aluminum														
Antimony														
Arsenic														
Barium														
Beryllium														
Bismuth														
Boron														
Cadmium														
Calcium														
Chromium														
Cobalt														
Copper														
Dissolved Cadmium (by saltwater extraction)														
Iron														
Lead														
Lithium														
Magnesium														
Manganese														
Mercury														
Molybdenum														
Nickel														
Phosphorus														
Potassium														
Selenium														
Silicon														
Silver														
Sodium														
Strontium														
Sulphur														
Thallium														
Tin														
Titanium														
Uranium														
Vanadium														
Zinc														
Total Metals														
Aluminum		<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Antimony		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Beryllium		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chromium		<0.0001	<0.0001	<0.0001	<0.0001	**0.00011**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper		**0.00051**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Iron		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Magnesium		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Manganese		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Phosphorus		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.3	<0.05
Potassium		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1
Selenium		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Silicon		**1.99**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Silver		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Strontium		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Sulphur		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5
Thallium		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)														
Uranium		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Vanadium		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc		<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics														
Carbon Organic (Dissolved)				<0.5	<0.5	<0.5					<0.5			
Carbon Organic (Total)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nitrogen Organic (Dissolved)														
Nitrogen Organic (Total)														
Percent of sample > MDL	**0.00%**	**3.45%**	**0.00%**	**0.00%**	**0.00%**	**1.69%**	**0.00%**	**1.69%**	**0.00%**	**0.00%**	**3.39%**	**0.00%**	**1.75%**	**0.00%**
ALS LAB ID	**L1434993-4**	**L1435186-7**	**L1437439-10**	**L1439467-5**	**L1442672-11**	**L1447300-9**	**L1452368-4**	**L1458340-9**	**L1461077-2**	**L1478436-4**	**L1481825-4**	**L1494504-4**	**L1512652-3**	**L1519657-7**

APPENDIX A QA/QC
TABLE A.10 Surface Water Duplicates
(PAGE 1 OF 11)

Site	MDL	AC02	Duplicate	RPD	MDL	AC02	Duplicate	RPD	MDL	AJWE-S	Duplicate	RPD	MDL	AJWE-S	Duplicate	RPD	MDL	AJWE-S	Duplicate	RPD	MDL	AJWW-S
Date Sampled		**31-May-11**		**(%)**		**5-Mar-13**		**(%)**		**18-Sep-07**		**(%)**		**29-Apr-08**		**(%)**		**1-May-14**		**(%)**		**25-Sep-14**
Physical Tests																						
Acidity to pH 8.3 (as CaCO3)													1	2.8	2.7							
Alkalinity (Total as CaCO3)	2	220	217	1.37%	1	394	396	0.51%	2	162	161	0.62%	2	191	163	15.82%	2	151	152	0.66%	2	161
Bicarbonate Alkalinity					1	367	396	7.60%					2	191	163	15.82%	2	151	152	0.66%	2	161
Carbonate Alkalinity					1	27.3	<2						2	<2	<2		2	<2	<2		2	<2
Color TCU	5	58.6	58.3	0.51%	5	24.1	24.8		5	<5	<5		5	<5	<5							
Hardness as CaCO3 (Dissolved)	0.5	243	242	0.41%	0.5	553	544	1.64%	0.7	1130	1130	0.00%	0.7	1160	1170	0.86%	0.5	1060	1060	0.00%	0.5	1820
Hydroxide Alkalinity					1	<1	<2						2	<2	<2		2	<2	<2		2	<2
pH pH	0.1	8.29	8.29	0.00%	0.1	8.39	8.26	1.56%	0.01	8.36	8.38	0.24%	0.01	8.17	8.19	0.24%	0.1	8.24	8.24	0.00%	0.1	8.27
Phosphorus (Nutrient) Total																						
Specific Conductivity µS/cm	2	536	533	0.56%	2	1130	1120	0.89%	2	2680	2680	0.00%	2	2620	2610	0.38%	2	2240	2250	0.45%	2	3510
Total Dissolved Solids	10	358	354	1.12%	10	754	742	1.60%	20	2250	2230	0.89%	20	2100	2110	0.48%	10	1910	1820	4.83%	20	3250
Total Suspended Solids	3	<3	<3		3	5.3	3.3		3	<3	<3		3	4.2	<3		3	<3	3.3		3	<3
Turbidity NTU	0.1	0.82	0.81	1.23%	0.1	3.35	3.78	12.06%					0.1	0.31	0.3		0.1	0.45	0.27		0.1	0.18
Dissolved Anions																						
Bromide (Dissolved)	0.25	<0.25	<0.25		0.5	<0.5	<0.5		0.5	<0.5	<0.5		2.5	<2.5	<2.5		1	<1	<1		1	<1
Chloride (Dissolved)	2.5	16	16.6	3.68%	5	40.3	40.5	0.50%	5	24.6	24.6		25	<25	<25		10	20	24		10	33
Fluoride (Dissolved)	0.1	0.23	0.24		0.2	0.26	0.33		0.2	0.21	0.21		1	1.4	1.4		0.4	<0.4	<0.4		0.03	0.209
Sulphate (Dissolved)	2.5	46.8	47.5	1.48%	5	215	217	0.93%	5	1380	1380	0.00%	25	1280	1300	1.55%	10	1200	1180	1.68%	10	1960
Nutrients																						
Ammonia (Total)	0.005	0.0213	0.0239		0.005	0.119	0.124	4.12%	0.005	<0.005	<0.005		0.02	<0.02	<0.02		0.005	<0.005	0.0051		0.005	0.0059
Nitrate (as N)	0.025	<0.025	<0.025		0.05	0.219	0.217		0.05	23.1	23	0.43%	0.25	20.8	21.1	1.43%	0.1	13.7	13.6	0.73%	0.1	68.9
Nitrate (Available)																						
Nitrite (as N)	0.005	0.0069	0.0087		0.01	<0.01	<0.01		0.01	0.09	0.095	5.41%	0.05	0.127	0.135		0.02	0.116	0.111	4.41%	0.02	0.138
Nitrogen (Dissolved)	0.05	0.79	0.8	1.26%	0.05	0.871	0.899	3.16%														
Nitrogen (Total)	0.05	0.76	0.85	11.18%	0.05	1.03	1.01	1.96%														
Nitrogen Kjeldahl (Total)	0.05	0.753	0.841	11.04%	0.05	0.883	0.932	5.40%	0.05	<0.05	<0.05		0.05	0.153	0.25		0.05	<0.05	<0.05		0.05	<0.05
Orthophosphate (Dissolved)	0.01	0.157	0.161	2.52%					0.001	0.0028	0.0034		0.001	0.0028	0.0026		0.001	0.0017	0.0023		0.001	0.0017
Phosphorus (Nutrient) Dissolved					0.02	0.163	0.154	5.68%									0.002	<0.002	<0.002		0.002	<0.002
Phosphorus (Nutrient) Total	0.02	0.179	0.171	4.57%	0.02	0.185	0.193	4.23%	0.002	0.0069	0.0027		0.002	0.0024	0.0021		0.002	<0.002	0.0054		0.002	0.0032
Cyanide																						
Cyanide (Free)	0.005	<0.005	<0.005		0.005	<0.005	<0.005						0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005
Cyanide (Total)	0.005	0.0099	0.0114		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005		0.005	<0.005	<0.005						0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005
Dissolved Metals																						
Aluminum (Dissolved)	0.005	<0.005	<0.005		0.001	0.0013	0.0013		0.025	<0.025	<0.025		0.025	<0.025	<0.025		0.001	0.001	0.0011		0.001	<0.001
Antimony (Dissolved)	0.0005	<0.0005	<0.0005		0.0001	0.00012	0.00012		0.0025	0.0207	0.0198	4.44%	0.0025	0.0225	0.0177	**23.88%**	0.0001	0.0135	0.0138	2.20%	0.0001	0.0174
Arsenic (Dissolved)	0.0005	0.0025	0.00247		0.0001	0.00278	0.00278	0.00%	0.0025	0.0657	0.0628	4.51%	0.0025	0.0763	0.0615	21.48%	0.0001	0.0381	0.0367	3.74%	0.0001	0.0164
Barium (Dissolved)	0.02	0.042	0.041		5E-05	0.0631	0.0623	1.28%	0.02	<0.02	<0.02		0.02	<0.02	<0.02		5E-05	0.0149	0.0145	2.72%	5E-05	0.0157
Beryllium (Dissolved)	0.001	<0.001	<0.001		0.0001	<0.0001	<0.0001		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.0001	<0.0001	<0.0001		0.0001	<0.0001
Bismuth (Dissolved)	0.2	<0.2	<0.2		0.0005	<0.0005	<0.0005										0.0005	<0.0005	<0.0005		0.0005	<0.0005
Boron (Dissolved)	0.1	<0.1	<0.1		0.01	0.041	0.042		0.1	<0.1	<0.1		0.1	<0.1	<0.1		0.01	0.076	0.079	3.87%	0.01	0.073
Cadmium (Dissolved)	2E-05	<0.000017	<0.000017		1E-05	<0.00001	<0.00001		0.001	<0.001	<0.001		0.0006	<0.0006	<0.0004						0.0002	<0.0002
Calcium (Dissolved)	0.1	49.6	48.8	1.63%	0.05	98.1	94.7	3.53%	0.1	153	152	0.66%	0.1	150	147	2.02%	0.05	140	139	0.72%	0.05	239
Chromium (Dissolved)	0.001	<0.001	<0.001		0.0001	<0.0001	<0.0001		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.0001	<0.0001	<0.0001		0.0001	<0.0001
Cobalt (Dissolved)	0.0003	<0.0003	<0.0003		0.0001	0.00017	0.00017		0.0015	<0.0015	<0.0015		0.0015	<0.0015	<0.0015		0.0001	0.00097	0.00099	2.04%	0.0001	0.00071
Copper (Dissolved)	0.001	0.0042	0.0043		0.0002	0.00315	0.00312	0.96%	0.005	0.0163	0.0158		0.005	0.0276	0.0224		0.0002	0.0206	0.0204	0.98%	0.0002	0.0338
Dissolved Cadmium (by saltwater extraction)																	4E-05	<0.00004	<0.00004		0.0001	<0.0001
Iron (Dissolved)	0.03	0.064	0.053		0.01	0.038	0.038		0.03	<0.03	<0.03		0.03	<0.03	<0.03		0.01	<0.01	<0.01		0.01	<0.01
Lead (Dissolved)	0.0005	<0.0005	<0.0005		5E-05	<0.00005	<0.00005		0.0025	<0.0025	<0.0025		0.0025	<0.0025	<0.0025		5E-05	<0.00005	<0.00005		5E-05	<0.00005
Lithium (Dissolved)	0.005	<0.005	<0.005		0.0005	0.00876	0.009	2.70%	0.025	0.041	0.04		0.025	0.054	0.045		0.0005	0.0313	0.0334	6.49%	0.0005	0.0534
Magnesium (Dissolved)	0.1	29	29.1	0.34%	0.1	74.7	74.6	0.13%	0.1	181	182	0.55%	0.1	191	194	1.56%	0.1	173	172	0.58%	0.1	298
Manganese (Dissolved)	0.0003	0.0107	0.0107	0.00%	5E-05	0.117	0.12	2.53%	0.0015	<0.0015	<0.0015		0.0015	<0.0015	<0.0015		5E-05	0.000841	0.000858	2.00%	5E-05	0.00308
Mercury (Dissolved)	1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002		1E-05	<0.00001	<0.00001		1E-05	<0.00001
Molybdenum (Dissolved)	0.001	0.0019	0.0019		5E-05	0.00339	0.00343	1.17%	0.005	2.26	2.16	4.52%	0.005	2.47	1.98	22.02%	5E-05	1.98	2	1.01%	5E-05	4.15
Nickel (Dissolved)	0.001	0.0012	0.0011		0.0005	0.00136	0.00135		0.005	<0.005	<0.005		0.005	0.0051	<0.005		0.0005	0.00345	0.00336	2.64%	0.0005	0.0138
Phosphorus (Metal) Dissolved	0.3	<0.3	<0.3		0.05	0.174	0.167										0.05	<0.05	<0.05		0.05	<0.05
Potassium (Dissolved)	2	8.1	8		0.1	14.7	14.2	3.46%	2	19	19.7	3.62%	2	17.6	17.6	0.00%	0.1	17.3	17.5	1.15%	0.1	29.5
Selenium (Dissolved)	0.001	<0.001	<0.001		0.0001	0.00038	0.00034		0.005	0.0177	0.0159		0.005	0.0221	0.0174		0.0001	0.0158	0.0155	1.92%	0.0001	0.0485
Silicon (Dissolved)	0.05	10.4	10.4	0.00%	0.05	10.4	10.3	0.97%									0.05	7.22	7.21	0.14%	0.05	7.16
Silver (Dissolved)	2E-05	<0.00002	<0.00002		1E-05	<0.00001	<0.00001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		1E-05	<0.00001	<0.00001		1E-05	<0.00001
Sodium (Dissolved)	2	27.2	26.7	1.86%	0.05	59.2	58.1	1.88%	2	191	199	4.10%	2	190	191	0.52%	0.05	164	169	3.00%	0.05	211
Strontium (Dissolved)	0.005	0.382	0.377	1.32%	0.0002	0.756	0.793	4.78%									0.0002	2.52	2.52	0.00%	0.0002	3.9
Sulphur (Dissolved)					0.5	69.3	68.3	1.45%									0.5	379	378	0.26%	0.5	594
Thallium (Dissolved)	0.0002	<0.0002	<0.0002		1E-05	<0.00001	<0.00001		0.001	<0.001	<0.001		0.001	<0.001	<0.001		1E-05	<0.00001	<0.00001		1E-05	0.000012
Tin (Dissolved)	0.0005	<0.0005	<0.0005		0.0001	<0.0001	<0.0001		0.0025	<0.0025	<0.0025		0.0025	<0.0025	<0.0025		0.0001	<0.0001	<0.0001		0.0001	<0.0001
Titanium (Dissolved)	0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01
Uranium (Dissolved)	0.0002	0.00054	0.00054		1E-05	0.00253	0.00257	1.57%	0.001	0.0101	0.0097	4.04%	0.001	0.0121	0.0097	**22.02%**	1E-05	0.00784	0.00785	0.13%	1E-05	0.0101
Vanadium (Dissolved)	0.001	0.0044	0.0044		0.001	0.0055	0.0056	1.80%	0.03	<0.03	<0.03		0.005	0.0109	0.0089		0.001	0.008	0.008	0.00%	0.001	0.005
Zinc (Dissolved)	0.005	<0.005	<0.005		0.001	<0.001	<0.001		0.025	<0.025	<0.025		0.005	<0.005	<0.005		0.001	<0.001	0.0011		0.001	0.0037
Total Metals																						
Aluminum (Total)	0.005	0.0285	0.0295	3.45%	0.003	0.0683	0.0684	0.15%	0.025	<0.025	<0.025		0.025	<0.025	<0.025		0.003	0.0089	0.0113		0.009	<0.009
Antimony (Total)	0.0005	<0.0005	<0.0005		0.0001	0.00013	0.00014		0.0025	0.0208	0.0198	4.93%	0.0025	0.0173	0.0175	1.15%	0.0001	0.0134	0.0133	0.75%	0.0001	0.0184
Arsenic (Total)	0.0005	0.00225	0.00236		0.0001	0.00279	0.00292	4.55%	0.0025	0.0654	0.063	3.74%	0.0025	0.0597	0.0596	0.17%	0.0001	0.0363	0.0356	1.95%	0.0001	0.0167
Barium (Total)	0.02	0.04	0.043		5E-05	0.0661	0.0678	2.54%	0.02	<0.02	<0.02		0.02	<0.02	<0.02		5E-05	0.0145	0.0145	0.00%	5E-05	0.0163
Beryllium (Total)	0.001	<0.001	<0.001		0.0001	<0.0001	<0.0001		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.0001	<0.0001	<0.0001		0.0001	<0.0001
Bismuth (Total)	0.2	<0.2	<0.2		0.0005	<0.0005	<0.0005										0.0005	<0.0005	<0.0005		0.0005	<0.0005
Boron (Total)	0.1	<0.1	<0.1		0.01	0.044	0.047		0.1	<0.1	<0.1		0.1	<0.1	<0.1		0.01	0.08	0.084	4.88%	0.01	0.082
Cadmium (Total)	2E-05	<0.000017	<0.000017		1E-05	<0.00001	<0.00001		0.001	<0.001	<0.001		0.0005	<0.0005	<0.0006						0.0002	<0.0002
Calcium (Total)	0.1	46.5	49	5.24%	0.05	98.8	99	0.20%	0.1	151	152	0.66%	0.1	148	150	1.34%	0.05	135	136	0.74%	0.05	245
Chromium (Total)	0.001	<0.001	<0.001		0.0001	0.00018	0.00019		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.0001	0.00011	0.00012		0.0001	0.00019
Cobalt (Total)	0.0003	<0.0003	<0.0003		0.0001	0.00022	0.00022		0.0015	<0.0015	<0.0015		0.0015	<0.0015	<0.0015		0.0001	0.00098	0.00104	5.94%	0.0001	0.00082
Copper (Total)	0.001	0.0047	0.0051		0.0005	0.00416	0.00432	3.77%	0.005	0.0173	0.0161		0.005	0.0221	0.0228		0.0005	0.0216	0.0216	0.00%	0.0005	0.0358
Iron (Total)	0.03	0.089	0.089		0.01	0.135	0.137	1.47%	0.03	<0.03	<0.03		0.03	<0.03	<0.03		0.01	<0.01	<0.01		0.01	0.01
Lead (Total)	0.0005	<0.0005	<0.0005		5E-05	<0.00005	<0.00005		0.0025	<0.0025	<0.0025		0.0025	<0.0025	<0.0025		5E-05	<0.00005	<0.00005		5E-05	<0.00005
Lithium (Total)	0.005	<0.005	0.0051		0.0005	0.00902	0.00956	5.81%	0.025	0.042	0.041		0.025	0.04	0.044		0.0005	0.0314	0.0336	6.77%	0.0005	0.0561
Magnesium (Total)	0.1	27.2	28.9	6.06%	0.1	72.5	74	2.05%	0.1	179	186	3.84%	0.1	193	194	0.52%	0.1	169	170	0.59%	0.1	295
Manganese (Total)	0.0003	0.017	0.0179	5.16%	5E-05	0.125	0.128	2.37%	0.0015	0.0016	<0.0015		0.0015	<0.0015	<0.0015		5E-05	0.00099	0.00104	4.93%	5E-05	0.0037
Mercury (Total)	1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002		1E-05	<0.00001	<0.00001		1E-05	<0.00001
Molybdenum (Total)	0.001	0.0022	0.0023		5E-05	0.00369	0.00389	5.28%	0.005	2.27	2.19	3.59%	0.005	1.89	1.92	1.57%	5E-05	2	2	0.00%	5E-05	4.47
Nickel (Total)	0.001	0.0012	0.0012		0.0005	0.00146	0.00155		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.0005	0.00347	0.00351	1.15%	0.0005	0.0144
Phosphorus (Metal) Total	0.3	<0.3	<0.3		0.05	0.195	0.211										0.05	<0.05	<0.05		0.05	<0.05
Potassium (Total)	2	7.7	8.1		0.1	14.4	14.6	1.38%	2	18.7	19.6	4.70%	2	17.8	17.3	2.85%	0.1	16.6	16.9	1.79%	0.1	30.3
Selenium (Total)	0.001	<0.001	<0.001		0.0001	0.00037	0.00037		0.005	0.0168	0.0164		0.005	0.0165	0.0162		0.0001	0.0147	0.0146	0.68%	0.0001	0.0502
Silicon (Total)	0.05	9.84	10.3	4.57%	0.05	10.6	10.8	1.87%									0.05	7.15	7.22	0.97%	0.05	7.37
Silver (Total)	2E-05	<0.00002	<0.00002		1E-05	<0.00001	<0.00001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		1E-05	<0.00001	<0.00001		1E-05	<0.00001
Sodium (Total)	2	25.6	27.1	5.69%	0.05	57.1	59.8	4.62%	2	187	198	5.71%	2	192	186	3.17%	0.05	165	168	1.80%	0.05	215
Strontium (Total)	0.005	0.365	0.385	5.33%	0.0002	0.78	0.818	4.76%									0.0002	2.49	2.52	1.20%	0.0002	4.1
Sulphur (Total)					0.5	71.8	73.7	2.61%									0.5	385	383	0.52%	0.5	594
Thallium (Total)	0.0002	<0.0002	<0.0002		1E-05	<0.00001	<0.00001		0.001	<0.001	<0.001		0.001	<0.001	<0.001		1E-05	<0.00001	<0.00001		1E-05	0.000012
Tin (Total)	0.0005	<0.0005	<0.0005		0.0001	<0.0001	<0.0001		0.0025	<0.0025	<0.0025		0.0025	<0.0025	<0.0025		0.0001	<0.0001	<0.0001		0.0001	<0.0001
Titanium (Total)	0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01
Total Cadmium (by saltwater extraction)																	4E-05	<0.00004	<0.00004		0.0001	<0.0001
Uranium (Total)	0.0002	0.00058	0.00062		1E-05	0.00269	0.0028	4.01%	0.001	0.0102	0.0097	5.03%	0.001	0.0094	0.0096	2.11%	1E-05	0.00785	0.00812	3.38%	1E-05	0.0117
Vanadium (Total)	0.001	0.0048	0.0051		0.001	0.006	0.0061	1.65%	0.03	<0.03	<0.03		0.005	0.0085	0.0088		0.001	0.0081	0.0083	2.44%	0.001	0.0052
Zinc (Total)	0.005	<0.005	<0.005		0.003	<0.003	<0.003		0.025	<0.025	<0.025		0.005	<0.005	<0.005		0.003	<0.003	<0.003		0.003	<0.003
Organics																						
Carbon Organic (Dissolved)	0.5	19.1	19.7	3.09%	0.5	11.8	12	1.68%	0.5	1.48	1.44		0.5	1.88	1.79		0.5	1.31	1.45		0.5	1.32
Carbon Organic (Total)	0.5	19.6	19.6	0.00%	0.5	11.9	12.2	2.49%									0.5	1.5	1.32		0.5	1.39
Nitrogen Organic (Dissolved)	0.05	0.762	0.767	0.65%																		
Nitrogen Organic (Total)	0.05	0.732	0.817	10.97%	0.06	0.765	0.809	5.59%														

Site	Duplicate	RPD	MDL	ANDER-10	Duplicate	RPD	MDL	ANDR15	Duplicate	RPD	MDL	ANDR15	Duplicate	RPD	MDL	ANDR15	Duplicate	RPD	MDL	CC02	Duplicate	RPD	MDL
Date Sampled		(%)		29-Jul-14		(%)		19-Mar-14		(%)		3-Apr-14		(%)		3-Sep-14		(%)		13-Feb-12		(%)	
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)																							
Alkalinity (Total as CaCO3)	161	0.00%	1	334	335	0.30%	2	255	256	0.39%	1	251	265	5.43%	1	266	268	0.75%	2	288	299	3.75%	1
Bicarbonate Alkalinity	161	0.00%	1	325	324	0.31%	2	255	256	0.39%	1	243	257	5.60%	1	254	257	1.17%	2	288	286	0.70%	1
Carbonate Alkalinity	<2		1	9.2	11	17.82%	2	<2	<2		1	8	7.7	3.82%	1	11.3	11	2.69%	2	<2	4.9		1
Color TCU																			5	5.4	5.5		5
Hardness as CaCO3 (Dissolved)	1830	0.55%	0.5	347	352	1.43%	0.5	338	347	2.63%	0.5	385	372	3.43%	0.5	330	328	0.61%	0.5	371	371	0.00%	0.5
Hydroxide Alkalinity	<2		1	<1	<1		2	<2	<2		1	<1	<1		1	<1	<1		2	<2	<1		1
pH pH	8.27	0.00%	0.1	8.36	8.38	0.24%	0.1	8.26	8.28	0.24%	0.1	8.31	8.34	0.36%	0.1	8.43	8.42	0.12%	0.1	8.28	8.31	0.36%	0.1
Phosphorus (Nutrient) Total																							
Specific Conductivity µS/cm	3540	0.85%	2	774	774	0.00%	2	909	909	0.00%	2	976	977	0.10%	2	850	846	0.47%	2	730	729	0.14%	2
Total Dissolved Solids	3280	0.92%	10	479	463	3.40%	10	495	563	12.85%	10	637	643	0.94%	20	519	517	0.39%	10	482	478	0.83%	10
Total Suspended Solids	<3		3	3.6	<3		3	4.1	4.2		3	3.1	<3		3	<3	<3		3	<3	<3		3
Turbidity NTU	0.23		0.1	1.44	0.94	42.02%	0.1	1.15	1.15	0.00%	0.1	0.54	0.57	5.41%	0.1	0.49	0.53		0.1	1.05	1.02	2.90%	0.1
Dissolved Anions																							
Bromide (Dissolved)	<1		0.5	<0.5	<0.25		0.5	<0.5	<0.5		0.5	<0.5	<0.5		0.5	<0.5	<0.25		0.25	<0.25	<0.25		0.5
Chloride (Dissolved)	34		5	60.7	60.2	0.83%	5	131	131	0.00%	5	155	152	1.95%	5	113	111	1.79%	2.5	4.8	4.6		5
Fluoride (Dissolved)	0.203	2.91%	0.03	0.244	0.218	11.26%	0.2	<0.2	<0.2		0.2	0.2	<0.2		0.03	0.217	0.223	2.73%	0.1	0.1	0.1		0.2
Sulphate (Dissolved)	1980	1.02%	5	11.8	11.8		5	36.2	36.2	0.00%	5	36.3	36	0.83%	5	25.4	25.4	0.00%	2.5	128	128	0.00%	5
Nutrients																							
Ammonia (Total)	0.0059		0.005	0.0167	0.0162		0.005	0.0109	0.0081		0.005	0.0093	0.0083		0.005	0.0072	0.007		0.05	0.053	0.072		0.005
Nitrate (as N)	69.8	1.30%	0.05	<0.05	<0.025		0.05	0.107	0.095		0.05	0.103	0.094		0.05	<0.05	<0.025		0.025	0.469	0.472	0.64%	0.05
Nitrate (Available)																							
Nitrite (as N)	0.145	4.95%	0.01	<0.01	<0.005		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.005		0.005	0.0065	0.0076		0.01
Nitrogen (Dissolved)																			0.05	0.84	0.81	3.64%	0.05
Nitrogen (Total)																			0.041	0.73	0.762	4.29%	0.0051
Nitrogen Kjeldahl (Total)	<0.05		0.05	0.807	0.789	2.26%	0.05	0.565	0.56	0.89%	0.05	0.506	0.37	**31.05%**	0.05	0.46	0.471	2.36%	0.2	0.25	0.28		0.05
Orthophosphate (Dissolved)	0.0019		0.001	0.0803	0.079	1.63%	0.001	0.0207	0.0206	0.48%	0.001	0.018	0.0181	0.55%	0.001	0.0251	0.0254	1.19%					
Phosphorus (Nutrient) Dissolved	<0.002		0.002	0.0916	0.092	0.44%	0.002	0.0268	0.0264	1.50%	0.002	0.0257	0.0233	9.80%	0.002	0.0284	0.0284	0.00%	0.002	0.0272	0.0263	3.36%	0.002
Phosphorus (Nutrient) Total	<0.002		0.02	0.115	0.107	7.21%	0.002	0.0378	0.041	8.12%	0.002	0.0196	0.0208	5.94%	0.002	0.0257	0.0232	10.22%	0.002	0.0327	0.0335	2.42%	0.002
Cyanide																							
Cyanide (Free)	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005
Cyanide (Total)	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005
Cyanide (WAD)	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005
Dissolved Metals																							
Aluminum (Dissolved)	<0.001		0.001	0.0021	0.0014		0.001	0.0015	0.0016		0.001	0.0012	0.0011		0.001	0.0016	0.0012		0.003	<0.003	<0.003		0.003
Antimony (Dissolved)	0.0172	1.16%	0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001
Arsenic (Dissolved)	0.0162	1.23%	0.0001	0.00203	0.00184	9.82%	0.0001	0.00047	0.00052		0.0001	0.00046	0.00046		0.0001	0.00059	0.00062	4.96%	0.0001	0.00047	0.00045		0.0001
Barium (Dissolved)	0.0155	1.28%	5E-05	0.0785	0.0751	4.43%	5E-05	0.0711	0.0718	0.98%	5E-05	0.0759	0.078	2.73%	5E-05	0.0757	0.0757	0.00%	5E-05	0.107	0.106	0.94%	5E-05
Beryllium (Dissolved)	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001
Bismuth (Dissolved)	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005
Boron (Dissolved)	0.069	5.63%	0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	0.034	0.034		0.01
Cadmium (Dissolved)	<0.0002		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	0.000011		1E-05
Calcium (Dissolved)	242	1.25%	0.05	79.1	79.5	0.50%	0.05	92.9	95.7	2.97%	0.05	105	101	3.88%	0.05	90.6	90.1	0.55%	0.05	93.2	92.5	0.75%	0.05
Chromium (Dissolved)	<0.0001		0.0001	0.00016	0.00013		0.0001	<0.0001	0.0001		0.0001	<0.0001	0.00011		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001
Cobalt (Dissolved)	0.0007	1.42%	0.0001	0.00017	0.00016		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001
Copper (Dissolved)	0.0327	3.31%	0.0002	0.00177	0.00166	6.41%	0.0002	0.00104	0.00112	7.41%	0.0002	0.00103	0.00101	1.96%	0.0002	0.00119	0.00121	1.67%	0.0005	0.00118	0.0012		0.0005
Dissolved Cadmium (by saltwater extraction)	<0.00008																						
Iron (Dissolved)	<0.01		0.01	0.054	0.052	3.77%	0.01	0.029	0.03		0.01	0.015	0.016		0.01	0.025	0.024		0.03	<0.03	<0.03		0.03
Lead (Dissolved)	<0.00005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		5E-05
Lithium (Dissolved)	0.0495	7.58%	0.0005	0.00897	0.00904	0.78%	0.0005	0.00775	0.00819	5.52%	0.0005	0.00739	0.00773	4.50%	0.0005	0.00874	0.00879	0.57%	0.0005	0.00245	0.00255		0.0005
Magnesium (Dissolved)	297	0.34%	0.1	36.3	37.3	2.72%	0.1	25.6	26.1	1.93%	0.1	29.9	29.1	2.71%	0.1	25.1	24.9	0.80%	0.1	33.7	33.9	0.59%	0.1
Manganese (Dissolved)	0.00282	8.81%	5E-05	0.196	0.177	10.19%	5E-05	0.00834	0.00892	6.72%	5E-05	0.00603	0.00623	3.26%	5E-05	0.0134	0.0137	2.21%	5E-05	0.0308	0.0303	1.64%	5E-05
Mercury (Dissolved)	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05
Molybdenum (Dissolved)	4.15	0.00%	5E-05	0.00207	0.00202	2.44%	5E-05	0.00309	0.00323	4.43%	5E-05	0.00313	0.00331	5.59%	5E-05	0.00326	0.00329	0.92%	5E-05	0.00931	0.00938	0.75%	5E-05
Nickel (Dissolved)	0.0136	1.46%	0.0005	0.00233	0.00225		0.0005	0.00055	0.00061		0.0005	0.00052	0.00051		0.0005	0.00063	0.0006		0.0005	<0.0005	<0.0005		0.0005
Phosphorus (Metal) Dissolved	<0.05		0.05	0.11	0.105		0.05	<0.05	<0.05		0.05	<0.05	<0.05		0.05	<0.05	<0.05		0.3	<0.3	<0.3		0.3
Potassium (Dissolved)	30	1.68%	0.1	10.4	10.3	0.97%	0.1	10.7	10.9	1.85%	0.1	9.81	9.32	5.12%	0.1	11	10.8	1.83%	0.05	4.63	4.53	2.18%	0.05
Selenium (Dissolved)	0.0471	2.93%	0.0001	0.00026	0.00021		0.0001	0.00031	0.00033		0.0001	0.00031	0.0003		0.0001	0.00018	0.00018		0.0001	0.00054	0.0005	7.69%	0.0001
Silicon (Dissolved)	7.27	1.52%	0.05	9.33	9.23	1.08%	0.05	8	8.11	1.37%	0.05	8.49	8.17	3.84%	0.05	9.1	9.02	0.88%	0.05	7.3	7.27	0.41%	0.05
Silver (Dissolved)	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05
Sodium (Dissolved)	203	3.86%	0.05	39	34.9	11.10%	0.05	54.4	55.6	2.18%	0.05	58.9	58.9	0.00%	0.05	51.1	52.5	2.70%	0.05	30.1	29.3	2.69%	0.05
Strontium (Dissolved)	3.84	1.55%	0.0002	0.407	0.401	1.49%	0.0002	0.396	0.39	1.53%	0.0002	0.412	0.414	0.48%	0.0002	0.36	0.375	4.08%	0.0001	0.376	0.381	1.32%	0.0001
Sulphur (Dissolved)	595	0.17%	0.5	4.51	4.61	2.19%	0.5	12.5	12.7	1.59%	0.5	12.5	12.3	1.61%	0.5	9.01	8.82	2.13%					
Thallium (Dissolved)	0.000011		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05
Tin (Dissolved)	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001
Titanium (Dissolved)	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01
Uranium (Dissolved)	0.0101	0.00%	1E-05	0.00114	0.00115	0.87%	1E-05	0.0049	0.00545	10.63%	1E-05	0.00548	0.00561	2.34%	1E-05	0.00323	0.00323	0.00%	1E-05	0.000894	0.000913	2.10%	1E-05
Vanadium (Dissolved)	0.005	0.00%	0.001	0.0021	0.0021		0.001	0.0014	0.0015		0.001	0.0016	0.0016		0.001	0.0017	0.0018		0.001	0.0018	0.0018		0.001
Zinc (Dissolved)	<0.001		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.001	<0.001	0.0013		0.003	0.0256	0.0241	6.04%	0.003
Total Metals																							
Aluminum (Total)	<0.009		0.003	0.0339	0.0351	3.48%	0.003	0.0896	0.091	1.55%	0.003	0.0182	0.0148		0.003	0.0323	0.0222	37.06%	0.003	0.0209	0.0436	**70.39%**	0.003
Antimony (Total)	0.0182	1.09%	0.0001	0.00011	0.00015		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001
Arsenic (Total)	0.0165	1.20%	0.0001	0.00196	0.00187	4.70%	0.0001	0.00049	0.00056		0.0001	0.00047	0.00048		0.0001	0.00059	0.00063	6.56%	0.0001	0.00051	0.00049		0.0001
Barium (Total)	0.0161	1.23%	5E-05	0.0788	0.0733	7.23%	5E-05	0.0698	0.0753	7.58%	5E-05	0.0762	0.0745	2.26%	5E-05	0.0747	0.0773	3.42%	5E-05	0.111	0.108	2.74%	5E-05
Beryllium (Total)	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001
Bismuth (Total)	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005
Boron (Total)	0.086	4.76%	0.01	<0.01	0.014		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	0.044	0.039		0.01
Cadmium (Total)	<0.0002		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	0.00001	<0.00001		1E-05
Calcium (Total)	241	1.65%	0.05	77.7	76.2	1.95%	0.05	90.9	94.5	3.88%	0.05	102	97.1	4.92%	0.05	86.3	88.8	2.86%	0.05	96.4	95.5	0.94%	0.05
Chromium (Total)	0.00017		0.0001	0.00025	0.00033		0.0001	0.00028	0.00031		0.0001	0.00015	0.00014		0.0001	0.00021	0.00019		0.0001	0.00253	0.00054	**129.64%**	0.0001
Cobalt (Total)	0.00078	5.00%	0.0001	0.0002	0.0002		0.0001	0.00012	0.00013		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001
Copper (Total)	0.0354	1.12%	0.0005	0.00202	0.00202		0.0005	0.00145	0.00152		0.0005	0.00136	0.00119		0.0005	0.00144	0.00131		0.0005	0.00154	0.00154		0.0005
Iron (Total)	<0.01		0.01	0.102	0.103	0.98%	0.01	0.16	0.177	10.09%	0.01	0.045	0.037		0.01	0.079	0.061	**25.71%**	0.03	0.076	0.161		0.03
Lead (Total)	<0.00005		5E-05	<0.00005	<0.00005		5E-05	0.00007	<0.00005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		5E-05
Lithium (Total)	0.056	0.18%	0.0005	0.00858	0.00975	12.77%	0.0005	0.0073	0.00772	5.59%	0.0005	0.00776	0.00751	3.27%	0.0005	0.00878	0.00901	2.59%	0.0005	0.00264	0.00264	0.00%	0.0005
Magnesium (Total)	299	1.35%	0.1	36.1	36.3	0.55%	0.1	24.9	25.8	3.55%	0.1	29.2	28.2	3.48%	0.1	24.2	24.6	1.64%	0.1	35.2	34.5	2.01%	0.1
Manganese (Total)	0.00371	0.27%	5E-05	0.207	0.18	13.95%	5E-05	0.0164	0.0169	3.00%	5E-05	0.00781	0.0073	6.75%	5E-05	0.0207	0.0172	18.47%	5E-05	0.0393	0.0445	12.41%	5E-05
Mercury (Total)	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05
Molybdenum (Total)	4.35	2.72%	5E-05	0.00214	0.00209	2.36%	5E-05	0.00322	0.00342	6.02%	5E-05	0.00339	0.00326	3.91%	5E-05	0.00343	0.00356	3.72%	5E-05	0.0107	0.00928	14.21%	5E-05
Nickel (Total)	0.014	2.82%	0.0005	0.00248	0.00239		0.0005	0.00075	0.00072		0.0005	0.0006	0.00058		0.0005	0.00068	0.00067		0.0005	0.00225	0.00063		0.0005
Phosphorus (Metal) Total	<0.05		0.05	0.108	0.101		0.05	<0.05	<0.05		0.05	<0.05	<0.05		0.05	<0.05	<0.05		0.3	<0.3	<0.3		0.3
Potassium (Total)	30.5	0.66%	0.1	10.3	10.2	0.98%	0.1	10.1	10.6	4.83%	0.1	9.56	9.03	5.70%	0.1	10.6	10.7	0.94%	0.05	4.77	4.56	4.50%	0.05
Selenium (Total)	0.0474	5.74%	0.0001	0.00024	0.00023		0.0001	0.0003	0.0003		0.0001	0.0003	0.00029		0.0001	0.00016	0.00018		0.0001	0.00056	0.00052	7.41%	0.0001
Silicon (Total)	7.33	0.54%	0.05	9.25	9.04	2.30%	0.05	7.85	8.1	3.13%	0.05	8.41	7.99	5.12%	0.05	8.86	8.97	1.23%	0.05	7.62	7.62	0.00%	0.05
Silver (Total)	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05
Sodium (Total)	213	0.93%	0.05	39.3	35.8	9.32%	0.05	54.3	54.5	0.37%	0.05	58.4	59.3	1.53%	0.05	51.1	53.6	4.78%	0.05	31.5	30.2	4.21%	0.05
Strontium (Total)	4.12	0.49%	0.0002	0.41	0.4	2.47%	0.0002	0.401	0.424	5.58%	0.0002	0.419	0.407	2.91%	0.0002	0.378	0.385	1.83%	0.0001	0.399	0.371	7.27%	0.0001
Sulphur (Total)	600	1.01%	0.5	4.6	4.51	1.98%	0.5	12.7	13.2	3.86%	0.5	12.8	12.4	3.17%	0.5	8.97	9.05	0.89%					
Thallium (Total)	0.000013		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05
Tin (Total)	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001
Titanium (Total)	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	0.01		0.01
Total Cadmium (by saltwater extraction)	<0.00008																						
Uranium (Total)	0.0107	8.93%	1E-05	0.00118	0.00114	3.45%	1E-05	0.00509	0.00535	4.98%	1E-05	0.00578	0.00568	1.75%	1E-05	0.00332	0.00344	3.55%	1E-05	0.000956	0.000906	5.37%	1E-05
Vanadium (Total)	0.0052	0.00%	0.001	0.0023	0.0022		0.001	0.0018	0.002		0.001	0.0018	0.0018		0.001	0.0019	0.002		0.001	0.0022	0.0021		0.001
Zinc (Total)	<0.003		0.003	<0.003	<0.003		0.003	<0.003	<0.003		0.003	<0.003	<0.003		0.003	<0.003	<0.003		0.003	0.0033	0.0032		0.003
Organics																							
Carbon Organic (Dissolved)	1.39		1	16.3	16.2	0.62%	0.5	12.3	12.5	1.61%	0.5	11.8	10.9	7.93%	0.5	12.2	11.8	3.33%	0.5	4.61	4.69	1.72%	0.5
Carbon Organic (Total)	1.34		1	16.4	16.1	1.85%	0.5	12.9	12.6	2.35%	0.5	11.5	11	4.44%	0.5	12.1	12	0.83%	0.5	4.76	4.71	1.06%	0.5
Nitrogen Organic (Dissolved)																			0.17	0.31	0.26		0.19
Nitrogen Organic (Total)																			0.3	<0.3	<0.3		0.06

APPENDIX A QA/QC
TABLE A.10 Surface Water Duplicates
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Site	CC02	Duplicate	RPD	MDL	CC02	Duplicate	RPD	MDL	CC02	Duplicate	RPD	MDL	CC08	Duplicate	RPD	MDL	CC08	Duplicate	RPD	MDL	CC08	Duplicate
Date Sampled	7-Mar-12		(%)		5-Feb-13		(%)		4-Dec-13		(%)		28-Apr-08		(%)		2-Sep-10		(%)		14-Apr-11	
Physical Tests																						
Acidity to pH 8.3 (as CaCO3)																						
Alkalinity (Total as CaCO3)	290	291	0.34%	1	283	283	0.00%	2	291	290	0.34%	2	158	163	3.12%	2	138	139	0.72%	2	170	175
Bicarbonate Alkalinity	280	280	0.00%	1	283	283	0.00%	2	291	290	0.34%											
Carbonate Alkalinity	10.3	11.2	8.37%	1	<1	<1		2	<2	<2												
Color TCU	8.7	8.6		5	6.4	6.2		5	6.2	7		5	7.7	7.6		5	15.7	15.7		5	8.1	8.4
Hardness as CaCO3 (Dissolved)	379	376	0.79%	0.5	347	342	1.45%	0.5	312	312	0.00%	0.7	182	182	0.00%	0.5	143	144	0.70%	0.5	186	187
Hydroxide Alkalinity	<1	<1		1	<1	<1		2	<2	<2												
pH pH	8.34	8.33	0.12%	0.1	8.31	8.33	0.24%	0.1	8.18	8.26	0.97%	0.01	8.11	8.15	0.49%	0.1	8.22	8.2	0.24%	0.1	8.31	8.38
Phosphorus (Nutrient) Total																						
Specific Conductivity µS/cm	753	756	0.40%	2	695	692	0.43%	2	623	637	2.22%	2	333	334	0.30%	2	266	266	0.00%	2	320	335
Total Dissolved Solids	510	503	1.38%	10	444	428	3.67%	10	428	422	1.41%	10	195	205	5.00%	10	175	174	0.57%	10	194	204
Total Suspended Solids	<3	3.3		3	<3	<3		3	<3	4		3	10.4	6.8		3	<3	<3		3	<3	<3
Turbidity NTU	1.07	1.11	3.67%	0.1	0.66	0.66	0.00%	0.1	0.67	0.64	4.58%	0.1	3.08	2.04	40.63%	0.1	0.37	0.21		0.1	0.18	0.93
Dissolved Anions																						
Bromide (Dissolved)	<0.5	<0.5		0.5	<0.5	<0.5		0.05	<0.05	<0.05		0.05	<0.05	<0.05		0.05	<0.05	<0.05		0.05	<0.05	<0.05
Chloride (Dissolved)	5.1	5.3		5	<5	<5		0.5	3.95	3.97	0.51%	0.5	0.95	0.88		0.5	0.58	0.58		0.5	1.04	1.05
Fluoride (Dissolved)	<0.2	<0.2		0.2	<0.2	<0.2		0.02	0.132	0.132	0.00%	0.02	0.094	0.068		0.02	0.066	0.067		0.02	0.074	0.076
Sulphate (Dissolved)	141	144	2.11%	5	120	120	0.00%	0.5	85.9	86.4	0.58%	0.5	25.3	24.8	2.00%	0.5	7.4	7.47	0.94%	0.5	15	15
Nutrients																						
Ammonia (Total)	0.0831	0.0849	2.14%	0.005	0.03	0.0308	2.63%	0.005	0.0279	0.0289	3.52%	0.02	<0.02	<0.02		0.005	<0.005	<0.005		0.005	0.0064	0.008
Nitrate (as N)	0.635	0.624	1.75%	0.05	0.41	0.405	1.23%	0.005	0.402	0.408	1.48%	0.005	0.167	0.168	0.60%	0.005	0.006	<0.005		0.005	0.0936	0.0916
Nitrate (Available)																						
Nitrite (as N)	<0.01	<0.01		0.01	<0.01	<0.01		0.001	0.0032	0.0033		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.001	<0.001	<0.001
Nitrogen (Dissolved)	0.96	0.95	1.05%	0.05	0.671	0.682	1.63%															
Nitrogen (Total)	0.972	0.961	1.14%	0.05	0.669	0.665	0.60%									0.0025	0.351	0.359	2.25%	0.0025	0.222	0.241
Nitrogen Kjeldahl (Total)	0.337	0.337	0.00%	0.05	0.291	0.308	5.68%	0.05	0.27	0.248		0.05	0.243	0.264		0.05	0.345	0.359	3.98%	0.05	0.128	0.15
Orthophosphate (Dissolved)								0.001	0.0408	0.0394	3.49%	0.001	0.0076	0.0071	6.80%	0.001	0.0095	0.0104	9.05%			
Phosphorus (Nutrient) Dissolved	0.0829	0.0848	2.27%	0.002	0.0345	0.0344	0.29%	0.002	0.0454	0.0439	3.36%					0.002	0.0121	0.0117	3.36%	0.002	0.007	0.0094
Phosphorus (Nutrient) Total	0.0921	0.0895	2.86%	0.002	0.0375	0.0371	1.07%	0.002	0.049	0.0486	0.82%	0.002	0.0213	0.0253	17.17%	0.002	0.0121	0.0124	2.45%	0.002	0.0075	0.017
Cyanide																						
Cyanide (Free)	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005				
Cyanide (Total)	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	0.0061	0.0058				
Cyanide (WAD)	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	0.0085				
Dissolved Metals																						
Aluminum (Dissolved)	<0.003	<0.003		0.001	0.0012	0.001		0.001	<0.001	<0.001		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005
Antimony (Dissolved)	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005
Arsenic (Dissolved)	0.00063	0.00062	1.60%	0.0001	0.00048	0.00045		0.0001	0.00047	0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005
Barium (Dissolved)	0.101	0.102	0.99%	5E-05	0.0965	0.0951	1.46%	5E-05	0.0863	0.0868	0.58%	0.02	0.055	0.054		0.02	0.052	0.052		0.02	0.052	0.052
Beryllium (Dissolved)	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.001	<0.001	<0.001
Bismuth (Dissolved)	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005										0.2	<0.2	<0.2
Boron (Dissolved)	0.036	0.037		0.01	0.04	0.041		0.01	0.039	0.039		0.1	<0.1	<0.1		0.1	<0.1	<0.1		0.1	<0.1	<0.1
Cadmium (Dissolved)	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		2E-05	<0.000017	<0.000017		2E-05	0.000024	0.000026		2E-05	0.000036	0.000032
Calcium (Dissolved)	92.9	92	0.97%	0.05	85.3	83.9	1.65%	0.05	75.9	76.2	0.39%	0.1	54.1	54.2	0.18%	0.1	42.9	43.3	0.93%	0.1	54.9	55.7
Chromium (Dissolved)	<0.0001	<0.0001		0.0001	<0.0001	0.00012		0.0001	<0.0001	<0.0001		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.001	<0.001	<0.001
Cobalt (Dissolved)	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0003	<0.0003	<0.0003		0.0003	<0.0003	<0.0003		0.0003	<0.0003	<0.0003
Copper (Dissolved)	0.00151	0.00158		0.0002	0.00123	0.00119	3.31%	0.0002	0.00101	0.00107	5.77%	0.001	0.0016	0.0029		0.001	0.0029	0.0028		0.001	0.0016	0.0016
Dissolved Cadmium (by saltwater extraction)																						
Iron (Dissolved)	<0.03	<0.03		0.01	0.017	0.018		0.01	0.013	0.013		0.03	<0.03	<0.03		0.03	<0.03	<0.03		0.03	<0.03	<0.03
Lead (Dissolved)	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005
Lithium (Dissolved)	0.00242	0.0024		0.0005	0.00306	0.00311	1.62%	0.0005	0.00268	0.0026	3.03%	0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005
Magnesium (Dissolved)	35.7	35.6	0.28%	0.1	32.6	32.1	1.55%	0.1	29.7	29.6	0.34%	0.1	11.3	11.4	0.88%	0.1	8.75	8.8	0.57%	0.1	11.8	11.6
Manganese (Dissolved)	0.0311	0.0316	1.59%	5E-05	0.0236	0.0237	0.42%	5E-05	0.0194	0.0199	2.54%	0.0003	0.00033	0.00033		0.0003	0.00071	0.0007		0.0003	<0.0003	<0.0003
Mercury (Dissolved)	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		2E-05	<0.00002	<0.00002		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001
Molybdenum (Dissolved)	0.00931	0.00927	0.43%	5E-05	0.00945	0.00945	0.00%	5E-05	0.0098	0.00978	0.20%	0.001	0.0103	0.0103	0.00%	0.001	0.0079	0.008	1.26%	0.001	0.0096	0.0098
Nickel (Dissolved)	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.001	<0.001	<0.001
Phosphorus (Metal) Dissolved	<0.3	<0.3		0.05	<0.05	<0.05		0.05	<0.05	0.05										0.3	<0.3	<0.3
Potassium (Dissolved)	6.24	6.37	2.06%	0.1	4.69	4.57	2.59%	0.1	4.24	4.21	0.71%	2	<2	<2		2	<2	<2		2	<2	<2
Selenium (Dissolved)	0.00064	0.00062	3.17%	0.0001	0.0005	0.00045		0.0001	0.00038	0.00037		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.001	<0.001	<0.001
Silicon (Dissolved)	7.19	7.19	0.00%	0.05	7.25	7.16	1.25%	0.05	7.89	7.86	0.38%									0.05	5.8	5.85
Silver (Dissolved)	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002
Sodium (Dissolved)	30.1	30.7	1.97%	0.05	33.3	34.2	2.67%	0.05	28.7	29	1.04%	2	4.5	4.4		2	3.8	3.8		2	5.3	5.1
Strontium (Dissolved)	0.377	0.379	0.53%	0.0002	0.386	0.387	0.26%	0.0002	0.33	0.334	1.20%									0.005	0.158	0.158
Sulphur (Dissolved)				0.5	38.3	38	0.79%	0.5	28	28.1	0.36%											
Thallium (Dissolved)	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002
Tin (Dissolved)	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005
Titanium (Dissolved)	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01
Uranium (Dissolved)	0.000989	0.000995	0.60%	1E-05	0.000817	0.000817	0.00%	1E-05	0.000716	0.000739	3.16%	0.0002	0.00051	0.00049		0.0002	<0.0002	<0.0002		0.0002	0.0005	0.00048
Vanadium (Dissolved)	0.0023	0.0023		0.001	0.0017	0.0017		0.001	0.0016	0.0016		0.001	<0.001	<0.001		0.001	0.0012	0.0012		0.001	<0.001	<0.001
Zinc (Dissolved)	<0.003	<0.003		0.001	0.0011	<0.001		0.001	<0.001	0.0013		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005
Total Metals																						
Aluminum (Total)	0.0224	0.0744	107.44%	0.003	0.0168	0.0143		0.003	0.0263	0.0364	32.22%	0.005	0.0737	0.064	14.09%	0.005	0.0083	0.0069		0.005	<0.005	<0.005
Antimony (Total)	0.0001	<0.0001		0.0001	0.00011	0.00011		0.0001	<0.0001	<0.0001		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005
Arsenic (Total)	0.00059	0.00056	5.22%	0.0001	0.00049	0.00048		0.0001	0.00051	0.00053	3.85%	0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005
Barium (Total)	0.103	0.104	0.97%	5E-05	0.0965	0.096	0.52%	5E-05	0.0886	0.087	1.82%	0.02	0.051	0.054		0.02	0.051	0.051		0.02	0.052	0.052
Beryllium (Total)	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.001	<0.001	<0.001
Bismuth (Total)	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005										0.2	<0.2	<0.2
Boron (Total)	0.044	0.042		0.01	0.045	0.045		0.01	0.042	0.042		0.1	<0.1	<0.1		0.1	<0.1	<0.1		0.1	<0.1	<0.1
Cadmium (Total)	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		2E-05	0.000034	0.000034		2E-05	0.000031	0.000028		2E-05	<0.000017	<0.000017
Calcium (Total)	92.9	90.9	2.18%	0.05	88	87.1	1.03%	0.05	78	78	0.00%	0.1	51.7	52	0.58%	0.1	43.9	43.9	0.00%	0.1	54	53.9
Chromium (Total)	0.00026	0.00025		0.0001	0.00018	0.0002		0.0001	0.00015	0.00021		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.001	<0.001	<0.001
Cobalt (Total)	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0003	<0.0003	<0.0003		0.0003	<0.0003	<0.0003		0.0003	<0.0003	<0.0003
Copper (Total)	0.00185	0.00184		0.0005	0.00174	0.00168		0.0005	0.00136	0.00138		0.001	0.0027	0.0025		0.001	0.0032	0.0031		0.001	0.0017	0.0017
Iron (Total)	0.071	0.084		0.01	0.055	0.053	3.70%	0.01	0.062	0.062	0.00%	0.03	0.121	0.105		0.03	<0.03	<0.03		0.03	<0.03	<0.03
Lead (Total)	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005
Lithium (Total)	0.00275	0.00242		0.0005	0.00314	0.00303	3.57%	0.0005	0.00278	0.00272	2.18%	0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005
Magnesium (Total)	36	35.4	1.68%	0.1	32.7	32.4	0.92%	0.1	29	29.3	1.03%	0.1	10.9	11.1	1.82%	0.1	8.98	8.89	1.01%	0.1	11.8	11.5
Manganese (Total)	0.0367	0.0373	1.62%	5E-05	0.0277	0.0273	1.45%	5E-05	0.0247	0.0245	0.81%	0.0003	0.00515	0.00508	1.37%	0.0003	0.00126	0.00114		0.0003	<0.0003	<0.0003
Mercury (Total)	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		2E-05	0.000494	<0.00002		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001
Molybdenum (Total)	0.00996	0.00987	0.91%	5E-05	0.0101	0.01	1.00%	5E-05	0.0102	0.0106	3.85%	0.001	0.0099	0.0099	0.00%	0.001	0.0092	0.0089	3.31%	0.001	0.0111	0.0109
Nickel (Total)	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.001	<0.001	<0.001
Phosphorus (Metal) Total	<0.3	<0.3		0.05	<0.05	<0.05		0.05	<0.05	<0.05										0.3	<0.3	<0.3
Potassium (Total)	6.48	6.32	2.50%	0.1	4.85	4.85	0.00%	0.1	4.53	4.45	1.78%	2	<2	<2		2	<2	<2		2	2.1	<2
Selenium (Total)	0.0006	0.00058	3.39%	0.0001	0.00052	0.0005	3.92%	0.0001	0.00037	0.00033		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.001	<0.001	<0.001
Silicon (Total)	7.29	7.16	1.80%	0.05	7.34	7.42	1.08%	0.05	8.06	8.03	0.37%									0.05	5.72	5.71
Silver (Total)	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		2E-05	<0.00002	<0.00002		2E-05	<0.00002	0.000075		2E-05	<0.00002	<0.00002
Sodium (Total)	31	30.3	2.28%	0.05	34.2	34.6	1.16%	0.05	29.5	30.1	2.01%	2	4.2	4.5		2	3.8	3.8		2	5.6	5.1
Strontium (Total)	0.387	0.382	1.30%	0.0002	0.39	0.397	1.78%	0.0002	0.333	0.336	0.90%									0.005	0.159	0.157
Sulphur (Total)				0.5	40.4	40.2	0.50%	0.5	29.1	29.6	1.70%											
Thallium (Total)	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002
Tin (Total)	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005
Titanium (Total)	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)																						
Uranium (Total)	0.00104	0.00102	1.94%	1E-05	0.000872	0.000852	2.32%	1E-05	0.000789	0.000789	0.00%	0.0002	0.00053	0.00054		0.0002	<0.0002	<0.0002		0.0002	0.00056	0.00056
Vanadium (Total)	0.0024	0.0024		0.001	0.002	0.002		0.001	0.0018	0.0019		0.001	0.0014	0.0013		0.001	0.0014	0.0012		0.001	0.0011	0.0011
Zinc (Total)	0.0033	<0.003		0.003	<0.003	<0.003		0.003	<0.003	<0.003		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005
Organics																						
Carbon Organic (Dissolved)	5.22	5.16	1.16%	0.5	4.45	4.45	0.00%	0.5	4.86	4.78	1.66%	0.5	5.8	5.87	1.20%	0.5	7.06	7.35	4.02%	0.5	4.87	4.94
Carbon Organic (Total)	5.27	5.49	4.09%	0.5	4.53	4.39	3.14%	0.5	5	4.83	3.46%									0.5	4.62	4.76
Nitrogen Organic (Dissolved)	0.24	0.24																				
Nitrogen Organic (Total)	0.254	0.252		0.06	0.261	0.278														0.06	0.122	0.141

APPENDIX A QA/QC
TABLE A.10 Surface Water Duplicates
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Site	RPD	MDL	CC08	Duplicate	RPD	MDL	CC08	Duplicate	RPD	MDL	CC08	Duplicate	RPD	MDL	CC08	Duplicate	RPD	MDL	ED/TH-01S	Duplicate	RPD	MDL
Date Sampled	(%)		28-Apr-11		(%)		5-May-11		(%)		4-May-12		(%)		6-Aug-13		(%)		13-May-14		(%)	
Physical Tests																						
Acidity to pH 8.3 (as CaCO3)																						
Alkalinity (Total as CaCO3)	2.90%	2	166	168	1.20%	2	134	135	0.74%	2	81	81.5	0.62%	2	126	125	0.80%	1	355	390	9.40%	1
Bicarbonate Alkalinity										2	81	81.5	0.62%	2	126	125	0.80%	1	304	332	8.81%	1
Carbonate Alkalinity										2	<2	<2		2	<2	<2		1	51.1	58.4	13.33%	1
Color TCU		5	7.1	6.6		5	30.7	30.7	0.00%	5	49.3	49.5	0.40%	5	26.7	26.9	0.75%					
Hardness as CaCO3 (Dissolved)	0.54%	0.5	187	181	3.26%	0.5	157	159	1.27%	0.5	100	99.6	0.40%	0.5	128	127	0.78%	0.5	394	392	0.51%	0.5
Hydroxide Alkalinity										2	<2	<2		2	<2	<2		1	<1	<1		1
pH pH	0.84%	0.1	8.24	8.28	0.48%	0.1	8.22	8.31	1.09%	0.1	8.1	8.05	0.62%	0.1	8.27	8.3	0.36%	0.1	8.84	8.86	0.23%	0.1
Phosphorus (Nutrient) Total																						
Specific Conductivity µS/cm	4.58%	2	316	317	0.32%	2	269	273	1.48%	2	178	178	0.00%	2	232	232	0.00%	2	864	830	4.01%	2
Total Dissolved Solids	5.03%	10	209	197	5.91%	10	190	188	1.06%	10	140	142	1.42%	10	166	162	2.44%	10	527	537	1.88%	10
Total Suspended Solids		3	<3	<3		3	6	<3		3	3.3	<3		3	5.1	<3		3	<3	<3		3
Turbidity NTU		0.1	0.26	0.24		0.1	1.82	1.73	5.07%	0.1	1.66	1.68	1.20%	0.1	0.43	0.32		0.1	0.69	0.5	31.93%	0.1
Dissolved Anions																						
Bromide (Dissolved)		0.05	<0.05	<0.05		0.05	<0.05	<0.05		0.05	<0.05	<0.05		0.05	<0.05	<0.05		0.5	<0.5	<0.5		0.5
Chloride (Dissolved)		0.5	0.98	0.97		0.5	1.1	0.84		0.5	0.93	0.93		0.5	0.53	0.53		5	48.1	48.3	0.41%	5
Fluoride (Dissolved)		0.02	0.072	0.072		0.02	0.055	0.055		0.02	0.07	0.07		0.02	0.085	0.085		0.2	0.21	0.21		0.2
Sulphate (Dissolved)	0.00%	0.5	15.5	15.5	0.00%	0.5	13.9	13.8	0.72%	0.5	13.2	13.2	0.00%	0.5	6.07	6.05	0.33%	5	40.5	40.8	0.74%	5
Nutrients																						
Ammonia (Total)		0.005	0.0074	0.0085		0.005	<0.005	0.0064		0.005	<0.005	<0.005		0.005	0.0065	0.0059		0.005	0.0293	0.0327	10.97%	0.005
Nitrate (as N)	2.16%	0.005	0.0613	0.0599	2.31%	0.005	0.0845	0.0838	0.83%	0.005	0.02	0.0204		0.005	0.0224	0.0229		0.05	<0.05	<0.05		0.05
Nitrate (Available)																						
Nitrite (as N)		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.01	<0.01	<0.01		0.01
Nitrogen (Dissolved)		0.05	0.37	0.33	11.43%	0.05	0.33	0.55	**50.00%**	0.05	0.3	0.34	12.50%	0.05	0.279	0.279	0.00%					
Nitrogen (Total)	8.21%	0.0025	0.219	0.244	10.80%	0.05	0.42	0.41	2.41%	0.0025	0.44	0.441	0.23%	0.05	0.29	0.291	0.34%					0.05
Nitrogen Kjeldahl (Total)		0.05	0.157	0.185		0.05	0.336	0.326	3.02%	0.05	0.42	0.42	0.00%	0.05	0.258	0.283	9.24%	0.05	1.39	1.31	5.93%	0.05
Orthophosphate (Dissolved)																		0.001	0.004	0.0022		0.001
Phosphorus (Nutrient) Dissolved		0.002	0.0095	0.0079		0.002	0.0149	0.014	6.23%	0.002	0.018	0.0172	4.55%	0.002	0.0112	0.0114	1.77%	0.002	0.0263	0.0245	7.09%	0.002
Phosphorus (Nutrient) Total		0.002	0.0081	0.0069		0.002	0.0266	0.0334	22.67%	0.002	0.0278	0.0275	1.08%	0.002	0.0146	0.0143	2.08%	0.002	0.0313	0.0342	8.85%	0.002
Cyanide																						
Cyanide (Free)		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005
Cyanide (Total)		0.005	<0.005	<0.005		0.005	0.0069	0.0075		0.005	0.0104	0.0104		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005
Cyanide (WAD)		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005
Dissolved Metals																						
Aluminum (Dissolved)		0.005	<0.005	<0.005		0.005	0.0052	0.0052		0.003	0.0129	0.0129		0.001	0.0035	0.0029		0.001	0.0012	<0.001		0.001
Antimony (Dissolved)		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	0.00012	0.00012		0.0001
Arsenic (Dissolved)		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0001	0.00032	0.0003		0.0001	0.00041	0.00037		0.0001	0.00141	0.00144	2.11%	0.0001
Barium (Dissolved)		0.02	0.05	0.052		0.02	0.042	0.042		5E-05	0.03	0.0296	1.34%	5E-05	0.0435	0.0437	0.46%	5E-05	0.0488	0.0456	6.78%	5E-05
Beryllium (Dissolved)		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001
Bismuth (Dissolved)		0.2	<0.2	<0.2		0.2	<0.2	<0.2		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005
Boron (Dissolved)		0.1	<0.1	<0.1		0.1	<0.1	<0.1		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	0.015	0.015		0.01
Cadmium (Dissolved)		2E-05	0.000024	0.000028		2E-05	0.000029	0.000029		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05
Calcium (Dissolved)	1.45%	0.1	55.5	52.8	4.99%	0.1	47.4	47.7	0.63%	0.05	30.4	30.1	0.99%	0.05	38.6	38.4	0.52%	0.05	42	41.3	1.68%	0.05
Chromium (Dissolved)		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.0001	0.00018	0.00018		0.0001	0.00012	0.00014		0.0001	<0.0001	<0.0001		0.0001
Cobalt (Dissolved)		0.0003	<0.0003	<0.0003		0.0003	<0.0003	<0.0003		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001
Copper (Dissolved)		0.001	0.0016	0.0016		0.001	0.0027	0.0027		0.0005	0.00413	0.00408	1.22%	0.0002	0.0032	0.00308	3.82%	0.0002	0.00079	0.00076		0.0002
Dissolved Cadmium (by saltwater extraction)																						
Iron (Dissolved)		0.03	<0.03	<0.03		0.03	<0.03	<0.03		0.03	0.061	0.054		0.01	0.013	0.012		0.01	<0.01	<0.01		0.01
Lead (Dissolved)		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		5E-05
Lithium (Dissolved)		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	0.0118	0.0112	5.22%	0.0005
Magnesium (Dissolved)	1.71%	0.1	11.7	11.9	1.69%	0.1	9.45	9.61	1.68%	0.1	5.94	5.94	0.00%	0.1	7.54	7.5	0.53%	0.1	70.3	70.2	0.14%	0.1
Manganese (Dissolved)		0.0003	<0.0003	<0.0003		0.0003	0.00047	0.00049		5E-05	0.00038	0.000365	4.03%	5E-05	0.000756	0.00077	1.83%	5E-05	0.00238	0.00211	12.03%	5E-05
Mercury (Dissolved)		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05
Molybdenum (Dissolved)	2.06%	0.001	0.0099	0.0099	0.00%	0.001	0.0086	0.0086	0.00%	5E-05	0.0116	0.0106	9.01%	5E-05	0.00902	0.00901	0.11%	5E-05	0.00201	0.00198	1.50%	5E-05
Nickel (Dissolved)		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	0.00063	0.0006		0.0005
Phosphorus (Metal) Dissolved		0.3	<0.3	<0.3		0.3	<0.3	<0.3		0.3	<0.3	<0.3		0.05	<0.05	<0.05		0.05	<0.05	<0.05		0.05
Potassium (Dissolved)		2	<2	<2		2	<2	<2		0.05	1.31	1.32	0.76%	0.1	1.56	1.54	1.29%	0.1	16.9	16.7	1.19%	0.1
Selenium (Dissolved)		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.0001	0.00022	0.00021		0.0001	0.00012	0.00011		0.0001	<0.0001	0.00011		0.0001
Silicon (Dissolved)	0.86%	0.05	5.86	5.89	0.51%	0.05	6.85	6.92	1.02%	0.05	5.82	5.8	0.34%	0.05	7.4	7.39	0.14%	0.05	<0.05	<0.05		0.05
Silver (Dissolved)		2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05
Sodium (Dissolved)		2	5.1	5		2	3.8	3.9		0.05	2.59	2.6	0.39%	0.05	3.25	3.2	1.55%	0.05	53	50	5.83%	0.05
Strontium (Dissolved)	0.00%	0.005	0.156	0.156	0.00%	0.005	0.132	0.135	2.25%	0.0001	0.0887	0.0804	9.82%	0.0002	0.112	0.118	5.22%	0.0002	0.271	0.252	7.27%	0.0002
Sulphur (Dissolved)														0.5	2.26	2.24		0.5	14.8	14.6	1.36%	0.5
Thallium (Dissolved)		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05
Tin (Dissolved)		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001
Titanium (Dissolved)		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01
Uranium (Dissolved)		0.0002	0.00052	0.0005		0.0002	0.00028	0.00029		1E-05	0.000075	0.000067	11.27%	1E-05	0.000091	0.000087	4.49%	1E-05	0.00143	0.00146	2.08%	1E-05
Vanadium (Dissolved)		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.001	0.0012	0.0012		0.001	0.0022	0.0021		0.001
Zinc (Dissolved)		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.003	<0.003	0.0038		0.001	0.001	0.0011		0.001	0.0012	<0.001		0.001
Total Metals																						
Aluminum (Total)		0.005	0.0073	0.0171		0.005	0.127	0.109	15.25%	0.003	0.1	0.101	1.00%	0.003	0.0578	0.0539	6.98%	0.003	0.0037	0.0036		0.003
Antimony (Total)		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	0.00013	0.00013		0.0001
Arsenic (Total)		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0001	0.00031	0.00031		0.0001	0.00042	0.00042		0.0001	0.00133	0.00134	0.75%	0.0001
Barium (Total)		0.02	0.052	0.053		0.02	0.045	0.044		5E-05	0.03	0.0299	0.33%	5E-05	0.0446	0.0447	0.22%	5E-05	0.0463	0.0479	3.40%	5E-05
Beryllium (Total)		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001
Bismuth (Total)		0.2	<0.2	<0.2		0.2	<0.2	<0.2		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005
Boron (Total)		0.1	<0.1	<0.1		0.1	<0.1	<0.1		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	0.015	0.015		0.01
Cadmium (Total)		2E-05	<0.000017	<0.000017		2E-05	0.000034	<0.000017		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05
Calcium (Total)	0.19%	0.1	54.4	51.7	5.09%	0.1	47.4	47.5	0.21%	0.05	29.9	29.7	0.67%	0.05	40.6	39.9	1.74%	0.05	40.7	41.5	1.95%	0.05
Chromium (Total)		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.0001	0.00039	0.00038		0.0001	0.00029	0.00027		0.0001	<0.0001	<0.0001		0.0001
Cobalt (Total)		0.0003	<0.0003	<0.0003		0.0003	<0.0003	<0.0003		0.0001	0.00012	0.00012		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001
Copper (Total)		0.001	0.0018	0.002		0.001	0.0033	0.0036		0.0005	0.00466	0.00476	2.12%	0.0005	0.00376	0.00367	2.42%	0.0005	0.00095	0.0009		0.0005
Iron (Total)		0.03	<0.03	<0.03		0.03	0.208	0.174	17.80%	0.03	0.181	0.177	2.23%	0.01	0.102	0.096	6.06%	0.01	0.049	<0.01		0.01
Lead (Total)		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		5E-05
Lithium (Total)		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	0.0112	0.0114	1.77%	0.0005
Magnesium (Total)	2.58%	0.1	11.6	11.8	1.71%	0.1	9.56	9.69	1.35%	0.1	5.91	5.88	0.51%	0.1	7.98	7.95	0.38%	0.1	68.8	70.4	2.30%	0.1
Manganese (Total)		0.0003	0.00042	0.001		0.0003	0.00528	0.00563	6.42%	5E-05	0.00345	0.00331	4.14%	5E-05	0.00368	0.00358	2.75%	5E-05	0.00389	0.00377	3.13%	5E-05
Mercury (Total)		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05
Molybdenum (Total)	1.82%	0.001	0.0109	0.0109	0.00%	0.001	0.0096	0.0101	5.08%	5E-05	0.0111	0.0114	2.67%	5E-05	0.00969	0.00975	0.62%	5E-05	0.00202	0.00202	0.00%	5E-05
Nickel (Total)		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.0005	0.0006	0.00055		0.0005	<0.0005	<0.0005		0.0005	0.00072	0.00072		0.0005
Phosphorus (Metal) Total		0.3	<0.3	<0.3		0.3	<0.3	<0.3		0.3	<0.3	<0.3		0.05	<0.05	<0.05		0.05	<0.05	<0.05		0.05
Potassium (Total)		2	<2	<2		2	<2	<2		0.05	1.28	1.29	0.78%	0.1	1.71	1.73	1.16%	0.1	16.3	16.6	1.82%	0.1
Selenium (Total)		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.0001	0.00016	0.00021		0.0001	0.00012	0.00012		0.0001	<0.0001	<0.0001		0.0001
Silicon (Total)	0.17%	0.05	5.84	5.89	0.85%	0.05	7.12	7.1	0.28%	0.05	5.89	5.86	0.51%	0.05	7.73	7.69	0.52%	0.05	0.057	0.053		0.05
Silver (Total)		2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002		1E-05	0.000012	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05
Sodium (Total)		2	5.2	5.1		2	3.9	3.9		0.05	2.53	2.55	0.79%	0.05	3.33	3.33	0.00%	0.05	53.4	53.8	0.75%	0.05
Strontium (Total)	1.27%	0.005	0.158	0.158	0.00%	0.005	0.136	0.137	0.73%	0.0001	0.0818	0.0847	3.48%	0.0002	0.119	0.122	2.49%	0.0002	0.27	0.268	0.74%	0.0002
Sulphur (Total)														0.5	2.36	2.3		0.5	14.5	14.6	0.69%	0.5
Thallium (Total)		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05
Tin (Total)		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001
Titanium (Total)		0.01	<0.01	<0.01		0.01	0.012	0.011		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01
Total Cadmium (by saltwater extraction)																						
Uranium (Total)		0.0002	0.00056	0.00056		0.0002	0.00031	0.00032		1E-05	0.000075	0.000081	7.69%	1E-05	0.000097	0.000097	0.00%	1E-05	0.00176	0.00183	3.90%	1E-05
Vanadium (Total)		0.001	<0.001	0.001		0.001	0.0014	0.0015		0.001	0.0011	0.0011		0.001	0.0016	0.0016		0.001	0.0023	0.0023		0.001
Zinc (Total)		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.003	<0.003	<0.003		0.003	<0.003	<0.003		0.003	<0.003	<0.003		0.003
Organics																						
Carbon Organic (Dissolved)	1.43%	0.5	4.57	4.74	3.65%	0.5	13.4	13.3	0.75%	0.5	14.8	15.6	5.26%	0.5	10.9	10.7	1.85%	1	19.5	19.8	1.53%	1
Carbon Organic (Total)	2.99%	0.5	4.66	4.86	4.20%	0.5	13.5	13.4	0.74%	0.5	14.7	15.2	3.34%	0.5	11.1	11.2	0.90%	1	19.3	19.9	3.06%	1
Nitrogen Organic (Dissolved)		0.05	0.301	0.262	13.85%	0.05	0.242	0.46		0.05	0.275	0.315	13.56%									
Nitrogen Organic (Total)		0.06	0.15	0.176		0.05	0.332	0.32	3.68%	0.06	0.42	0.42	0.00%									

APPENDIX A QA/QC
TABLE A.10 Surface Water Duplicates
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Site	HUMPH-10	Duplicate	RPD	MDL	HUMPH02	Duplicate	RPD	MDL	HUMPH02	Duplicate	RPD	MDL	JACL-D	Duplicate	RPD	MDL	JACL-M	Duplicate	RPD	MDL	JACL-S	Duplicate
Date Sampled	21-May-14		(%)		24-Apr-14		(%)		11-Aug-14		(%)		6-Sep-12		(%)		14-Sep-14		(%)		7-Sep-08	
Physical Tests																						
Acidity to pH 8.3 (as CaCO3)																						
Alkalinity (Total as CaCO3)	406	386	5.05%	1	481	477	0.84%	1	489	472	3.54%	1	277	279	0.72%	1	247	245	0.81%	1	230	230
Bicarbonate Alkalinity	397	371	6.77%	1	439	437	0.46%	1	460	459	0.22%	1	277	279	0.72%	1	244	241	1.24%	1	218	217
Carbonate Alkalinity	8.7	14.6	50.64%	1	42.1	39.7	5.87%	1	28.3	12.9	74.76%	1	<1	<1		1	3.8	4		1	12.7	13.2
Color TCU												5	16	16.2						5	16.3	15.7
Hardness as CaCO3 (Dissolved)	421	423	0.47%	0.5	675	695	2.92%	0.5	583	585	0.34%	0.5	326	325	0.31%	0.5	296	296	0.00%	0.7	291	286
Hydroxide Alkalinity	<1	<1		1	<1	<1		1	<1	<1		1	<1	<1		1	<1	<1		1	<1	<1
pH pH	8.48	8.49	0.12%	0.1	8.49	8.52	0.35%	0.1	8.49	8.5	0.12%	0.1	8.11	8.15	0.49%	0.1	8.45	8.45	0.00%	0.01	8.35	8.37
Phosphorus (Nutrient) Total																						
Specific Conductivity µS/cm	895	898	0.33%	2	1310	1350	3.01%	2	1230	1230	0.00%	2	744	739	0.67%	2	684	679	0.73%	2	717	715
Total Dissolved Solids	532	522	1.90%	10	946	926	2.14%	10	804	832	3.42%	10	486	480	1.24%	10	427	404	5.54%	10	431	426
Total Suspended Solids	<3	<3		3	11.6	8		3	4.6	6		3	<3	<3		3	<3	<3		3	<3	<3
Turbidity NTU	1.04	0.61	52.12%	0.1	1.89	1.88	0.53%	0.1	1.4	1.54	9.52%	0.1	0.92	1	8.33%	0.1	0.69	0.6	13.95%	0.1	1.09	1.31
Dissolved Anions																						
Bromide (Dissolved)	<0.5	<0.5		0.5	<0.5	<0.5		0.5	<0.5	<0.5		0.25	<0.25	<0.5		0.25	<0.25	<0.05		0.05	<0.05	<0.05
Chloride (Dissolved)	48.9	48.6	0.62%	5	32.1	31.3	2.52%	5	43.1	43.1	0.00%	2.5	57.4	59.3	3.26%	2.5	55.8	54.8	1.81%	0.5	59.1	59.1
Fluoride (Dissolved)	0.23	0.24		0.2	0.26	0.25		0.2	0.4	0.42		0.1	0.2	0.2		0.03	0.203	0.215	5.74%	0.02	0.199	0.203
Sulphate (Dissolved)	40.3	39.9	1.00%	5	313	310	0.96%	5	200	200	0.00%	2.5	63.6	64.4	1.25%	2.5	50.3	49.1	2.41%	0.5	74.6	74.3
Nutrients																						
Ammonia (Total)	0.0282	0.0287	1.76%	0.005	0.0062	0.0053		0.005	0.012	0.0121		0.05	0.962	1.01	4.87%	0.005	0.0993	0.0794	22.27%	0.02	0.098	0.097
Nitrate (as N)	<0.05	<0.05		0.05	<0.05	<0.05		0.05	0.055	<0.05		0.025	<0.025	<0.05		0.025	0.064	0.0485		0.005	0.0293	0.0259
Nitrate (Available)																						
Nitrite (as N)	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.005	<0.005	<0.01		0.005	0.0222	0.0146		0.001	0.0136	0.0138
Nitrogen (Dissolved)												0.05	1.95	2	2.53%							
Nitrogen (Total)	1.25	1.23	1.61%									0.056	1.77	1.75	1.14%							
Nitrogen Kjeldahl (Total)	1.34	1.34	0.00%	0.05	0.552	0.672	19.61%	0.05	0.805	0.762	5.49%	0.05	1.77	1.75	1.14%	0.05	0.925	0.904	2.30%	0.05	1.26	1.24
Orthophosphate (Dissolved)	0.0351	0.0349	0.57%	0.001	0.0767	0.0769	0.26%	0.001	0.0961	0.0936	2.64%	0.01	0.22	0.226	2.69%	0.001	0.0016	0.0011		0.001	0.0021	0.0014
Phosphorus (Nutrient) Dissolved	0.0624	0.0615	1.45%	0.02	0.094	0.0931						0.02	0.217	0.23	5.82%	0.002	0.0132	0.0129	2.30%			
Phosphorus (Nutrient) Total	0.0747	0.0702	6.21%	0.002	0.0813	0.0789	3.00%	0.02	0.132	0.107	20.92%	0.02	0.253	0.248	2.00%	0.002	0.0157	0.0156	0.64%	0.002	0.0227	0.0255
Cyanide																						
Cyanide (Free)	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005				
Cyanide (Total)	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005				
Cyanide (WAD)	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005				
Dissolved Metals																						
Aluminum (Dissolved)	0.0027	0.0027		0.001	<0.001	<0.001		0.001	0.0026	0.0016		0.001	<0.001	<0.001		0.001	0.0013	0.0014		0.005	<0.005	<0.005
Antimony (Dissolved)	0.00013	0.00012		0.0001	0.00021	0.00021		0.0001	0.00018	0.00016		0.0001	0.00012	0.00011		0.0001	<0.0001	<0.0001		0.0005	<0.0005	<0.0005
Arsenic (Dissolved)	0.00192	0.00195	1.55%	0.0001	0.00345	0.00344	0.29%	0.0001	0.00318	0.00314	1.27%	0.0001	0.00131	0.0013	0.77%	0.0001	0.00132	0.00134	1.50%	0.0005	0.00168	0.00177
Barium (Dissolved)	0.0646	0.065	0.62%	5E-05	0.0554	0.057	2.85%	5E-05	0.0675	0.0681	0.88%	5E-05	0.0737	0.0739	0.27%	5E-05	0.0625	0.0593	5.25%	0.02	0.06	0.058
Beryllium (Dissolved)	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.001	<0.001	<0.001
Bismuth (Dissolved)	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005				
Boron (Dissolved)	0.017	0.02		0.01	0.028	0.028		0.01	0.037	0.038		0.01	0.024	0.023		0.01	0.023	0.023		0.1	<0.1	<0.1
Cadmium (Dissolved)	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		2E-05	<0.000017	<0.000017
Calcium (Dissolved)	44.3	44.3	0.00%	0.05	106	107	0.94%	0.05	90.6	91.4	0.88%	0.05	60.4	60.9	0.82%	0.05	56.1	56.2	0.18%	0.1	48.6	47.8
Chromium (Dissolved)	<0.0001	<0.0001		0.0001	0.00016	0.00018		0.0001	<0.0001	<0.0001		0.0001	<0.0001	0.00011		0.0001	<0.0001	<0.0001		0.002	<0.002	<0.002
Cobalt (Dissolved)	0.0004	0.00038		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0003	<0.0003	<0.0003
Copper (Dissolved)	0.00226	0.00227	0.44%	0.0002	0.00635	0.00619	2.55%	0.0002	0.00631	0.00639	1.26%	0.0002	<0.0002	<0.0002		0.0002	0.00275	0.00163	51.14%	0.001	0.0016	0.001
Dissolved Cadmium (by saltwater extraction)																						
Iron (Dissolved)	0.033	0.039		0.01	<0.01	<0.01		0.01	0.012	0.013		0.01	0.019	0.019		0.01	<0.01	<0.01		0.03	<0.03	<0.03
Lead (Dissolved)	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		0.0005	<0.0005	<0.0005
Lithium (Dissolved)	0.0104	0.0109	4.69%	0.0005	0.00646	0.00656	1.54%	0.0005	0.00753	0.00746	0.93%	0.0005	0.00606	0.00612	0.99%	0.0005	0.00583	0.00589	1.02%	0.005	0.0066	0.0066
Magnesium (Dissolved)	75.4	75.9	0.66%	0.1	99.5	104	4.42%	0.1	86.5	86.6	0.12%	0.1	42.6	42	1.42%	0.1	37.8	37.8	0.00%	0.1	41.2	40.4
Manganese (Dissolved)	0.118	0.12	1.68%	5E-05	0.00923	0.00925	0.22%	5E-05	0.0204	0.02	1.98%	5E-05	0.104	0.103	0.97%	5E-05	0.000537	0.000527	1.88%	0.0003	0.00216	0.00241
Mercury (Dissolved)	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		2E-05	<0.00002	<0.00002
Molybdenum (Dissolved)	0.00369	0.00366	0.82%	5E-05	0.0235	0.0233	0.85%	5E-05	0.0191	0.0193	1.04%	5E-05	0.00109	0.00105	3.74%	5E-05	0.0023	0.00238	3.42%	0.001	0.003	0.0028
Nickel (Dissolved)	0.00218	0.00218		0.0005	0.00115	0.00113		0.0005	0.00138	0.00136		0.0005	0.0007	0.00068		0.0005	0.00064	0.00063		0.001	0.0015	0.0012
Phosphorus (Metal) Dissolved	0.062	0.055		0.05	0.078	0.079		0.05	0.115	0.11		0.3	<0.3	<0.3		0.05	<0.05	<0.05				
Potassium (Dissolved)	17.8	17.8	0.00%	0.1	13.2	13.5	2.25%	0.1	15.5	15.5	0.00%	0.05	12.3	12.1	1.64%	0.1	11.1	11	0.90%	2	13.3	13.2
Selenium (Dissolved)	0.00013	0.00014		0.0001	0.00448	0.00452	0.89%	0.0001	0.00056	0.00067	17.89%	0.0001	0.00042	0.00039		0.0001	0.00014	0.00014		0.001	0.0011	0.001
Silicon (Dissolved)	1.71	1.72	0.58%	0.05	8.04	8.07	0.37%	0.05	9.96	9.98	0.20%	0.05	4.87	4.84	0.62%	0.05	5.7	5.89	3.28%			
Silver (Dissolved)	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		2E-05	<0.00002	<0.00002
Sodium (Dissolved)	58.6	59.9	2.19%	0.05	63.8	62.3	2.38%	0.05	63	61.9	1.76%	0.05	39	39	0.00%	0.05	35.3	35.1	0.57%	2	37.3	38.4
Strontium (Dissolved)	0.328	0.334	1.81%	0.0002	0.972	0.965	0.72%	0.0002	0.892	0.881	1.24%	0.0002	0.398	0.392	1.52%	0.0002	0.363	0.371	2.18%			
Sulphur (Dissolved)	15.3	15.7	2.58%	0.5	100	101	1.00%	0.5	64.3	64.4	0.16%					0.5	17	16.9	0.59%			
Thallium (Dissolved)	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		0.0002	<0.0002	<0.0002
Tin (Dissolved)	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0005	<0.0005	<0.0005
Titanium (Dissolved)	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01
Uranium (Dissolved)	0.00178	0.00178	0.00%	1E-05	0.004	0.00381	4.87%	1E-05	0.0026	0.0026	0.00%	1E-05	0.00103	0.00102	0.98%	1E-05	0.00104	0.00108	3.77%	0.0002	0.00118	0.00122
Vanadium (Dissolved)	0.0026	0.0027		0.001	0.0051	0.0051	0.00%	0.001	0.0039	0.0039		0.001	0.0017	0.0016		0.001	0.0023	0.0024		0.001	0.0023	0.0024
Zinc (Dissolved)	0.0017	<0.001		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.001	0.0012	<0.001		0.001	<0.001	0.001		0.005	<0.005	<0.005
Total Metals																						
Aluminum (Total)	0.0308	0.0399	25.74%	0.003	0.156	0.114	31.11%	0.003	0.054	0.0619	13.63%	0.003	<0.003	<0.003		0.003	0.0077	0.0064		0.005	0.0065	0.0067
Antimony (Total)	0.00013	0.00013		0.0001	0.00022	0.00021		0.0001	0.00018	0.00018		0.0001	0.00028	0.00028		0.0001	0.0001	0.00011		0.0005	<0.0005	<0.0005
Arsenic (Total)	0.00182	0.00176	3.35%	0.0001	0.00329	0.00324	1.53%	0.0001	0.00322	0.00318	1.25%	0.0001	0.0014	0.00142	1.42%	0.0001	0.00131	0.00133	1.52%	0.0005	0.00177	0.00176
Barium (Total)	0.0622	0.0622	0.00%	5E-05	0.0595	0.0577	3.07%	5E-05	0.0673	0.0661	1.80%	5E-05	0.0742	0.0732	1.36%	5E-05	0.061	0.0586	4.01%	0.02	0.059	0.058
Beryllium (Total)	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.001	<0.001	<0.001
Bismuth (Total)	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005				
Boron (Total)	0.017	0.019		0.01	0.028	0.028		0.01	0.043	0.043		0.01	0.029	0.028		0.01	0.027	0.027		0.1	<0.1	<0.1
Cadmium (Total)	<0.00001	<0.00001		1E-05	0.000011	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		2E-05	<0.000017	<0.000017
Calcium (Total)	43.5	42.8	1.62%	0.05	108	105	2.82%	0.05	90.5	91.7	1.32%	0.05	61	59.9	1.82%	0.05	54.6	53.8	1.48%	0.1	48.4	48.3
Chromium (Total)	0.00017	0.00017		0.0001	0.00047	0.00038		0.0001	0.00021	0.00023		0.0001	0.00022	0.00018		0.0003	<0.0003	<0.0003		0.002	<0.002	<0.002
Cobalt (Total)	0.00041	0.00042		0.0001	0.0003	0.00018		0.0001	0.00015	0.00015		0.0001	0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0003	<0.0003	<0.0003
Copper (Total)	0.00308	0.00316	2.56%	0.0005	0.0111	0.00954	15.12%	0.0005	0.00821	0.0082	0.12%	0.0005	0.00051	<0.0005		0.0005	0.00213	0.00199		0.001	0.001	<0.001
Iron (Total)	0.092	0.099	7.33%	0.01	0.243	0.175	32.54%	0.01	0.087	0.103	16.84%	0.01	0.026	0.026		0.01	0.013	0.014		0.03	<0.03	<0.03
Lead (Total)	<0.00005	<0.00005		5E-05	0.000071	<0.00005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		0.0005	<0.0005	<0.0005
Lithium (Total)	0.00936	0.0102	8.59%	0.0005	0.00635	0.00628	1.11%	0.0005	0.00774	0.0079	2.05%	0.0005	0.0063	0.00614	2.57%	0.0005	0.00594	0.00579	2.56%	0.005	0.0069	0.0066
Magnesium (Total)	73.8	73	1.09%	0.1	101	101	0.00%	0.1	86.9	87.3	0.46%	0.1	42.9	41.8	2.60%	0.1	35.2	35.4	0.57%	0.1	40.9	40.2
Manganese (Total)	0.129	0.129	0.00%	5E-05	0.0454	0.028	47.41%	5E-05	0.0282	0.0286	1.41%	5E-05	0.11	0.107	2.76%	5E-05	0.00361	0.00332	8.37%	0.0003	0.00411	0.0038
Mercury (Total)	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		2E-05	<0.00002	<0.00002
Molybdenum (Total)	0.00374	0.00375	0.27%	5E-05	0.0238	0.0231	2.99%	5E-05	0.0206	0.0208	0.97%	5E-05	0.00169	0.00162	4.23%	5E-05	0.00231	0.00238	2.99%	0.001	0.0031	0.0028
Nickel (Total)	0.00222	0.00224		0.0005	0.00179	0.00156		0.0005	0.0015	0.00159		0.0005	0.00079	0.00078		0.0005	0.00077	0.00072		0.001	<0.001	<0.001
Phosphorus (Metal) Total	0.079	0.068		0.05	0.106	0.095		0.05	0.095	0.105		0.3	<0.3	<0.3		0.05	<0.05	<0.05				
Potassium (Total)	17.7	17.4	1.71%	0.1	13.6	13.2	2.99%	0.1	15.5	15.8	1.92%	0.05	12.7	12.6	0.79%	0.1	10.7	10.7	0.00%	2	13.2	12.9
Selenium (Total)	0.00012	0.00011		0.0001	0.00384	0.00382	0.52%	0.0001	0.0007	0.00072	2.82%	0.0001	0.00013	0.00014		0.0001	0.00015	0.00019		0.001	0.001	0.0011
Silicon (Total)	1.76	1.73	1.72%	0.05	8.44	8.2	2.88%	0.05	10.1	10.3	1.96%	0.05	4.98	4.85	2.64%	0.05	5.6	5.76	2.82%			
Silver (Total)	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		2E-05	<0.00002	<0.00002
Sodium (Total)	55.5	56.1	1.08%	0.05	63.1	63.4	0.47%	0.05	60.8	58.3	4.20%	0.05	41.7	39.9	4.41%	0.05	34.6	34.2	1.16%	2	38.4	37.6
Strontium (Total)	0.33	0.328	0.61%	0.0002	0.969	0.943	2.72%	0.0002	0.906	0.919	1.42%	0.0002	0.409	0.4	2.22%	0.0002	0.369	0.368	0.27%			
Sulphur (Total)	15.1	15.1	0.00%	0.5	102	102	0.00%	0.5	66.6	66.9	0.45%					0.5	16.9	16.8	0.59%			
Thallium (Total)	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		0.0002	<0.0002	<0.0002
Tin (Total)	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0005	<0.0005	<0.0005
Titanium (Total)	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)																						
Uranium (Total)	0.0019	0.00187	1.59%	1E-05	0.00405	0.00392	3.26%	1E-05	0.00272	0.00272	0.00%	1E-05	0.0011	0.00111	0.90%	1E-05	0.00109	0.00112	2.71%	0.0002	0.00113	0.00114
Vanadium (Total)	0.003	0.0031		0.001	0.0058	0.0056	3.51%	0.001	0.0041	0.0041		0.001	0.0019	0.0018		0.001	0.0027	0.0028		0.001	0.0023	0.0025
Zinc (Total)	<0.003	<0.003		0.003	<0.003	<0.003		0.003	<0.003	<0.003		0.003	<0.003	<0.003		0.003	<0.003	<0.003		0.005	<0.005	<0.005
Organics																						
Carbon Organic (Dissolved)	18.1	18.4	1.64%	0.5	9.63	10.1	4.76%	0.5	11.9	11.7	1.69%	0.5	14.8	15	1.34%	1	15.1	14.1	6.85%	0.5	15	14
Carbon Organic (Total)	18.3	17.9	2.21%	0.5	10.1	10.1	0.00%	0.5	12.1	12.1	0.00%	0.5	14.9	15.1	1.33%	1	15.1	14.9	1.33%			
Nitrogen Organic (Dissolved)												0.39	0.99	0.99								
Nitrogen Organic (Total)												0.1	0.81	0.74	9.03%							

APPENDIX A QA/QC
TABLE A.10 Surface Water Duplicates
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Site	RPD	MDL	KC03	Duplicate	RPD	MDL	MAKAOO-01	Duplicate	RPD	MDL	NSP	Duplicate	RPD	MDL	PC02	Duplicate	RPD	MDL	PC02	Duplicate	RPD	MDL	PC02
Date Sampled	(%)		7-May-14		(%)		15-Jul-14		(%)		10-Jul-12		(%)		6-Sep-08		(%)		5-Dec-11		(%)		9-Jan-12
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)																							
Alkalinity (Total as CaCO3)	0.00%	1	553	596	7.48%	1	205	206	0.49%	1	1210	1210	0.00%	2	446	445	0.22%	2	458	479	4.48%	2	444
Bicarbonate Alkalinity	0.46%	1	525	596	12.67%	1	105	108	2.82%	1	749	752	0.40%									2	444
Carbonate Alkalinity	3.86%	1	28	<20		1	99.4	98	1.42%	1	456	454	0.44%									2	<2
Color TCU		5	32.6	32.4	0.62%					5	35.8	35.8	0.00%	5	8.3	7.7		5	9	8.6		5	7
Hardness as CaCO3 (Dissolved)	1.73%	0.5	694	680	2.04%	0.5	806	804	0.25%	0.5	2540	2540	0.00%	0.7	780	798	2.28%	0.5	816	815	0.12%	0.5	774
Hydroxide Alkalinity		1	<1	<20		1	<1	<1		1	<1	<1										2	<2
pH pH	0.24%	0.1	8.31	8.3	0.12%	0.1	9.53	9.51	0.21%	0.1	9.11	9.12	0.11%	0.01	8.3	8.3	0.00%	0.1	8.32	8.2	1.45%	0.1	8.16
Phosphorus (Nutrient) Total																							
Specific Conductivity µS/cm	0.28%	2	1490	1490	0.00%	2	1770	1780	0.56%	2	5130	5130	0.00%	2	1850	1860	0.54%	2	1800	1860	3.28%	2	1820
Total Dissolved Solids	1.17%	10	1060	1040	1.90%	10	982	1140	14.89%	30	4990	5000	0.20%	20	1320	1280	3.08%	15	1240	1220	1.63%	15	1320
Total Suspended Solids		3	<3	<3		3	8	5		3	6.2	4.9		3	4.7	4		3	<3	3.3		3	6.7
Turbidity NTU	18.33%	0.1	0.42	0.38		0.1	1.48	1.33	10.68%	0.1	1.07	1.04	2.84%	0.1	2.29	2.26	1.32%	0.1	2.76	3	8.33%	0.1	2.31
Dissolved Anions																							
Bromide (Dissolved)		0.5	<0.5	<0.5		1	<1	<1		2.5	<2.5	<2.5		0.05	0.077	0.078		1	<1	<1		1	<1
Chloride (Dissolved)	0.00%	5	19.1	17.9		10	12	11		25	49	50		0.5	113	114	0.88%	10	125	128	2.37%	10	130
Fluoride (Dissolved)	1.99%	0.2	0.27	0.27		0.03	0.036	0.049		1	<1	<1		0.02	0.244	0.229	6.34%	0.4	<0.4	<0.4		0.4	<0.4
Sulphate (Dissolved)	0.40%	5	348	352	1.14%	10	917	883	3.78%	25	2640	2590	1.91%	0.5	476	477	0.21%	10	427	433	1.40%	10	438
Nutrients																							
Ammonia (Total)		0.005	0.0078	0.0078		0.005	0.0357	0.0342	4.29%	0.005	0.0849	0.0782	8.22%	0.02	0.041	0.04		0.005	0.019	0.0198		0.005	0.022
Nitrate (as N)	12.32%	0.05	0.113	0.109		0.1	<0.1	<0.1		0.25	<0.25	<0.25		0.005	0.167	0.167	0.00%	0.1	0.18	0.22		0.1	0.43
Nitrate (Available)																							
Nitrite (as N)	1.46%	0.01	<0.01	<0.01		0.02	<0.02	<0.02		0.05	<0.05	<0.05		0.001	0.0036	0.0032		0.02	<0.02	<0.02		0.02	<0.02
Nitrogen (Dissolved)										0.05	5.07	5.23	3.11%									0.05	0.68
Nitrogen (Total)										0.068	4.28	4.19	2.13%					0.05	0.49	0.4	20.22%	0.013	0.91
Nitrogen Kjeldahl (Total)	1.60%	0.05	0.678	0.697	2.76%	0.1	1.63	2.06	23.31%	0.05	4.28	4.19	2.13%	0.05	0.365	0.38		0.05	0.434	0.412	5.20%	0.05	0.483
Orthophosphate (Dissolved)		0.01	0.134	0.135	0.74%	0.01	0.447	0.412	8.15%														
Phosphorus (Nutrient) Dissolved		0.02	0.16	0.163	1.86%	0.02	0.567	0.556	1.96%	0.02	0.827	0.793	4.20%					0.002	0.0427	0.0434	1.63%	0.002	0.0328
Phosphorus (Nutrient) Total	11.62%	0.02	0.164	0.163	0.61%	0.02	0.692	0.762	9.63%	0.02	0.838	0.815	2.78%					0.002	0.0562	0.0582	3.50%	0.002	0.0516
Cyanide																							
Cyanide (Free)		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005			0.005	<0.005	<0.005		0.005	<0.005
Cyanide (Total)		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005						0.005	<0.005	<0.005		0.005	<0.005
Cyanide (WAD)		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005			0.005	<0.005	<0.005		0.005	<0.005
Dissolved Metals																							
Aluminum (Dissolved)		0.001	0.0012	0.0011		0.001	0.0016	0.0026		0.005	<0.005	<0.005		0.025	<0.025	<0.025		0.003	<0.003	<0.003		0.003	<0.003
Antimony (Dissolved)		0.0001	0.0002	0.00017		0.0001	0.00027	0.00027		0.0005	0.00057	0.00057		0.0025	<0.0025	<0.0025		0.0001	<0.0001	<0.0001		0.0001	<0.0001
Arsenic (Dissolved)		0.0001	0.00573	0.00547	4.64%	0.0001	0.00286	0.00294	2.76%	0.0005	0.0087	0.00925	6.13%	0.0025	<0.0025	<0.0025		0.0001	0.00154	0.00159	3.19%	0.0001	0.00124
Barium (Dissolved)		5E-05	0.0738	0.0735	0.41%	5E-05	0.0181	0.0185	2.19%	0.0003	0.0282	0.0297	5.18%	0.02	0.056	0.058		5E-05	0.0625	0.0631	0.96%	5E-05	0.0545
Beryllium (Dissolved)		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0005	<0.0005	<0.0005		0.005	<0.005	<0.005		0.0001	<0.0001	<0.0001		0.0001	<0.0001
Bismuth (Dissolved)		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0025	<0.0025	<0.0025						0.0005	<0.0005	<0.0005		0.0005	<0.0005
Boron (Dissolved)		0.01	0.116	0.1	14.81%	0.01	0.086	0.087	1.16%	0.05	<0.05	<0.05		0.1	<0.1	<0.1		0.01	0.079	0.076	3.87%	0.01	0.074
Cadmium (Dissolved)		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		5E-05	<0.00005	<0.00005		9E-05	<0.000085	<0.000085		1E-05	<0.00001	<0.00001		1E-05	0.000011
Calcium (Dissolved)	1.66%	0.05	72.1	70.7	1.96%	0.05	106	105	0.95%	0.05	33.3	32.4	2.74%	0.1	132	135	2.25%	0.05	129	128	0.78%	0.05	122
Chromium (Dissolved)		0.0001	0.00049	0.00045		0.0001	<0.0001	<0.0001		0.0005	<0.0005	<0.0005		0.005	<0.005	<0.005		0.0001	<0.0001	<0.0001		0.0001	0.00011
Cobalt (Dissolved)		0.0001	<0.0001	<0.0001		0.0001	0.0002	0.00019		0.0005	<0.0005	<0.0005		0.0015	<0.0015	<0.0015		0.0001	0.00028	0.00028		0.0001	0.00024
Copper (Dissolved)		0.0002	0.00574	0.00551	4.09%	0.0002	0.0009	0.00086		0.001	0.001	0.0011		0.005	<0.005	<0.005		0.0005	0.00119	0.00116		0.0005	0.0015
Dissolved Cadmium (by saltwater extraction)																							
Iron (Dissolved)		0.01	<0.01	<0.01		0.01	0.014	0.014		0.05	<0.05	<0.05		0.03	<0.03	<0.03		0.03	0.043	0.043		0.03	0.04
Lead (Dissolved)		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		0.0003	<0.00025	<0.00025		0.0025	<0.0025	<0.0025		5E-05	<0.00005	<0.00005		5E-05	<0.00005
Lithium (Dissolved)		0.0005	0.0136	0.0124	9.23%	0.0005	0.00151	0.00151		0.0025	0.0032	0.0036		0.025	<0.025	<0.025		0.0005	0.0108	0.0105	2.82%	0.0005	0.00931
Magnesium (Dissolved)	1.96%	0.1	125	122	2.43%	0.1	131	132	0.76%	0.1	596	596	0.00%	0.1	110	112	1.80%	0.1	120	120	0.00%	0.1	114
Manganese (Dissolved)	10.94%	5E-05	0.00017	0.000169		5E-05	0.0118	0.0121	2.51%	0.0003	0.0113	0.0105	7.34%	0.0015	0.117	0.114	2.60%	5E-05	0.229	0.226	1.32%	5E-05	0.106
Mercury (Dissolved)		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		2E-05	<0.00002	<0.00002		1E-05	<0.00001	<0.00001		1E-05	<0.00001
Molybdenum (Dissolved)		5E-05	0.0138	0.0127	8.30%	5E-05	0.00317	0.00318	0.31%	0.0003	0.0239	0.0244	2.07%	0.005	0.0121	0.0114		5E-05	0.00865	0.00858	0.81%	5E-05	0.00832
Nickel (Dissolved)		0.0005	0.0015	0.00152		0.0005	0.0012	0.00122		0.0025	<0.0025	<0.0025		0.005	0.0054	<0.005		0.0005	0.00398	0.00392	1.52%	0.0005	0.00378
Phosphorus (Metal) Dissolved		0.05	0.152	0.156		0.05	0.544	0.548	0.73%	0.3	0.71	0.76						0.3	<0.3	<0.3		0.3	<0.3
Potassium (Dissolved)	0.75%	0.1	21.8	21.2	2.79%	0.1	40.5	39.5	2.50%	0.25	101	104	2.93%	2	20.4	20.8	1.94%	0.05	25.3	25.1	0.79%	0.05	20.7
Selenium (Dissolved)		0.0001	0.00649	0.00657	1.23%	0.0001	0.00023	0.00021		0.0005	0.00083	0.00105		0.005	<0.005	<0.005		0.0001	0.00022	0.00021		0.0001	0.00041
Silicon (Dissolved)		0.05	9.29	9.1	2.07%	0.05	0.525	0.533	1.51%	0.05	0.556	0.55	1.08%					0.05	9.76	9.79	0.31%	0.05	8.93
Silver (Dissolved)		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		5E-05	<0.00005	<0.00005		0.0001	<0.0001	<0.0001		1E-05	<0.00001	<0.00001		1E-05	<0.00001
Sodium (Dissolved)	2.91%	0.05	98.7	97.9	0.81%	0.05	116	119	2.55%	0.25	586	615	4.83%	2	101	103	1.96%	0.05	122	120	1.65%	0.05	109
Strontium (Dissolved)		0.0002	1.26	1.13	10.88%	0.0002	1.32	1.37	3.72%	0.001	3.41	3.52	3.17%					0.0001	1.35	1.35	0.00%	0.0001	1.16
Sulphur (Dissolved)		0.5	116	114	1.74%	0.5	285	285	0.00%														
Thallium (Dissolved)		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		5E-05	<0.00005	<0.00005		0.001	<0.001	<0.001		1E-05	<0.00001	<0.00001		1E-05	<0.00001
Tin (Dissolved)		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0005	<0.0005	<0.0005		0.0025	<0.0025	<0.0025		0.0001	<0.0001	<0.0001		0.0001	<0.0001
Titanium (Dissolved)		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	0.01	0.01		0.01	0.013	0.012		0.01	0.011
Uranium (Dissolved)	3.33%	1E-05	0.00581	0.00529	9.37%	1E-05	0.000525	0.000534	1.70%	5E-05	0.00606	0.00591	2.51%	0.001	0.0035	0.0034		1E-05	0.00293	0.00291	0.68%	1E-05	0.00292
Vanadium (Dissolved)		0.001	0.0073	0.0071	2.78%	0.001	0.0025	0.0025		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.001	0.0024	0.0025		0.001	0.0023
Zinc (Dissolved)		0.001	<0.001	<0.001		0.001	<0.001	0.0019		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.003	0.0033	<0.003		0.003	<0.003
Total Metals																							
Aluminum (Total)		0.003	0.0034	0.0037		0.003	0.0046	0.0174		0.015	0.016	<0.015		0.025	0.043	0.076		0.003	0.0777	0.0797	2.54%	0.003	0.0562
Antimony (Total)		0.0001	0.00019	0.00017		0.0001	0.00028	0.00027		0.0005	0.00058	0.00063		0.0025	<0.0025	<0.0025		0.0001	<0.0001	<0.0001		0.0001	<0.0001
Arsenic (Total)		0.0001	0.00499	0.00532	6.40%	0.0001	0.003	0.0029	3.39%	0.0005	0.00869	0.00912	4.83%	0.0025	<0.0025	<0.0025		0.0001	0.00149	0.00147	1.35%	0.0001	0.00131
Barium (Total)		5E-05	0.0695	0.0731	5.05%	5E-05	0.0181	0.0198	8.97%	0.0003	0.028	0.0297	5.89%	0.02	0.057	0.06		5E-05	0.0606	0.0597	1.50%	5E-05	0.0566
Beryllium (Total)		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0005	<0.0005	<0.0005		0.005	<0.005	<0.005		0.0001	<0.0001	<0.0001		0.0001	<0.0001
Bismuth (Total)		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0025	<0.0025	<0.0025						0.0005	<0.0005	<0.0005		0.0005	<0.0005
Boron (Total)		0.01	0.099	0.094	5.18%	0.01	0.083	0.094	12.43%	0.05	<0.05	<0.05		0.1	<0.1	<0.1		0.01	0.08	0.075	6.45%	0.01	0.081
Cadmium (Total)		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		5E-05	<0.00005	<0.00005		9E-05	<0.000085	<0.000085		1E-05	<0.00001	<0.00001		1E-05	0.000011
Calcium (Total)	0.21%	0.05	69.3	73.3	5.61%	0.05	104	105	0.96%	0.05	33.6	31.5	6.45%	0.1	132	134	1.50%	0.05	124	122	1.63%	0.05	127
Chromium (Total)		0.0001	0.0005	0.00051	1.98%	0.0001	0.00013	0.00018		0.0005	<0.0005	<0.0005		0.005	<0.005	<0.005		0.0001	0.00034	0.00033		0.0001	0.00035
Cobalt (Total)		0.0001	<0.0001	<0.0001		0.0001	0.0002	0.0002		0.0005	<0.0005	<0.0005		0.0015	<0.0015	<0.0015		0.0001	0.00033	0.00033		0.0001	0.00031
Copper (Total)		0.0005	0.00568	0.00599	5.31%	0.0005	0.001	0.00121		0.0025	<0.0025	<0.0025		0.005	<0.005	<0.005		0.0005	0.00207	0.00213		0.0005	0.00238
Iron (Total)		0.01	<0.01	<0.01		0.01	0.022	0.043		0.05	<0.05	<0.05		0.03	0.099	0.145		0.03	0.165	0.171	3.57%	0.03	0.185
Lead (Total)		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		0.0003	<0.00025	<0.00025		0.0025	<0.0025	<0.0025		5E-05	<0.00005	<0.00005		5E-05	<0.00005
Lithium (Total)		0.0005	0.012	0.0114	5.13%	0.0005	0.00145	0.0016		0.0025	0.0035	0.0035		0.025	<0.025	<0.025		0.0005	0.0106	0.00993	6.53%	0.0005	0.00923
Magnesium (Total)	1.73%	0.1	114	121	5.96%	0.1	127	129	1.56%	0.1	590	587	0.51%	0.1	112	110	1.80%	0.1	119	116	2.55%	0.1	125
Manganese (Total)	7.84%	5E-05	0.00024	0.000238		5E-05	0.0184	0.0458	85.36%	0.0003	0.0203	0.0208	2.43%	0.0015	0.123	0.127	3.20%	5E-05	0.23	0.222	3.54%	5E-05	0.131
Mercury (Total)		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		2E-05	<0.00002	<0.00002		1E-05	<0.00001	<0.00001		1E-05	<0.00001
Molybdenum (Total)		5E-05	0.0129	0.0124	3.95%	5E-05	0.00324	0.00338	4.23%	0.0003	0.0234	0.0244	4.18%	0.005	0.0119	0.0123		5E-05	0.00881	0.0086	2.41%	5E-05	0.00911
Nickel (Total)		0.0005	0.00145	0.00162		0.0005	0.00132	0.00135		0.0025	<0.0025	<0.0025		0.005	0.0056	0.006		0.0005	0.00422	0.00405	4.11%	0.0005	0.00435
Phosphorus (Metal) Total		0.05	0.136	0.15		0.05	0.653	0.742	12.76%	0.3	0.7	0.74						0.3	<0.3	<0.3		0.3	<0.3
Potassium (Total)	2.30%	0.1	20.6	22	6.57%	0.1	39.2	39.5	0.76%	0.25	98.4	105	6.49%	2	20.6	21.4	3.81%	0.05	24.4	24	1.65%	0.05	21.6
Selenium (Total)		0.0001	0.00538	0.00576	6.82%	0.0001	0.00021	0.00022		0.0005	0.0008	0.00089		0.005	<0.005	<0.005		0.0001	0.00021	0.00018		0.0001	0.00037
Silicon (Total)		0.05	8.82	9.42	6.58%	0.05	0.551	0.605	9.34%	0.05	0.572	0.562	1.76%					0.05	9.77	9.64	1.34%	0.05	9.81
Silver (Total)		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		5E-05	<0.00005	<0.00005		0.0001	<0.0001	<0.0001		1E-05	<0.00001	<0.00001		1E-05	<0.00001
Sodium (Total)	2.11%	0.05	95.3	104	8.73%	0.05	113	117	3.48%	0.25	583	614	5.18%	2	104	104	0.00%	0.05	118	116	1.71%	0.05	115
Strontium (Total)		0.0002	1.11	1.06	4.61%	0.0002	1.29	1.37	6.02%	0.001	3.36	3.55	5.50%					0.0001	1.34	1.32	1.50%	0.0001	1.23
Sulphur (Total)		0.5	117	124	5.81%	0.5	282	286	1.41%														
Thallium (Total)		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		5E-05	<0.00005	<0.00005		0.001	<0.001	<0.001		1E-05	<0.00001	<0.00001		1E-05	<0.00001
Tin (Total)		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0005	<0.0005	<0.0005		0.0025	<0.0025	<0.0025		0.0001	<0.0001	<0.0001		0.0001	<0.0001
Titanium (Total)		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	0.012	0.013		0.01	0.015	0.016		0.01	0.015
Total Cadmium (by saltwater extraction)																							
Uranium (Total)	0.88%	1E-05	0.00533	0.00516	3.24%	1E-05	0.000554	0.00058	4.59%	5E-05	0.00573	0.00589	2.75%	0.001	0.0034	0.0036		1E-05	0.00292	0.0028	4.20%	1E-05	0.00314
Vanadium (Total)		0.001	0.0072	0.0077	6.71%	0.001	0.0026	0.0026		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.001	0.0026	0.0025		0.001	0.0027
Zinc (Total)		0.003	<0.003	<0.003		0.003	<0.003	0.0064		0.015	<0.015	<0.015		0.005	<0.005	<0.005		0.003	<0.003	<0.003		0.003	<0.003
Organics																							
Carbon Organic (Dissolved)	6.90%	0.5	13.8	13.9	0.72%	1	18.4	18.5	0.54%	0.5	54.6	54.5	0.18%	0.5	6.44	6.69	3.81%	0.5	8.3	8.3	0.00%	0.5	7.09
Carbon Organic (Total)		0.5	14.7	14.1	4.17%	1	17.9	19.7	9.57%	0.5	53.8	54	0.37%					0.5	8.34	8.25	1.08%	0.5	6.99
Nitrogen Organic (Dissolved)										0.05	4.99	5.15	3.16%									0.14	0.23
Nitrogen Organic (Total)										0.06	4.19	4.11	1.93%					0.098	0.288	0.165		0.06	0.461

Site	Duplicate	RPD	MDL	PC02	Duplicate	RPD	MDL	PC02	Duplicate	RPD	MDL	PC02	Duplicate	RPD	MDL	PC02	Duplicate	RPD	MDL	PC02.5	Duplicate	RPD	MDL
Date Sampled		(%)		5-Jun-13		(%)		2-Jul-13		(%)		4-Feb-14		(%)		26-Mar-14		(%)		28-Sep-11		(%)	
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)																			1	2.2	2.4		
Alkalinity (Total as CaCO3)	447	0.67%	1	283	272	3.96%	1	287	298	3.76%	2	455	463	1.74%	2	381	390	2.33%	2	444	443	0.23%	1
Bicarbonate Alkalinity	447	0.67%	1	279	266	4.77%	1	272	293	7.43%	2	455	463	1.74%	2	381	390	2.33%	2	444	443	0.23%	1
Carbonate Alkalinity	<2		1	4	5.8		1	15.3	5.3	97.09%	2	<2	<2		2	<2	<2		2	<2	<2		1
Color TCU	7.1		5	27	26.9	0.37%	5	35.6	35.7	0.28%									5	42.6	42.9	0.70%	5
Hardness as CaCO3 (Dissolved)	790	2.05%	0.5	393	396	0.76%	0.5	410	407	0.73%	0.5	760	757	0.40%	0.5	691	686	0.73%	0.5	495	491	0.81%	0.5
Hydroxide Alkalinity	<2		1	<1	<1		1	<1	<1		2	<2	<2		2	<2	<2		2	<2	<2		1
pH pH	8.15	0.12%	0.1	8.42	8.47	0.59%	0.1	8.43	8.32	1.31%	0.1	8.17	8.18	0.12%	0.1	8.17	8.21	0.49%	0.1	8.24	8.24	0.00%	0.1
Phosphorus (Nutrient) Total																							
Specific Conductivity µS/cm	1830	0.55%	2	877	878	0.11%	2	912	911	0.11%	2	1710	1700	0.59%	2	1450	1470	1.37%	2	1140	1130	0.88%	2
Total Dissolved Solids	1360	2.99%	10	553	561	1.44%	10	599	598	0.17%	10	1000	1190	17.35%	10	1010	1000	1.00%	10	704	706	0.28%	10
Total Suspended Solids	9.3		3	12.9	16.7		3	23.5	19.5	18.60%	3	<3	<3		3	4.5	5.5		3	27.3	60.7	**75.91%**	3
Turbidity NTU	3.04	**27.29%**	0.1	7.8	6.58	16.97%	0.1	3.5	3.54	1.14%	0.1	0.67	0.66	1.50%	0.1	0.95	1.14	18.18%					0.1
Dissolved Anions																							
Bromide (Dissolved)	<1		0.5	<0.5	<0.5		0.5	<0.5	<0.5		1	<1	<1		0.5	<0.5	<0.5		0.5	<0.5	<0.5		0.5
Chloride (Dissolved)	124	4.72%	5	57.4	57.2	0.35%	5	57.9	57.8	0.17%	10	137	136	0.73%	5	88.9	87.7	1.36%	5	66.7	65.8	1.36%	5
Fluoride (Dissolved)	<0.4		0.2	0.35	0.38		0.2	0.24	0.24		0.4	<0.4	<0.4		0.2	<0.2	<0.2		0.2	0.26	0.26		0.2
Sulphate (Dissolved)	419	4.43%	5	121	122	0.82%	5	126	127	0.79%	10	380	375	1.32%	5	362	356	1.67%	5	109	108	0.92%	5
Nutrients																							
Ammonia (Total)	0.029		0.005	0.01	0.0098		0.005	0.0177	0.0191		0.005	0.0201	0.0198		0.005	0.0359	0.0362	0.83%	0.005	0.0429	0.04	7.00%	0.005
Nitrate (as N)	0.41		0.05	<0.05	<0.05		0.05	<0.05	<0.05		0.1	1.18	1.18	0.00%	0.05	0.893	0.889	0.45%	0.05	<0.05	<0.05		0.05
Nitrate (Available)																							
Nitrite (as N)	<0.02		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.02	0.025	<0.02		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01
Nitrogen (Dissolved)	0.63	7.63%																	0.05	0.97	1.01	4.04%	0.05
Nitrogen (Total)	1.1	18.91%	0.05	0.815	0.764	6.46%	0.071	0.907	0.903	0.44%									0.05	1.02	1.33	**26.38%**	0.0051
Nitrogen Kjeldahl (Total)	0.688	**35.01%**	0.05	0.699	0.711	1.70%	0.05	0.907	0.903	0.44%	0.05	0.375	0.444	16.85%	0.05	0.514	0.536	4.19%	0.05	1.02	1.33	**26.38%**	0.05
Orthophosphate (Dissolved)											0.001	0.0212	0.0207	2.39%	0.001	0.0648	0.0613	5.55%					
Phosphorus (Nutrient) Dissolved	0.0328	0.00%	0.002	0.062	0.0596	3.95%	0.02	0.122	0.12	1.65%	0.002	0.0246	0.0247	0.41%	0.002	0.0746	0.0753	0.93%	0.02	0.237	0.228	3.87%	0.02
Phosphorus (Nutrient) Total	0.0555	7.28%	0.002	0.0895	0.0856	4.45%	0.002	0.0909	0.089	2.11%	0.002	0.0292	0.0293	0.34%	0.002	0.0868	0.0849	2.21%	0.02	0.289	0.328	12.64%	0.02
Cyanide																							
Cyanide (Free)	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005
Cyanide (Total)	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	0.0144	0.0127		0.005
Cyanide (WAD)	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005
Dissolved Metals																							
Aluminum (Dissolved)	<0.003		0.001	0.0018	0.0022		0.001	0.0044	0.0026		0.001	<0.001	<0.001		0.001	0.0011	<0.001		0.005	<0.005	<0.005		0.003
Antimony (Dissolved)	<0.0001		0.0001	<0.0001	0.00011		0.0001	0.00012	0.00012		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0005	<0.0005	<0.0005		0.0001
Arsenic (Dissolved)	0.00125	0.80%	0.0001	0.00166	0.0017	2.38%	0.0001	0.0023	0.00227	1.31%	0.0001	0.00122	0.00124	1.63%	0.0001	0.0017	0.00177	4.03%	0.0005	0.00251	0.00264	5.05%	0.0001
Barium (Dissolved)	0.056	2.71%	5E-05	0.0424	0.0432	1.87%	5E-05	0.0486	0.0486	0.00%	5E-05	0.0562	0.0573	1.94%	5E-05	0.0527	0.0526	0.19%	0.02	0.066	0.066		5E-05
Beryllium (Dissolved)	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.001	<0.001	<0.001		0.0001
Bismuth (Dissolved)	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.2	<0.2	<0.2		0.0005
Boron (Dissolved)	0.071	4.14%	0.01	0.032	0.033		0.01	0.038	0.038		0.01	0.078	0.078	0.00%	0.01	0.05	0.051	1.98%	0.1	<0.1	<0.1		0.01
Cadmium (Dissolved)	0.000012		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	0.000012		1E-05	<0.00001	<0.00001		2E-05	<0.000017	<0.000017		1E-05
Calcium (Dissolved)	125	2.43%	0.05	68.3	69.9	2.32%	0.05	70.5	69.5	1.43%	0.05	117	118	0.85%	0.05	104	104	0.00%	0.1	81.3	80.3	1.24%	0.05
Chromium (Dissolved)	0.00011		0.0001	0.0001	<0.0001		0.0001	0.00012	0.00014		0.0001	<0.0001	0.00013		0.0001	0.00017	0.00016		0.001	<0.001	<0.001		0.0001
Cobalt (Dissolved)	0.00023		0.0001	0.00011	0.00011		0.0001	0.00015	0.00015		0.0001	0.00024	0.00023		0.0001	0.00016	0.00016		0.0003	<0.0003	<0.0003		0.0001
Copper (Dissolved)	0.00143		0.0002	0.00227	0.00343	**40.70%**	0.0002	0.00487	0.00267	58.36%	0.0002	0.0015	0.0015	0.00%	0.0002	0.0023	0.00224	2.64%	0.001	0.0013	0.0013		0.0005
Dissolved Cadmium (by saltwater extraction)																							
Iron (Dissolved)	0.038		0.01	0.021	0.019		0.01	0.024	0.021		0.01	0.039	0.04		0.01	0.028	0.031		0.03	0.089	0.089		0.03
Lead (Dissolved)	<0.00005		5E-05	<0.00005	0.00005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		0.0005	<0.0005	<0.0005		5E-05
Lithium (Dissolved)	0.00908	2.50%	0.0005	0.00568	0.00573	0.88%	0.0005	0.00603	0.00613	1.64%	0.0005	0.00879	0.00902	2.58%	0.0005	0.00711	0.00778	9.00%	0.005	0.0072	0.0064		0.0005
Magnesium (Dissolved)	116	1.74%	0.1	54	53.8	0.37%	0.1	56.8	56.8	0.00%	0.1	114	112	1.77%	0.1	105	104	0.96%	0.1	71	70.6	0.56%	0.1
Manganese (Dissolved)	0.105	0.95%	5E-05	0.0305	0.0302	0.99%	5E-05	0.0337	0.0341	1.18%	5E-05	0.0853	0.0842	1.30%	5E-05	0.084	0.0837	0.36%	0.0003	0.384	0.383	0.26%	5E-05
Mercury (Dissolved)	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		
Molybdenum (Dissolved)	0.00785	5.81%	5E-05	0.007	0.00698	0.29%	5E-05	0.00827	0.00793	4.20%	5E-05	0.00881	0.00906	2.80%	5E-05	0.0138	0.0145	4.95%	0.001	0.0051	0.0052	1.94%	5E-05
Nickel (Dissolved)	0.00379	0.26%	0.0005	0.00174	0.0018		0.0005	0.00209	0.00213		0.0005	0.00421	0.00412	2.16%	0.0005	0.00265	0.00275	3.70%	0.001	0.0024	0.0024		0.0005
Phosphorus (Metal) Dissolved	<0.3		0.05	0.059	0.054		0.05	0.083	0.089		0.05	<0.05	<0.05		0.05	0.079	0.075		0.3	<0.3	<0.3		0.3
Potassium (Dissolved)	20.9	0.96%	0.1	14	14.3	2.12%	0.1	14.7	15	2.02%	0.1	19.8	20	1.01%	0.1	17.8	17.5	1.70%	2	16.8	16.8	0.00%	0.05
Selenium (Dissolved)	0.00037		0.0001	0.00046	0.00044		0.0001	0.0003	0.00033		0.0001	0.00139	0.00138	0.72%	0.0001	0.0015	0.00154	2.63%	0.001	<0.001	<0.001		0.0001
Silicon (Dissolved)	9.26	3.63%	0.05	4.06	4.11	1.22%	0.05	6.05	6.06	0.17%	0.05	9.34	9.39	0.53%	0.05	8.18	8.18	0.00%	0.05	13	13	0.00%	0.05
Silver (Dissolved)	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		2E-05	<0.00002	<0.00002		1E-05
Sodium (Dissolved)	108	0.92%	0.05	42.4	43.7	3.02%	0.05	46.2	48.1	4.03%	0.05	103	101	1.96%	0.05	76.3	75.7	0.79%	2	62.1	63.5	2.23%	0.05
Strontium (Dissolved)	1.08	7.14%	0.0002	0.511	0.514	0.59%	0.0002	0.58	0.549	5.49%	0.0002	1.04	1.07	2.84%	0.0002	0.889	0.937	5.26%	0.005	0.696	0.692	0.58%	0.0001
Sulphur (Dissolved)			0.5	38.7	38.5	0.52%	0.5	40.4	40.2	0.50%	0.5	123	122	0.82%	0.5	112	111	0.90%					
Thallium (Dissolved)	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		0.0002	<0.0002	<0.0002		1E-05
Tin (Dissolved)	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0005	<0.0005	<0.0005		0.0001
Titanium (Dissolved)	0.012		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01
Uranium (Dissolved)	0.00274	6.36%	1E-05	0.00108	0.00107	0.93%	1E-05	0.00117	0.00111	5.26%	1E-05	0.00302	0.00292	3.37%	1E-05	0.00269	0.00274	1.84%	0.0002	0.00086	0.00085		1E-05
Vanadium (Dissolved)	0.0023		0.001	0.0022	0.0023		0.001	0.0028	0.003		0.001	0.0027	0.0027		0.001	0.0035	0.0035		0.001	0.0022	0.0022		0.001
Zinc (Dissolved)	<0.003		0.001	0.001	0.0078		0.001	0.0037	0.0028		0.001	<0.001	<0.001		0.001	0.0028	0.0017		0.005	<0.005	<0.005		0.003
Total Metals																							
Aluminum (Total)	0.125	**75.94%**	0.003	0.335	0.325	3.03%	0.003	0.501	0.518	3.34%	0.003	0.0234	0.0267	13.17%	0.003	0.0443	0.0653	38.32%	0.005	0.512	0.47	8.55%	0.003
Antimony (Total)	<0.0001		0.0001	0.00011	0.00011		0.0001	0.00013	0.00016		0.0001	0.0001	0.00012		0.0001	<0.0001	<0.0001		0.0005	<0.0005	<0.0005		0.0001
Arsenic (Total)	0.00147	11.51%	0.0001	0.00178	0.00174	2.27%	0.0001	0.00241	0.00236	2.10%	0.0001	0.00129	0.00132	2.30%	0.0001	0.00185	0.00179	3.30%	0.0005	0.00253	0.00252	0.40%	0.0001
Barium (Total)	0.0583	2.96%	5E-05	0.0457	0.0451	1.32%	5E-05	0.0531	0.0536	0.94%	5E-05	0.0555	0.0568	2.32%	5E-05	0.0528	0.0553	4.63%	0.02	0.067	0.067		5E-05
Beryllium (Total)	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.001	<0.001	<0.001		0.0001
Bismuth (Total)	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.2	<0.2	<0.2		0.0005
Boron (Total)	0.08	1.24%	0.01	0.033	0.032		0.01	0.04	0.04		0.01	0.084	0.086	2.35%	0.01	0.051	0.053	3.85%	0.1	<0.1	<0.1		0.01
Cadmium (Total)	0.000019		1E-05	<0.00001	<0.00001		1E-05	0.000012	0.000011		1E-05	0.000012	0.000011		1E-05	<0.00001	0.00001		2E-05	<0.000017	<0.000017		1E-05
Calcium (Total)	121	4.84%	0.05	64.2	64.7	0.78%	0.05	65.3	64.8	0.77%	0.05	117	118	0.85%	0.05	103	104	0.97%	0.1	80.3	79.8	0.62%	0.05
Chromium (Total)	0.00059		0.0001	0.00108	0.001	7.69%	0.0001	0.00153	0.00149	2.65%	0.0001	0.00027	0.00025		0.0001	0.00029	0.00038		0.001	0.0014	0.0013		0.0001
Cobalt (Total)	0.0005		0.0001	0.00042	0.0004		0.0001	0.00058	0.00055	5.31%	0.0001	0.00025	0.00025		0.0001	0.00019	0.0002		0.0003	0.00064	0.00061		0.0001
Copper (Total)	0.00334		0.0005	0.00412	0.00401	2.71%	0.0005	0.00501	0.00496	1.00%	0.0005	0.00241	0.00262		0.0005	0.00287	0.00309	7.38%	0.001	0.0047	0.0044		0.0005
Iron (Total)	0.349	**61.42%**	0.01	0.483	0.447	7.74%	0.01	0.651	0.665	2.13%	0.01	0.088	0.088	0.00%	0.01	0.1	0.13	**26.09%**	0.03	0.841	0.781	7.40%	0.03
Lead (Total)	0.000098		5E-05	0.000131	0.000127		5E-05	0.000178	0.000204		5E-05	<0.00005	<0.00005		5E-05	<0.00005	0.000066		0.0005	<0.0005	<0.0005		5E-05
Lithium (Total)	0.00922	0.11%	0.0005	0.00562	0.0052	7.76%	0.0005	0.00587	0.00617	4.98%	0.0005	0.00924	0.00935	1.18%	0.0005	0.00728	0.00786	7.66%	0.005	0.0072	0.0058		0.0005
Magnesium (Total)	117	6.61%	0.1	51.6	50.7	1.76%	0.1	54	54.3	0.55%	0.1	113	114	0.88%	0.1	101	102	0.99%	0.1	70.2	68.9	1.87%	0.1
Manganese (Total)	0.192	**37.77%**	5E-05	0.0907	0.0889	2.00%	5E-05	0.119	0.114	4.29%	5E-05	0.0866	0.0878	1.38%	5E-05	0.089	0.0904	1.56%	0.0003	0.488	0.478	2.07%	5E-05
Mercury (Total)	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	0.000025	<0.00001		1E-05	<0.00001	<0.00001		
Molybdenum (Total)	0.00847	7.28%	5E-05	0.00683	0.00649	5.11%	5E-05	0.00798	0.00859	7.36%	5E-05	0.00948	0.00991	4.44%	5E-05	0.0148	0.0155	4.62%	0.001	0.0054	0.0054	0.00%	5E-05
Nickel (Total)	0.00469	7.52%	0.0005	0.00332	0.00319	3.99%	0.0005	0.00406	0.00413	1.71%	0.0005	0.00454	0.00448	1.33%	0.0005	0.00303	0.00316	4.20%	0.001	0.0035	0.0037		0.0005
Phosphorus (Metal) Total	<0.3		0.05	0.091	0.081		0.05	0.119	0.125		0.05	<0.05	<0.05		0.05	0.083	0.084		0.3	<0.3	<0.3		0.3
Potassium (Total)	20.9	3.29%	0.1	13.4	13.7	2.21%	0.1	14.1	13.7	2.88%	0.1	19.6	19.9	1.52%	0.1	17.2	17.4	1.16%	2	16.8	16.4	2.41%	0.05
Selenium (Total)	0.00035		0.0001	0.00044	0.00043		0.0001	0.00033	0.0003		0.0001	0.0013	0.00131	0.77%	0.0001	0.00148	0.00156	5.26%	0.001	<0.001	<0.001		0.0001
Silicon (Total)	9.29	5.45%	0.05	4.68	4.7	0.43%	0.05	6.95	6.9	0.72%	0.05	9.54	9.64	1.04%	0.05	8.23	8.42	2.28%	0.05	14.1	13.8	2.15%	0.05
Silver (Total)	<0.00001		1E-05	<0.00001	0.000027		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		2E-05	<0.00002	<0.00002		1E-05
Sodium (Total)	109	5.36%	0.05	42.2	42.1	0.24%	0.05	45.2	45	0.44%	0.05	103	105	1.92%	0.05	78.8	77.8	1.28%	2	61	61.2	0.33%	0.05
Strontium (Total)	1.17	5.00%	0.0002	0.491	0.47	4.37%	0.0002	0.549	0.593	7.71%	0.0002	1.07	1.12	4.57%	0.0002	0.929	0.951	2.34%	0.005	0.694	0.685	1.31%	0.0001
Sulphur (Total)			0.5	37.7	37.3	1.07%	0.5	38.9	38.8	0.26%	0.5	127	129	1.56%	0.5	117	117	0.00%					
Thallium (Total)	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		0.0002	<0.0002	<0.0002		1E-05
Tin (Total)	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0005	<0.0005	<0.0005		0.0001
Titanium (Total)	0.019		0.01	0.015	0.013		0.01	0.02	0.019		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	0.023	0.022		0.01
Total Cadmium (by saltwater extraction)																							
Uranium (Total)	0.00296	5.90%	1E-05	0.00105	0.00109	3.74%	1E-05	0.00114	0.00125	9.21%	1E-05	0.003	0.00304	1.32%	1E-05	0.00287	0.00289	0.69%	0.0002	0.0009	0.00088		1E-05
Vanadium (Total)	0.0031		0.001	0.0031	0.0031		0.001	0.0042	0.004		0.001	0.003	0.0031		0.001	0.0038	0.0039		0.001	0.0035	0.0033		0.001
Zinc (Total)	0.0031		0.003	0.003	<0.003		0.003	0.0042	0.0035		0.003	<0.003	<0.003		0.003	<0.003	<0.003		0.005	<0.005	<0.005		0.003
Organics																							
Carbon Organic (Dissolved)	6.93	2.28%	0.5	7.26	7.39	1.77%	1	16.5	15.9	3.70%	0.5	7	6.95	0.72%	0.5	7.61	7.57	0.53%	0.5	17.5	18.3	4.47%	0.5
Carbon Organic (Total)	6.99	0.00%	0.5	14.3	15.2	6.10%	1	16.8	16.8	0.00%	0.5	6.93	7.6	9.22%	0.5	7.71	7.43	3.70%	0.5	18.3	18.9	3.23%	0.5
Nitrogen Organic (Dissolved)	0.19																		0.05	0.927	0.97	4.53%	0.05
Nitrogen Organic (Total)	0.659	**35.36%**																	0.05	0.977	1.29	27.61%	0.06

Site	PC02.5	Duplicate	RPD	MDL	PC02.5	Duplicate	RPD	MDL	PC02.5	Duplicate	RPD	MDL	PC02.5	Duplicate	RPD	MDL	PC02.5	Duplicate	RPD	MDL	PC03	Duplicate	RPD
Date Sampled	9-May-12		(%)		8-Jan-13		(%)		2-Apr-13		(%)		6-Nov-13		(%)		13-Mar-14		(%)		2-May-07		(%)
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)												1	<1	<1									
Alkalinity (Total as CaCO3)	444	440	0.90%	20	430	451	4.77%	1	386	376	2.62%	1	442	441	0.23%	2	130	130	0.00%	2	253	252	0.40%
Bicarbonate Alkalinity	444	440	0.90%	20	430	451	4.77%	1	386	376	2.62%	1	442	441	0.23%	2	130	130	0.00%				
Carbonate Alkalinity	<1	<1		20	<20	<20		1	<1	<1		1	<1	<1		2	<2	<2					
Color TCU	36.5	36.5	0.00%	5	20.6	20.5		5	19.8	19.7		5	25.9	26.3	1.53%					5	21.3	20.6	
Hardness as CaCO3 (Dissolved)	578	572	1.04%	0.5	554	556	0.36%	0.5	550	532	3.33%	0.5	544	548	0.73%	0.5	209	210	0.48%	0.7	425	402	5.56%
Hydroxide Alkalinity	<1	<1		20	<20	<20		1	<1	<1		1	<1	<1		2	<2	<2					
pH pH	8.34	8.35	0.12%	0.1	8.21	8.2	0.12%	0.1	8.18	8.14	0.49%	0.1	8.32	8.32	0.00%	0.1	7.93	7.91	0.25%	0.01	8.25	8.26	0.12%
Phosphorus (Nutrient) Total																							
Specific Conductivity µS/cm	1220	1220	0.00%	2	1130	1140	0.88%	2	1130	1140	0.88%	2	1200	1200	0.00%	2	469	470	0.21%	2	877	885	0.91%
Total Dissolved Solids	804	795	1.13%	10	714	742	3.85%	10	756	762	0.79%	10	786	778	1.02%	10	306	304	0.66%	10	572	559	2.30%
Total Suspended Solids	7.8	10.5		3	4.3	6.3		3	6.7	6		3	6.6	5.5		3	20.3	15.7	**25.56%**	3	<3	<3	
Turbidity NTU	5.16	5.29	2.49%	0.1	2.62	3.06	15.49%	0.1	3.64	3.6	1.10%	0.1	6.29	6.01	4.55%	0.1	12.7	11.7	8.20%				
Dissolved Anions																							
Bromide (Dissolved)	<0.5	<0.5		0.5	<0.5	<0.5		0.5	<0.5	<0.5		0.5	<0.5	<0.5		0.05	<0.05	<0.05		0.05	<0.05	<0.05	
Chloride (Dissolved)	61.4	61.4	0.00%	5	65.4	65.5	0.15%	5	52.6	51.3	2.50%	5	65.5	65.2	0.46%	0.5	16.1	16.1	0.00%	0.5	60.3	60.3	0.00%
Fluoride (Dissolved)	0.23	0.23		0.2	0.37	0.35		0.2	0.31	0.31		0.2	0.26	0.26		0.02	0.087	0.087		0.02	0.206	0.204	0.98%
Sulphate (Dissolved)	188	188	0.00%	5	122	123	0.82%	5	208	203	2.43%	5	166	165	0.60%	0.5	94	93.6	0.43%	0.5	145	144	0.69%
Nutrients																							
Ammonia (Total)	0.0356	0.0344	3.43%	0.005	0.203	0.2	1.49%	0.005	0.0415	0.0382	8.28%	0.005	0.0598	0.0596	0.34%	0.005	0.255	0.253	0.79%	0.02	0.152	0.027	
Nitrate (as N)	<0.05	0.059		0.05	0.1	0.117		0.05	0.065	0.064		0.05	0.078	0.079		0.005	0.186	0.186	0.00%	0.005	<0.005	<0.005	
Nitrate (Available)																							
Nitrite (as N)	<0.01	<0.01		0.01	0.018	0.019		0.01	0.012	0.021		0.01	0.014	0.014		0.001	0.0102	0.0101	0.99%	0.001	<0.001	<0.001	
Nitrogen (Dissolved)	0.82	0.8	2.47%	0.05	0.836	0.853	2.01%	0.05	0.65	0.654	0.61%												
Nitrogen (Total)	0.873	0.941	7.50%	0.05	0.95	0.888	6.75%	0.071	0.827	0.798	3.57%	0.05	1.19	1.17	1.69%								
Nitrogen Kjeldahl (Total)	0.873	0.882	1.03%	0.05	0.863	0.829	4.02%	0.05	0.749	0.713	4.92%	0.05	1.08	1.23	12.99%	0.05	1.67	1.68	0.60%	0.05	0.852	0.825	3.22%
Orthophosphate (Dissolved)												0.01	0.119	0.122	2.49%	0.01	0.418	0.437	4.44%	0.001	0.0067	0.0063	6.15%
Phosphorus (Nutrient) Dissolved	0.135	0.133	1.49%	0.02	0.177	0.181	2.23%	0.002	0.0646	0.0563	13.73%	0.02	0.164	0.159	3.10%	0.02	0.511	0.489	4.40%				
Phosphorus (Nutrient) Total	0.171	0.164	4.18%					0.002	0.0801	0.0795	0.75%	0.02	0.223	0.219	1.81%	0.02	0.638	0.622	2.54%	0.002	0.0337	0.0277	19.54%
Cyanide																							
Cyanide (Free)	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005					
Cyanide (Total)	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	0.0067	0.0083	
Cyanide (WAD)	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005					
Dissolved Metals																							
Aluminum (Dissolved)	<0.003	<0.003		0.001	0.0018	0.0018		0.001	0.0016	0.0017		0.001	0.0018	0.0027		0.001	0.0043	0.0044		0.005	<0.005	<0.005	
Antimony (Dissolved)	0.00011	0.00011		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	0.00011	<0.0001		0.0005	<0.0005	<0.0005	
Arsenic (Dissolved)	0.00228	0.00232	1.74%	0.0001	0.00139	0.00138	0.72%	0.0001	0.00113	0.00118	4.33%	0.0001	0.00197	0.00173	12.97%	0.0001	0.00146	0.00144	1.38%	0.0005	0.00136	0.00113	
Barium (Dissolved)	0.0692	0.0692	0.00%	5E-05	0.0617	0.0632	2.40%	5E-05	0.061	0.0593	2.83%	5E-05	0.0672	0.067	0.30%	5E-05	0.0274	0.0275	0.36%	0.02	0.045	0.044	
Beryllium (Dissolved)	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.001	<0.001	<0.001	
Bismuth (Dissolved)	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005					
Boron (Dissolved)	0.034	0.034		0.01	0.025	0.025		0.01	0.025	0.024		0.01	0.027	0.026		0.01	0.025	0.025		0.1	<0.1	<0.1	
Cadmium (Dissolved)	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		2E-05	0.000023	0.000029	
Calcium (Dissolved)	95.3	91.9	3.63%	0.05	87.8	88.2	0.45%	0.05	90.8	88.7	2.34%	0.05	81.1	82.1	1.23%	0.05	36.4	36.2	0.55%	0.1	69.2	65.2	5.95%
Chromium (Dissolved)	0.00016	0.00016		0.0001	0.00016	0.00016		0.0001	<0.0001	<0.0001		0.0001	0.00016	0.00015		0.0001	<0.0001	0.00011		0.003	<0.003	<0.001	
Cobalt (Dissolved)	0.0002	0.0002		0.0001	0.00019	0.00019		0.0001	0.0001	0.0001		0.0001	0.0002	0.0002		0.0001	0.00021	0.00021		0.0003	<0.0003	<0.0003	
Copper (Dissolved)	0.00164	0.00174		0.0002	0.00089	0.00096		0.0002	0.00131	0.00133	1.52%	0.0002	0.00098	0.00112		0.0002	0.00539	0.00536	0.56%	0.001	0.0022	0.0023	
Dissolved Cadmium (by saltwater extraction)																							
Iron (Dissolved)	0.07	0.074		0.01	0.095	0.093	**2.13%**	0.01	0.036	0.034		0.01	0.083	0.082	1.21%	0.01	0.069	0.07	1.44%	0.03	<0.03	<0.03	
Lead (Dissolved)	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		0.0005	<0.0005	<0.0005	
Lithium (Dissolved)	0.0073	0.00735	0.68%	0.0005	0.00637	0.00632	0.79%	0.0005	0.00533	0.00501	6.19%	0.0005	0.00723	0.00667	8.06%	0.0005	0.00202	0.00212		0.005	0.0077	0.0068	
Magnesium (Dissolved)	82.5	83.2	0.84%	0.1	81.4	81.6	0.25%	0.1	78.4	75.4	3.90%	0.1	82.9	83.3	0.48%	0.1	28.6	29.1	1.73%	0.1	61.3	58	5.53%
Manganese (Dissolved)	0.178	0.18	1.12%	5E-05	0.408	0.409	0.24%	5E-05	0.0752	0.0748	0.53%	5E-05	0.295	0.297	0.68%	5E-05	0.0809	0.0825	1.96%	0.0003	0.00817	0.0142	**53.91%**
Mercury (Dissolved)				1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		2E-05	<0.00002	<0.00002	
Molybdenum (Dissolved)	0.0069	0.0069	0.00%	5E-05	0.00527	0.00524	0.57%	5E-05	0.0144	0.0143	0.70%	5E-05	0.0069	0.00696	0.87%	5E-05	0.0142	0.0136	4.32%	0.001	0.023	0.0199	14.45%
Nickel (Dissolved)	0.00248	0.00257		0.0005	0.00192	0.00195		0.0005	0.00163	0.00163		0.0005	0.0019	0.00213		0.0005	0.00189	0.00188		0.001	0.0014	0.0017	
Phosphorus (Metal) Dissolved	<0.3	<0.3		0.05	0.168	0.164		0.05	0.06	0.056		0.05	0.167	0.174		0.05	0.527	0.543	2.99%				
Potassium (Dissolved)	16.6	17	2.38%	0.1	15.6	16.1	3.15%	0.1	15.9	15.4	3.19%	0.1	16.3	16.2	0.62%	0.1	12.2	12.2	0.00%	2	13.1	12.7	3.10%
Selenium (Dissolved)	0.00017	0.00018		0.0001	0.00013	0.00014		0.0001	0.00014	0.00015		0.0001	0.00018	0.00017		0.0001	0.00033	0.0003		0.001	<0.001	<0.001	
Silicon (Dissolved)	8.8	8.41	4.53%	0.05	11.5	11.6	0.87%	0.05	7.34	7.22	1.65%	0.05	12.9	13	0.77%	0.05	4.34	4.31	0.69%				
Silver (Dissolved)	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		2E-05	<0.00002	<0.00002	
Sodium (Dissolved)	68.4	68.9	0.73%	0.05	59.6	59.5	0.17%	0.05	53.5	52.3	2.27%	0.05	61.2	59.8	2.31%	0.05	18.9	18.3	3.23%	2	52.4	52.6	0.38%
Strontium (Dissolved)	0.748	0.738	1.35%	0.0002	0.762	0.771	1.17%	0.0002	0.691	0.695	0.58%	0.0002	0.768	0.749	2.50%	0.0002	0.258	0.256	0.78%				
Sulphur (Dissolved)				0.5	40.4	40	1.00%	0.5	65.1	65	0.15%	0.5	54.2	56.9	4.86%	0.5	31.2	31.3	0.32%				
Thallium (Dissolved)	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		0.0002	<0.0002	<0.0002	
Tin (Dissolved)	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0005	<0.0005	<0.0005	
Titanium (Dissolved)	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01	
Uranium (Dissolved)	0.00122	0.00121	0.82%	1E-05	0.000654	0.000663	1.37%	1E-05	0.00158	0.00158	0.00%	1E-05	0.00105	0.00102	2.90%	1E-05	0.000865	0.000804	7.31%	0.0002	0.00179	0.00163	9.36%
Vanadium (Dissolved)	0.0029	0.0029		0.001	0.0013	0.0013		0.001	0.0026	0.0025		0.001	0.0021	0.002		0.001	0.0027	0.0027		0.03	<0.03	<0.03	
Zinc (Dissolved)	<0.003	0.0038		0.001	0.0015	0.0039		0.001	0.001	0.0011		0.001	<0.001	<0.001		0.001	0.0022	0.0018		0.005	<0.005	<0.005	
Total Metals																							
Aluminum (Total)	0.209	0.256	**20.22%**	0.003	0.0421	0.0537	**24.22%**	0.003	0.114	0.119	4.29%	0.003	0.11	0.111	0.90%	0.003	0.465	0.49	5.24%	0.005	0.014	0.0212	
Antimony (Total)	0.00014	0.00015		0.0001	<0.0001	<0.0001		0.0001	0.0001	<0.0001		0.0001	0.00012	0.00013		0.0001	0.00012	0.00012		0.0005	<0.0005	<0.0005	
Arsenic (Total)	0.00221	0.00242	9.07%	0.0001	0.00137	0.00139	1.45%	0.0001	0.00119	0.0012	0.84%	0.0001	0.00223	0.00205	8.41%	0.0001	0.00161	0.00165	2.45%	0.0005	0.00101	0.00106	
Barium (Total)	0.0686	0.0734	6.76%	5E-05	0.0631	0.0644	2.04%	5E-05	0.0617	0.0612	0.81%	5E-05	0.0671	0.0702	4.52%	5E-05	0.0331	0.0329	0.61%	0.02	0.042	0.043	
Beryllium (Total)	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.001	<0.001	<0.001	
Bismuth (Total)	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005					
Boron (Total)	0.037	0.041		0.01	0.028	0.029		0.01	0.028	0.027		0.01	0.031	0.028		0.01	0.028	0.028		0.1	<0.1	<0.1	
Cadmium (Total)	0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	0.000014	0.000016		2E-05	<0.000017	0.000027	
Calcium (Total)	89.4	94.8	5.86%	0.05	86.2	86.6	0.46%	0.05	85.7	85.4	0.35%	0.05	84.6	82.4	2.63%	0.05	35.5	35.6	0.28%	0.1	66.9	65.4	2.27%
Chromium (Total)	0.0007	0.00071	1.42%	0.0001	0.00029	0.00033		0.0001	0.00039	0.00036		0.0001	0.00052	0.00045		0.0001	0.00115	0.00117	1.72%	0.001	<0.001	<0.001	
Cobalt (Total)	0.00036	0.0004		0.0001	0.00023	0.00024		0.0001	0.00021	0.00019		0.0001	0.00029	0.00028		0.0001	0.00057	0.00058	1.74%	0.0003	<0.0003	<0.0003	
Copper (Total)	0.00315	0.00337	6.75%	0.0005	0.00187	0.0027		0.0005	0.00259	0.00253	2.34%	0.0005	0.00196	0.00196		0.0005	0.0106	0.0107	0.94%	0.001	0.0025	0.0025	
Iron (Total)	0.395	0.438	10.32%	0.01	0.204	0.231	12.41%	0.01	0.223	0.219	1.81%	0.01	0.304	0.303	0.33%	0.01	0.633	0.661	4.33%	0.03	0.049	0.047	
Lead (Total)	0.000076	0.000063		5E-05	<0.00005	<0.00005		5E-05	<0.00005	0.000052		5E-05	0.000052	<0.00005		5E-05	0.000133	0.000142		0.0005	<0.0005	<0.0005	
Lithium (Total)	0.00682	0.00747	9.10%	0.0005	0.00661	0.00699	5.59%	0.0005	0.00532	0.00507	4.81%	0.0005	0.00596	0.00687	14.19%	0.0005	0.00227	0.00236		0.005	0.0068	0.007	
Magnesium (Total)	77	84.5	9.29%	0.1	81.5	80.7	0.99%	0.1	73.9	73.3	0.82%	0.1	82.3	81	1.59%	0.1	28.4	28.3	0.35%	0.1	58.7	57.7	1.72%
Manganese (Total)	0.208	0.227	8.74%	5E-05	0.455	0.436	4.26%	5E-05	0.103	0.101	1.96%	5E-05	0.34	0.328	3.59%	5E-05	0.107	0.111	3.67%	0.0003	0.0153	0.0156	1.94%
Mercury (Total)				1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		2E-05	<0.00002	<0.00002	
Molybdenum (Total)	0.0068	0.00751	9.92%	5E-05	0.00562	0.00571	1.59%	5E-05	0.0146	0.0144	1.38%	5E-05	0.00797	0.00703	12.53%	5E-05	0.0152	0.0149	1.99%	0.001	0.0215	0.0209	2.83%
Nickel (Total)	0.00295	0.00319	7.82%	0.0005	0.00217	0.00216		0.0005	0.00196	0.00187		0.0005	0.00236	0.00234		0.0005	0.00374	0.00372	0.54%	0.001	0.0015	0.0016	
Phosphorus (Metal) Total	<0.3	<0.3		0.05	0.182	0.176		0.05	0.074	0.075		0.05	0.219	0.211		0.05	0.617	0.618	0.16%				
Potassium (Total)	15.9	17.2	7.85%	0.1	15.3	15.7	2.58%	0.1	15.8	15.1	4.53%	0.1	17.6	17.5	0.57%	0.1	11.8	11.8	0.00%	2	12.5	12.4	0.80%
Selenium (Total)	0.00018	0.00018		0.0001	0.00014	0.00015		0.0001	0.00014	0.00019		0.0001	0.0002	0.00015		0.0001	0.00035	0.00031		0.001	<0.001	<0.001	
Silicon (Total)	8.78	9.4	6.82%	0.05	11.5	11.6	0.87%	0.05	7.48	7.34	1.89%	0.05	13.6	13.3	2.23%	0.05	5.42	5.46	0.74%				
Silver (Total)	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	0.000013	<0.00001		1E-05	0.000015	0.000014		2E-05	<0.00002	<0.00002	
Sodium (Total)	65.6	71.5	8.61%	0.05	61.2	60.4	1.32%	0.05	53.8	52.3	2.83%	0.05	64.8	63.5	2.03%	0.05	18.4	18.5	0.54%	2	51.2	51	0.39%
Strontium (Total)	0.714	0.766	7.03%	0.0002	0.799	0.822	2.84%	0.0002	0.696	0.69	0.87%	0.0002	0.768	0.711	7.71%	0.0002	0.27	0.265	1.87%				
Sulphur (Total)				0.5	42	41.2	1.92%	0.5	65.2	64.6	0.92%	0.5	58.9	58.1	1.37%	0.5	31.2	30.7	1.62%				
Thallium (Total)	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		0.0002	<0.0002	<0.0002	
Tin (Total)	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0005	<0.0005	<0.0005	
Titanium (Total)	0.012	0.016		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	0.017	0.016		0.01	<0.01	<0.01	
Total Cadmium (by saltwater extraction)																							
Uranium (Total)	0.00123	0.00131	6.30%	1E-05	0.000666	0.000688	3.25%	1E-05	0.0016	0.00157	1.89%	1E-05	0.00113	0.00105	7.34%	1E-05	0.000917	0.000896	2.32%	0.0002	0.00166	0.00167	0.60%
Vanadium (Total)	0.0034	0.0037		0.001	0.0016	0.0017		0.001	0.0029	0.0029		0.001	0.0026	0.0033		0.001	0.004	0.0042		0.03	<0.03	<0.03	
Zinc (Total)	0.0032	<0.003		0.003	<0.003	<0.003		0.003	<0.003	<0.003		0.003	<0.003	<0.003		0.003	<0.003	<0.003		0.005	<0.005	<0.005	
Organics																							
Carbon Organic (Dissolved)	14.6	14.7	0.68%	0.5	11.2	11.2	0.00%	0.5	10.4	10.7	2.84%	0.5	14.5	14.4	0.69%	0.5	13.3	13.5	1.49%				
Carbon Organic (Total)	15.1	15.2	0.66%	0.5	12.3	12.1	1.64%	0.5	10.9	10.6	2.79%	1	15.3	15.2	0.66%	1	14	14.4	2.82%	0.5	14.8	14.6	1.36%
Nitrogen Organic (Dissolved)	0.784	0.706	10.47%					0.05	0.531	0.531	0.00%												
Nitrogen Organic (Total)	0.838	0.847	1.07%	0.06	0.66	0.629	4.81%	0.06	0.708	0.675	4.77%												

Site	MDL	PC03	Duplicate	RPD	MDL	PC03	Duplicate	RPD	MDL	PC03	Duplicate	RPD	MDL	PC03	Duplicate	RPD	MDL	PC08	Duplicate	RPD	MDL	PC08
Date Sampled		28-Jul-11		(%)		30-Aug-11		(%)		10-Apr-12		(%)		16-May-12		(%)		7-Jul-08		(%)		21-Apr-11
Physical Tests																						
Acidity to pH 8.3 (as CaCO3)	1	4.6	5.2																			
Alkalinity (Total as CaCO3)	2	270	271	0.37%	2	248	249	0.40%	1	291	290	0.34%	1	290	287	1.04%	2	220	217	1.37%	2	292
Bicarbonate Alkalinity									1	276	277	0.36%	1	290	287	1.04%					2	292
Carbonate Alkalinity									1	15	13.8	8.33%	1	<1	<1						2	<2
Color TCU	5	37.4	37.1	0.81%	5	28.4	28.5	0.35%	5	19.2	19.2		5	28.3	28.4	0.35%	5	20.2	20.3		5	14.4
Hardness as CaCO3 (Dissolved)	0.5	323	329	1.84%	0.5	301	303	0.66%	0.5	432	430	0.46%	0.5	419	420	0.24%	0.7	296	293	1.02%	0.5	360
Hydroxide Alkalinity									1	<1	<1		1	<1	<1						2	<2
pH pH	0.1	8.16	8.18	0.24%	0.1	8.21	8.24	0.36%	0.1	8.48	8.5	0.24%	0.1	8.38	8.37	0.12%	0.01	8.43	8.44	0.12%	0.1	8.16
Phosphorus (Nutrient) Total																						
Specific Conductivity µS/cm	2	764	766	0.26%	2	711	710	0.14%	2	913	906	0.77%	2	947	950	0.32%	2	672	678	0.89%	2	799
Total Dissolved Solids	10	459	456	0.66%	10	439	439	0.00%	10	597	587	1.69%	10	626	632	0.95%	10	416	412	0.97%	10	498
Total Suspended Solids	3	<3	<3		3	<3	<3		3	<3	<3		3	4.2	4.2		3	4	5		3	10.5
Turbidity NTU	0.1	0.97	0.83	15.56%	0.1	0.89	0.86	3.43%	0.1	1.42	1.55	8.75%	0.1	1.09	0.96	12.68%	0.1	6.63	6.93	4.42%	0.1	10.2
Dissolved Anions																						
Bromide (Dissolved)	0.5	<0.5	<0.5		0.25	<0.25	<0.25		0.5	<0.5	<0.5		0.5	<0.5	<0.5		0.05	<0.05	<0.05		0.5	<0.5
Chloride (Dissolved)	5	51.6	52.2	1.16%	2.5	51.3	53.6	4.39%	5	30.2	30.7	1.64%	5	56.6	54.5	3.78%	0.5	52.8	52.9	0.19%	5	58.7
Fluoride (Dissolved)	0.2	0.39	0.4		0.1	0.2	0.21		0.2	<0.2	<0.2		0.2	0.2	0.2		0.02	0.194	0.194	0.00%	0.2	0.21
Sulphate (Dissolved)	5	76	76.8	1.05%	2.5	63.8	66.9	4.74%	5	193	192	0.52%	5	173	170	1.75%	0.5	64.9	64.9	0.00%	5	64.1
Nutrients																						
Ammonia (Total)	0.005	0.0567	0.0562	0.89%	0.005	0.0177	0.0189		0.005	0.0786	0.0795	1.14%	0.005	0.0243	0.0224		0.02	0.197	0.189	4.15%	0.005	0.0591
Nitrate (as N)	0.05	<0.05	<0.05		0.025	0.028	<0.025		0.05	<0.05	<0.05		0.05	<0.05	0.085		0.005	0.0146	0.011		0.05	<0.05
Nitrate (Available)																						
Nitrite (as N)	0.01	<0.01	<0.01		0.005	<0.005	<0.005		0.01	<0.01	0.029		0.01	<0.01	<0.01		0.001	0.0012	0.0013		0.01	<0.01
Nitrogen (Dissolved)	0.05	1.01	1.09	7.62%	0.05	1.13	1.13	0.00%	0.05	0.68	0.62	9.23%	0.05	1.06	0.98	7.84%						
Nitrogen (Total)	0.05	1.03	1.09	5.66%	0.05	1.19	1.17	1.69%	0.0051	0.895	0.855	4.57%	0.0051	0.959	1.02	6.16%					0.05	0.33
Nitrogen Kjeldahl (Total)	0.05	1.03	1.09	5.66%	0.05	0.996	1.07	7.16%	0.05	0.895	0.826	8.02%	0.05	0.959	0.938	2.21%	0.05	1.56	1.56	0.00%	0.05	0.33
Orthophosphate (Dissolved)	0.001	0.028	0.0268	4.38%													0.001	<0.001	<0.001			
Phosphorus (Nutrient) Dissolved	0.002	0.0489	0.0472	3.54%	0.002	0.0331	0.0338	2.09%	0.002	0.0615	0.0607	1.31%	0.002	0.0336	0.0336	0.00%					0.002	0.0066
Phosphorus (Nutrient) Total	0.002	0.0582	0.0603	3.54%	0.002	0.0421	0.0459	8.64%	0.002	0.0937	0.0942	0.53%	0.002	0.0514	0.0467	9.58%	0.002	0.031	0.0339	8.94%	0.002	0.0422
Cyanide																						
Cyanide (Free)	0.005	<0.005	<0.005						0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005
Cyanide (Total)	0.005	0.0083	0.0071						0.005	0.0055	0.0064		0.005	<0.005	<0.005		0.005	0.0077	0.0086		0.005	0.006
Cyanide (WAD)	0.005	<0.005	<0.005						0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005
Dissolved Metals																						
Aluminum (Dissolved)	0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.003	<0.003	<0.003		0.003	<0.003	<0.003		0.005	<0.005	<0.005		0.005	<0.005
Antimony (Dissolved)	0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0001	0.0001	<0.0001		0.0001	0.00015	0.00016		0.0005	<0.0005	<0.0005		0.0005	<0.0005
Arsenic (Dissolved)	0.0005	0.00143	0.00154		0.0005	0.00147	0.00142		0.0001	0.00093	0.00089	4.40%	0.0001	0.00129	0.00127	1.56%	0.0005	0.00133	0.00163		0.0005	0.00077
Barium (Dissolved)	0.02	0.061	0.063		0.02	0.058	0.058		5E-05	0.0618	0.0634	2.56%	5E-05	0.053	0.0528	0.38%	0.02	0.048	0.053		0.02	0.071
Beryllium (Dissolved)	0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.001	<0.001	<0.001		0.001	<0.001
Bismuth (Dissolved)	0.2	<0.2	<0.2		0.2	<0.2	<0.2		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005						0.2	<0.2
Boron (Dissolved)	0.1	<0.1	<0.1		0.1	<0.1	<0.1		0.01	0.028	0.028		0.01	0.036	0.039		0.1	<0.1	<0.1		0.1	<0.1
Cadmium (Dissolved)	2E-05	<0.000017	0.000021		2E-05	<0.000017	<0.000017		1E-05	0.000023	0.000018		1E-05	0.00002	0.000017		2E-05	<0.000017	<0.000017		2E-05	<0.000017
Calcium (Dissolved)	0.1	55	55.6	1.08%	0.1	51.8	52.4	1.15%	0.05	64	63.1	1.42%	0.05	62.8	63.3	0.79%	0.1	51.5	50	2.96%	0.1	72.4
Chromium (Dissolved)	0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.0001	0.00011	<0.0001		0.0001	<0.0001	<0.0001		0.001	<0.001	<0.001		0.001	<0.001
Cobalt (Dissolved)	0.0003	<0.0003	<0.0003		0.0003	<0.0003	<0.0003		0.0001	0.00013	0.00013		0.0001	0.00011	0.00011		0.0003	<0.0003	<0.0003		0.0003	<0.0003
Copper (Dissolved)	0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.0005	0.00079	0.00065		0.0005	0.0014	0.00146		0.001	<0.001	0.0011		0.001	<0.001
Dissolved Cadmium (by saltwater extraction)																						
Iron (Dissolved)	0.03	0.034	0.037		0.03	<0.03	<0.03		0.03	0.044	0.045		0.03	<0.03	0.031		0.03	0.032	0.031		0.03	<0.03
Lead (Dissolved)	0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		0.0005	<0.0005	<0.0005		0.0005	<0.0005
Lithium (Dissolved)	0.005	0.0058	0.0051		0.005	0.0055	0.0056		0.0005	0.00411	0.00431	4.75%	0.0005	0.00672	0.00717	6.48%	0.005	0.0053	0.0059		0.005	<0.005
Magnesium (Dissolved)	0.1	45.1	46.1	2.19%	0.1	41.6	41.8	0.48%	0.1	66.1	66.2	0.15%	0.1	63.6	63.5	0.16%	0.1	40.6	40.8	0.49%	0.1	43.5
Manganese (Dissolved)	0.0003	0.0491	0.0499	1.62%	0.0003	0.0236	0.0235	0.42%	5E-05	0.107	0.109	1.85%	5E-05	0.0359	0.0353	1.69%	0.0003	0.0082	0.00905	9.86%	0.0003	0.21
Mercury (Dissolved)	1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		2E-05	<0.00002	<0.00002		1E-05	<0.00001
Molybdenum (Dissolved)	0.001	0.0044	0.0047		0.001	0.0062	0.0062	0.00%	5E-05	0.017	0.0168	1.18%	5E-05	0.0249	0.0273	9.20%	0.001	0.0024	0.0026		0.001	0.0021
Nickel (Dissolved)	0.001	<0.001	0.0012		0.001	0.0011	0.001		0.0005	0.00105	0.00107		0.0005	0.00127	0.00125		0.001	<0.001	<0.001		0.001	0.0015
Phosphorus (Metal) Dissolved	0.3	<0.3	<0.3		0.3	<0.3	<0.3		0.3	<0.3	<0.3		0.3	<0.3	<0.3						0.3	<0.3
Potassium (Dissolved)	2	12.4	12.7	2.39%	2	12.6	12.5	0.80%	0.05	11.6	11.7	0.86%	0.05	14.4	14.2	1.40%	2	12	12.1	0.83%	2	9.7
Selenium (Dissolved)	0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.0001	0.00014	0.00014		0.0001	0.00021	0.00021		0.001	<0.001	<0.001		0.001	<0.001
Silicon (Dissolved)	0.05	2.76	2.83	2.50%	0.05	5.61	5.6	0.18%	0.05	3.9	3.85	1.29%	0.05	3.32	3.3	0.60%					0.05	8
Silver (Dissolved)	2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		2E-05	<0.00002	<0.00002		2E-05	<0.00002
Sodium (Dissolved)	2	40.7	43.7	7.11%	2	38.2	37.9	0.79%	0.05	41.7	41.8	0.24%	0.05	50.8	49.9	1.79%	2	35.7	35.8	0.28%	2	38.4
Strontium (Dissolved)	0.005	0.442	0.46	3.99%	0.005	0.417	0.417	0.00%	0.0001	0.573	0.57	0.52%	0.0002	0.541	0.594	9.34%					0.005	0.454
Sulphur (Dissolved)																						
Thallium (Dissolved)	0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		0.0002	<0.0002	<0.0002		0.0002	<0.0002
Tin (Dissolved)	0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0005	<0.0005	<0.0005		0.0005	<0.0005
Titanium (Dissolved)	0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01
Uranium (Dissolved)	0.0002	0.00043	0.00043		0.0002	0.00077	0.00078		1E-05	0.00105	0.00105	0.00%	1E-05	0.00173	0.00192	10.41%	0.0002	0.00107	0.00114	6.33%	0.0002	0.00058
Vanadium (Dissolved)	0.001	0.0011	0.0011		0.001	0.0018	0.0018		0.001	0.0017	0.0017		0.001	0.0028	0.0029		0.001	0.0018	0.002		0.001	<0.001
Zinc (Dissolved)	0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.003	<0.003	<0.003		0.003	<0.003	<0.003		0.005	<0.005	<0.005		0.005	<0.005
Total Metals																						
Aluminum (Total)	0.005	0.0184	0.0206		0.005	0.0199	0.0174		0.003	0.01	0.0188		0.003	0.0169	0.0174	2.92%	0.005	0.0354	0.029	19.88%	0.005	0.0806
Antimony (Total)	0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0001	<0.0001	<0.0001		0.0001	0.00015	0.00015		0.0005	<0.0005	<0.0005		0.0005	<0.0005
Arsenic (Total)	0.0005	0.00141	0.00144		0.0005	0.00136	0.00132		0.0001	0.00092	0.00094	2.15%	0.0001	0.00132	0.0013	1.53%	0.0005	0.00154	0.00142		0.0005	0.00097
Barium (Total)	0.02	0.064	0.067		0.02	0.057	0.057		5E-05	0.0627	0.064	2.05%	5E-05	0.0533	0.0533	0.00%	0.02	0.05	0.048		0.02	0.077
Beryllium (Total)	0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.001	<0.001	<0.001		0.001	<0.001
Bismuth (Total)	0.2	<0.2	<0.2		0.2	<0.2	<0.2		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005						0.2	<0.2
Boron (Total)	0.1	<0.1	<0.1		0.1	<0.1	<0.1		0.01	0.033	0.029		0.01	0.045	0.039		0.1	<0.1	<0.1		0.1	<0.1
Cadmium (Total)	2E-05	0.000018	<0.000017		2E-05	<0.000017	<0.000017		1E-05	0.000018	0.00002		1E-05	0.000018	0.000019		2E-05	<0.000017	<0.000017		2E-05	<0.000017
Calcium (Total)	0.1	55.7	57.6	3.35%	0.1	49.5	49.6	0.20%	0.05	64.2	63.5	1.10%	0.05	62.5	63	0.80%	0.1	44.1	49.6	11.74%	0.1	72.5
Chromium (Total)	0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.0001	0.00019	0.00024		0.0001	0.00025	0.00017		0.001	<0.001	<0.001		0.001	<0.001
Cobalt (Total)	0.0003	<0.0003	<0.0003		0.0003	<0.0003	<0.0003		0.0001	0.00014	0.00017		0.0001	0.00014	0.00013		0.0003	<0.0003	<0.0003		0.0003	0.00033
Copper (Total)	0.001	0.0011	0.0014		0.001	0.0012	0.0011		0.0005	0.00085	0.00101		0.0005	0.00227	0.00228		0.001	0.0015	0.0014		0.001	0.0021
Iron (Total)	0.03	0.065	0.074		0.03	0.046	0.048		0.03	0.099	0.112		0.03	0.055	0.054		0.03	0.078	0.082		0.03	1.12
Lead (Total)	0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		0.0005	<0.0005	<0.0005		0.0005	<0.0005
Lithium (Total)	0.005	0.006	0.0058		0.005	0.0054	0.0054		0.0005	0.00389	0.00348	11.13%	0.0005	0.00721	0.00685	5.12%	0.005	0.0065	0.0061		0.005	<0.005
Magnesium (Total)	0.1	45.9	47.9	4.26%	0.1	40.3	40.7	0.99%	0.1	66.5	65.1	2.13%	0.1	63.2	63.6	0.63%	0.1	40	40.4	1.00%	0.1	44.1
Manganese (Total)	0.0003	0.0665	0.0705	5.84%	0.0003	0.0302	0.0286	5.44%	5E-05	0.108	0.116	7.14%	5E-05	0.0382	0.0387	1.30%	0.0003	0.0159	0.0146	8.52%	0.0003	0.227
Mercury (Total)	1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		2E-05	<0.00002	<0.00002		1E-05	<0.00001
Molybdenum (Total)	0.001	0.005	0.0054	7.69%	0.001	0.0066	0.0066	0.00%	5E-05	0.0173	0.0153	12.27%	5E-05	0.0276	0.0261	5.59%	0.001	0.0028	0.0027		0.001	0.0024
Nickel (Total)	0.001	<0.001	0.0014		0.001	0.0012	0.0011		0.0005	0.00116	0.00126		0.0005	0.00132	0.00141		0.001	<0.001	<0.001		0.001	0.002
Phosphorus (Metal) Total	0.3	<0.3	<0.3		0.3	<0.3	<0.3		0.3	<0.3	<0.3		0.3	<0.3	<0.3						0.3	<0.3
Potassium (Total)	2	12.7	13.4	5.36%	2	12.5	12.5	0.00%	0.05	11.4	11.6	1.74%	0.05	14.5	14.4	0.69%	2	12.8	12.2	4.80%	2	9.8
Selenium (Total)	0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.0001	0.00015	0.00015		0.0001	0.00022	0.00024		0.001	<0.001	<0.001		0.001	<0.001
Silicon (Total)	0.05	2.81	2.95	4.86%	0.05	5.49	5.49	0.00%	0.05	3.88	3.96	2.04%	0.05	3.36	3.35	0.30%					0.05	8.37
Silver (Total)	2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		2E-05	<0.00002	<0.00002		2E-05	<0.00002
Sodium (Total)	2	42.7	43.6	2.09%	2	38.3	38.6	0.78%	0.05	41	41.7	1.69%	0.05	52	51.7	0.58%	2	38.9	36.1	7.47%	2	39
Strontium (Total)	0.005	0.463	0.484	4.44%	0.005	0.41	0.41	0.00%	0.0001	0.568	0.496	13.53%	0.0002	0.577	0.545	5.70%					0.005	0.459
Sulphur (Total)																						
Thallium (Total)	0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		0.0002	<0.0002	<0.0002		0.0002	<0.0002
Tin (Total)	0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0005	<0.0005	<0.0005		0.0005	<0.0005
Titanium (Total)	0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01
Total Cadmium (by saltwater extraction)																						
Uranium (Total)	0.0002	0.00054	0.00055		0.0002	0.00085	0.00084		1E-05	0.0011	0.000972	12.36%	1E-05	0.00193	0.00184	4.77%	0.0002	0.00126	0.0012	4.88%	0.0002	0.00064
Vanadium (Total)	0.001	0.0013	0.0014		0.001	0.0018	0.0017		0.001	0.0018	0.0018		0.001	0.003	0.0031		0.001	0.0023	0.0021		0.001	0.0023
Zinc (Total)	0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.003	<0.003	<0.003		0.003	<0.003	<0.003		0.005	<0.005	<0.005		0.005	<0.005
Organics																						
Carbon Organic (Dissolved)	0.5	15.5	16	3.17%	0.5	17.3	17.3	0.00%	0.5	10	9.64	3.67%	0.5	15.8	15.4	2.56%	0.5	15.9	16.4	3.10%	0.5	10.7
Carbon Organic (Total)	0.5	16.5	15.4	6.90%	0.5	17.7	17.4	1.71%	0.5	10.1	9.93	1.70%	0.5	16.1	15.8	1.88%					0.5	10.8
Nitrogen Organic (Dissolved)	0.05	0.953	1.03	7.77%	0.05	1.08	1.11	2.74%	0.05	0.601	0.512	15.99%	0.05	1.04	0.873	17.46%						
Nitrogen Organic (Total)	0.05	0.973	1.03	5.69%	0.05	1.14	1.15	0.87%	0.06	0.816	0.747	8.83%	0.06	0.935	0.915	2.16%						

APPENDIX A QA/QC
TABLE A.10 Surface Water Duplicates
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Site	Duplicate	RPD	MDL	PC08	Duplicate	RPD	MDL	PC08	Duplicate	RPD	MDL	PC08	Duplicate	RPD	MDL	PC08	Duplicate	RPD	MDL	PC08	Duplicate	RPD	MDL
Date Sampled		(%)		25-Oct-11		(%)		24-May-12		(%)		4-Dec-12		(%)		7-May-13		(%)		4-Sep-13		(%)	
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)			1	2.4	2.3																		
Alkalinity (Total as CaCO3)	320	9.15%	2	328	322	1.85%	1	250	252	0.80%	2	312	302	3.26%	1	242	239	1.25%	1	301	306	1.65%	2
Bicarbonate Alkalinity	320	9.15%	2	328	322	1.85%	1	219	221	0.91%	2	312	302	3.26%	1	232	229	1.30%	1	301	306	1.65%	2
Carbonate Alkalinity	<2		2	<2	<2		1	31	31.2	0.64%	2	<2	<1		1	9.8	10.1	3.02%	1	<1	<1		2
Color TCU	14.1		5	19.9	19.8		5	17.8	17.8		5	22.5	22.6		5	16	16.2		5	23.2	23.5		5
Hardness as CaCO3 (Dissolved)	359	0.28%	0.5	344	348	1.16%	0.5	296	298	0.67%	0.5	333	333	0.00%	0.5	295	287	2.75%	0.5	318	315	0.95%	0.5
Hydroxide Alkalinity	<2		2	<2	<2		1	<1	<1		2	<2	<1		1	<1	<1		1	<1	<1		2
pH pH	8.14	0.25%	0.1	8.23	8.23	0.00%	0.1	8.54	8.55	0.12%	0.1	8.29	8.32	0.36%	0.1	8.54	8.55	0.12%	0.1	8.38	8.38	0.00%	0.1
Phosphorus (Nutrient) Total																							
Specific Conductivity µS/cm	798	0.13%	2	809	809	0.00%	2	667	672	0.75%	2	743	745	0.27%	2	672	667	0.75%	2	716	711	0.70%	2
Total Dissolved Solids	498	0.00%	10	457	459	0.44%	10	414	424	2.39%	10	463	477	2.98%	10	401	430	6.98%	10	406	435	6.90%	10
Total Suspended Solids	9.5		3	21.7	3.1		3	3.2	<3		3	<3	<3		3	3.3	4.7		3	8.5	7.7		3
Turbidity NTU	9.89	3.09%	0.1	10.8	6.16	**54.72%**	0.1	1.4	1.18	17.05%	0.1	10.1	10.1	0.00%	0.1	1.35	1.72	24.10%	0.1	7.48	8.11	8.08%	0.1
Dissolved Anions																							
Bromide (Dissolved)	<0.5		0.5	<0.5	<0.5		0.05	<0.05	<0.05		0.5	<0.5	<0.5		0.25	<0.25	<0.25		0.25	<0.25	<0.25		0.5
Chloride (Dissolved)	56.8	3.29%	5	56	55.9	0.18%	0.5	52.7	52.8	0.19%	5	56.8	56.6	0.35%	2.5	55.5	55.6	0.18%	2.5	51.8	51.7	0.19%	5
Fluoride (Dissolved)	0.21		0.2	0.29	0.29		0.02	0.209	0.207	0.96%	0.2	0.27	0.27		0.1	0.24	0.21		0.1	0.28	0.31		0.2
Sulphate (Dissolved)	64.5	0.62%	5	35	34.9	0.29%	0.5	58.9	58.8	0.17%	5	37.6	37.6	0.00%	2.5	55.4	55.3	0.18%	2.5	22.6	22.5	0.44%	5
Nutrients																							
Ammonia (Total)	0.0569	3.79%	0.005	0.181	0.232	24.70%	0.005	0.0212	0.0192		0.005	0.165	0.167	1.20%	0.005	0.0244	0.0243		0.005	0.0774	0.0673	13.96%	0.005
Nitrate (as N)	<0.05		0.05	0.122	0.111		0.005	<0.005	<0.005		0.05	0.05	<0.05		0.025	0.029	0.033		0.025	<0.025	<0.025		0.05
Nitrate (Available)																							
Nitrite (as N)	<0.01		0.01	0.014	0.013		0.001	<0.001	<0.001		0.01	0.014	0.011		0.005	<0.005	0.0079		0.005	0.0135	0.0145		0.01
Nitrogen (Dissolved)			0.05	0.78	0.74	5.26%	0.05	0.77	0.7	9.52%	0.05	0.881	0.892	1.24%					0.1	1.75	1.72	1.73%	
Nitrogen (Total)	0.45	**30.77%**	0.0051	3.68	2.36	**43.71%**	0.0025	0.893	0.873	2.27%	0.071	0.916	0.829	9.97%	0.05	1.05	0.968	8.13%	0.05	0.865	0.849	1.87%	
Nitrogen Kjeldahl (Total)	0.45	**30.77%**	0.05	3.55	2.24	**45.25%**	0.05	0.893	0.873	2.27%	0.05	0.852	0.818	4.07%	0.05	0.88	0.767	13.72%	0.05	0.931	0.951	2.13%	0.05
Orthophosphate (Dissolved)																							0.001
Phosphorus (Nutrient) Dissolved	0.0067		0.002	0.0056	0.0072		0.002	0.0185	0.0183	1.09%	0.002	0.0109	0.0115	5.36%	0.002	0.0366	0.0382	4.28%	0.002	0.0714	0.0651	9.23%	0.002
Phosphorus (Nutrient) Total	0.0443	4.86%	0.002	0.0896	0.0413	73.80%	0.002	0.0349	0.0274	**24.08%**	0.002	0.0603	0.0605	0.33%	0.002	0.0448	0.0462	3.08%					0.002
Cyanide																							
Cyanide (Free)	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005
Cyanide (Total)	0.0069		0.005	0.0065	0.0136		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005
Cyanide (WAD)	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005
Dissolved Metals																							
Aluminum (Dissolved)	<0.005		0.003	<0.003	<0.003		0.001	0.0022	0.0016		0.001	0.0011	0.0012		0.001	0.0012	0.0012		0.001	0.0023	0.0018		0.001
Antimony (Dissolved)	<0.0005		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001
Arsenic (Dissolved)	0.00081		0.0001	0.00093	0.00092	1.08%	0.0001	0.00117	0.00118	0.85%	0.0001	0.00088	0.00086	2.30%	0.0001	0.00116	0.00124	6.67%	0.0001	0.00151	0.00155	2.61%	0.0001
Barium (Dissolved)	0.071		5E-05	0.0648	0.063	2.82%	5E-05	0.0535	0.0532	0.56%	5E-05	0.0488	0.0498	2.03%	5E-05	0.046	0.0473	2.79%	5E-05	0.0694	0.0679	2.18%	5E-05
Beryllium (Dissolved)	<0.001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001
Bismuth (Dissolved)	<0.2		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005
Boron (Dissolved)	<0.1		0.01	0.028	0.028		0.01	0.016	0.017		0.01	0.03	0.029		0.01	0.019	0.02		0.01	0.029	0.03		0.01
Cadmium (Dissolved)	<0.000017		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05
Calcium (Dissolved)	72.2	0.28%	0.05	68.9	69.7	1.15%	0.05	54.9	56	1.98%	0.05	67.6	67.3	0.44%	0.05	56	54.4	2.90%	0.05	59.7	58.7	1.69%	0.05
Chromium (Dissolved)	<0.001		0.0001	0.00042	0.00039		0.0001	<0.0001	<0.0001		0.0001	0.00053	0.00056	5.50%	0.0001	0.0001	<0.0001		0.0001	0.00033	0.00031		0.0001
Cobalt (Dissolved)	<0.0003		0.0001	0.00024	0.00024		0.0001	<0.0001	<0.0001		0.0001	0.00012	0.00012		0.0001	<0.0001	<0.0001		0.0001	0.00016	0.00016		0.0001
Copper (Dissolved)	<0.001		0.0005	0.00054	0.00053		0.0002	0.00093	0.00096		0.0002	0.00074	0.00066		0.0002	0.00085	0.00093		0.0002	0.0005	0.00058		0.0002
Dissolved Cadmium (by saltwater extraction)																							
Iron (Dissolved)	<0.03		0.03	0.078	0.08		0.01	0.015	0.015		0.01	0.142	0.149	4.81%	0.01	0.011	<0.01		0.01	0.079	0.069	13.51%	0.01
Lead (Dissolved)	<0.0005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		5E-05
Lithium (Dissolved)	<0.005		0.0005	0.00536	0.00536	0.00%	0.0005	0.00479	0.00519	8.02%	0.0005	0.00542	0.00525	3.19%	0.0005	0.00544	0.0058	6.41%	0.0005	0.00553	0.0058	4.77%	0.0005
Magnesium (Dissolved)	43.4	0.23%	0.1	41.8	42.2	0.95%	0.1	38.6	38.3	0.78%	0.1	39.7	40	0.75%	0.1	37.6	36.7	2.42%	0.1	41	41	0.00%	0.1
Manganese (Dissolved)	0.207	1.44%	5E-05	0.124	0.127	2.39%	5E-05	0.00374	0.00379	1.33%	5E-05	0.16	0.155	3.17%	5E-05	0.00489	0.00464	5.25%	5E-05	0.0739	0.0644	13.74%	5E-05
Mercury (Dissolved)	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05
Molybdenum (Dissolved)	0.002		5E-05	0.00308	0.00304	1.31%	5E-05	0.00225	0.00225	0.00%	5E-05	0.00261	0.00257	1.54%	5E-05	0.00228	0.00232	1.74%	5E-05	0.00287	0.00292	1.73%	5E-05
Nickel (Dissolved)	0.0019		0.0005	0.00234	0.00244		0.0005	0.00073	0.0007		0.0005	0.00154	0.00155		0.0005	0.00066	0.00066		0.0005	0.00169	0.00161		0.0005
Phosphorus (Metal) Dissolved	<0.3		0.3	<0.3	<0.3		0.3	<0.3	<0.3		0.05	<0.05	<0.05		0.05	<0.05	<0.05		0.05	<0.05	<0.05		0.05
Potassium (Dissolved)	9.8		0.05	11	11.1	0.90%	0.05	10.6	10.4	1.90%	0.1	10.7	10.7	0.00%	0.1	11	11.1	0.90%	0.1	11.9	12	0.84%	0.1
Selenium (Dissolved)	<0.001		0.0001	0.0001	0.00011		0.0001	0.00015	0.00014		0.0001	0.0001	0.00012		0.0001	0.00013	0.00014		0.0001	0.00013	0.00012		0.0001
Silicon (Dissolved)	8.05	0.62%	0.05	9.42	9.54	1.27%	0.05	1.33	1.35	1.49%	0.05	9.45	9.45	0.00%	0.05	3.63	3.63	0.00%	0.05	10.1	10.1	0.00%	0.05
Silver (Dissolved)	<0.00002		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05
Sodium (Dissolved)	38.6	0.52%	0.05	38.5	38.9	1.03%	0.05	34.3	34	0.88%	0.05	37.6	37.4	0.53%	0.05	34.5	35.2	2.01%	0.05	39.3	39.1	0.51%	0.05
Strontium (Dissolved)	0.451	0.66%	0.0001	0.433	0.432	0.23%	0.0002	0.348	0.347	0.29%	0.0002	0.425	0.43	1.17%	0.0002	0.36	0.367	1.93%	0.0002	0.417	0.413	0.96%	0.0002
Sulphur (Dissolved)											0.5	13	13.2	1.53%	0.5	18.7	19	1.59%	0.5	8.16	8.22	0.73%	0.5
Thallium (Dissolved)	<0.0002		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05
Tin (Dissolved)	<0.0005		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001
Titanium (Dissolved)	<0.01		0.01	0.011	0.011		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01
Uranium (Dissolved)	0.00058		1E-05	0.000455	0.00046	1.09%	1E-05	0.00113	0.00114	0.88%	1E-05	0.000369	0.000372	0.81%	1E-05	0.00111	0.00112	0.90%	1E-05	0.000435	0.000442	1.60%	1E-05
Vanadium (Dissolved)	<0.001		0.001	0.0012	0.0012		0.001	0.0023	0.0023		0.001	0.0014	0.0014		0.001	0.0022	0.0022		0.001	0.0017	0.0018		0.001
Zinc (Dissolved)	<0.005		0.003	0.0098	<0.003		0.001	0.0014	0.0025		0.001	<0.001	<0.001		0.001	0.0017	0.0013		0.001	<0.001	0.0013		0.001
Total Metals																							
Aluminum (Total)	0.115	**35.17%**	0.003	0.13	0.237	**58.31%**	0.003	0.0191	0.015	**24.05%**	0.003	0.126	0.111	12.66%	0.003	0.0694	0.0573	19.10%	0.003	0.293	0.206	**34.87%**	0.003
Antimony (Total)	<0.0005		0.0001	<0.0001	<0.0001		0.0001	0.00012	0.00013		0.0001	<0.0001	<0.0001		0.0001	0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001
Arsenic (Total)	0.00104		0.0001	0.00107	0.00142	**28.11%**	0.0001	0.00117	0.00122	4.18%	0.0001	0.00114	0.00113	0.88%	0.0001	0.00112	0.0011	1.80%	0.0001	0.00185	0.00184	0.54%	0.0001
Barium (Total)	0.076		5E-05	0.0661	0.109	**49.00%**	5E-05	0.0517	0.0537	3.80%	5E-05	0.0534	0.0553	3.50%	5E-05	0.0449	0.046	2.42%	5E-05	0.0668	0.0623	6.97%	5E-05
Beryllium (Total)	<0.001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001
Bismuth (Total)	<0.2		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005
Boron (Total)	<0.1		0.01	0.033	0.034		0.01	0.02	0.022		0.01	0.032	0.032		0.01	0.019	0.021		0.01	0.032	0.033		0.01
Cadmium (Total)	<0.000017		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	0.000035	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05
Calcium (Total)	71.1	1.95%	0.05	68.4	68.6	0.29%	0.05	54.3	56.4	3.79%	0.05	66.7	67.2	0.75%	0.05	55.3	52.9	4.44%	0.05	58	55.8	3.87%	0.05
Chromium (Total)	<0.001		0.0001	0.00099	0.00122	**20.81%**	0.0001	0.00018	0.00018		0.0001	0.00112	0.00105	6.45%	0.0001	0.00034	0.0003		0.0001	0.00098	0.00078	**22.73%**	0.0001
Cobalt (Total)	0.00036		0.0001	0.00035	0.00046		0.0001	<0.0001	<0.0001		0.0001	0.00022	0.0002		0.0001	0.00013	0.00012		0.0001	0.00039	0.00032		0.0001
Copper (Total)	0.0021		0.0005	0.00143	0.00283		0.0005	0.00112	0.0011		0.0005	0.00443	0.00305	**36.90%**	0.0005	0.00193	0.00198		0.0005	0.00288	0.0022		0.0005
Iron (Total)	1.17	4.37%	0.03	0.767	1.27	**49.39%**	0.01	0.043	0.037		0.01	1.43	1.42	0.70%	0.01	0.122	0.104	15.93%	0.01	0.869	0.733	16.98%	0.01
Lead (Total)	<0.0005		5E-05	<0.00005	0.000054		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		5E-05	0.000058	<0.00005		5E-05
Lithium (Total)	<0.005		0.0005	0.00596	0.00599	0.50%	0.0005	0.00469	0.0054	14.07%	0.0005	0.00529	0.00518	2.10%	0.0005	0.00551	0.0054	2.02%	0.0005	0.00563	0.00582	3.32%	0.0005
Magnesium (Total)	43.2	2.06%	0.1	42.1	42.4	0.71%	0.1	36.7	38	3.48%	0.1	38.4	38.5	0.26%	0.1	36.3	35.5	2.23%	0.1	39.6	39	1.53%	0.1
Manganese (Total)	0.219	3.59%	5E-05	0.133	0.152	13.33%	5E-05	0.00535	0.00548	2.40%	5E-05	0.16	0.161	0.62%	5E-05	0.00746	0.00642	14.99%	5E-05	0.0648	0.0496	**26.57%**	5E-05
Mercury (Total)	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05
Molybdenum (Total)	0.0024		5E-05	0.00323	0.0032	0.93%	5E-05	0.00254	0.00247	2.79%	5E-05	0.00256	0.0026	1.55%	5E-05	0.00246	0.00233	5.43%	5E-05	0.00301	0.0031	2.95%	5E-05
Nickel (Total)	0.0021		0.0005	0.00277	0.00305	9.62%	0.0005	0.00077	0.00077		0.0005	0.00198	0.0019		0.0005	0.00097	0.00091		0.0005	0.00234	0.00213		0.0005
Phosphorus (Metal) Total	<0.3		0.3	<0.3	<0.3		0.3	<0.3	<0.3		0.05	0.062	0.062		0.05	0.066	0.068		0.05	0.072	0.056		0.05
Potassium (Total)	9.7		0.05	11.1	11.4	2.67%	0.05	10.2	10.6	3.85%	0.1	10.5	10.5	0.00%	0.1	10.8	10.6	1.87%	0.1	12.3	12.1	1.64%	0.1
Selenium (Total)	<0.001		0.0001	0.00012	0.00012		0.0001	0.00015	0.00016		0.0001	0.00011	0.00011		0.0001	0.00015	0.00015		0.0001	0.00016	0.00014		0.0001
Silicon (Total)	8.29	0.96%	0.05	9.79	10.1	3.12%	0.05	1.35	1.41	4.35%	0.05	9.72	9.68	0.41%	0.05	3.7	3.64	1.63%	0.05	11	10.5	4.65%	0.05
Silver (Total)	<0.00002		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	0.000013	<0.00001		1E-05
Sodium (Total)	38.3	1.81%	0.05	39	39.6	1.53%	0.05	33.8	35.4	4.62%	0.05	36.7	36.6	0.27%	0.05	32.9	32.7	0.61%	0.05	38.6	38.7	0.26%	0.05
Strontium (Total)	0.454	1.10%	0.0001	0.435	0.434	0.23%	0.0002	0.352	0.361	2.52%	0.0002	0.426	0.422	0.94%	0.0002	0.381	0.365	4.29%	0.0002	0.404	0.409	1.23%	0.0002
Sulphur (Total)											0.5	13.2	13.1	0.76%	0.5	18.6	18.7	0.54%	0.5	8.61	8.54	0.82%	0.5
Thallium (Total)	<0.0002		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05
Tin (Total)	<0.0005		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001
Titanium (Total)	0.01		0.01	0.018	0.024		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	0.011	<0.01		0.01
Total Cadmium (by saltwater extraction)																							
Uranium (Total)	0.00065		1E-05	0.000487	0.000476	2.28%	1E-05	0.00126	0.00127	0.79%	1E-05	0.000367	0.000375	2.16%	1E-05	0.0012	0.00115	4.26%	1E-05	0.000463	0.000457	1.30%	1E-05
Vanadium (Total)	0.0025		0.001	0.0025	0.0032		0.001	0.0025	0.0026		0.001	0.0034	0.0034		0.001	0.0025	0.0023		0.001	0.0033	0.003		0.001
Zinc (Total)	<0.005		0.003	<0.003	0.0053		0.003	<0.003	<0.003		0.003	<0.003	<0.003		0.003	<0.003	<0.003		0.003	<0.003	<0.003		0.003
Organics																							
Carbon Organic (Dissolved)	10.8	0.93%	0.5	12.9	12.9	0.00%	0.5	14.5	14.6	0.69%	0.5	10.7	10.2	4.78%	5	11.3	12.3		0.5	13.6	13.7	0.73%	0.5
Carbon Organic (Total)	10.7	0.93%	0.5	13.7	13.6	0.73%	0.5	14.6	14.5	0.69%	0.5	10.7	10.3	3.81%	5	11.5	11.9		0.5	13.7	14.3	4.29%	0.5
Nitrogen Organic (Dissolved)			0.16	0.46	0.38		0.05	0.749	0.681	9.51%	0.05	0.652	0.714	9.08%					0.1	1.66	1.64	1.21%	
Nitrogen Organic (Total)			0.18	0.59	0.62		0.06	0.872	0.854	2.09%	0.06	0.687	0.651	5.38%					0.06	0.853	0.883	3.46%	

Site	PC08	Duplicate	RPD	MDL	PC10	Duplicate	RPD	MDL	S. CATCHMENT	Duplicate	RPD	MDL	WR-SEEP	Duplicate	RPD
Date Sampled	8-Jan-14		(%)		9-Apr-14		(%)		2-Jul-14		(%)		8-May-14		(%)
Physical Tests															
Acidity to pH 8.3 (as CaCO3)															
Alkalinity (Total as CaCO3)	324	322	0.62%	2	287	295	2.75%	1	1080	1060	1.87%	2	143	143	0.00%
Bicarbonate Alkalinity	324	322	0.62%	2	287	295	2.75%	1	536	552	2.94%	2	143	143	0.00%
Carbonate Alkalinity	<2	<2		2	<2	<2		1	546	506	7.60%	2	<2	<2	
Color TCU	19.4	19.1													
Hardness as CaCO3 (Dissolved)	357	356	0.28%	0.5	401	400	0.25%	0.5	1750	1740	0.57%	0.5	705	707	0.28%
Hydroxide Alkalinity	<2	<2		2	<2	<2		1	<1	<1		2	<2	<2	
pH pH	7.87	7.9	0.38%	0.1	8.19	8.2	0.12%	0.1	9.34	9.29	0.54%	0.1	8.21	8.21	0.00%
Phosphorus (Nutrient) Total															
Specific Conductivity µS/cm	771	772	0.13%	2	833	835	0.24%	2	3130	3160	0.95%	2	1470	1480	0.68%
Total Dissolved Solids	477	400	17.56%	10	571	574	0.52%	20	2760	2740	0.73%	10	1220	1190	2.49%
Total Suspended Solids	10.1	6.9		3	5.4	6.4		3	45.7	863	179.88%	3	4.5	4.1	
Turbidity NTU	8.9	9.15	2.77%	0.1	3.04	3.73	20.38%	0.1	47.1	106	76.94%	0.1	2.35	2.41	2.52%
Dissolved Anions															
Bromide (Dissolved)	<0.5	<0.25		0.5	<0.5	<0.5		1	<1	<1		0.5	<0.5	<0.5	
Chloride (Dissolved)	61.9	56.4	9.30%	5	84.5	85	0.59%	10	34	27		5	43.8	43.3	1.15%
Fluoride (Dissolved)	0.27	0.26		0.2	<0.2	<0.2		0.03	0.088	0.096		0.2	<0.2	<0.2	
Sulphate (Dissolved)	30.8	30.3	1.64%	5	66.7	67.5	1.19%	10	1320	1330	0.75%	5	669	668	0.15%
Nutrients															
Ammonia (Total)	0.36	0.336	6.90%	0.005	0.0313	0.0296	5.58%	0.005	0.0428	0.0377	12.67%	0.005	0.0144	0.0144	
Nitrate (as N)	<0.05	<0.025		0.05	0.184	0.17		0.1	<0.1	<0.1		0.05	<0.05	<0.05	
Nitrate (Available)															
Nitrite (as N)	0.016	<0.005		0.01	<0.01	<0.01		0.02	<0.02	<0.02		0.01	<0.01	<0.01	
Nitrogen (Dissolved)															
Nitrogen (Total)															
Nitrogen Kjeldahl (Total)	0.926	0.9	2.85%	0.05	0.417	0.424	1.66%	0.05	3.38	3.07	9.61%	0.05	0.802	0.801	0.12%
Orthophosphate (Dissolved)	0.0061	0.0065	6.35%	0.001	0.0608	0.0608	0.00%	0.001	0.0013	<0.001		0.001	0.0019	0.0011	
Phosphorus (Nutrient) Dissolved	0.0101	0.0103	1.96%	0.002	0.0829	0.089	7.10%	0.002	0.0369	0.0383	3.72%	0.002	0.0146	0.0123	17.10%
Phosphorus (Nutrient) Total	0.0943	0.168	56.20%	0.002	0.0676	0.0679	0.44%	0.02	0.127	0.0874	36.94%	0.002	0.0193	0.0198	2.56%
Cyanide															
Cyanide (Free)	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005	
Cyanide (Total)	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005	
Cyanide (WAD)	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005	
Dissolved Metals															
Aluminum (Dissolved)	<0.001	<0.001		0.001	0.0016	0.0012		0.002	0.0024	<0.002		0.001	0.006	0.0075	22.22%
Antimony (Dissolved)	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0002	0.00066	0.00052		0.0001	0.0006	0.00059	1.68%
Arsenic (Dissolved)	0.00089	0.00085	4.60%	0.0001	0.0011	0.00113	2.69%	0.0002	0.0118	0.0123	4.15%	0.0001	0.00127	0.00127	0.00%
Barium (Dissolved)	0.0661	0.0638	3.54%	5E-05	0.0791	0.0786	0.63%	0.0001	0.00402	0.00304	27.76%	5E-05	0.0425	0.043	1.17%
Beryllium (Dissolved)	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0002	<0.0002	<0.0002		0.0001	<0.0001	<0.0001	
Bismuth (Dissolved)	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.001	<0.001	<0.001		0.0005	<0.0005	<0.0005	
Boron (Dissolved)	0.029	0.03		0.01	0.01	<0.01		0.02	0.482	0.392	20.59%	0.01	0.153	0.149	2.65%
Cadmium (Dissolved)	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		5E-05	<0.00005	<0.00005		3E-05	<0.00003	<0.00003	
Calcium (Dissolved)	70.5	71.2	0.99%	0.05	97.8	97.1	0.72%	0.05	11.1	11.8	6.11%	0.05	148	148	0.00%
Chromium (Dissolved)	0.00053	0.00053	0.00%	0.0001	0.00011	<0.0001		0.0002	<0.0002	<0.0002		0.0001	<0.0001	<0.0001	
Cobalt (Dissolved)	0.00027	0.00026		0.0001	0.00011	0.00012		0.0002	<0.0002	<0.0002		0.0001	<0.0001	<0.0001	
Copper (Dissolved)	0.00047	0.00042		0.0002	0.0018	0.0018	0.00%	0.0004	0.001	0.00086		0.0002	0.0133	0.0135	1.49%
Dissolved Cadmium (by saltwater extraction)								2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002	
Iron (Dissolved)	0.343	0.332	3.26%	0.01	0.017	0.018		0.01	<0.01	<0.01		0.01	0.013	0.015	
Lead (Dissolved)	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		0.0001	<0.0001	<0.0001		5E-05	<0.00005	<0.00005	
Lithium (Dissolved)	0.0051	0.00495	2.99%	0.0005	0.00476	0.0048	0.84%	0.001	0.0091	0.0077	16.67%	0.0005	0.0235	0.0227	3.46%
Magnesium (Dissolved)	44	43.4	1.37%	0.1	38.1	38.2	0.26%	0.1	418	415	0.72%	0.1	81.7	81.9	0.24%
Manganese (Dissolved)	0.223	0.216	3.19%	5E-05	0.023	0.0233	1.30%	0.0001	0.00295	0.00263	11.47%	5E-05	0.00518	0.00519	0.19%
Mercury (Dissolved)	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001	
Molybdenum (Dissolved)	0.00215	0.00214	0.47%	5E-05	0.00233	0.00231	0.86%	0.0001	0.0593	0.0476	21.89%	5E-05	0.102	0.1	1.98%
Nickel (Dissolved)	0.0017	0.00166		0.0005	0.00108	0.00109		0.001	0.0014	0.0014		0.0005	0.00142	0.0014	
Phosphorus (Metal) Dissolved	<0.05	<0.05		0.05	0.08	0.08		0.05	<0.05	<0.05		0.05	<0.05	<0.05	
Potassium (Dissolved)	10.9	10.9	0.00%	0.1	9.03	9.03	0.00%	0.1	78.3	78.1	0.26%	0.1	23.4	23.3	0.43%
Selenium (Dissolved)	0.00011	0.00011		0.0001	0.00035	0.00038		0.0002	0.0008	0.00076		0.0001	0.0023	0.00228	0.87%
Silicon (Dissolved)	9.53	9.72	1.97%	0.05	8.38	8.41	0.36%	0.05	2.38	2.77	15.15%	0.05	3.89	3.87	0.52%
Silver (Dissolved)	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		2E-05	<0.00002	<0.00002		1E-05	<0.00001	<0.00001	
Sodium (Dissolved)	36	35.2	2.25%	0.05	35.8	35.8	0.00%	0.1	274	272	0.73%	0.05	61.3	61.9	0.97%
Strontium (Dissolved)	0.455	0.444	2.45%	0.0002	0.461	0.466	1.08%	0.0004	0.121	0.105	14.16%	0.0002	2.23	2.16	3.19%
Sulphur (Dissolved)	11	10.8	1.83%	0.5	22.3	22.2	0.45%	0.5	427	420	1.65%	0.5	207	207	0.00%
Thallium (Dissolved)	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		2E-05	<0.00002	<0.00002		1E-05	<0.00001	<0.00001	
Tin (Dissolved)	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0002	<0.0002	<0.0002		0.0001	<0.0001	<0.0001	
Titanium (Dissolved)	<0.01	<0.01		0.01	<0.01	<0.01		0.02	<0.02	<0.02		0.01	<0.01	<0.01	
Uranium (Dissolved)	0.000474	0.00047	0.85%	1E-05	0.00172	0.00172	0.00%	2E-05	0.00331	0.00271	19.93%	1E-05	0.00657	0.00647	1.53%
Vanadium (Dissolved)	0.0013	0.0013		0.001	0.0026	0.0025		0.002	0.0048	0.0047		0.001	0.0011	0.0011	
Zinc (Dissolved)	<0.001	<0.001		0.001	0.001	<0.001		0.002	<0.002	<0.002		0.001	<0.001	<0.001	
Total Metals															
Aluminum (Total)	0.123	0.0342	112.98%	0.003	0.129	0.158	20.21%	0.006	1.21	0.337	112.86%	0.003	0.0981	0.0949	3.32%
Antimony (Total)	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0002	0.0008	0.00052		0.0001	0.00061	0.00062	1.63%
Arsenic (Total)	0.00116	0.00111	4.41%	0.0001	0.00114	0.00114	0.00%	0.0002	0.0264	0.0116	77.89%	0.0001	0.00137	0.00133	2.96%
Barium (Total)	0.0702	0.0709	0.99%	5E-05	0.0806	0.0795	1.37%	0.0001	0.046	0.0126	113.99%	5E-05	0.0434	0.0433	0.23%
Beryllium (Total)	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0002	<0.0002	<0.0002		0.0001	<0.0001	<0.0001	
Bismuth (Total)	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.001	<0.001	<0.001		0.0005	<0.0005	<0.0005	
Boron (Total)	0.03	0.031		0.01	0.013	0.012		0.02	0.505	0.448	11.96%	0.01	0.169	0.162	4.23%
Cadmium (Total)	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		5E-05	<0.00005	<0.00005		4E-05	<0.00004	<0.00004	
Calcium (Total)	68.7	70	1.87%	0.05	95.9	92.6	3.50%	0.05	22.8	13.1	54.04%	0.05	146	148	1.36%
Chromium (Total)	0.00104	0.00078	28.57%	0.0001	0.00043	0.0005		0.0002	0.00255	0.00081		0.0001	0.00027	0.00026	
Cobalt (Total)	0.00039	0.0003		0.0001	0.00021	0.00022		0.0002	0.00087	0.00033		0.0001	0.00013	0.00014	
Copper (Total)	0.0017	0.00107		0.0005	0.00277	0.00301	8.30%	0.001	0.0053	0.0021		0.0005	0.0152	0.0154	1.31%
Iron (Total)	1.84	1.54	17.75%	0.01	0.215	0.252	15.85%	0.01	1.32	0.355	115.22%	0.01	0.123	0.125	1.61%
Lead (Total)	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		0.0001	0.00039	0.00012		5E-05	<0.00005	<0.00005	
Lithium (Total)	0.0047	0.00486	3.35%	0.0005	0.00469	0.0047	0.21%	0.001	0.0107	0.0079	30.11%	0.0005	0.0241	0.0229	5.11%
Magnesium (Total)	43.3	43.4	0.23%	0.1	37.2	36.7	1.35%	0.1	407	385	5.56%	0.1	81.3	80.2	1.36%
Manganese (Total)	0.226	0.221	2.24%	5E-05	0.0311	0.0332	6.53%	0.0001	0.0866	0.0248	110.95%	5E-05	0.0113	0.011	2.69%
Mercury (Total)	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001	
Molybdenum (Total)	0.0022	0.00227	3.13%	5E-05	0.00249	0.00244	2.03%	0.0001	0.0818	0.0457	56.63%	5E-05	0.102	0.102	0.00%
Nickel (Total)	0.00209	0.00184		0.0005	0.00144	0.00152		0.001	0.004	0.002		0.0005	0.0017	0.00172	
Phosphorus (Metal) Total	0.111	0.082		0.05	0.097	0.088		0.05	0.426	0.091		0.05	<0.05	<0.05	
Potassium (Total)	10.5	10.7	1.89%	0.1	8.8	8.5	3.47%	0.1	77	70.9	8.25%	0.1	23.6	23.4	0.85%
Selenium (Total)	0.0001	0.0001		0.0001	0.00037	0.00034		0.0002	0.0011	0.00072		0.0001	0.00192	0.0019	1.05%
Silicon (Total)	9.77	9.7	0.72%	0.05	8.68	8.39	3.40%	0.05	6.17	3.83	46.80%	0.05	4.05	4.1	1.23%
Silver (Total)	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		2E-05	<0.00002	<0.00002		1E-05	<0.00001	<0.00001	
Sodium (Total)	35.9	36.1	0.56%	0.05	35.8	35.2	1.69%	0.1	238	257	7.68%	0.05	63.1	63.5	0.63%
Strontium (Total)	0.443	0.45	1.57%	0.0002	0.463	0.462	0.22%	0.0004	0.489	0.162	100.46%	0.0002	2.21	2.2	0.45%
Sulphur (Total)	11.2	11.1	0.90%	0.5	22.5	21.9	2.70%	0.5	427	408	4.55%	0.5	206	205	0.49%
Thallium (Total)	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		2E-05	<0.00002	<0.00002		1E-05	0.00001	<0.00001	
Tin (Total)	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0002	<0.0002	<0.0002		0.0001	<0.0001	<0.0001	
Titanium (Total)	<0.01	<0.01		0.01	<0.01	<0.01		0.02	0.044	<0.02		0.01	<0.01	<0.01	
Total Cadmium (by saltwater extraction)								2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002	
Uranium (Total)	0.000485	0.000485	0.00%	1E-05	0.00176	0.0018	2.25%	2E-05	0.00416	0.00298	33.05%	1E-05	0.00661	0.00666	0.75%
Vanadium (Total)	0.0031	0.0026		0.001	0.0031	0.0031		0.002	0.0065	0.0052		0.001	0.0015	0.0015	
Zinc (Total)	<0.003	<0.003		0.003	<0.003	<0.003		0.006	<0.006	<0.006		0.003	<0.003	<0.003	
Organics															
Carbon Organic (Dissolved)	12.2	12.2	0.00%	0.5	7.96	7.97	0.13%	2.5	32.7	33.2	1.52%	0.5	10.6	10.7	0.94%
Carbon Organic (Total)	13.3	12.7	4.62%	0.5	7.99	7.98	0.13%	2.5	36.1	36.9	2.19%	0.5	10.7	10.8	0.93%
Nitrogen Organic (Dissolved)															
Nitrogen Organic (Total)															

APPENDIX A QA/QC
TABLE A.11 Groundwater Duplicates
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Site	MDL	AJGW03-D	Duplicate	RPD	MDL	AJGW03-D	Duplicate	RPD	MDL	AJGW03-D	Duplicate	RPD	MDL	AJGW06-D	Duplicate	RPD	MDL	AJGW07-D	Duplicate	RPD
Date Sampled		2-Jun-10		(%)		23-Nov-10		(%)		12-Jun-14		(%)		24-Aug-10		(%)		19-Nov-08		(%)
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	1	2	2		1	4.6	3.8						1	2.5	2.2		1	3.9	3.5	
Alkalinity (Total as CaCO3)	2	277	270	2.56%	1	275	276	0.36%	2	294	292	0.68%	2	109	110	0.91%	2	224	225	0.45%
Bicarbonate Alkalinity	2	277	270	2.56%	1	275	276	0.36%	2	294	292	0.68%	2	109	110	0.91%	2	224	225	0.45%
Carbonate Alkalinity	2	<2	<2		1	<1	<1		2	<2	<2		2	<2	<2		2	<2	<2	
Color TCU	5	<5	<5		5	<5	<5						5	<5	<5		5	<5	<5	
Hardness as CaCO3 (Dissolved)	1.1	647	654	1.08%	0.5	596	593	0.50%	0.5	618	615	0.49%	0.5	173	173	0.00%	0.7	423	415	1.91%
Hydroxide Alkalinity	2	<2	<2		1	<1	<1		2	<2	<2		2	<2	<2		2	<2	<2	
pH pH	0.1	8.21	8.21	0.00%	0.1	8.11	8.15	0.49%	0.1	8.23	8.22	0.12%	0.1	8.17	8.19	0.24%	0.01	7.87	7.84	0.38%
Phosphorus (Nutrient) Total																				
Specific Conductivity µS/cm	2	1250	1250	0.00%	2	1280	1280	0.00%	2	1240	1250	0.80%	2	695	696	0.14%	2	919	911	0.87%
Total Dissolved Solids	13	896	892	0.45%	13	891	930	4.28%	10	960	957	0.31%	10	468	471	0.64%	10	641	638	0.47%
Total Suspended Solids	3	4.7	8		3	4	3.3		3	<3	4.4		3	17	17.5	2.90%	3	71	51.5	31.84%
Turbidity NTU	0.1	1.23	1.2	2.47%	0.1	1.04	1.06	1.90%	0.1	1.48	0.83	56.28%	0.1	2.72	3.03	10.78%				
Dissolved Anions																				
Bromide (Dissolved)	0.5	<0.5	<0.5		0.5	<0.5	<0.5		0.5	<0.5	<0.5		0.5	<0.5	<0.5		0.05	<0.05	<0.05	
Chloride (Dissolved)	5	7.3	7.4		5	8.1	8.2		5	11	10.4		5	<5	<5		0.5	5.86	5.66	3.47%
Fluoride (Dissolved)	0.2	<0.2	<0.2		0.2	<0.2	<0.2		0.2	0.22	0.22		0.2	0.26	0.26		0.02	0.151	0.148	2.01%
Sulphate (Dissolved)	5	446	446	0.00%	5	459	462	0.65%	5	468	470	0.43%	5	252	251	0.40%	0.5	273	272	0.37%
Nutrients																				
Ammonia (Total)	0.01	0.015	0.011		0.005	0.0087	0.0087		0.005	0.0165	0.0159		0.005	0.0123	0.0155		0.005	0.0131	<0.005	
Nitrate (as N)	0.05	<0.05	<0.05		0.05	<0.05	<0.05		0.05	<0.05	<0.05		0.05	<0.05	<0.05		0.005	<0.005	0.0062	
Nitrate (Available)																				
Nitrite (as N)	0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.001	0.0012	0.0012	
Nitrogen (Dissolved)	0.1	<0.1	<0.1		0.0051	0.116	0.114	1.74%					0.0051	0.459	0.367	22.28%				
Nitrogen (Total)																				
Nitrogen Kjeldahl (Total)	0.05	0.087	0.068		0.05	0.116	0.114		0.05	0.168	0.157		0.05	0.459	0.367	22.28%				
Orthophosphate (Dissolved)					0.001	0.0145	0.0149	2.72%	0.001	0.0188	0.0172	8.89%	0.001	0.0076	0.0082	7.59%	0.001	<0.001	<0.001	
Phosphorus (Nutrient) Dissolved									0.002	0.0188	0.0181	3.79%	0.002	0.0076	0.0084		0.002	<0.002	0.0022	
Phosphorus (Nutrient) Total	0.002	0.0214	0.0163	27.06%	0.002	0.0195	0.0208	6.45%	0.002	0.0295	0.0326	9.98%	0.002	0.0129	0.0228	55.46%	0.02	0.11	0.068	
Cyanide																				
Cyanide (Free)	0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005					
Cyanide (Total)	0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005		
Cyanide (WAD)	0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005					
Dissolved Metals																				
Aluminum (Dissolved)	0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.001	0.0023	0.0021		0.005	<0.005	<0.005		0.005	<0.005	<0.005	
Antimony (Dissolved)	0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.0001	<0.0001	<0.0001		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005	
Arsenic (Dissolved)	0.001	0.0066	0.0064	3.08%	0.001	0.0064	0.0062	3.17%	0.0001	0.00577	0.00565	2.10%	0.0005	0.0223	0.0229	2.65%	0.0005	0.00114	0.00109	
Barium (Dissolved)	0.02	0.029	0.029		0.02	0.03	0.032		5E-05	0.0282	0.0282	0.00%	0.02	0.024	0.023		0.02	0.044	0.043	
Beryllium (Dissolved)	0.002	<0.002	<0.002		0.002	<0.002	<0.002		0.0001	<0.0001	<0.0001		0.001	<0.001	<0.001		0.001	<0.001	<0.001	
Bismuth (Dissolved)									0.0005	<0.0005	<0.0005									
Boron (Dissolved)	0.1	<0.1	<0.1		0.1	<0.1	<0.1		0.01	0.035	0.03		0.1	0.24	0.24		0.1	<0.1	<0.1	
Cadmium (Dissolved)	3E-05	0.000055	<0.000034		0.0002	<0.0002	<0.0002		1E-05	0.000018	0.000014		0.0002	<0.00015	<0.0002		0.0003	<0.00031	<0.00031	
Calcium (Dissolved)	0.1	79.3	79.9	0.75%	0.1	74.8	74.8	0.00%	0.05	77.6	77.8	0.26%	0.1	39.7	39.5	0.51%	0.1	92.4	90	2.63%
Chromium (Dissolved)	0.002	<0.002	<0.002		0.002	<0.002	<0.002		0.0001	<0.0001	<0.0001		0.001	<0.001	<0.001		0.001	<0.001	<0.001	
Cobalt (Dissolved)	0.0006	<0.0006	<0.0006		0.0006	<0.0006	<0.0006		0.0001	0.00015	0.00015		0.0003	<0.0003	<0.0003		0.0003	<0.0003	<0.0003	
Copper (Dissolved)	0.002	<0.002	<0.002		0.002	<0.002	<0.002		0.0002	0.00034	0.00023		0.001	<0.001	<0.0015		0.001	<0.001	<0.001	
Dissolved Cadmium (by saltwater extraction)																				
Iron (Dissolved)	0.03	0.089	0.087		0.03	0.088	0.085		0.01	0.114	0.114	0.00%	0.03	0.036	0.032		0.03	0.787	0.791	0.51%
Lead (Dissolved)	0.001	<0.001	<0.001		0.001	<0.001	<0.001		5E-05	<0.00005	<0.00005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005	
Lithium (Dissolved)	0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.0005	0.0051	0.00455	11.40%	0.005	<0.005	<0.005		0.005	0.0053	0.0053	
Magnesium (Dissolved)	0.1	109	110	0.91%	0.1	99.4	98.7	0.71%	0.1	103	102	0.98%	0.1	18.1	18	0.55%	0.1	46.8	46.3	1.07%
Manganese (Dissolved)	0.0006	0.325	0.313	3.76%	0.0006	0.287	0.279	2.83%	5E-05	0.283	0.285	0.70%	0.0003	0.0743	0.0632	16.15%	0.0003	0.138	0.14	1.44%
Mercury (Dissolved)	1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		2E-05	<0.00002	<0.00002	
Molybdenum (Dissolved)	0.002	0.0551	0.0533	3.32%	0.002	0.0455	0.0446	2.00%	5E-05	0.0505	0.0446	12.41%	0.001	0.0385	0.0388	0.78%	0.001	0.0682	0.0664	2.67%
Nickel (Dissolved)	0.002	<0.002	<0.002		0.002	<0.002	<0.002		0.0005	0.00122	0.00114		0.001	<0.001	<0.001		0.001	0.0028	0.0026	
Phosphorus (Metal) Dissolved									0.05	<0.05	<0.05									
Potassium (Dissolved)	2	19.4	19.5	0.51%	2	18.1	19.3	6.42%	0.1	19.1	18.7	2.12%	2	<2	<2		2	8.9	8.9	
Selenium (Dissolved)	0.002	<0.002	<0.002		0.002	<0.002	<0.002		0.0001	<0.0001	<0.0001		0.001	<0.001	<0.001		0.001	0.0255	0.0244	4.41%
Silicon (Dissolved)									0.05	9.66	9.64	0.21%								
Silver (Dissolved)	4E-05	<0.00004	<0.00004		4E-05	<0.00004	<0.00004		1E-05	<0.00001	<0.00001		2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002	
Sodium (Dissolved)	2	69.1	69.6	0.72%	2	66.8	70.4	5.25%	0.05	60.8	61.6	1.31%	2	97	96.8	0.21%	2	41.6	42.3	1.67%
Strontium (Dissolved)									0.0002	0.895	0.798	11.46%								
Sulphur (Dissolved)									0.5	149	149	0.00%								
Thallium (Dissolved)	0.0004	<0.0004	<0.0004		0.0004	<0.0004	<0.0004		1E-05	<0.00001	<0.00001		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002	
Tin (Dissolved)	0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.0001	<0.0001	<0.0001		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005	
Titanium (Dissolved)	0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01	
Uranium (Dissolved)	0.0004	0.00287	0.00272	5.37%	0.0004	0.0025	0.00243	2.84%	1E-05	0.00301	0.00259	15.00%	0.0002	0.00104	0.00105	0.96%	0.0002	0.00138	0.00135	2.20%
Vanadium (Dissolved)	0.002	<0.002	<0.002		0.002	<0.002	<0.002		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.001	0.0019	0.0017	
Zinc (Dissolved)	0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.001	0.0064	0.0067	4.58%	0.005	<0.005	<0.005		0.005	<0.005	<0.005	
Total Metals																				
Aluminum (Total)	0.01	0.055	0.046		0.01	0.03	0.032		0.003	0.0513	0.0406	23.29%	0.005	0.179	0.185	3.30%	0.005	0.182	0.188	3.24%
Antimony (Total)	0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.0001	0.00018	0.00016		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005	
Arsenic (Total)	0.001	0.0067	0.0065	3.03%	0.001	0.0054	0.0052	3.77%	0.0001	0.00577	0.00562	2.63%	0.0005	0.0205	0.0203	0.98%	0.0005	0.00291	0.00247	
Barium (Total)	0.02	0.029	0.029		0.02	0.031	0.032		5E-05	0.0288	0.0281	2.46%	0.02	0.027	0.026		0.02	0.056	0.053	
Beryllium (Total)	0.002	<0.002	<0.002		0.002	<0.002	<0.002		0.0001	<0.0001	<0.0001		0.001	<0.001	<0.001		0.001	<0.001	<0.001	
Bismuth (Total)									0.0005	<0.0005	<0.0005									
Boron (Total)	0.1	<0.1	<0.1		0.1	<0.1	<0.1		0.01	0.038	0.035		0.1	0.24	0.24		0.1	<0.1	<0.1	
Cadmium (Total)	3E-05	0.000082	0.000065		0.0002	<0.0002	<0.0002		1E-05	0.00005	0.000047		0.0002	<0.0002	<0.0002		0.0004	<0.00041	<0.00041	
Calcium (Total)	0.1	76.3	77	0.91%	0.1	75.8	75.9	0.13%	0.05	74.9	74.4	0.67%	0.1	39.7	40	0.75%	0.1	86.1	87	1.04%
Chromium (Total)	0.002	<0.002	<0.002		0.002	<0.002	<0.002		0.0001	0.00067	0.00045		0.001	0.0018	0.0015		0.001	0.0097	0.0084	14.36%
Cobalt (Total)	0.0006	<0.0006	<0.0006		0.0006	<0.0006	<0.0006		0.0001	0.0002	0.00019		0.0003	<0.0003	<0.0003		0.0003	0.00065	0.00057	
Copper (Total)	0.002	<0.002	<0.002		0.002	<0.002	<0.002		0.0005	0.00238	0.00229		0.004	<0.004	<0.0045		0.001	0.0303	0.0247	20.36%
Iron (Total)	0.03	0.168	0.154	8.70%	0.03	0.145	0.139		0.01	0.207	0.19	8.56%	0.03	0.216	0.257	17.34%	0.03	8.88	5.86	40.98%
Lead (Total)	0.001	<0.001	<0.001		0.001	<0.001	<0.001		5E-05	0.000057	0.000057		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005	
Lithium (Total)	0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.0005	0.00477	0.00478	0.21%	0.005	<0.005	<0.005		0.005	0.0052	0.0054	
Magnesium (Total)	0.1	104	106	1.90%	0.1	103	106	2.87%	0.1	102	97.7	4.31%	0.1	17.8	17.8	0.00%	0.1	46.2	46.6	0.86%
Manganese (Total)	0.0006	0.349	0.34	2.61%	0.0006	0.29	0.286	1.39%	5E-05	0.292	0.285	2.43%	0.0003	0.0922	0.0785	16.05%	0.0003	0.212	0.175	19.12%
Mercury (Total)	1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		2E-05	<0.00002	<0.00002	
Molybdenum (Total)	0.002	0.0594	0.0567	4.65%	0.002	0.0458	0.0465	1.52%	5E-05	0.0503	0.0502	0.20%	0.001	0.0426	0.0425	0.24%	0.001	0.0655	0.0706	7.49%
Nickel (Total)	0.002	0.0021	0.0021		0.002	<0.002	<0.002		0.0005	0.00176	0.00153		0.001	0.0017	0.0015		0.001	0.0096	0.0084	13.33%
Phosphorus (Metal) Total									0.05	<0.05	<0.05									
Potassium (Total)	2	18.6	18.7	0.54%	2	19	19.9	4.63%	0.1	18.6	18.2	2.17%	2	<2	<2		2	9.1	9.2	
Selenium (Total)	0.002	<0.002	<0.002		0.002	<0.002	<0.002		0.0001	<0.0001	<0.0001		0.001	<0.001	<0.001		0.001	0.0113	0.0169	39.72%
Silicon (Total)									0.05	9.83	9.58	2.58%								
Silver (Total)	4E-05	<0.00004	<0.00004		4E-05	<0.00004	<0.00004		1E-05	<0.00001	<0.00001		2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002	
Sodium (Total)	2	66.3	66.7	0.60%	2	69.4	72.5	4.37%	0.05	62.3	61.5	1.29%	2	95.2	95.1	0.11%	2	43.1	42.9	0.47%
Strontium (Total)									0.0002	0.85	0.861	1.29%								
Sulphur (Total)									0.5	155	150	3.28%								
Thallium (Total)	0.0004	<0.0004	<0.0004		0.0004	<0.0004	<0.0004		1E-05	<0.00001	<0.00001		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002	
Tin (Total)	0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.0001	<0.0001	<0.0001		0.0005	0.00095	0.00071		0.0005	<0.0005	<0.0005	
Titanium (Total)	0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	0.011		0.01	0.019	0.021	
Total Cadmium (by saltwater extraction)																				
Uranium (Total)	0.0004	0.00294	0.00286	2.76%	0.0004	0.00267	0.00261	2.27%	1E-05	0.00283	0.00286	1.05%	0.0002	0.0012	0.00122	1.65%	0.0002	0.00099	0.00127	
Vanadium (Total)	0.002	<0.002	<0.002		0.002	<0.002	<0.002		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.001	0.0094	0.0078	18.60%
Zinc (Total)	0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.003	0.0087	0.0078		0.005	0.0099	0.0131		0.005	<0.005	<0.005	
Organics																				
Carbon Organic (Dissolved)	0.2	2.38	2.13	11.09%	0.5	2.57	2.37						0.5	2.66	2.62	1.52%	0.5	1.93		
Carbon Organic (Total)									0.5	2.18	2.23									
Nitrogen Organic (Dissolved)																				
Nitrogen Organic (Total)																				

APPENDIX A QA/QC
TABLE A.11 Groundwater Duplicates
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Site	MDL	AJGW07-D	Duplicate	RPD	MDL	AJGW07-D	Duplicate	RPD	MDL	AJGW07-D	Duplicate	RPD	MDL	AJGW07-S	Duplicate	RPD	MDL	AJGW07-S	Duplicate	RPD
Date Sampled		28-Mar-11		(%)		18-May-11		(%)		7-Jun-12		(%)		21-Jul-11		(%)		11-Jun-14		(%)
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	1	5.7	4.4		1	4.1	4.3						1	2.8	2.5					
Alkalinity (Total as CaCO3)	2	227	227	0.00%	2	230	228	0.87%	1	219	220	0.46%	2	274	271	1.10%	1	271	272	0.37%
Bicarbonate Alkalinity	2	227	227	0.00%	2	230	228	0.87%	1	219	220	0.46%	2	274	271	1.10%	1	263	265	0.76%
Carbonate Alkalinity	2	<2	<2		2	<2	<2		1	<1	<1		2	<2	<2		1	7.9	7.1	10.67%
Color TCU	5	<5	<5		5	<5	<5		5	<5	<5		5	<5	5.4					
Hardness as CaCO3 (Dissolved)	0.5	407	408	0.25%	0.5	413	411	0.49%	0.5	398	397	0.25%	0.5	441	441	0.00%	0.5	455	459	0.88%
Hydroxide Alkalinity	2	<2	<2		2	<2	<2		1	<1	<1		2	<2	<2		1	<1	<1	
pH pH	0.1	8.01	8.07	0.75%	0.1	8.08	8.06	0.25%	0.1	8.07	8.09	0.25%	0.1	8.15	8.16	0.12%	0.1	8.34	8.33	0.12%
Phosphorus (Nutrient) Total																				
Specific Conductivity µS/cm	2	859	866	0.81%	2	865	866	0.12%	2	855	852	0.35%	2	924	926	0.22%	2	908	921	1.42%
Total Dissolved Solids	10	609	604	0.82%	10	611	609	0.33%	10	611	618	1.14%	10	646	647	0.15%	10	640	640	0.00%
Total Suspended Solids	3	<3	<3		3	<3	<3		3	<3	<3		3	42.9	127	**99.00%**	3	3.6	<3	
Turbidity NTU	0.1	3.86	3.77	2.36%	0.1	7.16	7.17	0.14%	0.1	5.57	5.93	6.26%	0.1	43.3	89.8	**69.87%**	0.1	1.33	0.69	**63.37%**
Dissolved Anions																				
Bromide (Dissolved)	1.26	<1.3	<1.3		0.25	<0.25	<0.25		0.5	<0.5	<0.5		0.5	<0.5	<0.5		0.5	<0.5	<0.5	
Chloride (Dissolved)	5	6.8	5.2		2.5	5.8	5.6		5	5.2	6.6		5	<5	<5		5	9.4	6.7	
Fluoride (Dissolved)	0.2	<0.2	<0.2		0.1	0.15	0.16		0.2	<0.2	<0.2		0.2	0.35	0.34		0.2	0.22	0.22	
Sulphate (Dissolved)	5	251	252	0.40%	2.5	262	260	0.77%	5	269	276	2.57%	5	264	265	0.38%	5	254	256	0.78%
Nutrients																				
Ammonia (Total)	0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	0.0064	0.006		0.005	0.0098	0.0136		0.005	<0.005	<0.005	
Nitrate (as N)	0.05	<0.05	<0.05		0.025	<0.025	<0.025		0.05	<0.05	0.056		0.05	0.078	<0.05		0.05	0.056	<0.05	
Nitrate (Available)																				
Nitrite (as N)	0.01	<0.01	<0.01		0.005	<0.005	<0.005		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01	
Nitrogen (Dissolved)	0.0051	0.0651	0.095	37.35%	0.05	0.11	0.12		0.0051	0.0816	0.136	**50.00%**	0.05	0.17	0.16					
Nitrogen (Total)																				
Nitrogen Kjeldahl (Total)	0.05	0.065	0.095		0.05	0.091	0.065		0.05	0.082	0.08		0.05	0.092	0.16		0.05	0.101	0.095	
Orthophosphate (Dissolved)	0.001	0.0017	0.0011		0.001	<0.001	<0.001						0.001	0.03	0.0299	0.33%	0.001	0.0371	0.0353	4.97%
Phosphorus (Nutrient) Dissolved					0.002	0.0022	<0.002		0.002	0.0047	0.0049		0.002	0.0332	0.0318	4.31%	0.002	0.0367	0.037	0.81%
Phosphorus (Nutrient) Total	0.002	0.0095	0.0096		0.002	0.0129	0.0134	3.80%	0.002	0.035	0.0285	**20.47%**	0.02	0.087	0.166		0.002	0.0412	0.0391	5.23%
Cyanide																				
Cyanide (Free)	0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005	
Cyanide (Total)	0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005	
Cyanide (WAD)	0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005	
Dissolved Metals																				
Aluminum (Dissolved)					0.01	<0.01	<0.01		0.001	0.0012	0.0015		0.005	<0.005	<0.01		0.001	0.0013	0.0015	
Antimony (Dissolved)					0.001	<0.001	<0.001		0.0001	0.00021	0.0002		0.0005	<0.0005	<0.001		0.0001	0.00024	0.00023	
Arsenic (Dissolved)					0.001	0.0013	0.0013		0.0001	0.00117	0.00119	1.69%	0.0005	0.00454	0.0044		0.0001	0.00478	0.00465	2.76%
Barium (Dissolved)					0.02	0.033	0.033		5E-05	0.0441	0.0437	0.91%	0.02	0.042	0.042		5E-05	0.0363	0.0372	2.45%
Beryllium (Dissolved)					0.002	<0.002	<0.002		0.0001	<0.0001	<0.0001		0.001	<0.001	<0.002		0.0001	<0.0001	<0.0001	
Bismuth (Dissolved)					0.2	<0.2	<0.2		0.0005	<0.0005	<0.0005		0.2	<0.2	<0.2		0.0005	<0.0005	<0.0005	
Boron (Dissolved)					0.1	<0.1	<0.1		0.01	0.095	0.095	0.00%	0.1	<0.1	<0.1		0.01	0.061	0.066	7.87%
Cadmium (Dissolved)					3E-05	<0.000034	<0.000034		5E-05	<0.00005	<0.00005		5E-05	<0.00005	0.000044		0.0001	<0.0001	<0.0001	
Calcium (Dissolved)					0.1	89.6	90	0.45%	0.05	83.3	83.9	0.72%	0.1	94.3	94.6	0.32%	0.05	97.4	98	0.61%
Chromium (Dissolved)					0.002	<0.002	<0.002		0.0001	0.00015	0.00017		0.001	<0.001	<0.002		0.0001	0.00023	0.00023	
Cobalt (Dissolved)					0.0006	<0.0006	<0.0006		0.0001	0.00018	0.00017		0.0003	<0.0003	<0.0006		0.0001	<0.0001	<0.0001	
Copper (Dissolved)					0.002	<0.002	<0.002		0.0002	0.00028	0.00022		0.001	0.0012	<0.002		0.0002	0.00163	0.00169	3.61%
Dissolved Cadmium (by saltwater extraction)																	2E-05	<0.00002	<0.00002	
Iron (Dissolved)					0.03	0.613	0.602	1.81%	0.01	0.545	0.542	0.55%	0.03	<0.03	<0.03		0.01	<0.01	<0.01	
Lead (Dissolved)					0.001	<0.001	<0.001		5E-05	<0.00005	<0.00005		0.0005	<0.0005	<0.001		5E-05	<0.00005	<0.00005	
Lithium (Dissolved)					0.01	<0.01	<0.01		0.0005	0.0057	0.00558	2.13%	0.005	<0.005	<0.01		0.0005	0.00359	0.00425	16.84%
Magnesium (Dissolved)					0.1	45.9	45.4	1.10%	0.1	46.1	45.4	1.53%	0.1	49.9	49.8	0.20%	0.1	51.3	52	1.36%
Manganese (Dissolved)					0.0006	0.079	0.0773	2.18%	5E-05	0.127	0.129	1.56%	0.0003	0.0516	0.0626	19.26%	5E-05	0.00973	0.0114	15.81%
Mercury (Dissolved)					1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001	
Molybdenum (Dissolved)					0.002	0.0693	0.069	0.43%	5E-05	0.0771	0.0753	2.36%	0.001	0.136	0.129	5.28%	5E-05	0.128	0.131	2.32%
Nickel (Dissolved)					0.002	<0.002	<0.002		0.0005	0.00218	0.00211		0.001	<0.001	<0.002		0.0005	<0.0005	<0.0005	
Phosphorus (Metal) Dissolved					0.3	<0.3	<0.3		0.3	<0.3	<0.3		0.3	<0.3	<0.3		0.05	<0.05	<0.05	
Potassium (Dissolved)					2	7.6	7.5		0.05	8.04	8.19	1.85%	2	8	7.8		0.1	8.32	8.29	0.36%
Selenium (Dissolved)					0.002	0.0058	0.0061		0.0001	0.0163	0.0157	3.75%	0.001	0.0248	0.0289	15.27%	0.0001	0.0229	0.0226	1.32%
Silicon (Dissolved)					0.05	6.99	6.99	0.00%	0.05	6.96	7.04	1.14%	0.05	7.31	7.38	0.95%	0.05	7.44	7.52	1.07%
Silver (Dissolved)					4E-05	<0.00004	<0.00004		1E-05	<0.00001	<0.00001		2E-05	<0.00002	<0.00004		1E-05	<0.00001	<0.00001	
Sodium (Dissolved)					2	41.5	41.4	0.24%	0.05	42.3	42.4	0.24%	2	43.5	43.4	0.23%	0.05	40.1	38.5	4.07%
Strontium (Dissolved)					0.005	0.591	0.59	0.17%	0.0002	0.621	0.613	1.30%	0.005	0.705	0.691	2.01%	0.0002	0.716	0.705	1.55%
Sulphur (Dissolved)																	0.5	80.6	83.4	3.41%
Thallium (Dissolved)					0.0004	<0.0004	<0.0004		1E-05	<0.00001	<0.00001		0.0002	<0.0002	<0.0004		1E-05	<0.00001	<0.00001	
Tin (Dissolved)					0.001	<0.001	<0.001		0.0001	<0.0001	<0.0001		0.0005	<0.0005	<0.001		0.0001	<0.0001	<0.0001	
Titanium (Dissolved)					0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01	
Uranium (Dissolved)					0.0004	0.00091	0.00096		1E-05	0.000997	0.000988	0.91%	0.0002	0.00399	0.00382	4.35%	1E-05	0.00398	0.004	0.50%
Vanadium (Dissolved)					0.002	<0.002	<0.002		0.001	<0.001	<0.001		0.001	0.0031	0.003		0.001	0.0029	0.0028	
Zinc (Dissolved)					0.005	<0.005	<0.005		0.001	<0.001	<0.001		0.005	<0.005	<0.005		0.001	0.0106	0.0092	14.14%
Total Metals																				
Aluminum (Total)	0.005	0.0076	0.0101		0.01	<0.01	0.012		0.003	0.0061	0.007		0.005	1.84	5.56	**100.54%**	0.003	0.0632	0.0637	0.79%
Antimony (Total)	0.0005	<0.0005	<0.0005		0.001	<0.001	<0.001		0.0001	0.00024	0.00024		0.0005	<0.0005	<0.001		0.0001	0.00029	0.00027	
Arsenic (Total)	0.0005	0.00122	0.00123		0.001	0.0014	0.0014		0.0001	0.00139	0.00138	0.72%	0.0005	0.00557	0.0074	**28.22%**	0.0001	0.0048	0.00456	5.13%
Barium (Total)	0.02	0.034	0.035		0.02	0.035	0.035		5E-05	0.047	0.0468	0.43%	0.02	0.062	0.104		5E-05	0.0384	0.0382	0.52%
Beryllium (Total)	0.001	<0.001	<0.001		0.002	<0.002	<0.002		0.0001	<0.0001	<0.0001		0.001	<0.001	<0.002		0.0001	<0.0001	<0.0001	
Bismuth (Total)	0.2	<0.2	<0.2		0.2	<0.2	<0.2		0.0005	<0.0005	<0.0005		0.2	<0.2	<0.2		0.0005	<0.0005	<0.0005	
Boron (Total)	0.1	<0.1	0.11		0.1	0.1	0.1		0.01	0.105	0.104	0.96%	0.1	<0.1	<0.1		0.01	0.064	0.069	7.52%
Cadmium (Total)	2E-05	0.000035	0.000036		3E-05	<0.000034	<0.000034		5E-05	<0.00005	<0.00005		8E-05	<0.00008	0.000127		0.0001	<0.0001	<0.0001	
Calcium (Total)	0.1	88.1	89.8	1.91%	0.1	92.9	90.8	2.29%	0.05	91.3	90.3	1.10%	0.1	97.8	104	6.14%	0.05	93.5	92.5	1.08%
Chromium (Total)	0.001	<0.001	<0.001		0.002	<0.002	<0.002		0.0001	0.0011	0.00104	5.61%	0.001	0.0042	0.0148		0.0001	0.00066	0.00047	
Cobalt (Total)	0.0003	<0.0003	<0.0003		0.0006	<0.0006	<0.0006		0.0001	0.00021	0.00022		0.0003	0.00211	0.00631	**99.76%**	0.0001	0.00016	0.0001	
Copper (Total)	0.0045	<0.0045	<0.0045		0.002	0.0036	0.004		0.0005	0.00311	0.00294	5.62%	0.001	0.0217	0.0624	**96.79%**	0.0005	0.00404	0.00322	**22.59%**
Iron (Total)	0.03	0.497	0.512	2.97%	0.03	0.769	0.888	14.36%	0.01	0.775	0.767	1.04%	0.03	2.09	6.41	**101.65%**	0.01	0.091	0.054	51.03%
Lead (Total)	0.0005	<0.0005	<0.0005		0.001	<0.001	<0.001		5E-05	<0.00005	<0.00005		0.0005	<0.0005	0.0013		5E-05	<0.00005	<0.00005	
Lithium (Total)	0.005	<0.005	<0.005		0.01	<0.01	<0.01		0.0005	0.00588	0.00592	0.68%	0.005	<0.005	<0.01		0.0005	0.0033	0.00434	**27.23%**
Magnesium (Total)	0.1	44.6	45.6	2.22%	0.1	48.3	47.2	2.30%	0.1	45.7	45	1.54%	0.1	52.1	55.6	6.50%	0.1	50.5	50	1.00%
Manganese (Total)	0.0003	0.0622	0.0656	5.32%	0.0006	0.0826	0.0845	2.27%	5E-05	0.137	0.136	0.73%	0.0003	0.154	0.638	**122.22%**	5E-05	0.0607	0.0411	**38.51%**
Mercury (Total)	1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	0.000014		1E-05	<0.00001	<0.00001	
Molybdenum (Total)	0.001	0.0729	0.0722	0.96%	0.002	0.0758	0.0753	0.66%	5E-05	0.0805	0.0796	1.12%	0.001	0.138	0.135	2.20%	5E-05	0.127	0.132	3.86%
Nickel (Total)	0.001	0.0019	0.0021		0.002	<0.002	<0.002		0.0005	0.00243	0.00234		0.001	0.0053	0.0161	**100.93%**	0.0005	0.0007	0.00053	
Phosphorus (Metal) Total	0.3	<0.3	<0.3		0.3	<0.3	<0.3		0.3	<0.3	<0.3		0.3	<0.3	<0.3		0.05	<0.05	<0.05	
Potassium (Total)	2	7.7	7.8		2	7.9	7.7		0.05	8.53	8.41	1.42%	2	8.5	9.2		0.1	8.15	7.96	2.36%
Selenium (Total)	0.001	0.0148	0.0151	2.01%	0.002	0.0055	0.0055		0.0001	0.0155	0.0152	1.95%	0.001	0.0253	0.0302	17.66%	0.0001	0.022	0.0214	2.76%
Silicon (Total)	0.05	7.23	7.35	1.65%	0.05	7.22	7.13	1.25%	0.05	7.33	7.22	1.51%	0.05	11.2	18.5	**49.16%**	0.05	7.5	7.4	1.34%
Silver (Total)	2E-05	<0.00002	<0.00002		4E-05	<0.00004	<0.00004		1E-05	<0.00001	<0.00001		2E-05	<0.00002	0.000042		1E-05	<0.00001	<0.00001	
Sodium (Total)	2	41.4	41.9	1.20%	2	43.3	42.5	1.86%	0.05	44.5	43.9	1.36%	2	45.5	45.8	0.66%	0.05	41.5	38.3	8.02%
Strontium (Total)	0.005	0.586	0.591	0.85%	0.005	0.62	0.608	1.95%	0.0002	0.637	0.642	0.78%	0.005	0.746	0.775	3.81%	0.0002	0.716	0.737	2.89%
Sulphur (Total)																	0.5	83.4	82.5	1.08%
Thallium (Total)	0.0002	<0.0002	<0.0002		0.0004	<0.0004	<0.0004		1E-05	<0.00001	<0.00001		0.0002	<0.0002	<0.0004		1E-05	<0.00001	<0.00001	
Tin (Total)	0.0005	<0.0005	<0.0005		0.001	<0.001	<0.001		0.0001	<0.0001	<0.0001		0.0005	<0.0005	<0.001		0.0001	<0.0001	<0.0001	
Titanium (Total)	0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	0.121	0.352	**97.67%**	0.01	<0.01	<0.01	
Total Cadmium (by saltwater extraction)																	2E-05	0.000029	0.000021	
Uranium (Total)	0.0002	0.00117	0.00117	0.00%	0.0004	0.00101	0.00103		1E-05	0.00101	0.000986	2.40%	0.0002	0.00425	0.00416	2.14%	1E-05	0.00401	0.0042	4.63%
Vanadium (Total)	0.001	0.0016	0.0016		0.002	<0.002	<0.002		0.001	0.0012	0.0011		0.001	0.0102	0.024	**80.70%**	0.001	0.0034	0.0031	
Zinc (Total)	0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.003	<0.003	<0.003		0.005	0.0055	0.0152		0.003	0.0122	0.0106	
Organics																				
Carbon Organic (Dissolved)	0.5	1.53	1.54		0.5	0.97	0.93		0.5	16.3	2.66	**143.88%**	0.5	1.86	1.91					
Carbon Organic (Total)					0.5	0.85	0.87		0.5	1.78	1.7		0.5	1.9	2.32		0.5	1.6	1.4	
Nitrogen Organic (Dissolved)					0.05	0.11	0.11		0.05	1.79	<0.05		0.05	0.082	0.136					
Nitrogen Organic (Total)					0.05	0.11	0.12		0.06	0.075	0.074		0.05	0.082	0.146					

Site	MDL	3GC14-001I	Duplicate	RPD	MDL	3GC14-001I	Duplicate	RPD	MDL	3GC14-002I	Duplicate	RPD	MDL	3GC14-002I	Duplicate	RPD	MDL	BGC14-003D	Duplicate	RPD
Date Sampled		14-Jul-14		(%)		21-Aug-14		(%)		16-Jun-14		(%)		10-Jul-14		(%)		25-Aug-14		(%)
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)																				
Alkalinity (Total as CaCO3)	1	449	448	0.22%	2	457	455	0.44%	1	287	288	0.35%	1	287	290	1.04%	1	136	136	0.00%
Bicarbonate Alkalinity	1	449	448	0.22%	2	457	455	0.44%	1	287	288	0.35%	1	287	290	1.04%	1	98.6	96.8	1.84%
Carbonate Alkalinity	1	<1	<1		2	<2	<2		1	<1	<1		1	<1	<1		1	37.8	39.5	4.40%
Color TCU																				
Hardness as CaCO3 (Dissolved)	0.5	422	428	1.41%	0.5	429	435	1.39%	0.5	399	397	0.50%	0.5	393	400	1.77%	0.5	20.2	20.3	0.49%
Hydroxide Alkalinity	1	<1	<1		2	<2	<2		1	<1	<1		1	<1	<1		1	<1	<1	
pH pH	0.1	8.01	8.02	0.12%	0.1	8.23	8.22	0.12%	0.1	8.14	8.14	0.00%	0.1	8.29	8.3	0.12%	0.1	8.9	8.89	0.11%
Phosphorus (Nutrient) Total																				
Specific Conductivity µS/cm	2	1010	1020	0.99%	2	1010	1010	0.00%	2	1270	1270	0.00%	2	1240	1260	1.60%	2	844	838	0.71%
Total Dissolved Solids	10	604	546	10.09%	10	614	618	0.65%	10	795	859	7.74%	10	856	863	0.81%	10	573	564	1.58%
Total Suspended Solids	3	<3	<3		3	<3	<3		3	<3	<3		3	3.2	3.1		3	<3	<3	
Turbidity NTU	0.1	0.65	0.46		0.1	0.8	0.59	**30.22%**	0.1	0.56	0.62	10.17%	0.1	0.78	0.8	2.53%	0.1	1.31	1.07	**20.17%**
Dissolved Anions																				
Bromide (Dissolved)	0.5	<0.5	<0.5		0.5	<0.5	<0.5		0.5	<0.5	<0.5		0.5	<0.5	<0.5		0.5	<0.5	<0.5	
Chloride (Dissolved)	5	<5	<5		5	<5	<5		5	6	5.8		5	5.5	5.6		5	8.4	8.2	
Fluoride (Dissolved)	0.03	0.232	0.216	7.14%	0.03	0.216	0.216	0.00%	0.03	0.338	0.337	0.30%	0.2	0.31	0.31		0.03	0.117	0.115	
Sulphate (Dissolved)	5	147	148	0.68%	5	142	146	2.78%	5	418	415	0.72%	5	399	401	0.50%	5	255	252	1.18%
Nutrients																				
Ammonia (Total)	0.005	0.0625	0.0508	**20.65%**	0.005	0.0523	0.0452	14.56%	0.005	0.205	0.204	0.49%	0.005	0.199	0.208	4.42%	0.005	0.0828	0.0839	1.32%
Nitrate (as N)	0.05	0.313	0.359	13.69%	0.05	0.299	0.318	6.16%	0.05	<0.05	<0.05		0.05	<0.05	<0.05		0.05	<0.05	<0.05	
Nitrate (Available)																				
Nitrite (as N)	0.01	<0.01	0.01		0.01	0.014	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01	
Nitrogen (Dissolved)																				
Nitrogen (Total)																				
Nitrogen Kjeldahl (Total)	0.05	0.137	0.11		0.05	0.189	0.364		0.05	0.383	0.391	2.07%	0.05	0.355	0.358	0.84%	0.05	0.209	0.195	
Orthophosphate (Dissolved)	0.001	0.0168	0.0145	14.70%	0.001	0.0175	0.0171	2.31%	0.001	0.0209	0.0209	0.00%	0.001	0.022	0.0228	3.57%	0.01	0.27	0.264	2.25%
Phosphorus (Nutrient) Dissolved	0.002	0.0203	0.0177	13.68%	0.002	0.0173	0.0153	12.27%	0.002	0.0194	0.021	7.92%	0.002	0.0255	0.0229	10.74%	0.02	0.259	0.263	1.53%
Phosphorus (Nutrient) Total	0.002	0.0246	0.0214	13.91%	0.002	0.0223	0.0234	4.81%	0.002	0.0354	0.0368	3.88%	0.002	0.0406	0.0407	0.25%	0.02	0.295	0.287	2.75%
Cyanide																				
Cyanide (Free)	0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005	
Cyanide (Total)	0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005	
Cyanide (WAD)	0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005	
Dissolved Metals																				
Aluminum (Dissolved)	0.001	0.003	0.0031		0.001	0.003	0.0089		0.001	0.0029	0.0038		0.001	0.0045	0.0041		0.002	0.0592	0.0567	4.31%
Antimony (Dissolved)	0.0001	0.00015	0.00015		0.0001	0.00014	0.00012		0.0001	0.00022	0.00022		0.0001	0.00017	0.00016		0.0002	0.00021	<0.0002	
Arsenic (Dissolved)	0.0001	0.00068	0.00058	15.87%	0.0001	0.00057	0.00048		0.0001	0.00247	0.00251	1.61%	0.0001	0.00233	0.0024	2.96%	0.0002	0.00547	0.00515	6.03%
Barium (Dissolved)	5E-05	0.0305	0.0298	2.32%	5E-05	0.0294	0.0292	0.68%	5E-05	0.0237	0.0244	2.91%	5E-05	0.0237	0.0239	0.84%	0.0001	0.00906	0.00893	1.45%
Beryllium (Dissolved)	0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0002	<0.0002	<0.0002	
Bismuth (Dissolved)	0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.001	<0.001	<0.001	
Boron (Dissolved)	0.01	0.106	0.134	**23.33%**	0.01	0.114	0.114	0.00%	0.01	0.482	0.5	3.67%	0.01	0.492	0.509	3.40%	0.02	10.1	9.82	2.81%
Cadmium (Dissolved)	1E-05	0.000023	0.000017		1E-05	0.000017	0.000014		2E-05	<0.00002	<0.00002		1E-05	<0.00001	<0.00001		2E-05	<0.00002	<0.00002	
Calcium (Dissolved)	0.05	58.6	58.8	0.34%	0.05	57.7	58.8	1.89%	0.05	62.6	62.6	0.00%	0.05	59.9	60.8	1.49%	0.05	4.73	4.75	0.42%
Chromium (Dissolved)	0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0002	<0.0002	<0.0002	
Cobalt (Dissolved)	0.0001	0.00121	0.00107	12.28%	0.0001	0.00105	0.00092	13.20%	0.0001	0.00284	0.00284	0.00%	0.0001	0.00244	0.00255	4.41%	0.0002	<0.0002	<0.0002	
Copper (Dissolved)	0.0002	0.00043	0.0004		0.0002	0.00045	0.0004		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002		0.0004	<0.0004	<0.0004	
Dissolved Cadmium (by saltwater extraction)									2E-05	<0.00002	<0.00002						2E-05	<0.00002	<0.00002	
Iron (Dissolved)	0.01	0.051	0.047		0.01	0.057	0.057	0.00%	0.01	0.125	0.125	0.00%	0.01	0.142	0.157	10.03%	0.01	0.014	0.015	
Lead (Dissolved)	5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		5E-05	0.000076	<0.00005		0.0001	<0.0001	<0.0001	
Lithium (Dissolved)	0.0005	0.0147	0.0162	9.71%	0.0005	0.015	0.0153	1.98%	0.0005	0.00656	0.00646	1.54%	0.0005	0.0073	0.00684	6.51%	0.001	0.0075	0.0075	0.00%
Magnesium (Dissolved)	0.1	66.9	68.3	2.07%	0.1	69.3	70	1.01%	0.1	58.9	58.4	0.85%	0.1	59	60.2	2.01%	0.1	2.04	2.05	0.49%
Manganese (Dissolved)	5E-05	0.334	0.279	17.94%	5E-05	0.313	0.265	16.61%	5E-05	1.09	1.12	2.71%	5E-05	0.94	0.966	2.73%	0.0001	0.0336	0.0329	2.11%
Mercury (Dissolved)	1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001	
Molybdenum (Dissolved)	5E-05	0.00814	0.00911	11.25%	5E-05	0.00943	0.00924	2.04%	5E-05	0.0116	0.0113	2.62%	5E-05	0.0119	0.0118	0.84%	0.0001	0.0178	0.0174	2.27%
Nickel (Dissolved)	0.0005	0.00229	0.00202		0.0005	0.00184	0.00157		0.0005	0.00512	0.0052	1.55%	0.0005	0.00414	0.00435	4.95%	0.001	0.0013	0.0012	
Phosphorus (Metal) Dissolved	0.05	<0.05	<0.05		0.05	<0.05	<0.05		0.05	<0.05	<0.05		0.05	0.072	0.06		0.05	0.292	0.272	7.09%
Potassium (Dissolved)	0.1	7.72	7.88	2.05%	0.1	7.46	7.56	1.33%	0.1	9.26	8.99	2.96%	0.1	8.91	9.41	5.46%	0.1	9.45	9.53	0.84%
Selenium (Dissolved)	0.0001	0.00291	0.0029	0.34%	0.0001	0.00281	0.00259	8.15%	0.0001	0.00028	0.00028		0.0001	0.00013	0.00013		0.0002	0.00027	0.00025	
Silicon (Dissolved)	0.05	4.69	4.65	0.86%	0.05	4.65	4.6	1.08%	0.05	6.34	6.24	1.59%	0.05	6.19	6.18	0.16%	0.05	4.12	4.19	1.68%
Silver (Dissolved)	1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		2E-05	<0.00002	<0.00002	
Sodium (Dissolved)	0.05	81.4	79.6	2.24%	0.05	76.8	74.3	3.31%	0.05	131	133	1.52%	0.05	132	136	2.99%	0.1	161	158	1.88%
Strontium (Dissolved)	0.0002	1.13	1.36	18.47%	0.0002	1.3	1.34	3.03%	0.0002	1.34	1.28	4.58%	0.0002	1.36	1.37	0.73%	0.0004	0.159	0.157	1.27%
Sulphur (Dissolved)	0.5	47.7	48.5	1.66%	0.5	48.9	48.8	0.20%	0.5	135	134	0.74%	0.5	136	132	2.99%	0.5	85.6	84.1	1.77%
Thallium (Dissolved)	1E-05	0.000027	0.000032		1E-05	0.000027	0.000024		1E-05	0.000026	0.000026		1E-05	0.000027	0.000024		2E-05	<0.00002	<0.00002	
Tin (Dissolved)	0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0002	<0.0002	<0.0002	
Titanium (Dissolved)	0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.02	<0.02	<0.02	
Uranium (Dissolved)	1E-05	0.00247	0.00283	13.58%	1E-05	0.00299	0.0027	10.19%	1E-05	0.00274	0.0027	1.47%	1E-05	0.00272	0.00271	0.37%	2E-05	0.000812	0.000737	9.68%
Vanadium (Dissolved)	0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.002	<0.002	<0.002	
Zinc (Dissolved)	0.001	0.0061	0.0045		0.001	0.0055	0.0058	5.31%	0.001	0.017	0.0184	7.91%	0.001	0.0042	0.004		0.002	<0.002	<0.002	
Total Metals																				
Aluminum (Total)	0.003	0.0233	0.0127		0.003	0.0278	0.0233	17.61%	0.003	0.0249	0.025	0.40%	0.003	0.0365	0.036	1.38%	0.006	0.111	0.103	7.48%
Antimony (Total)	0.0001	0.00021	0.00025		0.0001	0.00015	0.00015		0.0001	0.00025	0.00023		0.0001	0.0002	0.00019		0.0002	0.0003	0.00027	
Arsenic (Total)	0.0001	0.00078	0.00062	22.86%	0.0001	0.00057	0.00053	7.27%	0.0001	0.0025	0.00252	0.80%	0.0001	0.00237	0.00252	6.13%	0.0002	0.00509	0.00523	2.71%
Barium (Total)	5E-05	0.031	0.0302	2.61%	5E-05	0.0294	0.0291	1.03%	5E-05	0.0246	0.0241	2.05%	5E-05	0.0241	0.0243	0.83%	0.0001	0.00952	0.00927	2.66%
Beryllium (Total)	0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0002	<0.0002	<0.0002	
Bismuth (Total)	0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.001	<0.001	<0.001	
Boron (Total)	0.01	0.131	0.138	5.20%	0.01	0.119	0.123	3.31%	0.01	0.464	0.521	11.57%	0.01	0.478	0.502	4.90%	0.02	10.4	10.4	0.00%
Cadmium (Total)	1E-05	0.000025	0.000023		1E-05	0.000022	0.00002		3E-05	<0.00003	<0.00002		1E-05	0.000029	0.000021		2E-05	0.000023	<0.00002	
Calcium (Total)	0.05	56.7	57.7	1.75%	0.05	57.4	55.7	3.01%	0.05	61.7	60.6	1.80%	0.05	59.8	60.9	1.82%	0.05	4.72	4.65	1.49%
Chromium (Total)	0.0001	0.00014	0.00012		0.0001	<0.0001	0.00012		0.0001	0.00019	0.00017		0.0001	0.00026	0.00023		0.0002	0.00035	0.0005	
Cobalt (Total)	0.0001	0.00128	0.00109	16.03%	0.0001	0.00105	0.00097	7.92%	0.0001	0.00298	0.00289	3.07%	0.0001	0.00256	0.00252	1.57%	0.0002	0.00024	0.00023	
Copper (Total)	0.0005	0.00097	0.00073		0.0005	0.00101	0.00089		0.0005	0.0007	0.00054		0.0005	0.00102	0.00085		0.001	<0.001	<0.001	
Iron (Total)	0.01	0.072	0.058	**21.54%**	0.01	0.09	0.081	10.53%	0.01	0.152	0.16	5.13%	0.01	0.179	0.213	17.35%	0.01	0.096	0.087	9.84%
Lead (Total)	5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		0.0001	<0.0001	<0.0001	
Lithium (Total)	0.0005	0.016	0.0162	1.24%	0.0005	0.0148	0.0153	3.32%	0.0005	0.00552	0.00695	**22.94%**	0.0005	0.00726	0.00723	0.41%	0.001	0.0075	0.0077	2.63%
Magnesium (Total)	0.1	67.2	69.4	3.22%	0.1	69.1	68.6	0.73%	0.1	59	58.1	1.54%	0.1	57.8	59.2	2.39%	0.1	2.1	2.09	0.48%
Manganese (Total)	5E-05	0.364	0.281	25.74%	5E-05	0.33	0.282	15.69%	5E-05	1.11	1.15	3.54%	5E-05	0.953	0.982	3.00%	0.0001	0.0357	0.0354	0.84%
Mercury (Total)	1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001	
Molybdenum (Total)	5E-05	0.00999	0.00997	0.20%	5E-05	0.00997	0.00972	2.54%	5E-05	0.0117	0.012	2.53%	5E-05	0.0125	0.0125	0.00%	0.0001	0.0184	0.0184	0.00%
Nickel (Total)	0.0005	0.00244	0.00208		0.0005	0.00195	0.00179		0.0005	0.00557	0.00526	5.72%	0.0005	0.00441	0.00458	3.78%	0.001	0.0019	0.0017	
Phosphorus (Metal) Total	0.05	<0.05	<0.05		0.05	<0.05	<0.05		0.05	<0.05	<0.05		0.05	0.053	<0.05		0.05	0.294	0.277	5.95%
Potassium (Total)	0.1	7.75	7.71	0.52%	0.1	7.49	7.41	1.07%	0.1	9	9.09	1.00%	0.1	8.93	9.49	6.08%	0.1	9.28	9.25	0.32%
Selenium (Total)	0.0001	0.00255	0.0028	9.35%	0.0001	0.00245	0.00246	0.41%	0.0001	0.00024	0.00025		0.0001	0.00017	0.00017		0.0002	0.0003	0.00028	
Silicon (Total)	0.05	4.8	4.69	2.32%	0.05	4.68	4.69	0.21%	0.05	6.4	6.41	0.16%	0.05	6.26	6.35	1.43%	0.05	4.21	4.27	1.42%
Silver (Total)	1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		2E-05	<0.00002	<0.00002	
Sodium (Total)	0.05	82.9	80.9	2.44%	0.05	77.1	76.2	1.17%	0.05	134	137	2.21%	0.05	132	137	3.72%	0.1	161	159	1.25%
Strontium (Total)	0.0002	1.3	1.38	5.97%	0.0002	1.28	1.32	3.08%	0.0002	1.33	1.37	2.96%	0.0002	1.42	1.39	2.14%	0.0004	0.161	0.16	0.62%
Sulphur (Total)	0.5	50.1	51.1	1.98%	0.5	48.9	50.4	3.02%	0.5	142	140	1.42%	0.5	136	136	0.00%	0.5	85.1	83.5	1.90%
Thallium (Total)	1E-05	0.000031	0.000035		1E-05	0.000032	0.000026		1E-05	0.000027	0.000025		1E-05	0.000026	0.000022		2E-05	<0.00002	<0.00002	
Tin (Total)	0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	0.00017	0.00012		0.0001	0.0002	0.00014		0.0002	<0.0002	<0.0002	
Titanium (Total)	0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.02	<0.02	<0.02	
Total Cadmium (by saltwater extraction)									2E-05	<0.00002	<0.00002								<0.00002	
Uranium (Total)	1E-05	0.0031	0.00301	2.95%	1E-05	0.003	0.00289	3.74%	1E-05	0.00289	0.0028	3.16%	1E-05	0.00285	0.00279	2.13%	2E-05	0.00085	0.000761	11.05%
Vanadium (Total)	0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.002	<0.002	<0.002	
Zinc (Total)	0.003	0.0083	0.0057		0.003	0.0067	0.0058		0.003	0.0188	0.0154	19.88%	0.003	0.0078	0.0063		0.006	<0.006	<0.006	
Organics																				
Carbon Organic (Dissolved)																				
Carbon Organic (Total)	0.5	1.31	1.02		0.5	1.08	1.01		0.5	2.62	3.01	13.85%	0.5	3.04	3.07	0.98%	0.5	3.36	3.24	3.64%
Nitrogen Organic (Dissolved)																				
Nitrogen Organic (Total)																				

APPENDIX A QA/QC
TABLE A.11 Groundwater Duplicates
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Site	MDL	BGC14-0066	Duplicate	RPD	MDL	BGC14-009	Duplicate	RPD	MDL	BGC14-011D	Duplicate	RPD	MDL	BGC14-012	Duplicate	RPD	MDL	BGC14-015	Duplicate	RPD
Date Sampled		5-Aug-14		(%)		28-Jul-14		(%)		15-Aug-14		(%)		18-Jun-14		(%)		23-Jul-14		(%)
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)																				
Alkalinity (Total as CaCO3)	2	131	132	0.76%	2	146	137	6.36%	1	328	325	0.92%	1	406	407	0.25%	1	296	297	0.34%
Bicarbonate Alkalinity	2	131	132	0.76%	2	146	137	6.36%	1	319	313	1.90%	1	406	407	0.25%	1	296	297	0.34%
Carbonate Alkalinity	2	<2	<2		2	<2	<2		1	8.8	11.2	24.00%	1	<1	<1		1	<1	<1	
Color TCU																				
Hardness as CaCO3 (Dissolved)	0.5	2360	2400	1.68%	0.5	233	234	0.43%	0.5	66.5	68.1	2.38%	0.5	1090	1100	0.91%	0.5	351	349	0.57%
Hydroxide Alkalinity	2	<2	<2		2	<2	<2		1	<1	<1		1	<1	<1		1	<1	<1	
pH pH	0.1	7.71	7.5	2.76%	0.1	7.96	7.96	0.00%	0.1	8.42	8.45	0.36%	0.1	8.16	8.15	0.12%	0.1	8.2	8.19	0.12%
Phosphorus (Nutrient) Total																				
Specific Conductivity µS/cm	2	3700	3730	0.81%	2	907	900	0.77%	2	1000	987	1.31%	2	2230	2240	0.45%	2	734	731	0.41%
Total Dissolved Solids	20	3910	4140	5.71%	10	625	630	0.80%	10	656	628	4.36%	10	1840	1850	0.54%	10	443	439	0.91%
Total Suspended Solids	3	5.4	3.1		3	<3	<3		3	<3	3.6		3	<3	<3		3	<3	<3	
Turbidity NTU	0.1	11	13.4	19.67%	0.1	1.04	1.1	5.61%	0.1	0.54	0.77	35.11%	0.1	0.28	0.25		0.1	1.12	1.22	8.55%
Dissolved Anions																				
Bromide (Dissolved)	1	<1	<1		0.5	<0.5	<0.5		0.5	<0.5	<0.5		1	<1	<1		0.25	<0.25	<0.25	
Chloride (Dissolved)	10	<10	<10		5	6.7	6.5		5	19.5	19.2		10	16	15		2.5	<2.5	<2.5	
Fluoride (Dissolved)	0.03	0.226	0.224	0.89%	0.03	0.165	0.17	2.99%	0.03	0.674	0.67	0.60%	0.03	0.232	0.242	4.22%	0.03	0.242	0.25	3.25%
Sulphate (Dissolved)	10	2720	2740	0.73%	5	329	323	1.84%	5	189	182	3.77%	10	1030	998	3.16%	2.5	120	119	0.84%
Nutrients																				
Ammonia (Total)	0.005	0.247	0.242	2.04%	0.005	0.156	0.158	1.27%	0.005	0.031	0.0288	7.36%	0.005	0.0182	0.0166		0.005	0.0491	0.0598	19.65%
Nitrate (as N)	0.1	<0.1	<0.1		0.05	<0.05	<0.05		0.05	<0.05	<0.05		0.1	<0.1	<0.1		0.025	<0.025	<0.025	
Nitrate (Available)																				
Nitrite (as N)	0.02	<0.02	<0.02		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.02	<0.02	<0.02		0.005	<0.005	<0.005	
Nitrogen (Dissolved)																				
Nitrogen (Total)																				
Nitrogen Kjeldahl (Total)	0.05	0.258	0.295	13.38%	0.05	0.406	0.411	1.22%	0.05	0.201	0.174		0.05	0.871	0.863	0.92%	0.05	0.168	0.187	
Orthophosphate (Dissolved)	0.001	<0.001	<0.001		0.001	0.0394	0.0486	20.91%	0.001	0.0379	0.0316	18.13%	0.001	0.0389	0.0386	0.77%	0.001	0.0619	0.0612	1.14%
Phosphorus (Nutrient) Dissolved	0.002	<0.002	<0.002		0.002	0.0402	0.0455	12.37%	0.002	0.0398	0.0329	18.98%	0.002	0.0416	0.0434	4.24%	0.002	0.0649	0.0644	0.77%
Phosphorus (Nutrient) Total	0.002	0.0034	0.0055		0.002	0.0694	0.0711	2.42%	0.002	0.0406	0.0373	8.47%	0.002	0.0466	0.0461	1.08%				
Cyanide																				
Cyanide (Free)	0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005	
Cyanide (Total)	0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005	
Cyanide (WAD)	0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005	
Dissolved Metals																				
Aluminum (Dissolved)	0.002	<0.002	<0.002		0.001	0.0058	0.0072	21.54%	0.001	0.0082	0.0093	12.57%	0.001	0.0038	0.004		0.001	0.0047	0.0042	
Antimony (Dissolved)	0.0002	<0.0002	<0.0002		0.0001	0.00044	0.00051		0.0001	<0.0001	<0.0001		0.0001	0.00017	0.00019		0.0001	0.00011	0.00012	
Arsenic (Dissolved)	0.0002	0.00644	0.00615	4.61%	0.0001	0.00503	0.00499	0.80%	0.0001	0.00061	0.00064	4.80%	0.0001	0.00295	0.00289	2.05%	0.0001	0.00275	0.00269	2.21%
Barium (Dissolved)	0.0001	0.00787	0.00787	0.00%	5E-05	0.0215	0.0224	4.10%	5E-05	0.0218	0.0231	5.79%	5E-05	0.0386	0.0384	0.52%	5E-05	0.0367	0.0362	1.37%
Beryllium (Dissolved)	0.0002	<0.0002	<0.0002		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001	
Bismuth (Dissolved)	0.001	<0.001	<0.001		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005	
Boron (Dissolved)	0.02	0.151	0.148	2.01%	0.01	0.125	0.137	9.16%	0.01	0.033	0.03		0.01	0.176	0.173	1.72%	0.01	0.062	0.06	3.28%
Cadmium (Dissolved)	2E-05	<0.00002	0.000024		2E-05	<0.00002	<0.00002		1E-05	<0.00001	<0.00001		1E-05	0.000021	0.000028		1E-05	<0.00001	<0.00001	
Calcium (Dissolved)	0.05	461	457	0.87%	0.05	69.6	69.9	0.43%	0.05	9.49	9.91	4.33%	0.05	152	152	0.00%	0.05	43.3	42.6	1.63%
Chromium (Dissolved)	0.0002	<0.0002	<0.0002		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	0.00011	0.0001		0.0001	<0.0001	<0.0001	
Cobalt (Dissolved)	0.0002	0.00082	0.00084		0.0001	0.00154	0.00151	1.97%	0.0001	0.00041	0.00046		0.0001	0.00067	0.00062	7.75%	0.0001	0.00147	0.00143	2.76%
Copper (Dissolved)	0.0004	<0.0004	<0.0004		0.0002	<0.0002	0.00106		0.0002	<0.0002	0.00026		0.0002	0.00485	0.00496	2.24%	0.0002	<0.0002	<0.0002	
Dissolved Cadmium (by saltwater extraction)	2E-05	0.000022			2E-05	<0.00002	<0.00002													
Iron (Dissolved)	0.01	1.6	1.54	3.82%	0.01	0.221	0.211	4.63%	0.01	0.032	0.03		0.01	0.032	0.031		0.01	0.038	0.035	
Lead (Dissolved)	0.0001	<0.0001	<0.0001		5E-05	<0.00005	0.000065		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005	
Lithium (Dissolved)	0.001	0.0283	0.0278	1.78%	0.0005	0.00477	0.00524	9.39%	0.0005	0.0158	0.015	5.19%	0.0005	0.0172	0.0169	1.76%	0.0005	0.00435	0.00414	4.95%
Magnesium (Dissolved)	0.1	294	306	4.00%	0.1	14.4	14.3	0.70%	0.1	10.4	10.5	0.96%	0.1	174	175	0.57%	0.1	59	58.8	0.34%
Manganese (Dissolved)	0.0001	0.355	0.365	2.78%	5E-05	0.92	0.891	3.20%	5E-05	0.123	0.136	10.04%	5E-05	0.0743	0.0711	4.40%	5E-05	0.374	0.364	2.71%
Mercury (Dissolved)	1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001	
Molybdenum (Dissolved)	0.0001	0.00467	0.00477	2.12%	5E-05	0.0213	0.0241	12.33%	5E-05	0.00597	0.00606	1.50%	5E-05	0.0102	0.0102	0.00%	5E-05	0.0164	0.0162	1.23%
Nickel (Dissolved)	0.001	0.0011	0.0011		0.0005	0.00314	0.00343	8.83%	0.0005	0.00144	0.00156		0.0005	0.00275	0.00268	2.58%	0.0005	0.0025	0.00253	1.19%
Phosphorus (Metal) Dissolved	0.05	<0.05	<0.05		0.05	0.075	0.072		0.05	<0.05	<0.05		0.05	<0.05	<0.05		0.05	0.076	0.075	
Potassium (Dissolved)	0.1	5.95	6.01	1.00%	0.1	0.91	0.96	5.35%	0.1	5.81	6.01	3.38%	0.1	24.9	24.9	0.00%	0.1	8.05	7.87	2.26%
Selenium (Dissolved)	0.0002	<0.0002	<0.0002		0.0001	0.00017	0.00021		0.0001	0.00012	0.00013		0.0001	0.00029	0.00026		0.0001	<0.0001	0.0001	
Silicon (Dissolved)	0.05	8.28	8.19	1.09%	0.05	8.5	8.64	1.63%	0.05	4.31	4.35	0.92%	0.05	7.68	7.63	0.65%	0.05	8.98	8.75	2.59%
Silver (Dissolved)	2E-05	<0.00002	<0.00002		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	0.000014		1E-05	<0.00001	<0.00001	
Sodium (Dissolved)	0.1	154	156	1.29%	0.05	103	104	0.97%	0.05	203	206	1.47%	0.05	162	158	2.50%	0.05	36.1	35.5	1.68%
Strontium (Dissolved)	0.0004	8.54	8.54	0.00%	0.0002	0.121	0.136	11.67%	0.0002	0.296	0.289	2.39%	0.0002	2.24	2.23	0.45%	0.0002	0.688	0.678	1.46%
Sulphur (Dissolved)	0.5	773	795	2.81%	0.5	106	105	0.95%	0.5	59.4	59.7	0.50%	0.5	315	312	0.96%	0.5	39.1	39.3	0.51%
Thallium (Dissolved)	2E-05	<0.00002	<0.00002		1E-05	0.000015	0.000015		1E-05	<0.00001	<0.00001		1E-05	<0.00001	0.000014		1E-05	0.000012	0.000013	
Tin (Dissolved)	0.0002	<0.0002	<0.0002		0.0001	<0.0001	<0.0001		0.0001	0.00014	0.00016		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001	
Titanium (Dissolved)	0.02	<0.02	<0.02		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01	
Uranium (Dissolved)	2E-05	0.000984	0.00099	0.61%	1E-05	0.00231	0.00255	9.88%	1E-05	0.0013	0.00149	13.62%	1E-05	0.00343	0.00349	1.73%	1E-05	0.00369	0.00372	0.81%
Vanadium (Dissolved)	0.002	<0.002	<0.002		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.001	0.0089	0.009	1.12%	0.001	<0.001	<0.001	
Zinc (Dissolved)	0.002	0.0052	0.0049		0.001	0.0026	0.0093		0.001	0.0071	0.006	16.79%	0.001	0.0052	0.0046		0.001	0.0021	0.0028	
Total Metals																				
Aluminum (Total)	0.006	0.0148	0.0112		0.003	0.0489	0.0854	54.36%	0.003	0.064	0.0707	9.95%	0.003	0.0151	0.0207	31.28%	0.003	0.0344	0.0285	18.76%
Antimony (Total)	0.0002	<0.0002	<0.0002		0.0001	0.00049	0.00053		0.0001	0.00019	0.00021		0.0001	0.00023	0.00022		0.0001	0.00012	0.00013	
Arsenic (Total)	0.0002	0.00694	0.00678	2.33%	0.0001	0.00516	0.00525	1.73%	0.0001	0.00068	0.00069	1.46%	0.0001	0.00297	0.00295	0.68%	0.0001	0.00293	0.00263	10.79%
Barium (Total)	0.0001	0.0083	0.00776	6.72%	5E-05	0.0216	0.0221	2.29%	5E-05	0.0237	0.0242	2.09%	5E-05	0.0399	0.0389	2.54%	5E-05	0.0385	0.0369	4.24%
Beryllium (Total)	0.0002	<0.0002	<0.0002		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001	
Bismuth (Total)	0.001	<0.001	<0.001		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005	
Boron (Total)	0.02	0.155	0.151	2.61%	0.01	0.128	0.13	1.55%	0.01	0.047	0.034		0.01	0.196	0.19	3.11%	0.01	0.072	0.068	5.71%
Cadmium (Total)	2E-05	0.000027	0.000027		2E-05	<0.00002	<0.00003		1E-05	<0.00001	<0.00001		1E-05	0.000024	0.000029		1E-05	0.000013	0.000013	
Calcium (Total)	0.05	475	446	6.30%	0.05	66.9	68.2	1.92%	0.05	9.96	9.9	0.60%	0.05	153	150	1.98%	0.05	44.2	42	5.10%
Chromium (Total)	0.0002	<0.0002	<0.0002		0.0001	0.00022	0.00026		0.0001	0.00021	0.00021		0.0001	0.00027	0.00028		0.0001	0.00018	0.00018	
Cobalt (Total)	0.0002	0.00091	0.00084		0.0001	0.00161	0.00163	1.23%	0.0001	0.0005	0.00052	3.92%	0.0001	0.00071	0.00063	11.94%	0.0001	0.00156	0.0015	3.92%
Copper (Total)	0.001	<0.001	<0.001		0.0005	0.00073	0.00096		0.0005	0.00061	0.00053		0.0005	0.0062	0.00649	4.57%	0.0005	<0.0005	<0.0005	
Iron (Total)	0.01	1.77	1.74	1.71%	0.01	0.267	0.29	8.26%	0.01	0.088	0.089	1.13%	0.01	0.043	0.047		0.01	0.072	0.067	7.19%
Lead (Total)	0.0001	<0.0001	<0.0001		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005	
Lithium (Total)	0.001	0.0281	0.0269	4.36%	0.0005	0.00468	0.00462	1.29%	0.0005	0.0162	0.0149	8.36%	0.0005	0.0178	0.0171	4.01%	0.0005	0.00451	0.00436	3.38%
Magnesium (Total)	0.1	319	298	6.81%	0.1	13.9	14.2	2.14%	0.1	10.8	10.5	2.82%	0.1	178	174	2.27%	0.1	60.9	57.9	5.05%
Manganese (Total)	0.0001	0.381	0.362	5.11%	5E-05	0.926	0.927	0.11%	5E-05	0.141	0.14	0.71%	5E-05	0.0771	0.0736	4.64%	5E-05	0.397	0.375	5.70%
Mercury (Total)	1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001	
Molybdenum (Total)	0.0001	0.00489	0.00468	4.39%	5E-05	0.0215	0.0222	3.20%	5E-05	0.00677	0.00646	4.69%	5E-05	0.0114	0.0113	0.88%	5E-05	0.0173	0.0167	3.53%
Nickel (Total)	0.001	0.0012	0.0011		0.0005	0.0034	0.00351	3.18%	0.0005	0.00181	0.00182		0.0005	0.00294	0.00292	0.68%	0.0005	0.00286	0.00269	6.13%
Phosphorus (Metal) Total	0.05	<0.05	<0.05		0.05	0.078	0.08		0.05	<0.05	<0.05		0.05	0.057	0.052		0.05	0.07	0.078	
Potassium (Total)	0.1	6.24	5.81	7.14%	0.1	0.89	0.9	1.12%	0.1	6.16	5.99	2.80%	0.1	24.3	23.7	2.50%	0.1	8.26	7.83	5.34%
Selenium (Total)	0.0002	<0.0002	<0.0002		0.0001	0.00025	0.00028		0.0001	0.00011	<0.0001		0.0001	0.00031	0.0003		0.0001	0.00012	0.00011	
Silicon (Total)	0.05	8.64	8.11	6.33%	0.05	8.35	8.67	3.76%	0.05	4.61	4.51	2.19%	0.05	7.93	7.75	2.30%	0.05	9.39	8.94	4.91%
Silver (Total)	2E-05	<0.00002	<0.00002		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	0.000012	0.000011		1E-05	<0.00001	<0.00001	
Sodium (Total)	0.1	164	156	5.00%	0.05	104	106	1.90%	0.05	210	203	3.39%	0.05	168	165	1.80%	0.05	38.6	36.7	5.05%
Strontium (Total)	0.0004	8.79	8.56	2.65%	0.0002	0.121	0.125	3.25%	0.0002	0.315	0.292	7.58%	0.0002	2.37	2.32	2.13%	0.0002	0.722	0.692	4.24%
Sulphur (Total)	0.5	825	778	5.86%	0.5	104	107	2.84%	0.5	62.6	61.2	2.26%	0.5	334	328	1.81%	0.5	43.2	41.2	4.74%
Thallium (Total)	2E-05	<0.00002	<0.00002		1E-05	0.000014	0.000015		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	0.000014	0.000013	
Tin (Total)	0.0002	<0.0002	<0.0002		0.0001	0.00015	0.00019		0.0001	0.00033	0.00028		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001	
Titanium (Total)	0.02	<0.02	<0.02		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01	
Total Cadmium (by saltwater extraction)					2E-05	<0.00002	<0.00002													
Uranium (Total)	2E-05	0.0011	0.000988	10.73%	1E-05	0.00231	0.00236	2.14%	1E-05	0.0016	0.00155	3.17%	1E-05	0.00377	0.00374	0.80%	1E-05	0.00394	0.00378	4.15%
Vanadium (Total)	0.002	<0.002	<0.002		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.001	0.0098	0.0096	2.06%	0.001	<0.001	<0.001	
Zinc (Total)	0.006	0.0073	<0.006		0.003	0.0035	0.0047		0.003	0.0083	0.0071		0.003	0.0069	0.0062		0.003	<0.003	<0.003	
Organics																				
Carbon Organic (Dissolved)																				
Carbon Organic (Total)	0.5	1.13	1.13		0.5	5.97	5.7	4.63%	0.5	3.42	1.99		0.5	13.1	12.9	1.54%	0.5	2.02	1.92	
Nitrogen Organic (Dissolved)																				
Nitrogen Organic (Total)																				

APPENDIX A QA/QC
TABLE A.11 Groundwater Duplicates
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Site	MDL	KAX-14-107S	Duplicate	RPD	MDL	KAX-14-107S	Duplicate	RPD	MDL	KAX-14-114S	Duplicate	RPD	MDL	MW11-01S	Duplicate	RPD	MDL	MW11-01S	Duplicate	RPD
Date Sampled		17-Jul-14		(%)		13-Aug-14		(%)		10-Sep-14		(%)		8-Mar-13		(%)		10-Mar-14		(%)
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)																				
Alkalinity (Total as CaCO3)	1	424	431	1.64%	2	441	440	0.23%	1	320	322	0.62%	1	153	152	0.66%	1	148	159	7.17%
Bicarbonate Alkalinity	1	405	409	0.98%	2	441	440	0.23%	1	317	322	1.56%	1	143	145	1.39%	1	141	151	6.85%
Carbonate Alkalinity	1	19.2	21.6	11.76%	2	<2	<2		1	2.5	<1		1	9.9	7	34.32%	1	6.5	7.8	18.18%
Color TCU													5	<5	<5					
Hardness as CaCO3 (Dissolved)	0.5	257	254	1.17%	0.5	256	257	0.39%	0.5	273	274	0.37%	0.5	389	384	1.29%	0.5	366	364	0.55%
Hydroxide Alkalinity	1	<1	<1		2	<2	<2		1	<1	<1		1	<1	<1		1	<1	<1	
pH pH	0.1	8.46	8.45	0.12%	0.1	8.28	8.29	0.12%	0.1	8.31	8.3	0.12%	0.1	8.41	8.35	0.72%	0.1	8.38	8.44	0.71%
Phosphorus (Nutrient) Total																				
Specific Conductivity µS/cm	2	1090	1100	0.91%	2	1070	1070	0.00%	2	1150	1160	0.87%	2	1040	1040	0.00%	2	980	955	2.58%
Total Dissolved Solids	10	690	742	7.26%	10	759	764	0.66%	13	749	767	2.37%	10	705	702	0.43%	10	666	676	1.49%
Total Suspended Solids	3	5.2	4.7		3	5.2	5		3	3	6		3	<3	<3					
Turbidity NTU	0.1	8.19	10.3	22.82%	0.1	7.78	9.61	21.05%	0.1	2.79	4.41	45.00%	0.1	0.75	0.52	36.22%				
Dissolved Anions																				
Bromide (Dissolved)	0.5	<0.5	<0.5		0.5	<0.5	<0.05		0.5	<0.5	<0.5		0.5	<0.5	<0.5		0.5	<0.5	<0.5	
Chloride (Dissolved)	5	8.2	8.3		5	8.3	0.88		5	14.8	14.9		5	<5	<5		5	<5	<5	
Fluoride (Dissolved)	0.03	0.283	0.28	1.07%	0.03	0.31	0.044		0.03	0.269	0.262	2.64%	0.2	0.32	0.33		0.2	0.4	0.37	
Sulphate (Dissolved)	5	175	169	3.49%	5	162	16.1	163.84%	5	310	309	0.32%	5	361	365	1.10%	5	369	370	0.27%
Nutrients																				
Ammonia (Total)	0.005	0.0375	0.0392	4.43%	0.005	0.0587	0.0619	5.31%	0.025	1.09	1.09	0.00%	0.005	0.101	0.0994	1.60%	0.005	0.0879	0.0868	1.26%
Nitrate (as N)	0.05	<0.05	<0.05		0.05	<0.05	<0.005		0.05	<0.05	<0.05		0.05	11.9	12.1	1.67%	0.05	3.73	3.67	1.62%
Nitrate (Available)																				
Nitrite (as N)	0.01	<0.01	<0.01		0.01	<0.01	<0.001		0.01	<0.01	<0.01		0.01	0.084	0.088	4.65%	0.01	0.142	0.14	1.42%
Nitrogen (Dissolved)													0.071	12	12.1	0.83%				
Nitrogen (Total)																				
Nitrogen Kjeldahl (Total)	0.05	0.554	0.623	11.72%	0.05	0.627	0.662	5.43%	0.05	2.25	2.22	1.34%	0.05	<0.05	<0.05		0.05	<0.05	<0.05	
Orthophosphate (Dissolved)	0.01	0.135	0.118	13.44%	0.01	0.115	0.105	9.09%	0.01	0.229	0.215	6.31%					0.001	0.0436	0.0433	0.69%
Phosphorus (Nutrient) Dissolved	0.02	0.148	0.126	16.06%	0.02	0.112	0.0921	19.50%	0.02	0.273	0.276	1.09%					0.002	0.0499	0.0562	11.88%
Phosphorus (Nutrient) Total	0.02	0.202	0.194	4.04%	0.02	0.184	0.187	1.62%	0.02	0.356	0.354	0.56%	0.002	0.0608	0.0599	1.49%				
Cyanide																				
Cyanide (Free)	0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005	
Cyanide (Total)	0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005	
Cyanide (WAD)	0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005	
Dissolved Metals																				
Aluminum (Dissolved)	0.001	0.0072	0.0065	10.22%	0.001	0.0059	0.0063	6.56%	0.001	0.0079	0.0048		0.001	0.0062	0.0064	3.17%	0.001	0.006	0.0057	5.13%
Antimony (Dissolved)	0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	0.00019	0.00016		0.0001	0.00015	0.00014		0.0001	0.00016	0.00013	
Arsenic (Dissolved)	0.0001	0.00536	0.00546	1.85%	0.0001	0.00534	0.00531	0.56%	0.0001	0.00583	0.00581	0.34%	0.0001	0.00243	0.00242	0.41%	0.0001	0.00201	0.00202	0.50%
Barium (Dissolved)	5E-05	0.0322	0.0315	2.20%	5E-05	0.0339	0.0341	0.59%	5E-05	0.0729	0.0721	1.10%	5E-05	0.0209	0.0204	2.42%	5E-05	0.0208	0.0211	1.43%
Beryllium (Dissolved)	0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001	
Bismuth (Dissolved)	0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005	
Boron (Dissolved)	0.01	0.642	0.638	0.63%	0.01	0.701	0.705	0.57%	0.01	0.368	0.375	1.88%	0.01	0.08	0.076	5.13%	0.01	0.071	0.07	1.42%
Cadmium (Dissolved)	1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	0.000012	0.000016		3E-05	<0.00003	<0.00003	
Calcium (Dissolved)	0.05	30.3	29.8	1.66%	0.05	29.7	29.8	0.34%	0.05	31.5	31.3	0.64%	0.05	37.7	36.8	2.42%	0.05	39.6	39.6	0.00%
Chromium (Dissolved)	0.0001	<0.0001	<0.0001		0.0001	0.00012	0.00011		0.0001	<0.0001	<0.0001		0.0001	0.00045	0.00046		0.0001	0.0001	<0.0001	
Cobalt (Dissolved)	0.0001	0.0005	0.00055	9.52%	0.0001	0.00039	0.00041		0.0001	0.00136	0.00142	4.32%	0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001	
Copper (Dissolved)	0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002		0.0002	0.00063	0.00075		0.0002	0.00055	0.00073		0.0002	0.00045	0.00042	
Dissolved Cadmium (by saltwater extraction)																	2E-05	<0.00002	<0.00002	
Iron (Dissolved)	0.01	0.756	0.759	0.40%	0.01	0.645	0.687	6.31%	0.01	0.462	0.499	7.70%	0.01	<0.01	0.018		0.01	<0.01	<0.01	
Lead (Dissolved)	5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005	
Lithium (Dissolved)	0.0005	0.00492	0.00486	1.23%	0.0005	0.00535	0.00551	2.95%	0.0005	0.00823	0.00753	8.88%	0.0005	0.00476	0.00414	13.93%	0.0005	0.00387	0.00381	1.56%
Magnesium (Dissolved)	0.1	44	43.7	0.68%	0.1	44.1	44.3	0.45%	0.1	47.2	47.6	0.84%	0.1	71.5	71.1	0.56%	0.1	64.9	64.4	0.77%
Manganese (Dissolved)	5E-05	0.668	0.671	0.45%	5E-05	0.646	0.665	2.90%	5E-05	0.974	1.01	3.63%	5E-05	0.037	0.036	2.74%	5E-05	0.0588	0.0591	0.51%
Mercury (Dissolved)	1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	0.000012		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001	
Molybdenum (Dissolved)	5E-05	0.00506	0.00481	5.07%	5E-05	0.00444	0.00416	6.51%	5E-05	0.0303	0.0308	1.64%	5E-05	0.0467	0.0456	2.38%	5E-05	0.0537	0.0526	2.07%
Nickel (Dissolved)	0.0005	0.00265	0.00278	4.79%	0.0005	0.00249	0.00248		0.0005	0.00972	0.0101	3.83%	0.0005	0.00051	0.00082		0.0005	<0.0005	<0.0005	
Phosphorus (Metal) Dissolved	0.05	0.175	0.178		0.05	0.163	0.155		0.05	0.3	0.296	1.34%	0.05	0.066	0.059		0.05	<0.05	<0.05	
Potassium (Dissolved)	0.1	13.9	13.5	2.92%	0.1	13.9	13.9	0.00%	0.1	20.8	20.9	0.48%	0.1	19.6	19.5	0.51%	0.1	19.3	19.5	1.03%
Selenium (Dissolved)	0.0001	0.00032	0.00034		0.0001	0.00053	0.00049		0.0001	0.00024	0.00025		0.0001	0.00459	0.00441	4.00%	0.0001	0.00119	0.00122	2.49%
Silicon (Dissolved)	0.05	10.6	10.2	3.85%	0.05	10.9	10.8	0.92%	0.05	7.62	7.65	0.39%	0.05	6.59	6.41	2.77%	0.05	6.79	6.85	0.88%
Silver (Dissolved)	1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001	
Sodium (Dissolved)	0.05	150	151	0.66%	0.05	158	158	0.00%	0.05	153	146	4.68%	0.05	74.9	71.9	4.09%	0.05	71.5	71.6	0.14%
Strontium (Dissolved)	0.0002	0.791	0.784	0.89%	0.0002	0.809	0.812	0.37%	0.0002	0.923	0.948	2.67%	0.0002	0.979	0.916	6.65%	0.0002	0.912	0.894	1.99%
Sulphur (Dissolved)	0.5	81	82.7	2.08%	0.5	95.4	94.6	0.84%	0.5	101	101	0.00%	0.5	117	115	1.72%	0.5	117	116	0.86%
Thallium (Dissolved)	1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	0.000011	0.000012		1E-05	0.000015	<0.00001	
Tin (Dissolved)	0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001	
Titanium (Dissolved)	0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01	
Uranium (Dissolved)	1E-05	0.00142	0.00139	2.14%	1E-05	0.00138	0.00135	2.20%	1E-05	0.00231	0.00235	1.72%	1E-05	0.000846	0.000804	5.09%	1E-05	0.000803	0.000748	7.09%
Vanadium (Dissolved)	0.001	0.0011	0.0011		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.001	0.0066	0.0065	1.53%	0.001	0.0058	0.0059	1.71%
Zinc (Dissolved)	0.001	0.0019	<0.001		0.001	<0.001	<0.001		0.001	0.0019	0.0038		0.001	<0.001	0.0018		0.001	<0.001	<0.001	
Total Metals																				
Aluminum (Total)	0.003	0.0198	0.0171	14.63%	0.003	0.019	0.0309	47.70%	0.003	0.0568	0.0534	6.17%	0.003	0.0301	0.0285	5.46%	0.003	0.0451	0.0503	10.90%
Antimony (Total)	0.0001	0.00015	0.00113		0.0001	0.00015	0.00015		0.0001	0.00032	0.00026		0.0001	0.00018	0.00018		0.0001	0.00017	0.00018	
Arsenic (Total)	0.0001	0.00576	0.0058	0.69%	0.0001	0.00561	0.00551	1.80%	0.0001	0.00596	0.00564	5.52%	0.0001	0.00249	0.00242	2.85%	0.0001	0.00202	0.00203	0.49%
Barium (Total)	5E-05	0.0322	0.0319	0.94%	5E-05	0.0335	0.0334	0.30%	5E-05	0.0728	0.0717	1.52%	5E-05	0.0215	0.0208	3.31%	5E-05	0.0217	0.0216	0.46%
Beryllium (Total)	0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001	
Bismuth (Total)	0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005	
Boron (Total)	0.01	0.676	0.67	0.89%	0.01	0.745	0.735	1.35%	0.01	0.396	0.375	5.45%	0.01	0.088	0.082	7.06%	0.01	0.077	0.078	1.29%
Cadmium (Total)	1E-05	<0.00001	<0.00001		1E-05	<0.00001	0.000167		1E-05	0.000032	0.000035		1E-05	0.000017	0.000021		4E-05	<0.00004	<0.00004	
Calcium (Total)	0.05	30.1	30.5	1.32%	0.05	29	30.1	3.72%	0.05	30.4	30.2	0.66%	0.05	37.4	38.4	2.64%	0.05	38.2	38.4	0.52%
Chromium (Total)	0.0001	0.00024	0.00027		0.0001	0.0002	0.00024		0.0001	0.00037	0.00038		0.0001	0.00061	0.00061	0.00%	0.0001	0.00051	0.0005	1.98%
Cobalt (Total)	0.0001	0.00076	0.00083	8.81%	0.0001	0.00059	0.00061	3.33%	0.0001	0.00151	0.00145	4.05%	0.0001	<0.0001	<0.0001		0.0001	0.00013	0.00013	
Copper (Total)	0.0005	0.00124	0.00115		0.0005	0.00052	0.00118		0.0005	0.0111	0.0106	4.61%	0.0005	0.00094	0.00086		0.0005	0.00143	0.00141	
Iron (Total)	0.01	0.8	0.834	4.16%	0.01	0.668	0.728	8.60%	0.01	0.565	0.59	4.33%	0.01	0.028	0.024		0.01	0.057	0.053	7.27%
Lead (Total)	5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		5E-05	0.000226	0.00021		5E-05	<0.00005	<0.00005		5E-05	0.000137	0.000123	
Lithium (Total)	0.0005	0.00501	0.00497	0.80%	0.0005	0.00551	0.00486	12.54%	0.0005	0.00813	0.00722	11.86%	0.0005	0.00471	0.00429	9.33%	0.0005	0.00398	0.00398	0.00%
Magnesium (Total)	0.1	44.5	44.6	0.22%	0.1	43.2	44.8	3.64%	0.1	46.4	46.4	0.00%	0.1	67.4	66.3	1.65%	0.1	63.1	62.2	1.44%
Manganese (Total)	5E-05	0.689	0.697	1.15%	5E-05	0.656	0.612	6.94%	5E-05	0.951	0.949	0.21%	5E-05	0.0395	0.0391	1.02%	5E-05	0.0625	0.0626	0.16%
Mercury (Total)	1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	0.000028	0.000028		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001	
Molybdenum (Total)	5E-05	0.00599	0.00538	10.73%	5E-05	0.00518	0.00505	2.54%	5E-05	0.0332	0.0296	11.46%	5E-05	0.0482	0.047	2.52%	5E-05	0.0572	0.057	0.35%
Nickel (Total)	0.0005	0.00297	0.00301	1.34%	0.0005	0.00269	0.00271	0.74%	0.0005	0.0107	0.0104	2.84%	0.0005	0.00062	0.00072		0.0005	0.00078	0.00073	
Phosphorus (Metal) Total	0.05	0.211	0.193		0.05	0.179	0.182		0.05	0.297	0.297	0.00%	0.05	0.053	0.051		0.05	0.052	0.068	
Potassium (Total)	0.1	13.7	14.1	2.88%	0.1	13.4	14.1	5.09%	0.1	20.5	20.3	0.98%	0.1	19.7	20.4	3.49%	0.1	20	20.7	3.44%
Selenium (Total)	0.0001	0.00014	0.00017		0.0001	0.00012	0.00012		0.0001	0.00038	0.00035		0.0001	0.0045	0.00444	1.34%	0.0001	0.0011	0.00112	1.80%
Silicon (Total)	0.05	10.6	10.7	0.94%	0.05	10.5	11.1	5.56%	0.05	7.67	7.58	1.18%	0.05	6.52	6.66	2.12%	0.05	6.82	6.89	1.02%
Silver (Total)	1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	0.000025	0.000015		1E-05	0.000017	<0.00001		1E-05	<0.00001	<0.00001	
Sodium (Total)	0.05	152	151	0.66%	0.05	160	151	5.79%	0.05	143	140	2.12%	0.05	75.9	76.2	0.39%	0.05	72.1	73.4	1.79%
Strontium (Total)	0.0002	0.81	0.825	1.83%	0.0002	0.811	0.8	1.37%	0.0002	1	0.91	9.42%	0.0002	1	0.912	9.21%	0.0002	0.921	0.926	0.54%
Sulphur (Total)	0.5	58.8	58.7	0.17%	0.5	54.6	55.9	2.35%	0.5	99.8	99.4	0.40%	0.5	118	116	1.71%	0.5	119	119	0.00%
Thallium (Total)	1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	0.00002	0.000018		1E-05	0.000014	0.000012		1E-05	<0.00001	0.00001	
Tin (Total)	0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	0.00011	<0.0001		0.0001	<0.0001	<0.0001		0.0001	0.00015	0.00013	
Titanium (Total)	0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01	
Total Cadmium (by saltwater extraction)																	2E-05	<0.00002	<0.00002	
Uranium (Total)	1E-05	0.00144	0.00148	2.74%	1E-05	0.00137	0.00132	3.72%	1E-05	0.00237	0.00226	4.75%	1E-05	0.000878	0.000846	3.71%	1E-05	0.000797	0.000822	3.09%
Vanadium (Total)	0.001	0.0013	0.0013		0.001	0.001	0.0011		0.001	0.0016	0.0016		0.001	0.0069	0.0067	2.94%	0.001	0.0061	0.0061	0.00%
Zinc (Total)	0.003	<0.003	<0.003		0.003	0.0036	<0.003		0.003	0.0037	0.0035		0.003	<0.003	<0.003		0.003	<0.003	<0.003	
Organics																				
Carbon Organic (Dissolved)													0.5	1.73	1.55					
Carbon Organic (Total)	0.5	10.9	10.9	0.00%	0.5	13.4	13.6	1.48%	0.5	7.9	7.81	1.15%	0.5	1.31	1.37		0.5	1.34	1.23	
Nitrogen Organic (Dissolved)													2.2	<2.2	<2.2					
Nitrogen Organic (Total)													0.06	<0.06	<0.06					

APPENDIX A QA/QC
TABLE A.11 Groundwater Duplicates
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Site	MDL	MW11-01S	Duplicate	RPD	MDL	MW11-02	Duplicate	RPD	MDL	MW11-02	Duplicate	RPD	MDL	MW11-02	Duplicate	RPD	MDL	MW11-02	Duplicate	RPD
Date Sampled		11-Sep-14		(%)		12-Feb-12		(%)		29-Aug-12		(%)		19-Jun-14		(%)		9-Sep-14		(%)
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)									1	4.5	4.5									
Alkalinity (Total as CaCO3)	1	161	162	0.62%	2	218	216	0.92%	2	186	189	1.60%	2	182	179	1.66%	1	173	175	1.15%
Bicarbonate Alkalinity	1	158	160	1.26%	2	218	216	0.92%					2	182	179	1.66%	1	173	175	1.15%
Carbonate Alkalinity	1	2.7	1.6		2	<2	<2						2	<2	<2		1	<1	<1	
Color TCU					5	7.4	7.5		5	5.2	5.3									
Hardness as CaCO3 (Dissolved)	0.5	366	358	2.21%	0.5	428	429	0.23%	0.5	463	458	1.09%	0.5	443	440	0.68%	0.5	429	435	1.39%
Hydroxide Alkalinity	1	<1	<1		2	<2	<2						2	<2	<2		1	<1	<1	
pH pH	0.1	8.41	8.4	0.12%	0.1	7.87	7.87	0.00%	0.1	7.97	7.96	0.13%	0.1	8.17	8.19	0.24%	0.1	8.03	8.05	0.25%
Phosphorus (Nutrient) Total																				
Specific Conductivity µS/cm	2	965	967	0.21%	2	2800	2810	0.36%	2	2870	2880	0.35%	2	2980	3000	0.67%	2	2950	2940	0.34%
Total Dissolved Solids	20	686	667	2.81%	15	2170	2150	0.93%	30	2240	2240	0.00%	20	2260	2170	4.06%	20	2140	2210	3.22%
Total Suspended Solids	3	<3	<3		3	26	20.7	22.70%	3	7.2	7.9		3	12.5	8.2		3	3.8	4.6	
Turbidity NTU	0.1	0.56	0.34		0.1	22.2	18.8	16.59%	0.1	4.07	3.37	18.82%	0.1	7.82	6.37	20.44%	0.1	1.17	0.94	21.80%
Dissolved Anions																				
Bromide (Dissolved)	0.5	<0.5	<0.5		1	<1	<1		5	<5	<1		1	<1	<1		1	<1	<1	
Chloride (Dissolved)	5	<5	<5		10	16	16		50	<50	18		10	17	17		10	16	16	
Fluoride (Dissolved)	0.03	0.199	0.203	1.99%	0.4	<0.4	<0.4		0.03	0.13	<0.4		0.03	0.119	0.121		0.03	0.099	0.098	
Sulphate (Dissolved)	5	367	367	0.00%	10	1360	1370	0.73%	50	1460	1450	0.69%	10	1470	1470	0.00%	10	1440	1470	2.06%
Nutrients																				
Ammonia (Total)	0.005	0.102	0.102	0.00%	0.05	<0.05	<0.05		0.005	0.0928	0.0939	1.18%	0.005	0.0434	0.0571	27.26%	0.005	0.0705	0.0706	0.14%
Nitrate (as N)	0.05	1.37	1.39	1.45%	0.1	<0.1	<0.1		0.5	<0.5	0.11		0.1	<0.1	<0.1		0.1	0.11	<0.1	
Nitrate (Available)																				
Nitrite (as N)	0.01	0.201	0.199	1.00%	0.02	<0.02	<0.02		0.1	<0.1	<0.02		0.02	<0.02	<0.02		0.02	<0.02	0.021	
Nitrogen (Dissolved)					0.05	0.334	0.323	3.35%	0.51	<0.51	0.29									
Nitrogen (Total)																				
Nitrogen Kjeldahl (Total)	0.05	0.189	0.187		0.2	0.33	0.32		0.05	0.181	0.189		0.05	0.192	0.176		0.05	0.169	0.166	
Orthophosphate (Dissolved)	0.001	0.0441	0.0432	2.06%					0.001	0.0522	0.0524	0.38%	0.001	0.0832	0.083	0.24%	0.001	0.0808	0.0788	2.51%
Phosphorus (Nutrient) Dissolved	0.002	0.0452	0.0445	1.56%	0.002	0.021	0.02	4.88%					0.002	0.079	0.0773	2.18%				
Phosphorus (Nutrient) Total	0.002	0.047	0.0443	5.91%	0.02	0.098	0.0937		0.002	0.0823	0.0802	2.58%	0.002	0.0986	0.098	0.61%	0.02	0.117	0.0983	17.37%
Cyanide																				
Cyanide (Free)	0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005	
Cyanide (Total)	0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005	
Cyanide (WAD)	0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005	
Dissolved Metals																				
Aluminum (Dissolved)	0.001	0.0057	0.0212	115.24%	0.015	<0.015	<0.015		0.005	0.0072	0.0075		0.002	0.0074	0.0078		0.002	0.0054	0.0049	
Antimony (Dissolved)	0.0001	0.00014	0.00016		0.0005	0.0016	0.00158		0.0005	<0.0005	<0.0005		0.0002	<0.0002	<0.0002		0.0002	0.00028	0.00027	
Arsenic (Dissolved)	0.0001	0.00205	0.00217	5.69%	0.0005	0.00331	0.00319	3.69%	0.0005	0.00348	0.00346	0.58%	0.0002	0.00321	0.00309	3.81%	0.0002	0.00306	0.00302	1.32%
Barium (Dissolved)	5E-05	0.021	0.0215	2.35%	0.0003	0.0395	0.0395	0.00%	0.0003	0.0364	0.0342	6.23%	0.0001	0.0286	0.0291	1.73%	0.0001	0.0277	0.0278	0.36%
Beryllium (Dissolved)	0.0001	<0.0001	<0.0001		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002	
Bismuth (Dissolved)	0.0005	<0.0005	<0.0005		0.0025	<0.0025	<0.0025		0.0025	<0.0025	<0.0025		0.001	<0.001	<0.001		0.001	<0.001	<0.001	
Boron (Dissolved)	0.01	0.068	0.067	1.48%	0.05	1.22	1.24	1.63%	0.05	1.24	1.28	3.17%	0.02	1.32	1.47	10.75%	0.02	1.3	1.29	0.77%
Cadmium (Dissolved)	1E-05	0.000011	0.000013		5E-05	0.000105	0.000099		5E-05	<0.00005	<0.00005		2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002	
Calcium (Dissolved)	0.05	39.9	40.5	1.49%	0.05	86.3	84.1	2.58%	0.05	91.5	90.9	0.66%	0.05	86	85.6	0.47%	0.05	83.7	84	0.36%
Chromium (Dissolved)	0.0001	<0.0001	0.00024		0.0005	0.00105	0.00094		0.0005	0.00124	0.00106		0.0002	<0.0002	<0.0002		0.0002	<0.0002	0.00148	
Cobalt (Dissolved)	0.0001	<0.0001	0.00012		0.0005	0.00259	0.00255	1.56%	0.0005	0.00156	0.00154		0.0002	0.00093	0.00095		0.0002	0.00093	0.00094	
Copper (Dissolved)	0.0002	0.00045	0.00094		0.0025	<0.0025	<0.0025		0.001	<0.001	<0.001		0.0004	<0.0004	<0.0004		0.0004	<0.0004	0.00049	
Dissolved Cadmium (by saltwater extraction)													2E-05	<0.00002	<0.00002					
Iron (Dissolved)	0.01	<0.01	0.061		0.03	0.038	0.037		0.01	0.207	0.202	2.44%	0.01	0.136	0.136	0.00%	0.01	0.102	0.222	74.07%
Lead (Dissolved)	5E-05	<0.00005	<0.00005		0.0003	<0.00025	<0.00025		0.0003	<0.00025	<0.00025		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001	
Lithium (Dissolved)	0.0005	0.00387	0.00364	6.13%	0.0025	0.0381	0.0379	0.53%	0.0025	0.0452	0.0482	6.42%	0.001	0.0637	0.0674	5.64%	0.001	0.0616	0.0616	0.00%
Magnesium (Dissolved)	0.1	64.6	62.4	3.46%	0.1	51.6	53.1	2.87%	0.1	56.9	56	1.59%	0.1	55.3	54.9	0.73%	0.1	53.3	54.8	2.78%
Manganese (Dissolved)	5E-05	0.0656	0.0696	5.92%	0.0003	1.43	1.4	2.12%	0.0003	1.24	1.24	0.00%	0.0001	0.967	0.966	0.10%	0.0001	0.967	0.949	1.88%
Mercury (Dissolved)	1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001						1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001	
Molybdenum (Dissolved)	5E-05	0.0619	0.0601	2.95%	0.0003	0.00862	0.00856	0.70%	0.0003	0.00462	0.00473	2.35%	0.0001	0.00121	0.00121	0.00%	0.0001	0.00124	0.00179	36.30%
Nickel (Dissolved)	0.0005	<0.0005	<0.0005		0.0025	0.0141	0.0137	2.88%	0.0025	0.0051	0.0049		0.001	0.0018	0.0018		0.001	0.0015	0.0016	
Phosphorus (Metal) Dissolved	0.05	<0.05	<0.05		0.3	<0.3	<0.3		0.05	0.097	0.093		0.05	0.103	0.1		0.05	0.108	0.097	
Potassium (Dissolved)	0.1	20.5	19.3	6.03%	0.25	2.66	2.66	0.00%	0.1	1.37	1.32	3.72%	0.1	1.02	1.02	0.00%	0.1	0.95	0.97	2.08%
Selenium (Dissolved)	0.0001	0.00059	0.0006	1.68%	0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002	
Silicon (Dissolved)	0.05	7.64	6.91	10.03%	0.05	6.19	6.26	1.12%	0.05	6.42	6.38	0.63%	0.05	6.6	6.59	0.15%	0.05	6.51	6.67	2.43%
Silver (Dissolved)	1E-05	<0.00001	<0.00001		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002	
Sodium (Dissolved)	0.05	72.1	72.4	0.42%	0.25	528	523	0.95%	0.25	530	529	0.19%	0.1	533	527	1.13%	0.1	564	549	2.70%
Strontium (Dissolved)	0.0002	0.931	0.904	2.94%	0.0005	3.45	3.51	1.72%	0.001	3.68	3.82	3.73%	0.0004	3.75	3.74	0.27%	0.0004	3.98	3.9	2.03%
Sulphur (Dissolved)	0.5	125	124	0.80%									0.5	459	460	0.22%	0.5	458	462	0.87%
Thallium (Dissolved)	1E-05	<0.00001	<0.00001		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002	
Tin (Dissolved)	0.0001	<0.0001	<0.0001		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002	
Titanium (Dissolved)	0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.05	<0.05	<0.05		0.02	<0.02	<0.02		0.02	<0.02	<0.02	
Uranium (Dissolved)	1E-05	0.000758	0.000776	2.35%	5E-05	0.0034	0.00342	0.59%	5E-05	0.00165	0.00166	0.60%	2E-05	0.000696	0.000703	1.00%	2E-05	0.000679	0.000683	0.59%
Vanadium (Dissolved)	0.001	0.0056	0.0057	1.77%	0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.002	<0.002	<0.002		0.002	<0.002	<0.002	
Zinc (Dissolved)	0.001	<0.001	0.0014		0.015	0.035	0.032		0.005	0.0061	0.0055		0.002	0.0062	0.0063		0.002	0.0048	0.0059	
Total Metals																				
Aluminum (Total)	0.003	0.0381	0.0057		0.015	0.617	0.512	18.60%	0.015	0.15	0.15	0.00%	0.006	0.381	0.26	37.75%	0.006	0.0411	0.0384	6.79%
Antimony (Total)	0.0001	0.00018	0.00014		0.0005	0.00301	0.00295	2.01%	0.0005	<0.0005	<0.0005		0.0002	0.00034	0.0003		0.0002	0.00041	0.00039	
Arsenic (Total)	0.0001	0.00208	0.00203	2.43%	0.0005	0.00364	0.00365	0.27%	0.0005	0.00354	0.00359	1.40%	0.0002	0.00351	0.00337	4.07%	0.0002	0.00309	0.00306	0.98%
Barium (Total)	5E-05	0.0219	0.0205	6.60%	0.0003	0.0516	0.0508	1.56%	0.0003	0.036	0.0378	4.88%	0.0001	0.0323	0.0308	4.75%	0.0001	0.0265	0.0268	1.13%
Beryllium (Total)	0.0001	<0.0001	<0.0001		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002	
Bismuth (Total)	0.0005	<0.0005	<0.0005		0.0025	<0.0025	<0.0025		0.0025	<0.0025	<0.0025		0.001	<0.001	<0.001		0.001	<0.001	<0.001	
Boron (Total)	0.01	0.077	0.073	5.33%	0.05	1.24	1.27	2.39%	0.05	1.27	1.41	10.45%	0.02	1.39	1.47	5.59%	0.02	1.23	1.27	3.20%
Cadmium (Total)	1E-05	0.000018	<0.00001		5E-05	0.000308	0.000289	6.37%	5E-05	<0.00005	<0.00005		2E-05	0.00007	0.000039		2E-05	<0.00002	<0.00002	
Calcium (Total)	0.05	39.1	38.9	0.51%	0.05	81.6	82.7	1.34%	0.05	89.7	91.9	2.42%	0.05	86.9	84.8	2.45%	0.05	80.4	80.7	0.37%
Chromium (Total)	0.0001	0.00042	0.00021		0.0005	0.00835	0.00913	8.92%	0.0005	0.00804	0.00808	0.50%	0.0002	0.00104	0.0009		0.0002	0.00045	0.00046	
Cobalt (Total)	0.0001	0.00014	0.0001		0.0005	0.00296	0.00296	0.00%	0.0005	0.00179	0.00185		0.0002	0.0012	0.00108	10.53%	0.0002	0.00093	0.00092	
Copper (Total)	0.0005	0.00109	0.00053		0.0025	0.0049	0.0041		0.0025	<0.0025	<0.0025		0.001	0.0027	0.0024		0.001	0.0014	0.0014	
Iron (Total)	0.01	0.047	<0.01		0.03	0.85	0.726	15.74%	0.01	0.396	0.39	1.53%	0.01	0.59	0.455	25.84%	0.01	0.166	0.162	2.44%
Lead (Total)	5E-05	0.000074	<0.00005		0.0003	0.00044	0.00041		0.0003	<0.00025	<0.00025		0.0001	0.00016	0.00013		0.0001	<0.0001	<0.0001	
Lithium (Total)	0.0005	0.00412	0.00381	7.82%	0.0025	0.0394	0.039	1.02%	0.0025	0.045	0.0488	8.10%	0.001	0.0658	0.0666	1.21%	0.001	0.0581	0.059	1.54%
Magnesium (Total)	0.1	63.2	59.6	5.86%	0.1	51.8	53.3	2.85%	0.1	56.6	57.2	1.05%	0.1	57	55.3	3.03%	0.1	53.2	53.4	0.38%
Manganese (Total)	5E-05	0.0702	0.0664	5.56%	0.0003	1.39	1.43	2.84%	0.0003	1.25	1.33	6.20%	0.0001	0.996	0.976	2.03%	0.0001	0.909	0.915	0.66%
Mercury (Total)	1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001						1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001	
Molybdenum (Total)	5E-05	0.0664	0.0635	4.46%	0.0003	0.00935	0.00941	0.64%	0.0003	0.00518	0.00565	8.68%	0.0001	0.0013	0.00126	3.12%	0.0001	0.00124	0.00117	5.81%
Nickel (Total)	0.0005	0.00063	<0.0005		0.0025	0.017	0.0175	2.90%	0.0025	0.0072	0.0075		0.001	0.0023	0.0022		0.001	0.0018	0.0017	
Phosphorus (Metal) Total	0.05	<0.05	<0.05		0.3	<0.3	<0.3		0.05	0.104	0.103		0.05	0.117	0.116		0.05	0.112	0.106	
Potassium (Total)	0.1	20.2	18.1	10.97%	0.25	2.65	2.75	3.70%	0.1	1.41	1.41	0.00%	0.1	1.08	1.04	3.77%	0.1	0.94	0.9	4.35%
Selenium (Total)	0.0001	0.0006	0.00052	14.29%	0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002	
Silicon (Total)	0.05	7.73	6.65	15.02%	0.05	7.54	7.42	1.60%	0.05	6.78	6.77	0.15%	0.05	7.45	6.99	6.37%	0.05	6.42	6.47	0.78%
Silver (Total)	1E-05	<0.00001	<0.00001		5E-05	<0.00005	<0.00005		5E-05	0.000053	0.000063		2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002	
Sodium (Total)	0.05	73.4	68.7	6.62%	0.25	506	528	4.26%	0.25	531	556	4.60%	0.1	536	526	1.88%	0.1	535	529	1.13%
Strontium (Total)	0.0002	0.997	0.952	4.62%	0.0005	3.55	3.54	0.28%	0.001	3.59	3.94	9.30%	0.0004	3.95	3.79	4.13%	0.0004	3.81	3.81	0.00%
Sulphur (Total)	0.5	124	119	4.12%									0.5	476	459	3.64%	0.5	460	451	1.98%
Thallium (Total)	1E-05	0.00002	0.00001		5E-05	0.000056	0.000054		5E-05	<0.00005	<0.00005		2E-05	0.000027	<0.00002		2E-05	<0.00002	<0.00002	
Tin (Total)	0.0001	<0.0001	<0.0001		0.0005	0.00112	0.00107		0.0005	<0.0005	<0.0005		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002	
Titanium (Total)	0.01	<0.01	<0.01		0.01	0.04	0.034		0.05	<0.05	<0.05		0.02	0.036	<0.02		0.02	<0.02	<0.02	
Total Cadmium (by saltwater extraction)																				
Uranium (Total)	1E-05	0.000797	0.000758	5.02%	5E-05	0.00346	0.00348	0.58%	5E-05	0.00175	0.00176	0.57%	2E-05	0.000754	0.000704	6.86%	2E-05	0.000656	0.000662	0.91%
Vanadium (Total)	0.001	0.0062	0.0056	10.17%	0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.002	0.0029	0.0022		0.002	<0.002	<0.002	
Zinc (Total)	0.003	0.0031	<0.003		0.015	0.036	0.05		0.015	<0.015	<0.015		0.006	0.0246	0.0194		0.006	0.0141	0.014	
Organics																				
Carbon Organic (Dissolved)					0.5	9.21	8.85	3.99%	0.5	3.99	3.56	11.39%								
Carbon Organic (Total)	0.5	1.39	1.31		0.5	11.3	10.8	4.52%	0.5	3.59	3.65	1.66%	0.5	2.25	2.14		0.5	2.33	2.36	
Nitrogen Organic (Dissolved)					0.05	0.094	0.158													
Nitrogen Organic (Total)					0.3	0.33	0.32													

Site	MDL	MW11-06D	Duplicate	RPD	MDL	MW11-06D	Duplicate	RPD	MDL	MW11-06D	Duplicate	RPD	MDL	MW11-07D	Duplicate	RPD	MDL	MW11-07D	Duplicate	RPD
Date Sampled		26-Jul-11		(%)		31-Oct-11		(%)		15-Nov-13		(%)		8-Jun-12		(%)		25-Aug-12		(%)
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	1	4.4	4														1	2.6	2.8	
Alkalinity (Total as CaCO3)	2	48.2	48.3	0.21%	2	42.9	44	2.53%	2	42.4	42.8	0.94%	1	120	122	1.65%	2	128	128	0.00%
Bicarbonate Alkalinity	2	48.2	48.3	0.21%					2	42.4	42.8	0.94%	1	120	122	1.65%				
Carbonate Alkalinity	2	<2	<2						2	<2	<2		1	<1	<1					
Color TCU	5	<5	<5		5	<5	<5						5	9.6	9.9		5	8.2	8.8	
Hardness as CaCO3 (Dissolved)	0.5	157	155	1.28%	0.5	140	137	2.17%	0.5	638	639	0.16%	0.5	285	289	1.39%	0.5	279	272	2.54%
Hydroxide Alkalinity	2	<2	<2						2	<2	<2		1	<1	<1					
pH pH	0.1	7.8	7.96	2.03%	0.1	7.9	7.91	0.13%	0.1	7.86	7.91	0.63%	0.1	8.01	7.97	0.50%	0.1	8.12	8.12	0.00%
Phosphorus (Nutrient) Total																				
Specific Conductivity µS/cm	2	1090	1090	0.00%	2	987	990	0.30%	2	2140	2150	0.47%	2	1560	1560	0.00%	2	1580	1580	0.00%
Total Dissolved Solids	10	720	730	1.38%	10	675	674	0.15%	10	1720	1750	1.73%	15	1160	1160	0.00%	15	1160	1160	0.00%
Total Suspended Solids	3	<3	<3		3	<3	<3						3	<3	<3		3	<3	3.3	
Turbidity NTU	0.1	0.39	0.41		0.1	1.87	2.11	12.06%					0.1	1.47	1.42	3.46%	0.1	2.25	1.88	17.92%
Dissolved Anions																				
Bromide (Dissolved)	0.5	<0.5	<0.5		0.5	<0.5	<0.5		1	<1	<1		1	<1	<1		1	<1	<1	
Chloride (Dissolved)	5	11.8	11.7		5	9.1	9.3		10	14	17		10	21	24		10	19	22	
Fluoride (Dissolved)	0.2	0.63	0.56		0.2	0.38	0.39		0.4	<0.4	<0.4		0.4	0.45	0.44		0.4	0.47	0.55	
Sulphate (Dissolved)	5	476	471	1.06%	5	423	437	3.26%	10	1190	1200	0.84%	10	711	701	1.42%	10	700	744	6.09%
Nutrients																				
Ammonia (Total)	0.005	0.0215	0.0351		0.005	0.0509	0.0531	4.23%	0.005	0.0904	0.0891	1.45%	0.005	0.0398	0.0442	10.48%	0.005	0.0561	0.0552	1.62%
Nitrate (as N)	0.05	<0.05	<0.05		0.05	<0.05	<0.05		0.1	<0.1	<0.1		0.1	<0.1	<0.1		0.1	<0.1	<0.1	
Nitrate (Available)																				
Nitrite (as N)	0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.02	0.024	<0.02		0.02	<0.02	<0.02		0.02	<0.02	<0.02	
Nitrogen (Dissolved)	0.05	0.14	0.16		0.05	0.09	0.08						0.073	0.253	0.175		0.27	<0.27	<0.27	
Nitrogen (Total)																				
Nitrogen Kjeldahl (Total)	0.05	0.14	0.16		0.05	0.128	0.142		0.05	0.167	0.167		0.25	0.25	0.175		0.25	<0.25	<0.25	
Orthophosphate (Dissolved)									0.001	0.0072	0.0074	2.74%					0.001	0.0982	0.0951	3.21%
Phosphorus (Nutrient) Dissolved	0.002	0.0214	0.0247	14.32%	0.002	0.0485	0.0494	1.84%	0.002	0.007	0.0102		0.002	0.0914	0.0885	3.22%				
Phosphorus (Nutrient) Total	0.002	0.0281	0.0303	7.53%	0.002	0.055	0.0536	2.58%	0.002	0.0089	0.0098		0.02	0.162	0.161	0.62%	0.02	0.129	0.132	2.30%
Cyanide																				
Cyanide (Free)	0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005	
Cyanide (Total)	0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005	
Cyanide (WAD)	0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005	
Dissolved Metals																				
Aluminum (Dissolved)	0.01	0.019	0.016		0.003	0.0139	0.0142		0.001	0.0034	0.0042		0.002	0.0098	0.0099		0.002	0.0112	0.0092	
Antimony (Dissolved)	0.001	<0.001	<0.001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0002	<0.0002	<0.0002		0.0002	0.00022	<0.0002	
Arsenic (Dissolved)	0.001	0.0084	0.0082	2.41%	0.0001	0.01	0.0101	1.00%	0.0001	0.0137	0.0137	0.00%	0.0002	0.00536	0.00542	1.11%	0.0002	0.00606	0.00585	3.53%
Barium (Dissolved)	0.02	<0.02	<0.02		5E-05	0.015	0.015	0.00%	5E-05	0.0242	0.0242	0.00%	0.0001	0.0438	0.0436	0.46%	0.0001	0.0456	0.0416	9.17%
Beryllium (Dissolved)	0.002	<0.002	<0.002		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002	
Bismuth (Dissolved)	0.2	<0.2	<0.2		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.001	<0.001	<0.001		0.001	<0.001	<0.001	
Boron (Dissolved)	0.1	0.65	0.64	1.55%	0.01	0.612	0.606	0.99%	0.01	0.555	0.557	0.36%	0.02	0.29	0.314	7.95%	0.02	0.281	0.28	0.36%
Cadmium (Dissolved)	0.0004	<0.0004	<0.0004		3E-05	<0.00003	<0.00003		3E-05	<0.00003	<0.00003		2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002	
Calcium (Dissolved)	0.1	47.6	46.5	2.34%	0.05	42.5	41.8	1.66%	0.05	167	167	0.00%	0.05	68	68.6	0.88%				
Chromium (Dissolved)	0.002	<0.002	<0.002		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0002	0.00021	0.00025		0.0002	<0.0002	<0.0002	
Cobalt (Dissolved)	0.0006	<0.0006	<0.0006		0.0001	0.00016	0.00016		0.0001	<0.0001	<0.0001		0.0002	0.0007	0.00068		0.0002	0.00057	0.00049	
Copper (Dissolved)	0.004	<0.004	<0.004		0.0005	<0.0005	<0.0005		0.0002	<0.0002	<0.0002		0.0004	<0.0004	0.00041		0.0004	<0.0004	<0.0004	
Dissolved Cadmium (by saltwater extraction)																				
Iron (Dissolved)	0.03	<0.03	<0.03		0.03	0.043	0.051		0.01	0.104	0.104	0.00%	0.02	0.201	0.203	0.99%	0.02	0.205	0.186	9.72%
Lead (Dissolved)	0.001	<0.001	<0.001		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001	
Lithium (Dissolved)	0.01	<0.01	<0.01		0.0005	0.00541	0.00517	4.54%	0.0005	0.0137	0.0139	1.45%	0.001	0.0273	0.0272	0.37%	0.001	0.0222	0.0238	6.96%
Magnesium (Dissolved)	0.1	9.39	9.4	0.11%	0.1	8.2	8.04	1.97%	0.1	53.6	54.2	1.11%	0.1	27.9	28.7	2.83%				
Manganese (Dissolved)	0.0006	0.081	0.0848	4.58%	5E-05	0.124	0.124	0.00%	5E-05	0.0668	0.0673	0.75%	0.0001	0.908	0.931	2.50%	0.0001	0.97	0.857	12.37%
Mercury (Dissolved)	1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001	
Molybdenum (Dissolved)	0.002	0.0777	0.0774	0.39%	5E-05	0.0921	0.0913	0.87%	5E-05	0.0825	0.0821	0.49%	0.0001	0.0231	0.0239	3.40%	0.0001	0.024	0.0237	1.26%
Nickel (Dissolved)	0.002	<0.002	<0.002		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.001	0.0012	0.0012		0.001	0.0014	0.0011	
Phosphorus (Metal) Dissolved	0.3	<0.3	<0.3		0.3	<0.3	<0.3		0.05	<0.05	<0.05		0.3	<0.3	<0.3					
Potassium (Dissolved)	2	<2	<2		0.05	1.08	1.09	0.92%	0.1	2.05	2.13	3.83%	0.1	2.5	2.5	0.00%	0.1	4.85	3.75	**25.58%**
Selenium (Dissolved)	0.002	<0.002	<0.002		0.0001	0.0001	0.0001		0.0001	<0.0001	<0.0001		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002	
Silicon (Dissolved)	0.05	3.32	3.31	0.30%	0.05	3.78	3.69	2.41%	0.05	3.82	3.87	1.30%	0.05	5.01	5.04	0.60%				
Silver (Dissolved)	4E-05	<0.00004	<0.00004		1E-05	<0.00001	<0.00001		1E-05	0.00005	0.000046		2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002	
Sodium (Dissolved)	2	162	162	0.00%	0.05	156	157	0.64%	0.05	256	259	1.17%	0.1	241	239	0.83%	0.1	260	243	6.76%
Strontium (Dissolved)	0.005	2.44	2.4	1.65%	0.0001	2.31	2.3	0.43%	0.0002	7.45	7.54	1.20%	0.0004	7.65	7.83	2.33%	0.0004	7.26	7.69	5.75%
Sulphur (Dissolved)									0.5	370	374	1.08%								
Thallium (Dissolved)	0.0004	<0.0004	<0.0004		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002	
Tin (Dissolved)	0.001	0.0017	0.0016		0.0001	0.00014	0.00016		0.0001	<0.0001	<0.0001		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002	
Titanium (Dissolved)	0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01					
Uranium (Dissolved)	0.0004	<0.0004	<0.0004		1E-05	0.00014	0.000136	2.90%	1E-05	0.000024	0.000029		2E-05	0.000769	0.00078	1.42%	2E-05	0.000735	0.00067	9.25%
Vanadium (Dissolved)	0.002	<0.002	<0.002		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.002	<0.002	<0.002		0.002	<0.002	<0.002	
Zinc (Dissolved)	0.005	0.0131	0.0076		0.003	0.0067	<0.003		0.001	<0.001	<0.001		0.002	<0.002	<0.002		0.002	<0.002	<0.002	
Total Metals																				
Aluminum (Total)	0.01	0.02	0.019		0.003	0.113	0.101	11.21%	0.003	0.0066	0.0097		0.006	0.0156	0.0162		0.006	0.018	0.0198	
Antimony (Total)	0.001	<0.001	<0.001		0.0001	<0.0001	<0.0001		0.0001	0.00013	0.00013		0.0002	0.0002	0.00021		0.0002	0.00029	0.00029	
Arsenic (Total)	0.001	0.008	0.0079	1.26%	0.0001	0.00972	0.00965	0.72%	0.0001	0.0141	0.0143	1.41%	0.0002	0.00588	0.00636	7.84%	0.0002	0.00597	0.00606	1.50%
Barium (Total)	0.02	<0.02	<0.02		5E-05	0.0164	0.0159	3.10%	5E-05	0.0239	0.0235	1.69%	0.0001	0.0457	0.0476	4.07%	0.0001	0.0423	0.0433	2.34%
Beryllium (Total)	0.002	<0.002	<0.002		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002	
Bismuth (Total)	0.2	<0.2	<0.2		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.001	<0.001	<0.001		0.001	<0.001	<0.001	
Boron (Total)	0.1	0.67	0.67	0.00%	0.01	0.617	0.622	0.81%	0.01	0.584	0.57	2.43%	0.02	0.316	0.327	3.42%	0.02	0.288	0.289	0.35%
Cadmium (Total)	0.0004	<0.0004	<0.0004		3E-05	<0.00003	<0.00003		3E-05	<0.00003	<0.00003		2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002	
Calcium (Total)	0.1	47.7	47.5	0.42%	0.05	42.2	41.2	2.40%	0.05	165	164	0.61%	0.05	73.3	71.3	2.77%				
Chromium (Total)	0.002	<0.002	<0.002		0.0001	0.00019	0.00011		0.0001	0.00011	<0.0001		0.0002	0.00057	0.00058		0.0002	0.00111	0.00118	6.11%
Cobalt (Total)	0.0006	<0.0006	<0.0006		0.0001	0.00022	0.00021		0.0001	<0.0001	<0.0001		0.0002	0.00081	0.00085		0.0002	0.0006	0.00061	
Copper (Total)	0.006	<0.006	<0.004		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.001	<0.001	<0.001		0.001	<0.001	<0.001	
Iron (Total)	0.03	<0.03	<0.03		0.03	0.119	0.113		0.01	0.113	0.116	2.62%	0.02	0.247	0.255	3.19%	0.02	0.263	0.257	2.31%
Lead (Total)	0.001	<0.001	<0.001		5E-05	<0.00005	<0.00005		5E-05	<0.00005	<0.00005		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001	
Lithium (Total)	0.01	<0.01	<0.01		0.0005	0.00509	0.0051	0.20%	0.0005	0.0142	0.0139	2.14%	0.001	0.0272	0.0267	1.86%	0.001	0.0231	0.0233	0.86%
Magnesium (Total)	0.1	9.58	9.69	1.14%	0.1	8.17	7.99	2.23%	0.1	53.4	54.5	2.04%	0.1	28.2	28.1	0.36%				
Manganese (Total)	0.0006	0.0834	0.0882	5.59%	5E-05	0.128	0.127	0.78%	5E-05	0.0691	0.0689	0.29%	0.0001	0.962	1.03	6.83%	0.0001	0.931	0.89	4.50%
Mercury (Total)	1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001	
Molybdenum (Total)	0.002	0.0807	0.0816	1.11%	5E-05	0.0964	0.0953	1.15%	5E-05	0.0874	0.0855	2.20%	0.0001	0.0251	0.0258	2.75%	0.0001	0.0251	0.0248	1.20%
Nickel (Total)	0.002	<0.002	<0.002		0.0005	<0.0005	<0.0005		0.0005	<0.0005	<0.0005		0.001	0.0014	0.0015		0.001	0.0016	0.0016	
Phosphorus (Metal) Total	0.3	<0.3	<0.3		0.3	<0.3	<0.3		0.05	<0.05	<0.05		0.3	<0.3	<0.3					
Potassium (Total)	2	<2	<2		0.05	1.12	1.11	0.90%	0.1	2.15	2.18	1.39%	0.1	2.56	2.69	4.95%	0.1	3.96	3.74	5.71%
Selenium (Total)	0.002	<0.002	<0.002		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002	
Silicon (Total)	0.05	3.36	3.39	0.89%	0.05	3.93	3.85	2.06%	0.05	3.87	3.86	0.26%	0.05	5.28	5.14	2.69%				
Silver (Total)	4E-05	<0.00004	<0.00004		1E-05	<0.00001	<0.00001		1E-05	0.000049	0.000058		2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002	
Sodium (Total)	2	165	168	1.80%	0.05	160	159	0.63%	0.05	267	267	0.00%	0.1	245	255	4.00%	0.1	240	237	1.26%
Strontium (Total)	0.005	2.46	2.46	0.00%	0.0001	2.38	2.33	2.12%	0.0002	7.75	7.62	1.69%	0.0004	7.85	7.98	1.64%	0.0004	7.36	7.52	2.15%
Sulphur (Total)									0.5	377	379	0.53%								
Thallium (Total)	0.0004	<0.0004	<0.0004		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002	
Tin (Total)	0.001	0.0022	0.002		0.0001	0.00023	0.00027		0.0001	<0.0001	<0.0001		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002	
Titanium (Total)	0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01		0.01	<0.01	<0.01					
Total Cadmium (by saltwater extraction)																				
Uranium (Total)	0.0004	<0.0004	<0.0004		1E-05	0.000142	0.000141	0.71%	1E-05	0.000025	0.000028		2E-05	0.000834	0.000862	3.30%	2E-05	0.000766	0.000708	7.87%
Vanadium (Total)	0.002	<0.002	<0.002		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.002	<0.002	<0.002		0.002	<0.002	<0.002	
Zinc (Total)	0.005	0.0084	0.0082		0.003	<0.003	0.0033		0.003	<0.003	0.0035		0.006	<0.006	<0.006		0.006	<0.006	<0.006	
Organics																				
Carbon Organic (Dissolved)	0.5	7.28	3.88	**60.93%**	0.5	2.38	2.17		0.5	1.97	1.81		0.5	13.1	14.1	7.35%	0.5	12.8	13.1	2.32%
Carbon Organic (Total)	0.5	5.47	3.47	**44.74%**	0.5	2.18	2.13		0.5	1.75	1.73		1	13.8	13.3	3.69%	0.5	13.5	13.4	0.74%
Nitrogen Organic (Dissolved)	0.05	0.169	0.145		0.05	<0.05	<0.05						0.05	0.13	0.256					
Nitrogen Organic (Total)	0.05	0.119	0.125		0.05	<0.05	<0.05						0.3	<0.3	0.131					

APPENDIX A QA/QC
TABLE A.11 Groundwater Duplicates
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Site	MDL	MW11-08D	Duplicate	RPD	MDL	MW11-09D	Duplicate	RPD	MDL	MW11-10D	Duplicate	RPD	MDL	MW11-10D	Duplicate	RPD	MDL	MW12-01	Duplicate	RPD
Date Sampled		1-Nov-11		(%)		26-May-13		(%)		9-Feb-12		(%)		7-Dec-12		(%)		2-Dec-12		(%)
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)																				
Alkalinity (Total as CaCO3)	2	219	220	0.46%	2	142	142	0.00%	2	152	147	3.34%	2	243	243	0.00%	2	175	179	2.26%
Bicarbonate Alkalinity					2	142	142	0.00%	2	152	147	3.34%	2	243	243	0.00%				
Carbonate Alkalinity					2	<2	<2		2	<2	<2		2	<2	<2					
Color TCU	5	15.1	16.2		5	11.4	11.1		5	<5	<5		5	<5	<5					
Hardness as CaCO3 (Dissolved)	0.5	181	179	1.11%	0.5	58.9	58.3	1.02%	0.5	1410	1410	0.00%	0.5	1480	1490	0.67%	0.5	1760	1760	0.00%
Hydroxide Alkalinity					2	<2	<2		2	<2	<2		2	<2	<2					
pH pH	0.1	8.08	8.04	0.50%	0.1	8.2	8.22	0.24%	0.1	8.24	8.24	0.00%	0.1	7.96	8.01	0.63%	0.1	8.05	8.05	0.00%
Phosphorus (Nutrient) Total																				
Specific Conductivity µS/cm	2	1600	1620	1.24%	2	1650	1640	0.61%	2	2680	2660	0.75%	2	2780	2770	0.36%	2	3190	3180	0.31%
Total Dissolved Solids	15	1130	1180	4.33%	10	1120	1100	1.80%	15	2490	2460	1.21%	30	2730	2680	1.85%	30	3160	3090	2.24%
Total Suspended Solids	3	13.6	16.9		3	<3	<3		5	163	159	2.48%	3	<3	3.1		3	<3	<3	
Turbidity NTU	0.1	8.28	11.4	31.71%	0.1	1.57	1.97	22.60%	0.1	97	105	7.92%	0.1	8.88	10.3	14.81%	0.1	0.46	0.48	
Dissolved Anions																				
Bromide (Dissolved)	1	<1	<1		1	<1	<1		1	<1	<1		1	<1	<1		1	<1	<1	
Chloride (Dissolved)	10	12	12		10	20	19		10	<10	<10		10	<10	<10		10	18	18	
Fluoride (Dissolved)	0.4	<0.4	<0.4		0.4	0.41	0.4		0.4	<0.4	<0.4		0.4	<0.4	<0.4		0.4	<0.4	<0.4	
Sulphate (Dissolved)	10	626	651	3.92%	10	657	678	3.15%	10	1640	1660	1.21%	10	1700	1700	0.00%	10	1670	1660	0.60%
Nutrients																				
Ammonia (Total)	0.005	0.0245	0.0284		0.005	<0.005	<0.005		0.005	0.148	0.137	7.72%	0.005	0.0547	0.055	0.55%	0.005	<0.005	<0.005	
Nitrate (as N)	0.1	<0.1	<0.1		0.1	<0.1	<0.1		0.1	<0.1	<0.1		0.1	<0.1	<0.1		0.1	88.2	87.7	0.57%
Nitrate (Available)																				
Nitrite (as N)	0.02	<0.02	<0.02		0.02	<0.02	<0.02		0.02	<0.02	<0.02		0.02	0.042	0.045		0.02	0.334	0.329	1.51%
Nitrogen (Dissolved)	0.05	0.3	0.35	15.38%	0.11	0.17	0.17		0.013	0.357	0.351	1.69%	0.05	0.174	0.176		0.11	88.5	88.1	0.45%
Nitrogen (Total)																				
Nitrogen Kjeldahl (Total)	0.05	0.303	0.389	24.86%	0.05	0.174	0.175		0.05	0.357	0.351	1.69%	0.05	0.225	0.222		0.05	<0.05	<0.05	
Orthophosphate (Dissolved)																	0.001	0.0037	0.0039	
Phosphorus (Nutrient) Dissolved	0.002	0.0745	0.0679	9.27%	0.02	0.375	0.376	0.27%	0.002	0.0058	0.0046		0.002	0.0025	0.0023					
Phosphorus (Nutrient) Total	0.02	0.119	0.115	3.42%	0.02	0.43	0.422	1.88%	0.002	0.0196	0.0196	0.00%	0.002	0.0215	0.0212	1.41%				
Cyanide																				
Cyanide (Free)	0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005					
Cyanide (Total)	0.005	0.0053	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005					
Cyanide (WAD)	0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005		0.005	<0.005	<0.005					
Dissolved Metals																				
Aluminum (Dissolved)	0.006	0.0103	0.0125		0.002	0.0168	0.0178	5.78%	0.006	<0.006	<0.006		0.002	<0.002	<0.002		0.002	0.0022	0.0024	
Antimony (Dissolved)	0.0002	0.00042	0.00036		0.0002	<0.0002	<0.0002		0.0002	0.00045	0.00045		0.0002	<0.0002	<0.0002		0.0002	0.00398	0.0039	2.03%
Arsenic (Dissolved)	0.0002	0.00312	0.00316	1.27%	0.0002	0.00573	0.00545	5.01%	0.0002	0.00453	0.00447	1.33%	0.0002	0.00543	0.00503	7.65%	0.0002	0.00578	0.0059	2.05%
Barium (Dissolved)	0.0001	0.0576	0.0594	3.08%	0.0001	0.0429	0.0426	0.70%	0.0001	0.0589	0.0586	0.51%	0.0001	0.00934	0.00866	7.56%	0.0001	0.0315	0.0309	1.92%
Beryllium (Dissolved)	0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002	
Bismuth (Dissolved)	0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.001	<0.001	<0.001	
Boron (Dissolved)	0.02	2.55	2.49	2.38%	0.02	0.441	0.445	0.90%	0.02	0.088	0.087		0.02	0.082	0.082		0.02	0.115	0.108	6.28%
Cadmium (Dissolved)	2E-05	0.000023	0.000027		2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002		0.0007	<0.0007	<0.0007	
Calcium (Dissolved)	0.05	30.6	30.3	0.99%	0.05	16.7	16.5	1.20%	0.05	244	244	0.00%	0.05	272	272	0.00%	0.05	245	242	1.23%
Chromium (Dissolved)	0.0002	0.00032	0.0003		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002	
Cobalt (Dissolved)	0.0002	0.00128	0.00129	0.78%	0.0002	0.00031	0.00032		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002		0.0002	0.00192	0.00186	3.17%
Copper (Dissolved)	0.001	<0.001	<0.001		0.0004	<0.0004	<0.0004		0.001	<0.001	<0.001		0.0004	<0.0004	<0.0004		0.0004	0.00712	0.00782	9.37%
Dissolved Cadmium (by saltwater extraction)																				
Iron (Dissolved)	0.03	0.241	0.256	6.04%	0.01	0.239	0.228	4.71%	0.03	<0.03	<0.03		0.01	0.978	0.986	0.81%	0.01	<0.01	<0.01	
Lead (Dissolved)	0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001		0.0001	<0.0001	<0.0001	
Lithium (Dissolved)	0.001	0.0011	<0.001		0.001	0.0197	0.0193	2.05%	0.001	0.0125	0.0117	6.61%	0.001	0.0091	0.009	1.10%	0.001	0.0296	0.0276	6.99%
Magnesium (Dissolved)	0.1	25.5	25.1	1.58%	0.1	4.17	4.12	1.21%	0.1	195	195	0.00%	0.1	195	196	0.51%	0.1	279	279	0.00%
Manganese (Dissolved)	0.0001	1.1	1.14	3.57%	0.0001	0.831	0.776	6.85%	0.0001	0.153	0.153	0.00%	0.0001	0.34	0.315	7.63%	0.0001	0.0875	0.0871	0.46%
Mercury (Dissolved)	1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001	
Molybdenum (Dissolved)	0.0001	0.0604	0.06	0.66%	0.0001	0.0162	0.0164	1.23%	0.0001	0.0262	0.0267	1.89%	0.0001	0.0222	0.0233	4.84%	0.0001	3.42	3.28	4.18%
Nickel (Dissolved)	0.001	0.0066	0.0063	4.65%	0.001	0.0034	0.0033		0.001	0.0023	0.0023		0.001	<0.001	<0.001		0.001	0.0148	0.0148	0.00%
Phosphorus (Metal) Dissolved	0.3	<0.3	<0.3		0.05	0.399	0.397	0.50%	0.3	<0.3	<0.3		0.05	<0.05	<0.05		0.05	<0.05	<0.05	
Potassium (Dissolved)	0.1	13.2	13.4	1.50%	0.1	1.33	1.31	1.52%	0.1	17.9	17.9	0.00%	0.1	14.4	14.3	0.70%	0.1	41.7	41.2	1.21%
Selenium (Dissolved)	0.0002	0.00023	0.00023		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002		0.0002	0.0405	0.0399	1.49%
Silicon (Dissolved)	0.05	4.04	3.98	1.50%	0.05	3.6	3.55	1.40%	0.05	12.9	13	0.77%	0.05	14.3	14.2	0.70%	0.05	7.35	7.24	1.51%
Silver (Dissolved)	2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002	
Sodium (Dissolved)	0.1	296	296	0.00%	0.1	340	320	6.06%	0.1	183	181	1.10%	0.1	169	159	6.10%	0.1	151	149	1.33%
Strontium (Dissolved)	0.0002	1.1	1.08	1.83%	0.0004	0.793	0.773	2.55%	0.0002	4.16	4.17	0.24%	0.0004	2.86	3.03	5.77%	0.0004	3.51	3.36	4.37%
Sulphur (Dissolved)					0.5	211	212	0.47%					0.5	493	503	2.01%	0.5	541	536	0.93%
Thallium (Dissolved)	2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002	
Tin (Dissolved)	0.0002	0.00067	0.00055		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002	
Titanium (Dissolved)	0.01	<0.01	<0.01		0.02	<0.02	<0.02		0.01	0.012	0.012		0.02	<0.02	<0.02		0.02	<0.02	<0.02	
Uranium (Dissolved)	2E-05	0.00529	0.00522	1.33%	2E-05	0.0014	0.00144	2.82%	2E-05	0.00301	0.00302	0.33%	2E-05	0.00236	0.00225	4.77%	2E-05	0.0146	0.0146	0.00%
Vanadium (Dissolved)	0.002	<0.002	<0.002		0.002	<0.002	<0.002		0.002	<0.002	<0.002		0.002	<0.002	<0.002		0.002	0.004	0.004	
Zinc (Dissolved)	0.006	<0.006	<0.006		0.002	<0.002	<0.002		0.006	<0.006	<0.006		0.002	0.0043	0.0037		0.002	<0.002	<0.002	
Total Metals																				
Aluminum (Total)	0.006	0.286	0.4	33.24%	0.006	0.0413	0.0449	8.35%	0.006	0.01	0.0089		0.006	<0.006	<0.006		0.006	0.0154	0.0137	
Antimony (Total)	0.0002	0.00033	0.00041		0.0002	<0.0002	<0.0002		0.0002	0.00043	0.00043		0.0002	<0.0002	<0.0002		0.0002	0.00401	0.00372	7.50%
Arsenic (Total)	0.0002	0.00309	0.00336	8.37%	0.0002	0.00571	0.00584	2.25%	0.0002	0.00479	0.00478	0.21%	0.0002	0.00541	0.00525	3.00%	0.0002	0.00586	0.0058	1.03%
Barium (Total)	0.0001	0.0586	0.0607	3.52%	0.0001	0.0429	0.0438	2.08%	0.0001	0.0502	0.0861	52.68%	0.0001	0.00983	0.00952	3.20%	0.0001	0.0312	0.0298	4.59%
Beryllium (Total)	0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002	
Bismuth (Total)	0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.001	<0.001	<0.001	
Boron (Total)	0.02	2.38	2.47	3.71%	0.02	0.449	0.464	3.29%	0.02	0.092	0.092		0.02	0.093	0.086		0.02	0.117	0.108	8.00%
Cadmium (Total)	2E-05	0.000068	0.00009		2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002		0.0007	<0.0007	<0.0007	
Calcium (Total)	0.05	28.6	30.4	6.10%	0.05	16.1	16.2	0.62%	0.05	259	256	1.17%	0.05	278	273	1.81%	0.05	240	234	2.53%
Chromium (Total)	0.0002	0.00145	0.00206	34.76%	0.0002	0.00122	0.00114	6.78%	0.0002	0.00108	0.00128	16.95%	0.0002	0.00053	0.00055		0.0002	<0.0002	<0.0002	
Cobalt (Total)	0.0002	0.00152	0.00157	3.24%	0.0002	0.0004	0.00038		0.0002	0.0003	0.0003		0.0002	0.0002	0.0002		0.0002	0.0019	0.0019	0.00%
Copper (Total)	0.001	0.0047	0.003		0.001	0.002	0.0026		0.001	<0.001	<0.001		0.001	<0.001	<0.001		0.001	0.0094	0.009	4.35%
Iron (Total)	0.03	0.51	0.636	21.99%	0.01	0.358	0.352	1.69%	0.03	0.489	0.492	0.61%	0.01	1.02	1	1.98%	0.01	0.028	0.022	
Lead (Total)	0.0001	0.00019	0.00026		0.0001	0.00013	0.00013		0.0001	<0.0001	<0.0001		0.0001	0.00021	0.00021		0.0001	<0.0001	<0.0001	
Lithium (Total)	0.001	0.0012	0.0011		0.001	0.0195	0.0198	1.53%	0.001	0.0126	0.0117	7.41%	0.001	0.0108	0.0096	11.76%	0.001	0.0299	0.0275	8.36%
Magnesium (Total)	0.1	23.9	24.6	2.89%	0.1	4.05	4.12	1.71%	0.1	201	201	0.00%	0.1	202	205	1.47%	0.1	275	270	1.83%
Manganese (Total)	0.0001	1.15	1.1	4.44%	0.0001	0.812	0.845	3.98%	0.0001	0.285	0.279	2.13%	0.0001	0.36	0.353	1.96%	0.0001	0.0871	0.0855	1.85%
Mercury (Total)	1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001		1E-05	<0.00001	<0.00001	
Molybdenum (Total)	0.0001	0.0602	0.0606	0.66%	0.0001	0.0168	0.0171	1.77%	0.0001	0.0268	0.027	0.74%	0.0001	0.026	0.024	8.00%	0.0001	3.36	3.19	5.19%
Nickel (Total)	0.001	0.0069	0.0085	20.78%	0.001	0.0038	0.0037		0.001	0.0024	0.0026		0.001	<0.001	<0.001		0.001	0.0148	0.0145	2.05%
Phosphorus (Metal) Total	0.3	<0.3	<0.3		0.05	0.415	0.416	0.24%	0.3	<0.3	<0.3		0.05	<0.05	<0.05		0.05	<0.05	<0.05	
Potassium (Total)	0.1	12.8	14.2	10.37%	0.1	1.31	1.32	0.76%	0.1	17.1	17	0.59%	0.1	14.7	14.6	0.68%	0.1	40.7	39.4	3.25%
Selenium (Total)	0.0002	0.00037	0.0004		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002		0.0002	0.0395	0.038	3.87%
Silicon (Total)	0.05	4.28	4.69	9.14%	0.05	3.56	3.61	1.39%	0.05	13	12.9	0.77%	0.05	14.7	14.5	1.37%	0.05	7.33	7.12	2.91%
Silver (Total)	2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002	
Sodium (Total)	0.1	286	292	2.08%	0.1	325	341	4.80%	0.1	183	179	2.21%	0.1	175	172	1.73%	0.1	146	150	2.70%
Strontium (Total)	0.0002	1.06	1.07	0.94%	0.0004	0.781	0.805	3.03%	0.0002	4.12	4.21	2.16%	0.0004	3.31	3.08	7.20%	0.0004	3.46	3.27	5.65%
Sulphur (Total)					0.5	210	211	0.48%					0.5	526	537	2.07%	0.5	543	530	2.42%
Thallium (Total)	2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002		2E-05	<0.00002	<0.00002		2E-05	0.00002	<0.00002	
Tin (Total)	0.0002	0.00113	0.00173	41.96%	0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002		0.0002	<0.0002	<0.0002	
Titanium (Total)	0.01	0.012	0.016		0.02	<0.02	<0.02		0.01	0.012	0.012		0.02	<0.02	<0.02		0.02	<0.02	<0.02	
Total Cadmium (by saltwater extraction)																				
Uranium (Total)	2E-05	0.00505	0.00524	3.69%	2E-05	0.00141	0.00152	7.51%	2E-05	0.00315	0.00316	0.32%	2E-05	0.00269	0.00262	2.64%	2E-05	0.0142	0.0138	2.86%
Vanadium (Total)	0.002	<0.002	0.0025		0.002	<0.002	<0.002		0.002	<0.002	<0.002		0.002	<0.002	<0.002		0.002	0.004	0.0041	
Zinc (Total)	0.006	<0.006	<0.006		0.006	<0.006	0.0115		0.006	0.0108	0.0099		0.006	<0.006	<0.006		0.006	<0.006	<0.006	
Organics																				
Carbon Organic (Dissolved)	0.5	19.8	19.9	0.50%	0.5	13.2	13	1.53%	0.5	15.4	15	2.63%	0.5	3.96	3.6	9.52%	0.5	2.69	2.97	9.89%
Carbon Organic (Total)	0.5	21.2	21.9	3.25%	0.5	12.7	12.7	0.00%	0.5	14.1	13.7	2.88%	0.5	3.96	3.66	7.87%	0.5	2.69	2.64	1.88%
Nitrogen Organic (Dissolved)	0.05	0.635	0.272	80.04%					0.068	0.193	0.223		0.054	0.174	0.121					
Nitrogen Organic (Total)	0.05	0.275	0.322	15.75%					0.06	0.209	0.214									

Site	MDL	MW12-04	Duplicate	RPD
Date Sampled		14-Aug-13		(%)
Physical Tests				
Acidity to pH 8.3 (as CaCO3)				
Alkalinity (Total as CaCO3)	2	182	188	3.24%
Bicarbonate Alkalinity	2	182	188	3.24%
Carbonate Alkalinity	2	<2	<2	
Color TCU	5	<5	<5	
Hardness as CaCO3 (Dissolved)	0.5	395	396	0.25%
Hydroxide Alkalinity	2	<2	<2	
pH pH	0.1	8.13	8.11	0.25%
Phosphorus (Nutrient) Total				
Specific Conductivity µS/cm	2	1220	1220	0.00%
Total Dissolved Solids	10	851	836	1.78%
Total Suspended Solids	3	8.1	8.4	
Turbidity NTU	0.1	3.92	2.35	**50.08%**
Dissolved Anions				
Bromide (Dissolved)	0.5	<0.5	<0.5	
Chloride (Dissolved)	5	18.5	18.1	
Fluoride (Dissolved)	0.2	0.37	0.37	
Sulphate (Dissolved)	5	443	438	1.14%
Nutrients				
Ammonia (Total)	0.005	0.316	0.319	0.94%
Nitrate (as N)	0.05	<0.05	<0.05	
Nitrate (Available)				
Nitrite (as N)	0.01	<0.01	<0.01	
Nitrogen (Dissolved)	0.05	0.417	0.404	3.17%
Nitrogen (Total)				
Nitrogen Kjeldahl (Total)	0.05	0.443	0.385	14.01%
Orthophosphate (Dissolved)				
Phosphorus (Nutrient) Dissolved	0.02	0.181	0.181	0.00%
Phosphorus (Nutrient) Total	0.02	0.198	0.194	2.04%
Cyanide				
Cyanide (Free)	0.005	<0.005	<0.005	
Cyanide (Total)	0.005	<0.005	<0.005	
Cyanide (WAD)	0.005	<0.005	<0.005	
Dissolved Metals				
Aluminum (Dissolved)	0.001	0.0025	0.002	
Antimony (Dissolved)	0.0001	<0.0001	<0.0001	
Arsenic (Dissolved)	0.0001	0.00473	0.00486	2.71%
Barium (Dissolved)	5E-05	0.0746	0.0742	0.54%
Beryllium (Dissolved)	0.0001	<0.0001	<0.0001	
Bismuth (Dissolved)	0.0005	<0.0005	<0.0005	
Boron (Dissolved)	0.01	0.096	0.096	0.00%
Cadmium (Dissolved)	5E-05	<0.00005	<0.00005	
Calcium (Dissolved)	0.05	41.7	42	0.72%
Chromium (Dissolved)	0.0001	<0.0001	<0.0001	
Cobalt (Dissolved)	0.0001	0.00048	0.00048	
Copper (Dissolved)	0.0002	<0.0002	<0.0002	
Dissolved Cadmium (by saltwater extraction)				
Iron (Dissolved)	0.01	0.024	0.023	
Lead (Dissolved)	5E-05	<0.00005	<0.00005	
Lithium (Dissolved)	0.0005	0.00238	0.00236	
Magnesium (Dissolved)	0.1	70.6	70.7	0.14%
Manganese (Dissolved)	5E-05	0.3	0.299	0.33%
Mercury (Dissolved)	1E-05	<0.00001	<0.00001	
Molybdenum (Dissolved)	5E-05	0.148	0.15	1.34%
Nickel (Dissolved)	0.0005	0.00137	0.00144	
Phosphorus (Metal) Dissolved	0.05	0.17	0.167	
Potassium (Dissolved)	0.1	36.9	37.4	1.35%
Selenium (Dissolved)	0.0001	0.00015	0.00015	
Silicon (Dissolved)	0.05	11.6	11.7	0.86%
Silver (Dissolved)	1E-05	<0.00001	<0.00001	
Sodium (Dissolved)	0.05	106	108	1.87%
Strontium (Dissolved)	0.0002	0.287	0.292	1.73%
Sulphur (Dissolved)	0.5	144	142	1.40%
Thallium (Dissolved)	1E-05	<0.00001	<0.00001	
Tin (Dissolved)	0.0001	<0.0001	<0.0001	
Titanium (Dissolved)	0.01	<0.01	<0.01	
Uranium (Dissolved)	1E-05	0.00105	0.00102	2.90%
Vanadium (Dissolved)	0.001	<0.001	<0.001	
Zinc (Dissolved)	0.001	<0.001	<0.001	
Total Metals				
Aluminum (Total)	0.003	0.175	0.155	12.12%
Antimony (Total)	0.0001	<0.0001	<0.0001	
Arsenic (Total)	0.0001	0.00436	0.00469	7.29%
Barium (Total)	5E-05	0.0737	0.076	3.07%
Beryllium (Total)	0.0001	<0.0001	<0.0001	
Bismuth (Total)	0.0005	<0.0005	<0.0005	
Boron (Total)	0.01	0.1	0.103	2.96%
Cadmium (Total)	5E-05	<0.00005	<0.00005	
Calcium (Total)	0.05	40.1	41.2	2.71%
Chromium (Total)	0.0001	0.00054	0.00054	0.00%
Cobalt (Total)	0.0001	0.00059	0.00062	4.96%
Copper (Total)	0.0005	0.00089	0.00097	
Iron (Total)	0.01	0.261	0.241	7.97%
Lead (Total)	5E-05	0.000052	<0.00005	
Lithium (Total)	0.0005	0.0025	0.00242	
Magnesium (Total)	0.1	67.4	69.4	2.92%
Manganese (Total)	5E-05	0.292	0.309	5.66%
Mercury (Total)	1E-05	<0.00001	<0.00001	
Molybdenum (Total)	5E-05	0.149	0.152	1.99%
Nickel (Total)	0.0005	0.00201	0.00206	
Phosphorus (Metal) Total	0.05	0.178	0.177	
Potassium (Total)	0.1	36.6	37.6	2.70%
Selenium (Total)	0.0001	0.00017	0.0002	
Silicon (Total)	0.05	11.7	12	2.53%
Silver (Total)	1E-05	<0.00001	<0.00001	
Sodium (Total)	0.05	101	106	4.83%
Strontium (Total)	0.0002	0.292	0.295	1.02%
Sulphur (Total)	0.5	141	145	2.80%
Thallium (Total)	1E-05	<0.00001	<0.00001	
Tin (Total)	0.0001	0.00011	0.00011	
Titanium (Total)	0.01	0.011	<0.01	
Total Cadmium (by saltwater extraction)				
Uranium (Total)	1E-05	0.00104	0.00106	1.90%
Vanadium (Total)	0.001	<0.001	<0.001	
Zinc (Total)	0.003	<0.003	0.0036	
Organics				
Carbon Organic (Dissolved)	0.5	2.5	2.54	1.59%
Carbon Organic (Total)	0.5	2.49	2.61	
Nitrogen Organic (Dissolved)				
Nitrogen Organic (Total)				

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APPENDIX B

PHOTOGRAPHS

(Pages B-1 to B-11)

PHOTO 1 AC02 Surface Water Site; Summer

PHOTO 2 AC02 Surface Water Site; Winter

PHOTO 3 AJAX West Pit Surface Water Site

PHOTO 4 AJAX West Pit (East) Surface Water Site

KGHM MINING INC.
AJAX PROJECT

PHOTO 5 ANDER 10 Surface Water Site; Winter

PHOTO 6 ANDER 10 Surface Water Site; Summer

PHOTO 7 ANDER 15 Surface Water Site; Winter

PHOTO 8 ANDER 15 Surface Water Site; Summer

KGHM MINING INC.
AJAX PROJECT

PHOTO 9 CC02 Surface Water Site; Winter

PHOTO 10 CC02 Surface Water Site; Summer

PHOTO 11 CC08 Surface Water Site; Winter

PHOTO 12 CC08 Surface Water Site; Summer

KGHM MINING INC.
AJAX PROJECT

PHOTO 13 Edith Lake Surface Water Site

PHOTO 14 Goose Lake Surface Water Site

PHOTO 15 HUMPH-02 Surface Water Site; Winter

PHOTO 16 HUMPH-02 Surface Water Site; Summer

KGHM MINING INC.
AJAX PROJECT

PHOTO 17 HUMPH-08 Surface Water Site; Winter

PHOTO 18 HUMPH-08 Surface Water Site; Summer

PHOTO 19 HUMPH-10 Surface Water Site; Winter

PHOTO 20 HUMPH-10 Surface Water Site; Summer

KGHM MINING INC.
AJAX PROJECT

PHOTO 21 Inks Lake (INKS-S) Surface Water Site; Summer

PHOTO 22 Jacko Lake Surface Water Site; Summer

PHOTO 23 JC03 Surface Water Site; Winter

PHOTO 24 JC03 Surface Water Site; Winter

KGHM MINING INC.
AJAX PROJECT

PHOTO 25 KC03 Surface Water Site; Winter

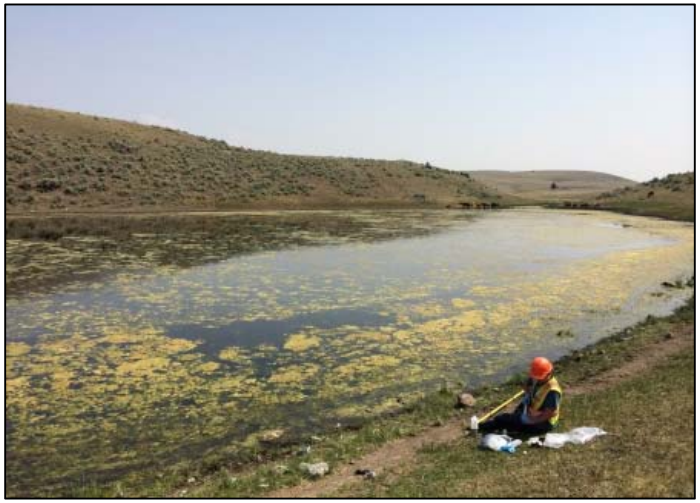

PHOTO 26 MAKAOO-1 Surface Water Site; Summer

PHOTO 27 NSP Surface Water Site; Winter

PHOTO 28 NSP Surface Water Site; Summer

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PHOTO 29 PC02 Surface Water Site; Summer

PHOTO 30 PC02 Surface Water Site; Winter

PHOTO 31 PC02.3 Surface Water Site; Winter

PHOTO 32 PC02.3 Surface Water Site; Summer

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PHOTO 33 PC02.5 Surface Water Site; Winter

PHOTO 34 PC 02.5 Surface Water Site; Summer

PHOTO 35 PC03 Surface Water Site; Winter

PHOTO 36 PC03 Surface Water Site; Summer

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PHOTO 37 PC08 Surface Water Site; Winter

PHOTO 38 PC08 Surface Water Site; Summer

PHOTO 39 PC10 Surface Water Site; Winter

PHOTO 40 PC10 Surface Water Site; Summer

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PHOTO 41 PC02WH Surface Water Site; Water House

PHOTO 42 WALL - Wallender Lake Surface Water Site; Summer

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AJAX PROJECT

APPENDIX C

SURFACE WATER QUALITY DATA TABLES

Appendix C1 Aquatic Life Guidelines
Appendix C2 Drinking Water Guidelines
Appendix C3 Agriculture Guidelines
Appendix C4 Wildlife Guidelines Exceedances
Appendix C5 Recreation Guidelines Exceedances
Appendix C6 SW Summary Stats
Appendix C7 Jacko Lake Profiles 2007 to 2013

APPENDIX C1

AQUATIC LIFE GUIDELINES

(Pages C1-1 to C1-62)

TABLE C1.1 - AQUATIC LIFE GUIDELINES

Analytes	BCWQG-30 DAY AVERAGE[2]	BCWQG-MAXIMUM [3]	CEQG-PAL[4]
Physical Tests			
pH		6.5 to 9	6.5 to 9
Dissolved Anions			
Chloride	150	600	120[18]/640[19]
Fluoride		0.4 to 0.01(-51.73+92.57(Log(H))) [12]	0.12
Sulphate	SITE SPECIFIC [20]		
Nutrients			
Ammonia (Total)	0.102 to 2.08 [13,14]	0.681 to 28.7 [13,14]	0.017 to 192 [13,14]
Nitrate (as N)	3	32.8	3
Nitrite (as N)	0.02 to 0.2 [15]	0.06 to 0.6 [15]	0.06
Cyanide			
Cyanide (Free)			0.005
Cyanide (WAD)		0.01	
Metals			
Aluminum	0.05 to $e^{(1.6-3.327*[pH]+0.402*([pH]\ ^{\wedge}[\ (2)\ ]\ ))}$ [13,16]	0.1 to $e^{(1.209-2.426*[pH]+0.286*[pH]\ ^{\wedge}[\ (2)\ ]\ )}$ [13,16]	0.005 to 0.1 [13]
Antimony	0.009 [21]		
Arsenic		0.005	0.005
Barium	1		
Beryllium	0.00013		
Boron		1.2	1.5[18]/29[19]
Cadmium		0.00002 to $e^{(0.762*ln(H)-6.07)}$/1000 to 0.000172 [12]	$10^{(0.83*(log(H)-2.46)}$/1000 (min 0.000036 mg/L; max 0.000373 mg/L) [12,18] $10^{(1.016*(log(H)-1.71)}$/1000 (min 0.000106 mg/L; max 0.0077 mg/L) [12,19]
Chromium		0.0089	0.0089
Cobalt	0.004	0.11	
Copper	(0.04*H)/1000 to 0.010 [12]	(0.094*H+2)/1000 TO 0.010 [12]	$e^{(0.8545*ln(H)-1.465)}$ 0.2/1000 to 0.004 [12]
Iron		0.35 [16]/1 [17]	0.3
Lead	(3.31+$e^{1.273*ln(H)-4.704}$)/1000 [12]	0.003 to $e^{(1.273*ln(H)-1.460)}$/1000 [12]	e ((1.273*ln(H)-4.705)) /1000 to 0.007 [12]
Manganese	0.0044*H+0.605 [12]	(0.01102*H)+0.54 [12]	
Mercury	0.00002		0.000026
Molybdenum	1	2	0.073
Nickel	e ((0.76*ln(H)+1.06)) /1000 to 0.15 [12]		e ((0.76*ln(H)+1.06)) /1000 to 0.15 [12]
Selenium	0.002	0.002	0.001
Silver	0.00005 to 0.0015 [12]	0.0001 to 0.003 [12]	0.0001
Thallium	0.0008		0.0008
Uranium	0.0085		0.015
Zinc	(7.5+0.75*(H-90))/1000 to 0.0075 [12]	(33+0.75*(H-90))/1000 to 0.033 [12]	0.03

M:\1\01\00246\31\A\Report\3 - Baseline Water Quality - GW SW\Rev0\Appendix\Appendix C - SWQ Data Tables Rev0\[C1 - Aquatic Life Guidelines - Rev0.xlsx]C1.1 - AQUATIC LIFE GUIDELINES

NOTES:

1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. BRITISH COLUMBIA WATER QUALITY GUIDELINES (APPROVED AND WORKING) - 30 DAY AVERAGE LIMITS (BCWQG-30 DAY AVERAGE) - FRESHWATER AQUATIC LIFE.
3. BRITISH COLUMBIA WATER QUALITY GUIDELINES (APPROVED AND WORKING) - MAXIMUM LIMITS (BCWQG-MAX) - FRESHWATER AQUATIC LIFE.
4. CANADIAN ENVIRONMENTAL QUALITY GUIDELINES - WATER QUALITY GUIDELINE FOR THE PROTECTION OF AQUATIC LIFE (CEQG-PAL) - FRESHWATER.
5. THIS SHADING INDICATES THAT THE VALUE EXCEEDS THE LIMITS OF THE BCWQG - 30 DAY AVERAGE GUIDELINES.
6. THIS SHADING INDICATES THAT THE VALUE EXCEEDS THE LIMITS OF THE BCWQG - MAXIMUM GUIDELINES.
7. THIS SHADING INDICATES THAT THE VALUED EXCEEDS THE LIMITS OF THE CEQG-PAL.
8. THIS SHADING INDICATES THAT THE VALUE EXCEEDS THE LIMITS OF THE BCWQG - 30 DAY AVERAGE AND THE BCWQG - MAXIMUM.
9. THIS SHADING INDICATES THAT THE VALUE EXCEEDS THE LIMITS OF THE BCWQG - 30 DAY AVERAGE AND THE CEQG-PAL.
10. THIS SHADING INDICATES THAT THE VALUE EXCEEDS THE LIMITS OF THE BCWQG-MAXIMUM AND THE CEQG-PAL.
11. THIS SHADING INDICATES THAT THE VALUE EXCEEDS ALL OF THE ABOVE LISTED GUIDELINES.
12. HARDNESS (H) DEPENDENT GUIDELINE LIMIT (DISSOLVED).
13. pH DEPENDENT GUIDELINE LIMIT (*IN SITU* VALUE PREFFERED).
14. TEMPERATURE DEPENDENT GUIDELINE LIMIT.
15. CHLORIDE (DISSOLVED) DEPENDENT GUIDELINE LIMIT.
16. GUIDELINE IS SPECIFIC TO DISSOLVED CONCENTRATION ONLY.
17. GUIDELINE IS SPECIFIC TO TOTAL CONCENTRATION ONLY.
18. GUIDELINE IS SPECIFIC TO LONG-TERM EXPOSURE.
19. GUIDELINE IS SPECIFIC TO SHORT-TERM EXPOSURE.
20. GUIDELINE IS APPLIED ONLY FOR WATERS OF DISSOLVED HARDNESS >250 mg/L AND IS DEPENDENT ON TOXICITY TESTING.
21. GUIDELINE IS APPLICABLE FOR Sb(III) ONLY.
22. ALL SHADING INDICATING EXCEEDANCE OF THE CEQG-PAL GUIDELINE FOR B, Cd, AND Cl REFERS TO THE LONG-TERM EXPOSURE GUIDELINES.

TABLE C1.2 - AC02
PAGE 1 OF 2

Site ID		AC02	AC02	AC02	AC02	AC02	AC02	AC02	AC02	AC02	AC02	AC02	AC02	AC02	AC02	AC02
Analytes	**MDL**	**1-May-07**	**18-Jul-07**	**17-Sep-07**	**29-Apr-08**	**7-Jul-08**	**4-Sep-08**	**31-May-11**	**10-May-12**	**16-May-12**	**24-May-12**	**12-Jul-12**	**8-Aug-12**	**8-Jan-13**	**5-Feb-13**	**5-Mar-13**
In Situ Parameters																
Conductivity µS/cm	...	395		697	806	648	655	390	409	481	571	374	756	517	519	598
Oxygen Dissolved %	...				95.6	70.7	58.2	87.4	91.5	80.4	90	64.5	42.2	70.5	71.2	84.5
Oxygen Dissolved	...	11	5.98	9.14	10.6	6.5	6.27	9.12	10.4	8.91	9.04	6.14	3.33	10.3	10.3	11.6
pH (unitless)	...	8.24	8.02	8.1	8.65	7.91	7.82	7.35	8.3	8.21	8.17	8.22	7.94	8.48	8.09	8.19
Redox Potential mV	...	-69.3				-94.4	-72	246	47.5	91.6	107	75.9	25.5	133	171	122
Salinity ppt	...							0.24	0.28	0.32	0.35		0.35	0.48	0.48	0.52
Specific Conductivity µS/cm	...	551	1018	934	1114	727	876	502	581	661	704	434	726	992	986	1058
Temperature °C	...	10.1	17.2	11.7	10.5	19.3	11.8	13.3	9.5	10.7	15.1	17.7	27.2	0.07	0.18	2.19
Total Dissolved Solids	...							326	378	430	458		472	645	642	688
Turbidity NTU	...							0.3	1.3	1.3	1.7	1.9	4.2	2.1	2.5	2.7
Physical Tests																
Acidity to pH 8.3 (as CaCO3)	1				<1											
Alkalinity (Total as CaCO3)	1 to 2	227	355	370	390	351	389	220	273	302	327	320	373	474	446	394
Bicarbonate Alkalinity	1 to 2				378				273	300	309	320	357	474	446	367
Carbonate Alkalinity	1 to 2				12.5				<1	2.6	17.4	<2	15.9	<2	<2	27.3
Color TCU	5	35.7	34.7	29.4	16.6	34.7	31.1	58.6	39.1	36.4	33.7	32.6	34.6	14.6	13.8	24.1
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	257	387	385	567	345	381	243	278	317	331	310	336	468	466	553
Hydroxide Alkalinity	1 to 2				<1				<1	<1	<1	<2	<1	<2	<2	<1
pH (unitless)	0.01 to 0.1	8.38	8.32	8.39	8.31	8.41	8.3	8.29	8.43	8.43	8.4	8.27	8.45	8.26	8.27	8.39
Specific Conductivity µS/cm	2	522	877	933	1160	711	886	536	581	667	685	629	704	916	927	1130
Total Dissolved Solids	1 to 2	345	594	613	752	465	573	358	378	449	455	449	453	570	584	754
Total Suspended Solids	3	<3	33.6	42.2	<3	3.5	92.3	<3	<3	<3	<3	5.3	6.3	3.7	19.3	5.3
Turbidity NTU	0.1				1.49	1.91	28.7	0.82	1.2	1.43	1.67	3.32	4.28	3.02	5.55	3.35
Dissolved Anions																
Bromide	0.05 to 2.495	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	<0.05	<0.05	<0.25	<0.5	<0.5	<0.5
Chloride	0.5 to 1	8.92	11.5	11.2	26.7	5.87	7.6	16	7.56	10.5	9.94	6.38	10.8	9.8	10.6	40.3
Fluoride	0.02 to 0.4	0.216		0.174	0.17	0.231	0.21	0.23	0.219	0.237	0.234	0.244	0.24	0.35	<0.2	0.26
Sulphate	0.5 to 1	47.5	117	144	230	64.4	113	46.8	53.1	74.1	76.8	47.9	60.5	124	121	215
Nutrients																
Ammonia (Total)	0.005 to 0.05	0.021	0.045	0.064	0.025	0.039	0.052	0.0213	0.0115	0.0209	0.0281	0.0414	0.0844	0.134	0.264	0.119
Nitrate (as N)	0.005 to 0.1	0.0115	0.0491	0.1	<0.005	<0.005	0.0684	<0.025	<0.005	<0.005	0.0096	0.0088	0.067	0.106	0.131	0.219
Nitrite (as N)	0.001 to 0.02	0.0012	0.0012	0.0045	<0.001	<0.001	0.0042	0.0069	<0.001	<0.001	0.0012	0.001	0.0438	0.013	<0.01	<0.01
Nitrogen (Dissolved)	0.05 to 0.1							0.79	0.51	0.57	0.52	0.24	0.76	0.662	0.99	0.871
Nitrogen (Total)	0.0025 to 0.11							0.76	0.498	0.619	0.667		0.992	0.716	0.922	1.03
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.529	1.3	1.3	0.644	0.775	1.19	0.753	0.498	0.619	0.656	0.876	0.881	0.671	0.822	0.883
Orthophosphate (Dissolved)	0.001 to 0.01	0.144	0.45	0.175	0.0639	0.21	0.13	0.157								
Phosphorus - Dissolved	0.002 to 0.02								0.147	0.168	0.155	0.194	0.208	0.168	0.141	0.163
Phosphorus - Total	0.002 to 0.02	0.164	0.63	0.235	0.0983	0.22	0.302	0.179	0.153	0.176	0.177	0.216	0.264		0.221	0.185
Cyanide																
Cyanide (Free)	0.005				<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	0.0093	0.0188	0.0105	<0.005	0.0091		0.0099	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																
Aluminum	0.001 to 0.025	<0.005	<0.01	<0.005	<0.01	<0.005	<0.01	<0.005	<0.003	<0.003	0.0017	0.002	0.0029	0.0012	0.0013	0.0013
Antimony	0.0001 to 0.0025	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	0.00012	0.00013	0.00012	0.0001	0.00013	<0.0001	<0.0001	0.00012
Arsenic	0.0001 to 0.0025	0.00284	0.0043	0.00285	0.0028	0.00413	0.0034	0.0025	0.00281	0.00321	0.00354	0.00347	0.00434	0.00261	0.00231	0.00278
Barium	5E-005 to 0.02	0.041	0.028	0.043	0.06	0.026	0.045	0.042	0.0432	0.048	0.0463	0.0406	0.0525	0.059	0.0583	0.0631
Beryllium	0.0001 to 0.005	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2							<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.034	0.049	0.048	0.05	0.073	0.058	0.058	0.041
Cadmium	1E-005 to 8.5E-005	<0.000017	<0.000034	<0.000017	<0.000034	<0.000017	<0.000034	<0.000017	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	53.6	56.8	53.8	103	64.1	55.1	49.6	55.8	62.3	64.4	61.7	53.3	81.5	83.1	98.1
Chromium	0.0001 to 0.018	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001	0.00014	<0.0001	0.00013	0.00011	0.00011	<0.0001	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015	<0.0003	<0.0006	<0.0003	<0.0006	<0.0003	<0.0006	<0.0003	0.00011	0.00011	0.00012	0.00013	0.00016	0.00012	0.00011	0.00017
Copper	0.0002 to 0.006	0.0041	<0.002	<0.001	0.0026	0.0023	<0.002	0.0042	0.00413	0.0039	0.00366	0.00204	0.00097	0.00132	0.00116	0.00315
Dissolved Cadmium (by saltwater extrac	0.00002															
Iron	0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	0.034	<0.03	0.064	<0.03	<0.03	0.022	0.028	0.061	0.046	0.025	0.038
Lead	5E-005 to 0.0025	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	<0.005	0.012	0.0108	<0.01	0.0095	0.011	<0.005	0.00444	0.00661	0.00538	0.00673	0.00998	0.00985	0.00994	0.00876
Magnesium	0.1	29.9	59.5	60.8	75.2	44.8	59.2	29	33.7	39.2	41.4	37.8	49.3	64.1	62.8	74.7
Manganese	5E-005 to 0.0015	0.0189	0.116	0.0778	0.043	0.25	0.0816	0.0107	0.018	0.0355	0.0432	0.173	0.339	0.439	0.258	0.117
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0021	<0.002	0.0019	0.0028	0.0025	<0.002	0.0019	0.0025	0.003	0.00279	0.00217	0.00251	0.00268	0.00242	0.00339
Nickel	0.0005 to 0.005	0.0012	<0.002	<0.001	<0.002	0.0013	<0.002	0.0012	0.00132	0.00141	0.00146	0.0015	0.00128	0.00102	0.00107	0.00136
Phosphorus	0.05 to 0.3							<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.156	0.16	0.174
Potassium	0.05 to 2	8.6	13.1	11.9	12.1	11.3	11.2	8.1	8.03	9.55	9.39	8.84	10.8	12	10.7	14.7
Selenium	0.0001 to 0.006	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001	0.00016	0.00015	0.00016	0.00015	0.00018	<0.0001	<0.0001	0.00038
Silicon	0.05							10.4	11.1	11.5	11.5	11.7	8.25	11.4	11	10.4
Silver	1E-005 to 0.0001	<0.00002	<0.00004	<0.00002	<0.00004	<0.00002	<0.00004	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	25.5	58.5	64.8	57.7	38.7	51.5	27.2	23.8	31.1	33.3	30.6	41.8	46.6	51.2	59.2
Strontium	0.0001 to 0.005							0.382	0.356	0.509	0.459	0.442	0.476	0.707	0.738	0.756
Sulphur	0.5													41.1	38.7	69.3
Thallium	1E-005 to 0.001	<0.0002	<0.0004	<0.0002	<0.0004	<0.0002	<0.0004	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00078	0.00071	0.00093	0.00239	0.00087	0.00077	0.00054	0.000831	0.00103	0.000899	0.000639	0.000867	0.00153	0.00155	0.00253
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.03	0.0057	0.0045	0.0029	0.0044	0.0055	0.0054	0.0054	0.004	0.0045	0.0027	0.0025	0.0055
Zinc	0.001 to 0.006	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.003	<0.003	0.0059	0.0021	0.0028	0.0012	0.0012	<0.001
Total Metals																
Aluminum	0.003 to 0.025	0.0625	0.107	0.318	0.012	0.024	0.196	0.0285	0.044	0.0536	0.0478	0.159	0.151	0.0554	0.0435	0.0683
Antimony	0.0001 to 0.0025	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	0.00014	0.00015	0.00013	0.00013	0.00015	0.0001	0.00011	0.00013
Arsenic	0.0001 to 0.0025	0.00291	0.0037	0.00293	0.0028	0.00411	0.0032	0.00225	0.00274	0.00342	0.00336	0.00349	0.00401	0.00271	0.0024	0.00279
Barium	5E-005 to 0.02	0.042	0.036	0.073	0.06	0.028	0.06	0.04	0.0424	0.0492	0.0457	0.0431	0.0531	0.0604	0.0607	0.0661
Beryllium	0.0001 to 0.005	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2							<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.039	0.058	0.051	0.057	0.073	0.064	0.065	0.044
Cadmium	1E-005 to 8.5E-005	<0.000017	<0.000034	<0.000017	<0.000034	<0.000017	<0.000034	<0.000017	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000014	<0.00001
Calcium	0.05 to 0.1	53.4	54.5	53	104	66.1	56.8	46.5	55.2	63.3	62.8	64.1	52.6	82.7	86.7	98.8
Chromium	0.0001 to 0.005	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001	<0.0004	0.00027	0.00025	0.00047	0.00038	0.0002	0.00025	0.00018
Cobalt	0.0001 to 0.0015	<0.0003	<0.0006	0.00039	<0.0006	<0.0003	<0.0006	<0.0003	0.00013	0.00013	0.00014	0.00026	0.00025	0.00017	0.00015	0.00022
Copper	0.0005 to 0.007	0.0044	<0.002	0.0032	0.003	0.0026	<0.002	0.0047	0.00459	0.00495	0.00413	0.00328	0.00236	0.00259	0.00222	0.00416
Iron	0.01 to 0.03	0.108	0.179	0.572	0.034	0.069	0.311	0.089	0.082	0.086	0.088	0.252	0.273	0.117	0.105	0.135
Lead	5E-005 to 0.0025	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.00005	<0.00005	<0.00005	0.000057	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	<0.005	0.012	0.0114	<0.01	0.0093	0.012	<0.005	0.00438	0.0069	0.00518	0.00664	0.00927	0.0103	0.00995	0.00902
Magnesium	0.1	29.6	56.2	60.7	75.6	45	60.2	27.2	33.1	40	38.8	38.8	48.8	63.8	63.1	72.5
Manganese	5E-005 to 0.0015	0.0254	0.743	1.03	0.0514	0.271	0.434	0.017	0.0227	0.0441	0.0555	0.236	0.377	0.469	0.271	0.125
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	0.000041	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0021	<0.002	0.0021	0.0028	0.0024	<0.002	0.0022	0.00271	0.00327	0.00299	0.0025	0.00268	0.00288	0.00261	0.00369
Nickel	0.0005 to 0.005	0.0013	<0.002	<0.002	<0.002	0.0015	<0.002	0.0012	0.00135	0.00155	0.00151	0.00177	0.00159	0.00115	0.00128	0.00146
Phosphorus	0.05 to 0.3							<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.168	0.178	0.195
Potassium	0.05 to 2	8.6	12	11.7	12.3	11.1	12.2	7.7	7.73	9.81	9.21	8.94	11.1	12.2	11.2	14.4
Selenium	0.0001 to 0.006	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001	0.00016	0.00017	0.00017	0.0002	0.00016	<0.0001	<0.0001	0.00037
Silicon	0.05							9.84	11	11.7	11.1	12.4	8.7	11.8	11.7	10.6
Silver	1E-005 to 0.0001	<0.00002	<0.00004	<0.00002	<0.00004	<0.00002	<0.00004	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	25.4	51.9	63.5	58.2	38.2	57.8	25.6	23.4	32.5	32.6	31.5	42.1	48.4	52	57.1
Strontium	0.0001 to 0.005							0.365	0.359	0.523	0.462	0.463	0.463	0.742	0.74	0.78
Sulphur	0.5													43	41.3	71.8
Thallium	1E-005 to 0.001	<0.0002	<0.0004	<0.0002	<0.0004	<0.0002	<0.0004	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	0.012	<0.01	<0.01	0.011	<0.01	<0.01	<0.01	<0.01	0.011	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002															
Uranium	1E-005 to 0.001	0.00076	0.00072	0.00105	0.00221	0.00081	0.0008	0.00058	0.000862	0.00109	0.000949	0.000723	0.00094	0.0016	0.00161	0.00269
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.03	0.0058	0.0046	0.0039	0.0048	0.0056	0.0058	0.0054	0.0049	0.0052	0.0033	0.0029	0.006
Zinc	0.003 to 0.006	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.003	<0.003	<0.003	0.0035	<0.003	<0.003	<0.003	<0.003
Organics																
Carbon Organic (Dissolved)	0.5 to 5		18.2	17.9	12.3	17.2	16.6	19.1	13.2	14.9	15.8	14.7	14.6	8.93	8.76	11.8
Carbon Organic (Total)	0.5 to 5	16.3						19.6	13.6	14.9	15.5	15.4	15.1	9.19	8.99	11.9
Nitrogen Organic (Dissolved)	0.05 to 0.26							0.762	0.499	0.549	0.481	0.189	0.565			
Nitrogen Organic (Total)	0.05 to 0.3							0.732	0.486	0.598	0.628	0.835	0.797	0.537	0.557	0.765
ALS LAB ID		**L501128**	**L532402**	**L555226**	**L624228**	**L652819**	**L678833**	**L1011500**	**L1146570**	**L1148880**	**L1152500**	**L1178283**	**L1191600**	**L1256678**	**l1265809**	**L1275746**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

AC02 2-Apr-13	AC02 6-May-13	AC02 4-Jun-13	AC02 2-Jul-13	AC02 7-Aug-13	AC02 3-Sep-13	AC02 8-Oct-13	AC02 6-Nov-13	AC02 4-Dec-13	AC02 15-Apr-14	AC02 10-Sep-14
821	397	566	640	628		700	320	550		793
	86.5	108	109	58.2	67.9	77.2	83.1	85.5		84.5
	8.64	10.5	9.56	5.7	6.33	8.85	11.2	12.4		8.84
8.37	8.02	8.29	8.34	8.09	8.18	8.33	8.27	8.2		8.3
123	180	116	74.8	275	213	129	163	110		93.8
0.58	0.24	0.33	0.33	0.37	0.38	0.394	0.27	0.52		
1165	486	676	686	753	769	489	557	1067		1023
9.54	15.4	16.4	21.5	16.3	18.6	9.18	2.76	0.01		13.2
757	316	439	445	490	500	455	362	693		510
6.9	9.6	3.5	6.3	12.7		2.8	9.5	3.6		
							<1			
377	217	291	308	328	359	387	416	431	385	430
369	217	283	290	328	349		405	431	385	407
7.9	<1	7.5	18	<1	9.7		10.9	<2	<2	23.2
17.6	63.8	46.8	51.3	28.9	31.8	24	21.9	14.9		
561	215	299	306	348	337	397	406	487	594	494
<1	<1	<1	<1	<1	<1		<1	<2	<2	<1
8.29	8.43	8.43	8.49	8.35	8.46	8.51	8.38	8.17	8.29	8.46
1130	450	644	657	712	738	772	865	990	1210	1060
778	309	415	458	458	469	482	457	686	844	704
8	3.3	4.4	6.3	5.8	16.3	14.8	9.9	5.3	8.7	3.2
7.71	10.4	2.84	2.93	1.27	9.14	8.08	9.49	3.66	4.11	1.37
<0.5	<0.05	<0.25	<0.05	<0.5	<0.25	<0.5	<0.5	<0.5	<0.5	<0.5
<5	4.85	13.4	13.7	13	12.3	24.5	10.9	37.2	56.8	53.3
<0.2	0.225	0.27	0.244	0.27	0.24	0.32	0.2	<0.2	<0.2	0.197
	33.1	64	46.9	61	61.5	122	81	127	299	131
0.0363	0.0134	0.0175	0.0084	0.02	0.0763	0.0861	0.0656	0.19	0.0412	0.0452
<0.05	0.0057	<0.025	0.0051	<0.05	0.031	0.116	<0.05	<0.05	<0.05	<0.05
<0.01	0.0012	<0.005	<0.001	<0.01	<0.005	0.027	0.012	<0.01	<0.01	0.023
0.619				0.609	0.897					
0.674	0.842	0.674	0.847	0.736	1.04	0.939	0.949			
0.674	0.86	0.745	0.842	0.673	0.958	0.952	0.97	0.699	0.96	0.923
						0.0644	0.0883	0.132	0.0849	0.0992
0.0946	0.231	0.241	0.247	0.128	0.133		0.122	0.144	0.129	
0.137	0.292	0.259	0.223	0.148	0.172	0.158	0.176	0.165	0.103	0.206
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
0.0012	0.0047	0.0021	0.0034	0.0015	0.0026	0.0025	<0.001	0.001	0.002	0.001
0.00012	0.00011	0.00011	0.00012	0.00013	0.00011	0.00011	<0.0001	<0.0001	0.00012	0.00012
0.00302	0.00318	0.00281	0.00326	0.00332	0.00347	0.00297	0.00308	0.00271	0.00275	0.00324
0.0714	0.0365	0.0419	0.045	0.0455	0.0362	0.0388	0.0567	0.0738	0.0761	0.0508
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
0.054	0.042	0.046	0.047	0.066	0.069	0.065	0.065	0.055	0.055	0.068
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
102	44.8	58.3	62.2	57.9	46.4	58.2	69.2	87.7	105	86.8
<0.0001	0.0001	0.00016	0.00016	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
0.00014	0.00014	0.00016	0.00016	0.00011	0.00015	0.00013	0.00014	<0.0001	0.00012	0.0001
0.0019	0.00572	0.00368	0.00295	0.00168	0.00115	0.0011	0.00147	0.00107	0.00173	0.00126
0.012	0.076	0.064	0.069	0.019	0.024	0.018	0.024	0.018	0.018	0.016
<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
0.00823	0.00416	0.00439	0.00498	0.00881	0.00948	0.00972	0.00985	0.01	0.0084	0.00992
74.3	25.1	37.2	36.5	49.5	53.7	61.1	56.5	65	80.3	67.3
0.108	0.0255	0.0441	0.0498	0.0768	0.11	0.0283	0.128	0.371	0.131	0.0482
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
0.00323	0.00195	0.0018	0.00188	0.00293	0.00268	0.00327	0.00305	0.00275	0.00292	0.00347
0.00106	0.00151	0.00165	0.00178	0.00138	0.00127	0.00134	0.00135	0.0015	0.00144	0.00159
0.099	0.238	0.218	0.241	0.135	0.138	0.096	0.109	0.141	0.108	0.125
12.5	9.06	8.92	10.4	11.1	12.2	11.6	12.9	11.3	12.4	12.9
0.00016	0.00019	0.00019	0.00018	0.00015	0.00015	0.00011	0.00013	0.00012	0.00015	0.00014
9.61	11.8	11.7	12.3	11.1	9.42	9.34	11.9	12.2	8.93	11.4
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
56.2	19.9	32.3	35.1	39.5	44.3	44.5	43.6	45.8	57.8	57
0.774	0.305	0.4	0.426	0.487	0.425	0.52	0.616	0.728	0.908	0.713
79.9	11.2	20.4	15.2	20.3	20.3	23	27.2	39.5	92.5	43.4
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0.0019	0.000462	0.000748	0.000645	0.000968	0.000938	0.00107	0.00126	0.00132	0.00176	0.00148
0.0059	0.0063	0.0038	0.0043	0.0033	0.0036	0.0035	0.0033	0.0029	0.0048	0.0042
<0.001	0.0016	<0.001	0.0028	0.0011	<0.001	0.0016	0.001	<0.001	0.0011	<0.001
0.268	0.536	0.172	0.142	0.121	0.429	0.255	0.275	0.149	0.149	0.151
0.00013	0.00013	0.00014	0.00016	0.00018	0.00014	0.00014	0.00016	<0.0001	0.00012	0.00016
0.00299	0.00322	0.00285	0.00322	0.00333	0.00336	0.00292	0.00306	0.00275	0.00272	0.00316
0.0732	0.0411	0.0441	0.0475	0.0493	0.04	0.043	0.0644	0.074	0.0761	0.0532
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
0.057	0.043	0.051	0.05	0.071	0.074	0.076	0.075	0.056	0.057	0.072
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
102	44.3	59.4	60.2	60	46.9	59.5	72.1	89.6	105	83.6
0.00045	0.00102	0.00047	0.00038	0.00033	0.00087	0.00048	0.00044	0.0003	0.00031	0.00031
0.00028	0.0005	0.00028	0.00026	0.0002	0.00044	0.0003	0.00031	0.00018	0.00021	0.00021
0.00369	0.009	0.00491	0.00382	0.00263	0.00507	0.00253	0.00293	0.00204	0.00316	0.0022
0.411	0.768	0.299	0.315	0.194	0.655	0.361	0.368	0.22	0.243	0.211
0.000059	0.000121	0.00005	<0.00005	<0.00005	0.000114	0.000066	0.000077	<0.00005	<0.00005	<0.00005
0.00817	0.00439	0.0048	0.00517	0.00888	0.0111	0.00962	0.0108	0.00983	0.00823	0.00942
73.5	24.7	37	35.6	49.4	50.1	60.1	58.4	62.3	75.6	65.4
0.127	0.0692	0.0704	0.0783	0.107	0.2	0.0777	0.172	0.389	0.151	0.0889
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
0.00327	0.002	0.0021	0.00204	0.00317	0.00305	0.0035	0.00348	0.00298	0.00296	0.00347
0.00145	0.00215	0.00209	0.00195	0.00163	0.00191	0.00172	0.00177	0.00169	0.00153	0.0018
0.142	0.281	0.248	0.251	0.154	0.34	0.13	0.163	0.152	0.135	0.144
12.2	8.88	9.2	10.5	11.7	12.1	11.5	15	12	12.5	12.4
0.00016	0.00019	0.00019	0.00018	0.00015	0.00017	0.00013	0.00012	0.0001	0.00015	0.00013
10.7	12.8	12.6	12.6	11.7	10.2	10.5	13.3	12.9	9.2	11.4
<0.00001	<0.00001	0.000014	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
54	18.8	33.7	34.9	41.5	44.7	46.5	45.9	46.5	57	56.6
0.772	0.32	0.46	0.443	0.503	0.46	0.531	0.661	0.72	0.871	0.713
85.8	11.3	21.4	15.4	21.5	20.6	24.1	30.3	41.2	93.9	43.7
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.01	0.016	<0.01	<0.01	<0.01	0.011	<0.01	<0.01	<0.01	<0.01	<0.01
0.00192	0.000472	0.000802	0.000691	0.00102	0.000994	0.00121	0.00143	0.00137	0.00176	0.00151
0.0067	0.0079	0.0045	0.0047	0.0038	0.0052	0.0044	0.0049	0.0035	0.0055	0.0048
<0.003	0.0032	<0.003	<0.003	<0.003	0.0034	<0.003	<0.003	<0.003	<0.003	<0.003
11	18.1	17.7	19.3	14.7	16.2	12.5	11.9	11.9	11.3	15
11.2	17.6	19.5	19.1	17.3	16.5	13.5	12.9	12.6	14	15.4
0.583										
0.638										
L1285503	**L1298960**	**L1311741**	**L1326032**	**L1344180**	**L1357647**	**L1376311**	**L1388680**	**L1399806**	**L1443519**	**L1516193**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		AJWE-D	AJWE-D	AJWE-D	AJWE-D	AJWE-D	AJWE-D	AJWE-D	AJWE-D	AJWE-D	AJWE-D	AJWE-D
Analytes	**MDL**	**3-May-07**	**17-Jul-07**	**18-Sep-07**	**29-Apr-08**	**7-Jul-08**	**6-Sep-08**	**9-May-12**	**11-Jul-12**	**6-Nov-12**	**1-May-14**	**24-Sep-14**
In Situ Parameters												
Conductivity µS/cm	...	1871	1989	2037	1715	1820	1906	1837	2000	1939	13	2050
Oxygen Dissolved %	...				79.9	66.3	77.8	85.8	93.8		90.1	
Oxygen Dissolved	...	11.2	11.5	9.29	10.2	7.94	8.85	10.7	10.9		10.3	
pH (unitless)	...	8.01	8.05	8.25	8.19	8.19	8.11	8.51	8.38	8.37	8.01	8.42
Redox Potential mV	...		-75.8			-107		247	237	130	82.2	115
Salinity ppt	...		1.43					1.52		1.45	0.01	1.48
Specific Conductivity µS/cm	...	2669	2748	2771	2798	2763	2720	2927	2929	2779	18	2806
Temperature °C	...	9.34	10.4	11.2	4.73	7.13	9.35	5.5	8.38	9.18	9.81	10.9
Total Dissolved Solids	...		1788					1903		1806	12	1837
Turbidity NTU	...							0.1		0.2	-2.4	-0.1
Physical Tests												
Acidity to pH 8.3 (as CaCO3)	1				3.1					<1		
Alkalinity (Total as CaCO3)	1 to 2	168	165	167	177	161	152	163	163	150	166	146
Bicarbonate Alkalinity	1 to 2				177			163	163	150	166	146
Carbonate Alkalinity	1 to 2				<2			<2	<2	<1	<2	<1
Color TCU	5		<5	<5	<5	<5	<5	<5	<5	<5		
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	1280	1290	1160	1240	1190	1230	1380	1330	1340	1360	1300
Hydroxide Alkalinity	1 to 2				<2			<2	<2	<1	<2	<1
pH (unitless)	0.01 to 0.1	8.21	8.21	8.27	8.16	8.32	8.31	8.29	8.3	8.32	8.22	8.33
Specific Conductivity µS/cm	2	2620	2740	2720	2780	2730	2750	2850	2740	2790	2800	2790
Total Dissolved Solids	1 to 2	2240	2270	2260	2250	2270	2270	2510	2650	2440	2600	2420
Total Suspended Solids	3	<3	<3	<3	<3	<3	<3	<3	4	<3	5.2	5.2
Turbidity NTU	0.1				0.23	0.19	0.14	0.18	0.36	1.29	0.45	0.24
Dissolved Anions												
Bromide	0.05 to 2.495	<0.25	<5	<0.5	<2.5	<0.05	<2.5	<1	<1	<1	<1	<1
Chloride	0.5 to 1	26.6	<50	25.3	<25	24.1	34	30	31	30	31	27
Fluoride	0.02 to 0.4	0.37		0.22	1.2	0.144	<1	<0.4	<0.4	<0.4	<0.4	0.177
Sulphate	0.5 to 1	1390	1350	1400	1360	1410	1480	1590	1600	1560	1600	1580
Nutrients												
Ammonia (Total)	0.005 to 0.05	0.027	0.041	0.0073	<0.02	<0.02	<0.02	<0.005	<0.005	0.0051	<0.005	<0.005
Nitrate (as N)	0.005 to 0.1	24.4	24	23.8	22.5	20.8	22.7	22	20.6	21.1	18.8	18.5
Nitrite (as N)	0.001 to 0.02	0.0128	0.16	0.022	0.091	0.0079	0.134	0.029	0.025	0.046	0.031	0.031
Nitrogen (Dissolved)	0.05 to 0.1							28.5	31.4	23.9		
Nitrogen (Total)	0.0025 to 0.11							22.2	20.8	21.2		
Nitrogen Kjeldahl (Total)	0.05 to 0.2	<0.05	0.258	0.209	0.176	0.17	0.222	0.177	0.126	<0.5	<0.05	<0.05
Orthophosphate (Dissolved)	0.001 to 0.01	<0.001	<0.001	0.0027	0.0025	0.0014				0.0019	0.0021	0.0012
Phosphorus - Dissolved	0.002 to 0.02							<0.002	0.0034	<0.002	<0.002	<0.002
Phosphorus - Total	0.002 to 0.02	0.003	0.0032	0.0043	<0.002	0.0022		0.0021	0.0029	<0.002	0.0102	<0.002
Cyanide												
Cyanide (Free)	0.005				<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005				<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals												
Aluminum	0.001 to 0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.006	<0.002	0.0021	0.0012	<0.001
Antimony	0.0001 to 0.0025	0.0225	0.0247	0.0237	0.0209	0.0206	0.021	0.0211	0.0222	0.02	0.0194	0.0189
Arsenic	0.0001 to 0.0025	0.0793	0.0829	0.0757	0.0714	0.0691	0.0725	0.0633	0.0612	0.0572	0.0533	0.0512
Barium	5E-005 to 0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.0167	0.0162	0.0201	0.0185	0.0187
Beryllium	0.0001 to 0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2							<0.001	<0.001	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.1	0.114	0.097	0.091	0.098	0.105
Cadmium	1E-005 to 8.5E-005	0.00111	<0.003	<0.001	0.000479	0.000355	0.00059	<0.0004	<0.0022	<0.00055		<0.0001
Calcium	0.05 to 0.1	164	169	154	157	157	160	175	174	172	177	172
Chromium	0.0001 to 0.018	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015	<0.0015	0.0017	0.0016	<0.0015	<0.0015	0.0017	0.00162	0.00191	0.00119	0.00124	0.00134
Copper	0.0002 to 0.006	0.0292	0.0414	0.0365	<0.03	0.0296	0.0364	0.0249	0.03	0.0175	0.0203	0.0182
Dissolved Cadmium (by saltwater extrac	0.00002										<0.00006	<0.00006
Iron	0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.02	<0.01	<0.01	<0.01
Lead	5E-005 to 0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.045	0.053	0.042	0.052	0.042	0.04	0.0462	0.0412	0.0397	0.0439	0.0457
Magnesium	0.1	212	212	188	207	194	203	229	218	222	222	211
Manganese	5E-005 to 0.0015	0.0019	0.0018	0.002	<0.0015	<0.0015	<0.0015	0.00105	0.00136	0.00118	0.000689	0.000787
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002			<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	2.25	2.24	2.17	2.18	1.95	1.99	2.35	2.34	2.19	2.67	2.2
Nickel	0.0005 to 0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0036	0.0039	0.00334	0.00415	0.00356
Phosphorus	0.05 to 0.3							<0.3	<0.3	<0.05	<0.05	<0.05
Potassium	0.05 to 2	20.1	17.8	19.9	19.2	19.7	18.2	21.3	20.4	21.9	21.6	20
Selenium	0.0001 to 0.006	0.0175	0.017	0.0164	0.0189	0.0155	0.0156	0.0195	0.0162	0.0182	0.0205	0.0184
Silicon	0.05							8.77	9.01	8.65	8.64	8.67
Silver	1E-005 to 0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	210	212	206	208	207	188	235	206	205	218	210
Strontium	0.0001 to 0.005							2.87	2.89	2.77	3.34	2.77
Sulphur	0.5									0.488	496	474
Thallium	1E-005 to 0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00002	<0.00002	0.000016	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.0102	0.0107	0.0095	0.0103	0.0098	0.0094	0.0105	0.0109	0.00979	0.00988	0.00944
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.03	0.0086	0.0081	0.0069	0.008	0.007	0.008	0.0078	0.0076
Zinc	0.001 to 0.006	<0.025	<0.025	<0.025	<0.005	<0.005	<0.005	<0.006	0.0025	<0.001	0.0015	0.0016
Total Metals												
Aluminum	0.003 to 0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.0097	0.0063	0.0699	0.0076	<0.003
Antimony	0.0001 to 0.0025	0.0217	0.0241	0.0234	0.0206	0.021	0.0199	0.0215	0.0223	0.02	0.0191	0.0203
Arsenic	0.0001 to 0.0025	0.0745	0.0811	0.0758	0.0702	0.0726	0.0693	0.064	0.0641	0.0572	0.0518	0.0525
Barium	5E-005 to 0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.0172	0.0171	0.0205	0.0184	0.0191
Beryllium	0.0001 to 0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2							<0.001	<0.001	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.13	0.105	0.095	0.104	0.126
Cadmium	1E-005 to 8.5E-005	0.000645	<0.003	<0.001	0.000472	0.000614	0.000493	<0.0004	<0.0022	<0.00057		<0.0001
Calcium	0.05 to 0.1	157	170	155	157	155	161	182	175	169	173	176
Chromium	0.0001 to 0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0002	<0.0002	0.00046	0.00013	0.00012
Cobalt	0.0001 to 0.0015	<0.0015	0.0016	0.0017	<0.0015	<0.0015	0.0015	0.00168	0.00198	0.00134	0.00129	0.00137
Copper	0.0005 to 0.007	0.0311	0.0407	0.0372	<0.03	0.0313	0.0349	0.0262	0.0327	0.023	0.0221	0.0201
Iron	0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.02	0.087	<0.01	<0.01
Lead	5E-005 to 0.0025	0.0027	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0001	<0.0001	0.000057	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.041	0.049	0.041	0.049	0.04	0.041	0.0486	0.0419	0.0398	0.0441	0.0508
Magnesium	0.1	201	215	188	207	195	191	239	222	224	217	217
Manganese	5E-005 to 0.0015	0.0024	0.0018	0.002	<0.0015	<0.0015	<0.0015	0.00122	0.00147	0.00304	0.000896	0.000848
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002		<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	2.16	2.2	2.14	2.11	2.01	1.89	2.48	2.45	2.32	2.73	2.47
Nickel	0.0005 to 0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0037	0.0039	0.00386	0.0038	0.00362
Phosphorus	0.05 to 0.3							<0.3	<0.3	<0.05	<0.05	<0.05
Potassium	0.05 to 2	19.5	17.8	20	18.6	19.3	18.3	21.9	21.2	21.8	21.1	21.1
Selenium	0.0001 to 0.006	0.0162	0.0165	0.016	0.0178	0.0176	0.0153	0.02	0.0172	0.0183	0.0191	0.0191
Silicon	0.05							9.28	9.19	8.88	8.72	8.88
Silver	1E-005 to 0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	205	215	205	202	201	189	244	213	213	216	220
Strontium	0.0001 to 0.005							3.03	3	2.89	3.36	3
Sulphur	0.5									497	499	492
Thallium	1E-005 to 0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00002	<0.00002	0.000011	<0.00001	0.00001
Tin	0.0001 to 0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002										<0.00006	<0.00006
Uranium	1E-005 to 0.001	0.0098	0.0105	0.0095	0.0101	0.01	0.0092	0.0111	0.011	0.0103	0.0102	0.0103
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.03	0.0084	0.0085	0.0066	0.0083	0.0079	0.0087	0.008	0.0077
Zinc	0.003 to 0.006	<0.025	<0.025	<0.025	<0.005	<0.005	<0.005	<0.006	<0.006	<0.003	<0.003	<0.003
Organics												
Carbon Organic (Dissolved)	0.5 to 5	1.74	1.71	1.58	1.55	1.46	1.1	1.49	1.2	1.29	0.92	1.2
Carbon Organic (Total)	0.5 to 5							1.4	1.15	1.16	0.99	1.2
Nitrogen Organic (Dissolved)	0.05 to 0.26							6.5	10.8	<4.8		
Nitrogen Organic (Total)	0.05 to 0.3							0.177	0.126	<0.5		
ALS LAB ID		**L502198**	**L532007**	**L556006**	**L624576**	**L653575**	**L679672**	**L1145681**	**L1177597**	**l1234688**	**L1450350**	**L1523985**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		AJWE-M
Analytes	**MDL**	**24-Sep-14**
In Situ Parameters		
Conductivity µS/cm	...	2194
Oxygen Dissolved %	...	
Oxygen Dissolved	...	
pH (unitless)	...	8.42
Redox Potential mV	...	115
Salinity ppt	...	1.48
Specific Conductivity µS/cm	...	2250
Temperature °C	...	13.4
Total Dissolved Solids	...	1837
Turbidity NTU	...	-0.1
Physical Tests		
Acidity to pH 8.3 (as CaCO3)	1	
Alkalinity (Total as CaCO3)	1 to 2	149
Bicarbonate Alkalinity	1 to 2	149
Carbonate Alkalinity	1 to 2	<1
Color TCU	5	
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	1240
Hydroxide Alkalinity	1 to 2	<1
pH (unitless)	0.01 to 0.1	8.33
Specific Conductivity µS/cm	2	2720
Total Dissolved Solids	1 to 2	2380
Total Suspended Solids	3	5.1
Turbidity NTU	0.1	0.16
Dissolved Anions		
Bromide	0.05 to 2.495	<1
Chloride	0.5 to 1	26
Fluoride	0.02 to 0.4	0.185
Sulphate	0.5 to 1	1540
Nutrients		
Ammonia (Total)	0.005 to 0.05	0.0094
Nitrate (as N)	0.005 to 0.1	17.5
Nitrite (as N)	0.001 to 0.02	0.121
Nitrogen (Dissolved)	0.05 to 0.1	
Nitrogen (Total)	0.0025 to 0.11	
Nitrogen Kjeldahl (Total)	0.05 to 0.2	<0.05
Orthophosphate (Dissolved)	0.001 to 0.01	0.0022
Phosphorus - Dissolved	0.002 to 0.02	<0.002
Phosphorus - Total	0.002 to 0.02	<0.002
Cyanide		
Cyanide (Free)	0.005	<0.005
Cyanide (Total)	0.005	<0.005
Cyanide (WAD)	0.005	<0.005
Dissolved Metals		
Aluminum	0.001 to 0.025	<0.001
Antimony	0.0001 to 0.0025	0.0186
Arsenic	0.0001 to 0.0025	0.0468
Barium	5E-005 to 0.02	0.0187
Beryllium	0.0001 to 0.005	<0.0001
Bismuth	0.0005 to 0.2	<0.0005
Boron	0.01 to 0.1	0.103
Cadmium	1E-005 to 8.5E-005	<0.0001
Calcium	0.05 to 0.1	166
Chromium	0.0001 to 0.018	<0.0001
Cobalt	0.0001 to 0.0015	0.001
Copper	0.0002 to 0.006	0.0166
Dissolved Cadmium (by saltwater extrac	0.00002	<0.00006
Iron	0.01 to 0.03	<0.01
Lead	5E-005 to 0.0025	<0.00005
Lithium	0.0005 to 0.025	0.0445
Magnesium	0.1	200
Manganese	5E-005 to 0.0015	0.000629
Mercury	1E-005 to 5E-005	<0.00001
Molybdenum	5E-005 to 0.005	2.26
Nickel	0.0005 to 0.005	0.0035
Phosphorus	0.05 to 0.3	<0.05
Potassium	0.05 to 2	19.7
Selenium	0.0001 to 0.006	0.0182
Silicon	0.05	8.5
Silver	1E-005 to 0.0001	<0.00001
Sodium	0.05 to 2	201
Strontium	0.0001 to 0.005	2.8
Sulphur	0.5	452
Thallium	1E-005 to 0.001	0.000011
Tin	0.0001 to 0.0025	<0.0001
Titanium	0.01	<0.01
Uranium	1E-005 to 0.001	0.00918
Vanadium	0.001 to 0.03	0.0081
Zinc	0.001 to 0.006	0.0013
Total Metals		
Aluminum	0.003 to 0.025	<0.006
Antimony	0.0001 to 0.0025	0.0192
Arsenic	0.0001 to 0.0025	0.0484
Barium	5E-005 to 0.02	0.0183
Beryllium	0.0001 to 0.005	<0.0001
Bismuth	0.0005 to 0.2	<0.0005
Boron	0.01 to 0.1	p
Cadmium	1E-005 to 8.5E-005	<0.0001
Calcium	0.05 to 0.1	169
Chromium	0.0001 to 0.005	0.00025
Cobalt	0.0001 to 0.0015	0.00105
Copper	0.0005 to 0.007	0.0179
Iron	0.01 to 0.03	<0.01
Lead	5E-005 to 0.0025	<0.00005
Lithium	0.0005 to 0.025	0.0495
Magnesium	0.1	208
Manganese	5E-005 to 0.0015	0.000781
Mercury	1E-005 to 5E-005	<0.00001
Molybdenum	5E-005 to 0.005	2.34
Nickel	0.0005 to 0.005	0.00379
Phosphorus	0.05 to 0.3	<0.05
Potassium	0.05 to 2	20.5
Selenium	0.0001 to 0.006	0.0183
Silicon	0.05	8.7
Silver	1E-005 to 0.0001	<0.00001
Sodium	0.05 to 2	208
Strontium	0.0001 to 0.005	2.86
Sulphur	0.5	467
Thallium	1E-005 to 0.001	0.000011
Tin	0.0001 to 0.0025	<0.0001
Titanium	0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002	<0.00006
Uranium	1E-005 to 0.001	0.00967
Vanadium	0.001 to 0.03	0.0085
Zinc	0.003 to 0.006	<0.003
Organics		
Carbon Organic (Dissolved)	0.5 to 5	1.17
Carbon Organic (Total)	0.5 to 5	1.03
Nitrogen Organic (Dissolved)	0.05 to 0.26	
Nitrogen Organic (Total)	0.05 to 0.3	
ALS LAB ID		**L1523985**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		AJWE-S	AJWE-S	AJWE-S	AJWE-S	AJWE-S	AJWE-S	AJWE-S	AJWE-S	AJWE-S	AJWE-S	AJWE-S
Analytes	**MDL**	**3-May-07**	**17-Jul-07**	**18-Sep-07**	**29-Apr-08**	**7-Jul-08**	**6-Sep-08**	**9-May-12**	**11-Jul-12**	**6-Nov-12**	**1-May-14**	**24-Sep-14**
In Situ Parameters												
Conductivity µS/cm	...	1535	2406	2204	1692	2718	2264	1883	2553	1938	13	1000
Oxygen Dissolved %	...				92.7	81.1	106	91.3	91.5		90.4	1
Oxygen Dissolved	...	10.7	8.79	9.22	11.3	7.5	10.5	10.4	8.16		10.3	1
pH (unitless)	...	8.4	7.89	8.26	8.11	8.01	8.39	8.49	8.3	8.37	8.01	1
Redox Potential mV	...		-68.8			-99.4		218	191	90.9	82.2	1
Salinity ppt	...		1.36					1.4		1.45	0.01	1
Specific Conductivity µS/cm	...	2254	2623	2703	2620	2887	2753	2689	2826	2777	18	1000
Temperature °C	...	8.29	20.7	15.3	6.48	18.7	15.7	9.31	19.9	9.17	9.81	1
Total Dissolved Solids	...		1701					1748		1805	12	1000
Turbidity NTU	...							0.2		0.2	-2.4	1
Physical Tests												
Acidity to pH 8.3 (as CaCO3)	1				2.8					<1		
Alkalinity (Total as CaCO3)	1 to 2	170	165	162	191	157	154	144	149	146	151	149
Bicarbonate Alkalinity	1 to 2				191			144	149	146	151	149
Carbonate Alkalinity	1 to 2				<2			<1	<1	<1	<2	<1
Color TCU	5		<5	<5	<5	<5	<5	<5	<5	<5		
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	1170	1250	1130	1160	1180	1290	1250	1290	1340	1060	1270
Hydroxide Alkalinity	1 to 2				<2			<1	<1	<1	<2	<1
pH (unitless)	0.01 to 0.1	8.21	8.27	8.36	8.17	8.39	8.39	8.31	8.33	8.3	8.24	8.35
Specific Conductivity µS/cm	2	2530	2630	2680	2620	2670	2770	2650	2650	2780	2240	2720
Total Dissolved Solids	1 to 2	2210	2220	2250	2100	2200	2310	2270	2480	2260	1910	2350
Total Suspended Solids	3	<3	<3	<3	4.2	<3	<3	<3	<3	<3	<3	8.2
Turbidity NTU	0.1				0.31	0.31	0.19	0.22	0.25	0.17	0.45	0.13
Dissolved Anions												
Bromide	0.05 to 2.495	<0.25	<5	<0.5	<2.5	<0.05	<2.5	<1	<1	<1	<1	<1
Chloride	0.5 to 1	25.3	<50	24.6	<25	24.6	30	25	30	29	20	26
Fluoride	0.02 to 0.4	0.38		0.21	1.4	0.154	<1	<0.4	<0.4	<0.4	<0.4	0.184
Sulphate	0.5 to 1	1340	1300	1380	1280	1400	1500	1450	1520	1560	1200	1550
Nutrients												
Ammonia (Total)	0.005 to 0.05	0.023	0.03	<0.005	<0.02	0.039	0.023	0.0064	<0.005	0.0051	<0.005	0.0102
Nitrate (as N)	0.005 to 0.1	23.2	21.8	23.1	20.8	20.3	22.4	19.8	19.2	21.2	13.7	17.7
Nitrite (as N)	0.001 to 0.02	0.0456	0.22	0.09	0.127	0.143	0.242	0.101	0.162	0.028	0.116	0.127
Nitrogen (Dissolved)	0.05 to 0.1							25	29.7	22.6		
Nitrogen (Total)	0.0025 to 0.11							19.9	19.4	21.2		
Nitrogen Kjeldahl (Total)	0.05 to 0.2	<0.05	0.212	<0.05	0.153	0.33	0.34	<0.05	<0.05	<0.05	<0.05	<0.05
Orthophosphate (Dissolved)	0.001 to 0.01	0.0014	0.0027	0.0028	0.0028	0.0024				0.0015	0.0017	0.003
Phosphorus - Dissolved	0.002 to 0.02							0.002	<0.002	<0.002	<0.002	<0.002
Phosphorus - Total	0.002 to 0.02	0.0024	<0.002	0.0069	0.0024	0.0039		<0.002	0.0023	<0.002	<0.002	<0.002
Cyanide												
Cyanide (Free)	0.005				<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005				<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals												
Aluminum	0.001 to 0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.003	<0.002	0.0012	0.001	<0.001
Antimony	0.0001 to 0.0025	0.0209	0.0187	0.0207	0.0225	0.0183	0.0186	0.0184	0.0196	0.0194	0.0135	0.0185
Arsenic	0.0001 to 0.0025	0.0727	0.0614	0.0657	0.0763	0.0599	0.0613	0.0549	0.0547	0.0561	0.0381	0.0473
Barium	5E-005 to 0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.0158	0.0174	0.0196	0.0149	0.0192
Beryllium	0.0001 to 0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2							<0.0005	<0.001	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.11	0.108	0.095	0.088	0.076	0.101
Cadmium	1E-005 to 8.5E-005	0.000342	<0.003	<0.001	<0.0006	0.000467	0.00048	<0.0004	<0.002	<0.00053		<0.0001
Calcium	0.05 to 0.1	152	162	153	150	153	170	160	169	171	140	169
Chromium	0.0001 to 0.018	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	0.00122	0.00115	0.00116	0.00097	0.00097
Copper	0.0002 to 0.006	0.0213	0.0172	0.0163	0.0276	0.0193	0.0169	0.0197	0.0177	0.0178	0.0206	0.0162
Dissolved Cadmium (by saltwater extrac	0.00002										<0.00004	<0.00006
Iron	0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.02	<0.01	<0.01	<0.01
Lead	5E-005 to 0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.00005	<0.0001	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.04	0.045	0.041	0.054	0.039	0.04	0.0426	0.04	0.038	0.0313	0.0428
Magnesium	0.1	192	205	181	191	193	211	205	212	223	173	207
Manganese	5E-005 to 0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	0.000648	0.0008	0.00116	0.000841	0.000598
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002		<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	2.21	2.03	2.26	2.47	1.93	1.99	2.16	2.33	2.17	1.98	2.2
Nickel	0.0005 to 0.005	<0.005	<0.005	<0.005	0.0051	<0.005	<0.005	0.00344	0.0038	0.00324	0.00345	0.00359
Phosphorus	0.05 to 0.3							<0.3	<0.3	<0.05	<0.05	<0.05
Potassium	0.05 to 2	19.1	17.5	19	17.6	19.7	21.6	19.3	20.1	21.8	17.3	20.5
Selenium	0.0001 to 0.006	0.0165	0.0165	0.0177	0.0221	0.0159	0.0153	0.0174	0.0163	0.0178	0.0158	0.018
Silicon	0.05							8.05	8.86	8.6	7.22	8.67
Silver	1E-005 to 0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	198	192	191	190	200	211	211	199	206	164	200
Strontium	0.0001 to 0.005							2.65	2.83	2.67	2.52	2.68
Sulphur	0.5									0.483	379	465
Thallium	1E-005 to 0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00001	<0.00002	<0.00001	<0.00001	0.00001
Tin	0.0001 to 0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.0097	0.0104	0.0101	0.0121	0.0099	0.0098	0.00962	0.0105	0.00979	0.00784	0.00916
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.03	0.0109	0.01	0.0089	0.0076	0.008	0.008	0.008	0.0081
Zinc	0.001 to 0.006	<0.025	<0.025	<0.025	<0.005	<0.005	<0.005	<0.003	0.0048	<0.001	<0.001	<0.001
Total Metals												
Aluminum	0.003 to 0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.007	<0.006	0.0033	0.0089	<0.006
Antimony	0.0001 to 0.0025	0.0204	0.0193	0.0208	0.0173	0.0179	0.0187	0.0184	0.0205	0.0198	0.0134	0.0189
Arsenic	0.0001 to 0.0025	0.0715	0.0628	0.0654	0.0597	0.0588	0.0608	0.0545	0.0517	0.0567	0.0363	0.0482
Barium	5E-005 to 0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.021	0.016	0.0173	0.0199	0.0145	0.0184
Beryllium	0.0001 to 0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2							<0.0005	<0.001	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.11	0.117	0.086	0.094	0.08	0.114
Cadmium	1E-005 to 8.5E-005	0.000135	<0.003	<0.001	<0.0005	0.000449	0.000439	<0.0004	<0.0005	<0.00056		<0.0001
Calcium	0.05 to 0.1	158	160	151	148	153	175	163	163	171	135	169
Chromium	0.0001 to 0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00012	<0.0002	<0.0001	0.00011	0.00015
Cobalt	0.0001 to 0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	0.00131	0.00111	0.00122	0.00098	0.00102
Copper	0.0005 to 0.007	0.0218	0.0187	0.0173	0.0221	0.02	0.0172	0.0206	0.0178	0.0186	0.0216	0.0169
Iron	0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.02	<0.01	<0.01	<0.01
Lead	5E-005 to 0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.00005	<0.0001	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.04	0.048	0.042	0.04	0.038	0.04	0.0433	0.043	0.0396	0.0314	0.0441
Magnesium	0.1	201	202	179	193	195	222	212	206	225	169	211
Manganese	5E-005 to 0.0015	<0.0015	<0.0015	0.0016	<0.0015	<0.0015	<0.0015	0.000913	0.00076	0.00136	0.00099	0.00064
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002		<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	2.18	2.08	2.27	1.89	1.88	1.96	2.21	2.51	2.33	2	2.48
Nickel	0.0005 to 0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00358	0.0036	0.00332	0.00347	0.00363
Phosphorus	0.05 to 0.3							<0.3	<0.3	<0.05	<0.05	<0.05
Potassium	0.05 to 2	19.1	17.3	18.7	17.8	19.8	23.9	19.5	18.6	21.9	16.6	20.8
Selenium	0.0001 to 0.006	0.0168	0.0167	0.0168	0.0165	0.0154	0.0154	0.0168	0.0149	0.018	0.0147	0.018
Silicon	0.05							8.3	8.67	8.75	7.15	8.78
Silver	1E-005 to 0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	197	193	187	192	202	229	211	192	211	165	202
Strontium	0.0001 to 0.005							2.68	3.1	2.86	2.49	3
Sulphur	0.5									501	385	471
Thallium	1E-005 to 0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00001	<0.00002	<0.00001	<0.00001	0.000011
Tin	0.0001 to 0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.012	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002										<0.00004	<0.00006
Uranium	1E-005 to 0.001	0.0094	0.0101	0.0102	0.0094	0.0097	0.0097	0.00983	0.011	0.0102	0.00785	0.00979
Vanadium	0.001 to 0.03	<0.03	<0.03	0.0205	0.0205	0.0101	0.0088	0.0079	0.008	0.0083	0.0081	0.0083
Zinc	0.003 to 0.006	<0.025	<0.025	<0.025	<0.005	<0.005	<0.005	<0.003	<0.006	<0.003	<0.003	<0.003
Organics												
Carbon Organic (Dissolved)	0.5 to 5	1.57	1.57	1.48	1.88	2.08	1.47	1.1	1.31	1.73	1.31	1.08
Carbon Organic (Total)	0.5 to 5							1.14	1.16	1.67	1.5	1.07
Nitrogen Organic (Dissolved)	0.05 to 0.26							5.1	10.3	<4.5		
Nitrogen Organic (Total)	0.05 to 0.3							<0.06	<0.06	<0.06		
ALS LAB ID		**L502198**	**L532007**	**L556006**	**L624576**	**L653575**	**L679672**	**L1145681**	**L1177597**	**l1234688**	**L1450350**	**L1523985**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C1.6 - AJWW-D
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Site ID		AJWW-D	AJWW-D	AJWW-D	AJWW-D	AJWW-D	AJWW-D	AJWW-D
Analytes	MDL	19-Jul-07	18-Sep-07	29-Apr-08	7-Jul-08	5-Sep-08	1-May-14	25-Sep-14
In Situ Parameters								
Conductivity µS/cm	...	2174	2202		2139	2150	2321	2445
Oxygen Dissolved %	...				12.2	17.5	65.7	20.2
Oxygen Dissolved	...	2.08	1.82		1.54	2.14	7.37	2.26
pH (unitless)	...	7.9	8.04		7.59	7.71	8	7.76
Redox Potential mV	...				-73.8	-65	110	137
Salinity ppt	...						1.71	1.81
Specific Conductivity µS/cm	...	3367	3428		3477	3406	3254	3437
Temperature °C	...	6.46	6.3		4.85	5.67	10.1	9.9
Total Dissolved Solids	...						2100	2233
Turbidity NTU	...						-3.1	0
Physical Tests								
Acidity to pH 8.3 (as CaCO3)	1	5.8		7.8				
Alkalinity (Total as CaCO3)	1 to 2	154	161	170	163	165	162	158
Bicarbonate Alkalinity	1 to 2			170		165	162	158
Carbonate Alkalinity	1 to 2			<2		<2	<2	<2
Color TCU	5	<5	<5	<5	<5	<5		
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	1770	1590	1750	1700	1710	1930	1830
Hydroxide Alkalinity	1 to 2			<2		<2	<2	<2
pH (unitless)	0.01 to 0.1	7.97	8.1	7.95	8.1	8.14	8.07	8.22
Specific Conductivity µS/cm	2	3300	3370	3450	3380	3410	3520	3530
Total Dissolved Solids	1 to 2	2970	3010	741	2930	3140	3390	3230
Total Suspended Solids	3	4.2	<3	4.1	<3	<3	6	3.6
Turbidity NTU	0.1			0.65	0.5	0.39	0.29	0.16
Dissolved Anions								
Bromide	0.05 to 2.495	<0.5	<0.5	<2.5	<0.5	<2.5	<1	<1
Chloride	0.5 to 1	35.8	38.4	33	36	39	38	32
Fluoride	0.02 to 0.4		0.24	1.3	0.38	<1	<0.4	0.206
Sulphate	0.5 to 1	1650	1800	1650	1700	1770	1980	1850
Nutrients								
Ammonia (Total)	0.005 to 0.05	0.024	0.0107	<0.02	0.045	0.028	<0.005	0.0115
Nitrate (as N)	0.005 to 0.1	72.9	79.9	74.1	74.3	79	71.4	65.4
Nitrite (as N)	0.001 to 0.02	0.138	0.187	0.074	0.049	0.138	0.036	0.149
Nitrogen (Dissolved)	0.05 to 0.1							
Nitrogen (Total)	0.0025 to 0.11							
Nitrogen Kjeldahl (Total)	0.05 to 0.2	<0.05	0.27	0.152	0.39	0.239	<0.05	<0.05
Orthophosphate (Dissolved)	0.001 to 0.01	0.0012	0.0021	0.0011	<0.001		0.0011	0.0018
Phosphorus - Dissolved	0.002 to 0.02						<0.002	<0.002
Phosphorus - Total	0.002 to 0.02	0.0032	0.0066	0.0034	0.005		<0.002	<0.002
Cyanide								
Cyanide (Free)	0.005			<0.005	<0.005		<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005
Cyanide (WAD)	0.005			<0.005	<0.005		<0.005	<0.005
Dissolved Metals								
Aluminum	0.001 to 0.025	<0.025	<0.05	<0.05	<0.05	<0.025	<0.002	<0.001
Antimony	0.0001 to 0.0025	0.0151	0.0142	0.0167	0.0143	0.0157	0.0171	0.0172
Arsenic	0.0001 to 0.0025	0.02	0.0183	0.0212	0.018	0.0193	0.0178	0.0154
Barium	5E-005 to 0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.0137	0.0155
Beryllium	0.0001 to 0.005	<0.005	<0.01	<0.01	<0.01	<0.005	<0.0002	<0.0001
Bismuth	0.0005 to 0.2						<0.001	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.066	0.073
Cadmium	1E-005 to 8.5E-005	<0.005	<0.002	<0.0007	0.00066	0.000914		<0.0002
Calcium	0.05 to 0.1	228	212	221	218	225	255	243
Chromium	0.0001 to 0.018	<0.005	<0.01	<0.01	<0.01	<0.005	<0.0002	<0.0001
Cobalt	0.0001 to 0.0015	<0.0015	<0.003	<0.003	<0.003	<0.0015	0.00089	0.00097
Copper	0.0002 to 0.006	0.0281	0.028	0.034	0.031	0.0265	0.0384	0.0399
Dissolved Cadmium (by saltwater extrac	0.00002						<0.00008	<0.00012
Iron	0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.01	<0.01
Lead	5E-005 to 0.0025	<0.0025	<0.005	<0.005	<0.005	<0.0025	<0.0001	<0.00005
Lithium	0.0005 to 0.025	0.047	<0.05	0.054	0.05	0.045	0.0505	0.0545
Magnesium	0.1	292	258	292	280	279	314	297
Manganese	5E-005 to 0.0015	0.0269	0.0341	0.0213	0.0234	0.0278	0.00317	0.00506
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	3.3	3.29	3.4	3.15	3.37	4.84	4.11
Nickel	0.0005 to 0.005	0.0118	0.012	0.015	0.014	0.0135	0.0149	0.0147
Phosphorus	0.05 to 0.3						<0.05	<0.05
Potassium	0.05 to 2	25.4	24.5	24.7	25.5	25.1	31.9	30.4
Selenium	0.0001 to 0.006	0.0291	0.028	0.035	0.028	0.0321	0.0522	0.0485
Silicon	0.05						7.19	7.33
Silver	1E-005 to 0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0001	<0.00002	<0.00001
Sodium	0.05 to 2	200	193	197	198	183	214	205
Strontium	0.0001 to 0.005						4.46	3.75
Sulphur	0.5						616	597
Thallium	1E-005 to 0.001	<0.001	<0.002	<0.002	<0.002	<0.001	<0.00002	0.00001
Tin	0.0001 to 0.0025	<0.0025	<0.005	<0.005	<0.005	<0.0025	<0.0002	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	0.01	0.012	<0.02	<0.01
Uranium	1E-005 to 0.001	0.0103	0.0111	0.0111	0.0111	0.0109	0.0109	0.0106
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.01	<0.01	0.005	0.0046	0.0046
Zinc	0.001 to 0.006	<0.025	<0.05	<0.005	<0.005	<0.005	<0.002	0.0014
Total Metals								
Aluminum	0.003 to 0.025	<0.025	<0.05	<0.05	<0.05	<0.025	0.0088	<0.006
Antimony	0.0001 to 0.0025	0.0143	0.0152	0.017	0.0142	0.0156	0.017	0.0175
Arsenic	0.0001 to 0.0025	0.0192	0.0186	0.0211	0.0176	0.0196	0.0177	0.0148
Barium	5E-005 to 0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.0136	0.0146
Beryllium	0.0001 to 0.005	<0.005	<0.01	<0.01	<0.01	<0.005	<0.0002	<0.0001
Bismuth	0.0005 to 0.2						<0.001	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.071	0.08
Cadmium	1E-005 to 8.5E-005	<0.005	<0.002	<0.0008	0.00057	0.000887		<0.0002
Calcium	0.05 to 0.1	230	212	222	221	222	245	237
Chromium	0.0001 to 0.005	<0.005	<0.01	<0.01	<0.01	<0.005	<0.0002	0.0002
Cobalt	0.0001 to 0.0015	<0.0015	<0.003	<0.003	<0.003	<0.0015	0.00093	0.00094
Copper	0.0005 to 0.007	0.0275	0.029	0.036	0.032	0.0274	0.0438	0.0412
Iron	0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.01	<0.01
Lead	5E-005 to 0.0025	<0.0025	<0.005	<0.005	<0.005	<0.0025	<0.0001	<0.00005
Lithium	0.0005 to 0.025	0.045	0.05	0.057	0.051	0.046	0.0516	0.0544
Magnesium	0.1	287	261	292	281	277	310	291
Manganese	5E-005 to 0.0015	0.026	0.0357	0.0225	0.0235	0.0278	0.00326	0.0052
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	3.16	3.43	3.54	3.15	3.4	4.97	4.11
Nickel	0.0005 to 0.005	0.0113	0.013	0.015	0.014	0.0135	0.0153	0.0147
Phosphorus	0.05 to 0.3						<0.05	<0.05
Potassium	0.05 to 2	25	24.4	24.6	25.7	24.3	30.3	30.3
Selenium	0.0001 to 0.006	0.0284	0.029	0.033	0.028	0.031	0.05	0.0477
Silicon	0.05						7.08	7.27
Silver	1E-005 to 0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0001	<0.00002	<0.00001
Sodium	0.05 to 2	198	191	195	199	183	217	199
Strontium	0.0001 to 0.005						4.49	3.84
Sulphur	0.5						624	583
Thallium	1E-005 to 0.001	<0.001	<0.002	<0.002	<0.002	<0.001	<0.00002	0.000012
Tin	0.0001 to 0.0025	<0.0025	<0.005	<0.005	<0.005	<0.0025	<0.0002	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	0.011	<0.02	<0.01
Total Cadmium (by saltwater extraction)	0.00002						<0.00008	<0.00012
Uranium	1E-005 to 0.001	0.0101	0.0118	0.0115	0.0107	0.0111	0.0111	0.0104
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.01	<0.01	0.0051	0.0048	0.0045
Zinc	0.003 to 0.006	<0.025	<0.05	<0.005	<0.005	<0.005	<0.006	<0.003
Organics								
Carbon Organic (Dissolved)	0.5 to 5	2.59	2.51	2.45	2.29	2.4	1.45	1.35
Carbon Organic (Total)	0.5 to 5						1.57	1.42
Nitrogen Organic (Dissolved)	0.05 to 0.26							
Nitrogen Organic (Total)	0.05 to 0.3							
ALS LAB ID		**L532652**	**L556006**	**L624576**	**L653575**	**L679128**	**L1450350**	**L1523985**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C1.7 - AJWW-S
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Site ID		AJWW-S	AJWW-S	AJWW-S	AJWW-S	AJWW-S	AJWW-S	AJWW-S	AJWW-S
Analytes	MDL	3-May-07	19-Jul-07	18-Sep-07	29-Apr-08	7-Jul-08	5-Sep-08	1-May-14	25-Sep-14
In Situ Parameters									
Conductivity µS/cm	...	2285	2575	2579	2283	2748	2643	2321	2725
Oxygen Dissolved %	...					57.9	83.3	65.7	85.9
Oxygen Dissolved	...	9.09	4.84	8.39		5.6	8.62	7.37	8.75
pH (unitless)	...	8.28	7.9	8.3		7.28	8.08	8	8.19
Redox Potential mV	...					-57.9	-86	110	113
Salinity ppt	...							1.71	1.83
Specific Conductivity µS/cm	...	3334	3352	3399	3439	3465	3406	3254	3470
Temperature °C	...	8.5	12.9	12.4	7.41	14.2	13.3	10.1	13.8
Total Dissolved Solids	...							2110	2256
Turbidity NTU	...							-3.1	0.1
Physical Tests									
Acidity to pH 8.3 (as CaCO3)	1		4.6		6.4				
Alkalinity (Total as CaCO3)	1 to 2	165	152	155	156	157	154	157	161
Bicarbonate Alkalinity	1 to 2				156		154	157	161
Carbonate Alkalinity	1 to 2				<2		<2	<2	<2
Color TCU	5		<5	<5	<5	<5	<5		
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	1670	1760	1630	1710	1690	1750	1900	1820
Hydroxide Alkalinity	1 to 2				<2		<2	<2	<2
pH (unitless)	0.01 to 0.1	8.13	8.05	8.21	8.09	8.14	8.22	8.16	8.27
Specific Conductivity µS/cm	2	3150	3290	3360	3430	3370	3420	3410	3510
Total Dissolved Solids	1 to 2	2870	2900	2880	1030	2880	3110	3260	3250
Total Suspended Solids	3	<3	5.5	<3	<3	<3	<3	5.7	<3
Turbidity NTU	0.1				0.28	0.22	0.32	0.32	0.18
Dissolved Anions									
Bromide	0.05 to 2.495	<0.5	<0.5	<0.5	<2.5	<0.5	<0.5	<1	<1
Chloride	0.5 to 1	35.7	35	33.6	35	35.5	34.5	36	33
Fluoride	0.02 to 0.4	0.4		0.22	<1	0.27	<0.2	<0.4	0.209
Sulphate	0.5 to 1	1640	1660	1640	1670	1690	1690	1910	1960
Nutrients									
Ammonia (Total)	0.005 to 0.05	0.032	0.029	0.0326	<0.02	0.048	0.063	<0.005	0.0059
Nitrate (as N)	0.005 to 0.1	71.5	72.2	71.5	74.3	72.8	72.6	68.2	68.9
Nitrite (as N)	0.001 to 0.02	0.077	0.127	0.137	0.112	0.093	0.134	0.137	0.138
Nitrogen (Dissolved)	0.05 to 0.1								
Nitrogen (Total)	0.0025 to 0.11								
Nitrogen Kjeldahl (Total)	0.05 to 0.2	<0.05	<0.05	<0.05	0.064	<0.36	0.169	<0.05	<0.05
Orthophosphate (Dissolved)	0.001 to 0.01	<0.001	0.0013	0.002	0.0013	0.001		0.001	0.0017
Phosphorus - Dissolved	0.002 to 0.02							<0.002	<0.002
Phosphorus - Total	0.002 to 0.02	0.0036	0.0026	0.0036	0.0027	0.0041		0.0021	0.0032
Cyanide									
Cyanide (Free)	0.005				<0.005	<0.005		<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	0.0207	<0.005		<0.005	<0.005
Cyanide (WAD)	0.005				<0.005	<0.005		<0.005	<0.005
Dissolved Metals									
Aluminum	0.001 to 0.025	<0.05	<0.025	<0.05	<0.05	<0.05	<0.05	0.0065	<0.001
Antimony	0.0001 to 0.0025	0.0157	0.0166	0.0165	0.0198	0.0166	0.0179	0.0167	0.0174
Arsenic	0.0001 to 0.0025	0.025	0.0226	0.0214	0.0264	0.0207	0.0204	0.0177	0.0164
Barium	5E-005 to 0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.0157	0.0157
Beryllium	0.0001 to 0.005	<0.01	<0.005	<0.01	<0.01	<0.01	<0.01	<0.0001	<0.0001
Bismuth	0.0005 to 0.2							<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.065	0.073
Cadmium	1E-005 to 8.5E-005	0.00151	<0.005	<0.002	<0.002	0.00054	0.00093		<0.0002
Calcium	0.05 to 0.1	219	228	213	218	219	228	250	239
Chromium	0.0001 to 0.018	<0.01	<0.005	<0.01	<0.01	<0.01	<0.01	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015	<0.003	<0.0015	<0.003	<0.003	<0.003	<0.003	0.0007	0.00071
Copper	0.0002 to 0.006	0.03	0.0311	0.028	0.035	0.031	0.032	0.0334	0.0338
Dissolved Cadmium (by saltwater extrac	0.00002							<0.00008	<0.0001
Iron	0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.01	<0.01
Lead	5E-005 to 0.0025	<0.005	<0.0025	<0.005	<0.005	<0.005	<0.005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	<0.05	0.048	0.051	0.061	<0.05	<0.05	0.0485	0.0534
Magnesium	0.1	273	289	267	284	278	287	310	298
Manganese	5E-005 to 0.0015	0.008	0.0111	0.0074	0.0073	0.0081	0.0066	0.00237	0.00308
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	3.41	3.28	3.23	4.09	3.21	3.48	4.56	4.15
Nickel	0.0005 to 0.005	0.012	0.0115	0.012	0.017	0.012	0.013	0.013	0.0138
Phosphorus	0.05 to 0.3							<0.05	<0.05
Potassium	0.05 to 2	23.8	26.1	25.3	24.9	26.1	26.8	31.2	29.5
Selenium	0.0001 to 0.006	0.031	0.0293	0.029	0.042	0.029	0.032	0.0505	0.0485
Silicon	0.05							7.1	7.16
Silver	1E-005 to 0.0001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001
Sodium	0.05 to 2	194	200	190	195	198	201	206	211
Strontium	0.0001 to 0.005							4.35	3.9
Sulphur	0.5							608	594
Thallium	1E-005 to 0.001	<0.002	<0.001	<0.002	<0.002	<0.002	<0.002	<0.00001	0.000012
Tin	0.0001 to 0.0025	<0.005	<0.0025	<0.005	<0.005	<0.005	<0.005	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.0111	0.0102	0.0107	0.0118	0.0108	0.0114	0.0107	0.0101
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.03	<0.01	<0.01	<0.01	0.0054	0.005
Zinc	0.001 to 0.006	<0.05	<0.025	<0.05	<0.005	<0.005	<0.005	<0.001	0.0037
Total Metals									
Aluminum	0.003 to 0.025	<0.05	<0.025	<0.05	<0.05	<0.05	<0.05	<0.003	<0.009
Antimony	0.0001 to 0.0025	0.0156	0.016	0.0163	0.0194	0.016	0.0174	0.0164	0.0184
Arsenic	0.0001 to 0.0025	0.0237	0.0218	0.0209	0.0258	0.0231	0.0199	0.0174	0.0167
Barium	5E-005 to 0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.0153	0.0163
Beryllium	0.0001 to 0.005	<0.01	<0.005	<0.01	<0.01	<0.01	<0.01	<0.0001	<0.0001
Bismuth	0.0005 to 0.2							<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.07	0.082
Cadmium	1E-005 to 8.5E-005	0.00113	<0.005	<0.002	<0.002	0.00066	0.00069		<0.0002
Calcium	0.05 to 0.1	217	230	213	219	217	227	241	245
Chromium	0.0001 to 0.005	<0.01	<0.005	<0.01	<0.01	<0.01	<0.01	<0.0001	0.00019
Cobalt	0.0001 to 0.0015	<0.003	<0.0015	<0.003	<0.003	<0.003	<0.003	0.00065	0.00082
Copper	0.0005 to 0.007	0.031	0.0309	0.028	0.036	0.031	0.031	0.0331	0.0358
Iron	0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.01	0.01
Lead	5E-005 to 0.0025	<0.005	<0.0025	<0.005	<0.005	<0.005	<0.005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	<0.05	0.044	<0.05	0.066	<0.05	<0.05	0.0489	0.0561
Magnesium	0.1	273	291	261	287	279	286	304	295
Manganese	5E-005 to 0.0015	0.0099	0.0107	0.0076	0.0102	0.0092	0.0073	0.00129	0.0037
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	3.23	3.16	3.16	3.99	3.1	3.48	4.75	4.47
Nickel	0.0005 to 0.005	0.012	0.011	0.011	0.016	0.012	0.012	0.0135	0.0144
Phosphorus	0.05 to 0.3							<0.05	<0.05
Potassium	0.05 to 2	24	26	26	24.9	26.3	26.6	29.6	30.3
Selenium	0.0001 to 0.006	0.027	0.0294	0.028	0.041	0.029	0.032	0.048	0.0502
Silicon	0.05							7.02	7.37
Silver	1E-005 to 0.0001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001
Sodium	0.05 to 2	196	200	196	196	199	199	206	215
Strontium	0.0001 to 0.005							4.32	4.1
Sulphur	0.5							614	594
Thallium	1E-005 to 0.001	<0.002	<0.001	<0.002	<0.002	<0.002	<0.002	<0.00001	0.000012
Tin	0.0001 to 0.0025	<0.005	<0.0025	<0.005	<0.005	<0.005	<0.005	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002							<0.00008	<0.0001
Uranium	1E-005 to 0.001	0.0109	0.0101	0.0101	0.0116	0.0105	0.0114	0.0106	0.0117
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.03	<0.01	<0.01	<0.01	0.0054	0.0052
Zinc	0.003 to 0.006	<0.05	<0.025	<0.05	<0.005	<0.005	<0.005	<0.003	<0.003
Organics									
Carbon Organic (Dissolved)	0.5 to 5	2.67	2.5	2.38	2.43	2.16	1.56	1.43	1.32
Carbon Organic (Total)	0.5 to 5							1.41	1.39
Nitrogen Organic (Dissolved)	0.05 to 0.26								
Nitrogen Organic (Total)	0.05 to 0.3								
ALS LAB ID		**L502198**	**L532652**	**L556006**	**L624576**	**L653575**	**L679128**	**L1450350**	**L1523985**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C1.8 - ANDER10
PAGE 1 OF 1

Site ID			ANDER-10	ANDER-10	ANDER-10	ANDER-10	ANDER-10	ANDER-10	ANDER-10	ANDER-10	ANDER-10	ANDER-10	ANDER-10	ANDER-10	ANDER-10	ANDER-10	ANDER-10	ANDER-10
Analytes	**MDL**		**12-Mar-14**	**19-Mar-14**	**26-Mar-14**	**2-Apr-14**	**9-Apr-14**	**23-Apr-14**	**6-May-14**	**21-May-14**	**3-Jun-14**	**17-Jun-14**	**3-Jul-14**	**15-Jul-14**	**29-Jul-14**	**11-Aug-14**	**3-Sep-14**	**17-Sep-14**
In Situ Parameters																		
Conductivity µS/cm	...		430	392	402	424	390	377	367	524	602	543	602	499	554	627		554
Oxygen Dissolved %	...			85.6	77.8	83.1	82.4	84.7	107	97.6	84.8	84.5	79.3	88.3	85	79.8		9.14
Oxygen Dissolved	...		11.3	12.4	11.3	12	11.7	11.3	12.5	10.1	7.99	8.58	7.86	8.74	8.57	8.49		7.82
pH (unitless)	...		7.84	8.12	7.9	8.11	8.01	8.25	8.36	8.27	8.31	8.41	8.36	8.73	8.47	7.94	8.23	12.8
Redox Potential mV	...		37.9	24.8	182	168	153	127	206	60.6	136	81.5	79.6	161	121	192		0
Salinity ppt	...		0.4	0.36	0.37	0.39	0.29	0.31	0.26	0.33	0.34	0.33	0.36	0.3	0.34	0.41		76.5
Specific Conductivity µS/cm	...		821	748	767	805	612	641	533	665	691	677	733	603	685	824		832
Temperature °C	...		0.05	0.1	0.05	0.22	0.79	3.43	8	13.9	18.3	14.6	15.6	15.8	15	12.4	11	7.53
Total Dissolved Solids	...		533	486	499	523	398	417	349	433	449	441	476	396	446	536		541
Turbidity NTU	...																	
Physical Tests																		
Acidity to pH 8.3 (as CaCO3)	1																	
Alkalinity (Total as CaCO3)	1 to 2		349	321	337	298	254	249	258	266	286	282	310	323	334	385	401	404
Bicarbonate Alkalinity	1 to 2		349	321	337	289	254	237	258	266	278	262	295	306	325	385	384	399
Carbonate Alkalinity	1 to 2		<1	<2	<2	8.6	<2	11.2	<2	<1	7.8	19.2	14.2	17.4	9.2	<2	16.3	4.7
Color TCU	5																	
Hardness as CaCO3 (Dissolved)	0.5 to 1.1		385	343	355	346	281	281	278	320	306	306	326	360	347	379	418	400
Hydroxide Alkalinity	1 to 2		<1	<2	<2	<1	<2	<1	<2	<1	<1	<1	<1	<1	<1	<2	<1	<1
pH (unitless)	0.01 to 0.1		8.38	8.26	8.26	8.3	8.22	8.37	8.26	8.32	8.49	8.46	8.47	8.38	8.36	8.29	8.4	8.31
Specific Conductivity µS/cm	2		809	728	775	714	585	630	595	655	668	665	710	770	774	840	867	860
Total Dissolved Solids	1 to 2		488	443	435	461	382	388	367	410	415	410	441	471	479	527	529	556
Total Suspended Solids	3		4	4.3	6.3	14.6	8.8	<3	6	11.4	21.8	13.7	10.1	13.6	3.6	124	<3	3.2
Turbidity NTU	0.1		2.31	1.43	1.25	2.94	2.21	0.98	1.33	3.1	6.33	4.99	3.87	2.14	1.44	15.9	1.31	1
Dissolved Anions																		
Bromide	0.05 to 2.495		<0.5	<0.05	<0.5	<0.25	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	0.5 to 1		52.3	45.1	57.4	60.5	40.9	50.4	50.7	46.2	47.5	52.4	59	61.4	60.7	58.3	58.8	59.5
Fluoride	0.02 to 0.4		0.31	0.19	<0.2	0.17	0.162	0.183	0.195	0.218	0.23	0.219	0.241	0.229	0.244	0.37	0.199	<0.2
Sulphate	0.5 to 1		23.9	20	21.6	22.8	21.5	21	20.2	16.7	13.3	11.9	11.9	12.4	11.8	18.1	23	26.4
Nutrients																		
Ammonia (Total)	0.005 to 0.05		0.0619	0.0389	0.0353	0.0234	0.0215	0.0076	0.0075	0.0154	0.0192	0.0117	0.0244	0.0307	0.0167	0.0164	0.0103	0.0074
Nitrate (as N)	0.005 to 0.1		0.142	0.102	0.102	0.064	0.0496	0.0134	0.0054	0.0105	0.022	<0.025	0.0541	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrite (as N)	0.001 to 0.02		<0.01	0.0028	<0.01	<0.005	0.0017	<0.001	<0.001	<0.001	0.0012	<0.005	0.002	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen (Dissolved)	0.05 to 0.1																	
Nitrogen (Total)	0.0025 to 0.11									0.715								
Nitrogen Kjeldahl (Total)	0.05 to 0.2		0.668	0.635	0.605	0.586	0.504	0.619	0.715	0.74	0.922	0.934	0.873	1.89	0.807	0.693	0.658	0.535
Orthophosphate (Dissolved)	0.001 to 0.01		0.0777	0.0578	0.0396	0.0355	0.0342	0.0227	0.0194	0.0376	0.0562	0.034	0.0659	0.0787	0.0803	0.0926	0.0843	0.0706
Phosphorus - Dissolved	0.002 to 0.02		0.0858	0.0761	0.0512	0.0467	0.0696	0.0337	0.0278	0.0501	0.0672	0.0456	0.0747	0.096	0.0916		0.0894	0.0713
Phosphorus - Total	0.002 to 0.02		0.0967	0.089	0.0604	0.0761	0.0449	0.0451	0.0384	0.072	0.103	0.0772	0.0985	0.486	0.115	0.137	0.0808	0.0626
Cyanide																		
Cyanide (Free)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																		
Aluminum	0.001 to 0.025		0.0022	0.0016	0.0012	0.0011	0.0023	0.0022	0.0017	0.0016	0.0019	0.0019	0.0019	0.0176	0.0021	0.0013	0.0011	0.0028
Antimony	0.0001 to 0.0025		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025		0.00121	0.00108	0.00097	0.00093	0.00109	0.00108	0.00112	0.00148	0.00157	0.00124	0.00166	0.00208	0.00203	0.00166	0.00173	0.00117
Barium	5E-005 to 0.02		0.079	0.0691	0.0728	0.0692	0.0593	0.0573	0.0615	0.0707	0.0757	0.0695	0.0771	0.0805	0.0785	0.0826	0.0768	0.0849
Beryllium	0.0001 to 0.005		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium	1E-005 to 8.5E-005		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1		87.2	77.4	79.9	78.9	63.8	65	68.1	74.9	72.7	73.3	75.5	81.2	79.1	84.6	92.5	89.4
Chromium	0.0001 to 0.018		0.00016	0.00014	0.00013	0.00012	<0.0001	0.00012	0.00012	0.00014	0.00012	0.00012	0.00014	0.00018	0.00016	0.00012	0.00014	0.00012
Cobalt	0.0001 to 0.0015		0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	0.00012	0.00015	0.00012	0.00016	0.00018	0.00017	0.00026	0.00021	0.00015
Copper	0.0002 to 0.006		0.00183	0.0014	0.00115	0.00115	0.00116	0.00141	0.00149	0.00147	0.00145	0.00123	0.00159	0.00199	0.00177	0.00114	0.00152	0.00109
Dissolved Cadmium (by saltwater extrac	0.00002																	
Iron	0.01 to 0.03		0.049	0.052	0.043	0.031	0.037	0.026	0.024	0.037	0.039	0.034	0.046	0.094	0.054	0.055	0.083	0.036
Lead	5E-005 to 0.0025		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000186
Lithium	0.0005 to 0.025		0.00919	0.00795	0.00802	0.00744	0.00739	0.00716	0.00707	0.00834	0.008	0.00811	0.00827	0.00976	0.00897	0.00966	0.0102	0.0106
Magnesium	0.1		40.6	36.3	37.7	36.1	29.6	28.9	26.3	32.3	30.2	29.9	33.5	38.3	36.3	40.6	45.5	42.9
Manganese	5E-005 to 0.0015		0.0695	0.0338	0.0233	0.0271	0.0441	0.0115	0.0161	0.052	0.102	0.0555	0.159	0.243	0.196	0.962	0.283	0.289
Mercury	1E-005 to 5E-005		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005		0.00189	0.00185	0.00186	0.00187	0.00294	0.00269	0.00277	0.00262	0.00229	0.00175	0.00196	0.00232	0.00207	0.00192	0.00192	0.0021
Nickel	0.0005 to 0.005		0.00155	0.00125	0.00108	0.00108	0.00094	0.00101	0.00111	0.00125	0.00152	0.00122	0.00197	0.00224	0.00233	0.00248	0.00234	0.00211
Phosphorus	0.05 to 0.3		0.092	0.081	<0.05	<0.05	0.05	<0.05	<0.05	0.051	0.069	0.053	0.079	0.102	0.11	0.119	0.105	0.069
Potassium	0.05 to 2		9.2	8.98	8.55	8.16	7.2	7.61	7.67	8.57	8.39	8.86	9.77	10.7	10.4	9.37	10.2	9.61
Selenium	0.0001 to 0.006		0.00033	0.00026	0.00022	0.00023	0.00028	0.00027	0.00024	0.00026	0.00023	0.00022	0.00023	0.00026	0.00026	0.0002	0.00025	0.00017
Silicon	0.05		11.8	11.5	11.6	11	8.8	9.41	9.28	9.79	8.74	6.63	7.21	9.09	9.33	13.5	12.1	12.1
Silver	1E-005 to 0.0001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2		36.4	31.2	32.2	33	26	28.7	30.8	32.6	31.2	31.8	36	38.6	39	40.7	41.2	40.6
Strontium	0.0001 to 0.005		0.405	0.376	0.369	0.347	0.296	0.281	0.295	0.322	0.33	0.315	0.367	0.426	0.407	0.469	0.461	0.46
Sulphur	0.5		8.29	7	7.58	8.11	7.36	7.51	7	6.53	5.25	4.67	4.43	4.81	4.51	6.64	8.51	9.35
Thallium	1E-005 to 0.001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001		0.00258	0.00228	0.00273	0.00271	0.00273	0.00269	0.00241	0.00216	0.00186	0.00166	0.00134	0.00125	0.00114	0.000958	0.00133	0.00156
Vanadium	0.001 to 0.03		0.0024	0.0023	0.0025	0.0024	0.0026	0.0027	0.003	0.0034	0.0036	0.0029	0.0028	0.0025	0.0021	0.0015	0.0018	0.0013
Zinc	0.001 to 0.006		<0.001	0.0023	0.0013	<0.001	<0.001	0.0011	0.0012	0.0017	<0.001	0.0068	<0.001	<0.001	<0.001	0.0016	0.0012	<0.001
Total Metals																		
Aluminum	0.003 to 0.025		0.0727	0.0854	0.0508	0.332	0.155	0.0539	0.0866	0.152	0.361	0.331	0.104	<0.003	0.0339	0.117	0.0524	0.0172
Antimony	0.0001 to 0.0025		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00012	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	<0.0001	0.0001	<0.0001
Arsenic	0.0001 to 0.0025		0.00122	0.00107	0.00097	0.00106	0.00109	0.00102	0.00113	0.00147	0.00161	0.00137	0.0018	0.00199	0.00196	0.00178	0.0018	0.00123
Barium	5E-005 to 0.02		0.0783	0.0692	0.0699	0.0743	0.0588	0.0579	0.062	0.0706	0.0812	0.0749	0.0787	0.0789	0.0788	0.0829	0.078	0.089
Beryllium	0.0001 to 0.005		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	<0.01	0.013	0.012	0.017
Cadmium	1E-005 to 8.5E-005		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1		84.8	75.3	78.3	75.5	60.1	65.4	66.1	71.8	68.7	70.9	74.1	79.3	77.7	80.9	90.9	89.5
Chromium	0.0001 to 0.005		0.00038	0.00034	0.00028	0.00112	0.00059	0.00027	0.00038	<0.0006	0.00107	0.00098	0.00047	0.00017	0.00025	0.0005	0.00035	0.0003
Cobalt	0.0001 to 0.0015		0.00016	0.00016	0.00013	0.0004	0.00026	0.00011	0.00015	0.00025	0.00047	0.00041	0.00028	0.00018	0.0002	0.00036	0.00027	0.00018
Copper	0.0005 to 0.007		0.00231	0.00196	0.00151	0.00327	0.00255	0.00196	0.00212	0.00242	0.00367	0.00283	0.00265	0.00192	0.00202	0.00183	0.00195	0.00119
Iron	0.01 to 0.03		0.161	0.184	0.129	0.512	0.287	0.103	0.151	0.275	0.618	0.513	0.2	0.051	0.102	0.299	0.2	0.112
Lead	5E-005 to 0.0025		<0.00005	<0.00005	<0.00005	0.000084	0.000131	<0.00005	<0.00005	<0.00005	0.000094	0.000077	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025		0.00923	0.00718	0.00753	0.00759	0.00695	0.00741	0.00695	0.00816	0.00787	0.00858	0.00819	0.0083	0.00858	0.00958	0.00978	0.0105
Magnesium	0.1		40	34.2	34.4	33.8	28.2	28.3	26.1	31.2	29.5	29.4	33	37.2	36.1	39.4	45.6	44.1
Manganese	5E-005 to 0.0015		0.0814	0.0526	0.035	0.0815	0.0835	0.0215	0.0356	0.0975	0.214	0.137	0.185	0.231	0.207	1	0.301	0.32
Mercury	1E-005 to 5E-005		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005		0.00201	0.00197	0.00194	0.00189	0.003	0.00296	0.0028	0.00274	0.00234	0.00211	0.00201	0.00239	0.00214	0.00202	0.00212	0.00236
Nickel	0.0005 to 0.005		0.00188	0.00154	0.00132	0.00274	0.00167	0.00125	0.00143	0.00199	0.00283	0.00257	0.00244	0.00228	0.00248	0.00302	0.00289	0.00228
Phosphorus	0.05 to 0.3		0.084	0.09	<0.05	0.087	0.067	0.052	<0.05	0.071	0.118	0.08	0.102	0.099	0.108	0.127	0.108	0.091
Potassium	0.05 to 2		9.06	8.62	8.28	7.77	6.75	7.64	7.34	8.28	8.05	8.82	9.66	10	10.3	9.08	10	9.89
Selenium	0.0001 to 0.006		0.0003	0.00026	0.00023	0.00025	0.00028	0.00025	0.00025	0.00025	0.00027	0.00023	0.00025	0.00023	0.00024	0.00022	0.00024	0.00019
Silicon	0.05		11.8	11.2	11.3	11.3	8.79	9.53	9.18	9.79	9.34	7.45	7.46	8.92	9.25	13.3	12	12.6
Silver	1E-005 to 0.0001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2		36.5	29.4	32.2	32.5	25	28.5	29.9	31.3	30.6	32.3	36.5	36	39.3	39.3	41.5	37.7
Strontium	0.0001 to 0.005		0.399	0.393	0.359	0.338	0.287	0.293	0.284	0.325	0.328	0.357	0.369	0.41	0.41	0.462	0.473	0.478
Sulphur	0.5		8.35	7.16	7.63	8.14	7.29	7.56	6.98	6.39	5.11	4.78	4.55	5.03	4.6	6.59	8.69	9.95
Thallium	1E-005 to 0.001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025		<0.0001	<0.0001	0.00081	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01		<0.01	<0.01	<0.01	0.013	<0.01	<0.01	<0.01	<0.01	0.013	0.013	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002																	
Uranium	1E-005 to 0.001		0.00261	0.00234	0.00274	0.00266	0.00276	0.00284	0.00251	0.00228	0.0019	0.00185	0.00138	0.00132	0.00118	0.00101	0.00138	0.00172
Vanadium	0.001 to 0.03		0.0027	0.0027	0.0026	0.0035	0.0033	0.0029	0.0033	0.004	0.0045	0.004	0.0033	0.0025	0.0023	0.0019	0.0021	0.0015
Zinc	0.003 to 0.006		<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics																		
Carbon Organic (Dissolved)	0.5 to 5		12.8	12.3	11.2	11	9.75	12.8	13.7	14.4	14.9	16.1	15	15.2	16.3	12.8	14.8	12.4
Carbon Organic (Total)	0.5 to 5		12.9	12.1	11.6	11.4	10.1	13	14.1	15	16	16.3	15.9	26.8	16.4	13.1	15.4	12.9
Nitrogen Organic (Dissolved)	0.05 to 0.26																	
Nitrogen Organic (Total)	0.05 to 0.3																	
ALS LAB ID			**L1432163**	**L1434695**	**L1437439**	**L1439467**	**L1441961**	**L1446462**	**L1451608**	**L1458340**	**L1465108**	**L1472862**	**L1481215**	**L1488139**	**L1494491**	**L1500711**	**L1513418**	**L1519657**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C1.9 - ANDR15
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Site ID		ANDR15	ANDR15	ANDR15	ANDR15	ANDR15	ANDR15	ANDR15	ANDR15	ANDR15	ANDR15	ANDR15	ANDR15	ANDR15	ANDR15	ANDR15	ANDR15	ANDR15
Analytes	**MDL**	**5-Feb-14**	**13-Mar-14**	**19-Mar-14**	**27-Mar-14**	**3-Apr-14**	**9-Apr-14**	**24-Apr-14**	**7-May-14**	**23-May-14**	**4-Jun-14**	**17-Jun-14**	**3-Jul-14**	**15-Jul-14**	**29-Jul-14**	**11-Aug-14**	**3-Sep-14**	**17-Sep-14**
In Situ Parameters																		
Conductivity µS/cm	...	421	408	474	517	576	470	295	358	443	485	535	569	502	485	598		549
Oxygen Dissolved %	...	43.5	77.2	82.9	87.1	67.7	80.7	81.1	101	93.8	89.7	84.1	82.3	84.9	85.9	82.3		92.9
Oxygen Dissolved	...	6.33	11	12.1	12.5	9.64	11.7	10.9	13	10.5	10.1	8.88	8.6	8.96	9.32	8.66		10.8
pH (unitless)	...	8.65	8.1	8.02	8.06	8.2	8.29	8.24	8.44	8.45	8.41	8.49	8.43	8.5	8.53	8.27	8.38	8.26
Redox Potential mV	...	-76	45.4	172	86.2	-1.3	-69.5	87.8	203	35.6	154	92.5	45.7	40.4	66.7	23		107
Salinity ppt	...	0.39	0.36	0.44	0.47	0.52	0.43	0.24	0.26	0.3	0.33	0.34	0.36	0.32	0.32	0.38		0.39
Specific Conductivity µS/cm	...	811	756	908	968	1070	896	510	592	614	683	699	734	653	650	778		794
Temperature °C	...	-0.25	0.92	0.02	0.6	0.82	0.14	2.89	4.3	10.4	9.84	12.7	13.2	12.9	17.7	12.9	10.1	8.84
Total Dissolved Solids	...	528	490	590	629	695	582	332	384	399	444	454	477	424	423	506		516
Turbidity NTU	...																	
Physical Tests																		
Acidity to pH 8.3 (as CaCO3)	1																	
Alkalinity (Total as CaCO3)	1 to 2	266	258	255	275	251	235	175	207	216	231	230	255	253	265	279	266	295
Bicarbonate Alkalinity	1 to 2	266	258	255	262	243	235	169	207	209	227	215	247	238	257	269	254	282
Carbonate Alkalinity	1 to 2	<2	<2	<2	13.4	8	<2	6	<2	7.5	4.4	15.1	8.3	14.9	8.1	10.4	11.3	13.8
Color TCU	5								33.7									
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	369	351	338	371	385	322	215	237	260	274	272	294	297	310	317	330	340
Hydroxide Alkalinity	1 to 2	<2	<2	<2	<1	<1	<2	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1	8.06	8.2	8.26	8.32	8.31	8.24	8.37	8.26	8.35	8.45	8.46	8.48	8.39	8.37	8.44	8.43	8.47
Specific Conductivity µS/cm	2	809	785	909	987	976	846	507	562	592	663	686	714	718	793	778	850	821
Total Dissolved Solids	1 to 2	528	489	495	606	637	561	331	384	382	368	426	418	442	476	490	519	563
Total Suspended Solids	3	<3	<3	4.1	4.3	3.1	108	36.7	16.7	7	6.1	33.8	7.9	15.9	8.5	3.7	<3	5.6
Turbidity NTU	0.1	0.61	0.42	1.15	0.8	0.54	15.8	7.04	2.63	1.45	2.76	4.76	2.48	3.48	1.35	0.4	0.49	0.57
Dissolved Anions																		
Bromide	0.05 to 2.495	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	0.5 to 1	114	90.8	131	148	155	134	48.2	53.9	58.9	71.9	81.8	80	77.1	92.7	85.4	113	97
Fluoride	0.02 to 0.4	<0.2	0.39	<0.2	<0.2	0.2	<0.2	0.158	0.192	0.21	0.218	0.221	0.24	0.232	0.223	0.42	0.217	0.21
Sulphate	0.5 to 1	34.5	29.8	36.2	37.4	36.3	32	19	21.6	17.9	17.7	18.2	17.2	16.6	21.7	20.3	25.4	23.7
Nutrients																		
Ammonia (Total)	0.005 to 0.05	0.0101	0.012	0.0109	0.0076	0.0093	0.0153	0.0084	0.0051	0.0077	0.0063	0.0101	0.0125	0.0206	0.0083	0.0146	0.0072	0.0077
Nitrate (as N)	0.005 to 0.1	0.137	0.142	0.107	0.113	0.103	<0.05	0.0327	0.0203	0.0103	0.011	<0.025	0.0205	0.064	<0.05	0.063	<0.05	<0.05
Nitrite (as N)	0.001 to 0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen (Dissolved)	0.05 to 0.1																	
Nitrogen (Total)	0.0025 to 0.11																	
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.359	0.329	0.565	0.448	0.506	1.26	0.709	0.492	0.579	0.555	0.978	0.77	0.59	0.447	0.518	0.46	0.565
Orthophosphate (Dissolved)	0.001 to 0.01	0.0176	0.0232	0.0207	0.0171	0.018	0.0149	0.0174	0.013	0.0156	0.0191	0.0171	0.0272	0.0313	0.026	0.0307	0.0251	0.0286
Phosphorus - Dissolved	0.002 to 0.02	0.019	0.0231	0.0268	0.0226	0.0257	0.222	0.154	0.0206	0.0262	0.0263	0.0263	0.0308	0.0398	0.0303		0.0284	0.0296
Phosphorus - Total	0.002 to 0.02	0.0291	0.025	0.0378	0.0256	0.0196	0.019	0.0305	0.0398	0.0346	0.0604	0.0762	0.14	0.0589	0.0365	0.0544	0.0257	0.068
Cyanide																		
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																		
Aluminum	0.001 to 0.025	<0.001	0.0017	0.0015	0.0019	0.0012	0.002	0.0067	0.0032	0.0025	0.0043	0.0033	0.0023	0.0024	0.0018	0.0019	0.0016	0.0016
Antimony	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00054	0.00048	0.00047	0.00045	0.00046	0.00042	0.00042	0.00045	0.00056	0.00056	0.00055	0.00064	0.00068	0.00059	0.00068	0.00059	0.00065
Barium	5E-005 to 0.02	0.0857	0.0841	0.0711	0.0741	0.0759	0.0673	0.045	0.0479	0.0576	0.0629	0.0635	0.0685	0.0747	0.0736	0.0787	0.0757	0.0802
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000027	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	98.2	93.9	92.9	98.6	105	88.7	59.4	67	72.8	75.6	76.9	81.1	80.6	85.3	85.9	90.6	91.9
Chromium	0.0001 to 0.018	<0.0001	0.00019	<0.0001	<0.0001	<0.0001	<0.0001	0.00012	0.00012	0.0001	0.0001	0.00011	0.00015	0.00011	<0.0001	0.00011	<0.0001	0.00015
Cobalt	0.0001 to 0.0015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	0.0002 to 0.006	0.00113	0.00105	0.00104	0.00102	0.00103	0.00105	0.00149	0.00137	0.00131	0.00145	0.00127	0.00135	0.00127	0.00126	0.00126	0.00119	0.00126
Dissolved Cadmium (by saltwater extrac	0.00002																	
Iron	0.01 to 0.03	0.02	0.022	0.029	0.016	0.015	0.041	0.032	0.027	0.038	0.051	0.043	0.018	0.039	0.02	0.029	0.025	0.027
Lead	5E-005 to 0.0025	<0.00005	0.000061	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00881	0.00706	0.00775	0.00817	0.00739	0.00659	0.00442	0.00453	0.00612	0.00718	0.00682	0.00842	0.00811	0.0077	0.00809	0.00874	0.00871
Magnesium	0.1	30.1	28.2	25.6	30.4	29.9	24.5	16.2	16.8	18.9	20.8	19.4	22.2	23.1	23.6	25	25.1	26.7
Manganese	5E-005 to 0.0015	0.014	0.0135	0.00834	0.00633	0.00603	0.0186	0.00323	0.00339	0.00597	0.00895	0.00663	0.018	0.0489	0.0203	0.0219	0.0134	0.012
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00335	0.00283	0.00309	0.00327	0.00313	0.00308	0.00205	0.00213	0.00255	0.00251	0.00236	0.00311	0.00359	0.00345	0.00333	0.00326	0.00327
Nickel	0.0005 to 0.005	0.0005	<0.0005	0.00055	<0.0005	0.00052	0.00068	0.0008	0.00074	0.0007	0.00108	0.0007	0.00065	0.00062	0.00067	0.00063	0.00063	0.00065
Phosphorus	0.05 to 0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	0.05 to 2	9.41	8.4	10.7	10.1	9.81	9.01	6.6	6.97	7.87	8.66	9.13	9.72	9.13	10.1	9.71	11	10.1
Selenium	0.0001 to 0.006	0.00038	0.00038	0.00031	0.00028	0.00031	0.00028	0.00022	0.00023	0.00018	0.00019	0.00021	0.00019	0.00017	0.00016	0.00016	0.00018	0.00017
Silicon	0.05	9.34	9.21	8	8.48	8.49	8.37	8.53	8.81	8.77	8.07	7.55	9.2	10.2	9.49	10.3	9.1	10.1
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	43.8	36.1	54.4	58.4	58.9	55.6	25.2	28.4	30	37.6	41.4	38.9	38.7	44.9	43	51.1	46.9
Strontium	0.0001 to 0.005	0.41	0.377	0.396	0.422	0.412	0.355	0.229	0.245	0.292	0.322	0.318	0.331	0.37	0.367	0.379	0.36	0.398
Sulphur	0.5	12	10	12.5	12.4	12.5	11.1	6.74	8	6.31	6.54	6.59	6.04	6.19	7.63	7.34	9.01	8.26
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00464	0.00396	0.0049	0.00558	0.00548	0.0044	0.00233	0.0024	0.00246	0.00251	0.00242	0.00296	0.00339	0.00332	0.00352	0.00323	0.00392
Vanadium	0.001 to 0.03	0.0018	0.002	0.0014	0.0015	0.0016	0.0015	0.0021	0.0019	0.0023	0.0019	0.0019	0.0022	0.0025	0.0019	0.002	0.0017	0.0019
Zinc	0.001 to 0.006	<0.001	<0.001	<0.001	<0.001	<0.001	0.0012	<0.001	<0.001	0.0013	0.0062	0.0034	0.0019	<0.001	<0.001	0.0012	<0.001	<0.001
Total Metals																		
Aluminum	0.003 to 0.025	0.0854	0.0074	0.0896	0.0241	0.0182	1.85	0.733	0.178	0.142	0.124	0.463	0.0833	0.282	0.0605	0.12	0.0323	0.115
Antimony	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.0005	0.00047	0.00049	0.00047	0.00047	0.00084	0.00058	0.00046	0.00058	0.00061	0.00067	0.00067	0.00077	0.00071	0.00079	0.00059	0.00066
Barium	5E-005 to 0.02	0.0828	0.0761	0.0698	0.0753	0.0762	0.0989	0.0561	0.0451	0.0567	0.0626	0.0711	0.0727	0.0766	0.0787	0.086	0.0747	0.0841
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000055	0.000022	<0.00001	0.000011	0.000012	0.000023	<0.00001	0.000012	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	91	89.8	90.9	96.1	102	85.9	58.7	63.9	68.7	71.8	74.2	80	79.9	86.4	85.2	86.3	93.3
Chromium	0.0001 to 0.005	0.0004	0.00025	0.00028	0.00021	0.00015	0.00401	0.00152	0.00045	0.00041	0.00038	0.00104	0.00027	0.00073	0.00027	0.00039	0.00021	0.00054
Cobalt	0.0001 to 0.0015	0.00012	<0.0001	0.00012	<0.0001	<0.0001	0.00146	0.00056	0.00018	0.00017	0.00017	0.00047	0.00015	0.00024	0.0001	0.00015	<0.0001	0.00014
Copper	0.0005 to 0.007	0.00153	0.00123	0.00145	0.00122	0.00136	0.00881	0.00499	0.00225	0.00203	0.00195	0.00332	0.00194	0.00265	0.00169	0.00182	0.00144	0.00202
Iron	0.01 to 0.03	0.152	0.035	0.16	0.053	0.045	3.07	1.14	0.341	0.287	0.268	0.894	0.162	0.478	0.113	0.224	0.079	0.211
Lead	5E-005 to 0.0025	<0.00005	<0.00005	0.00007	<0.00005	<0.00005	0.00101	0.00036	0.000111	0.00011	0.000087	0.000318	0.000079	0.000144	<0.00005	<0.00005	<0.00005	0.000058
Lithium	0.0005 to 0.025	0.00807	0.00694	0.0073	0.00808	0.00776	0.00799	0.00491	0.00501	0.00576	0.00657	0.00667	0.00756	0.00902	0.00847	0.00838	0.00878	0.00897
Magnesium	0.1	28.7	26.4	24.9	28.6	29.2	24.1	16.2	15.9	17.9	20.1	18.9	22.2	22.9	24.3	25.2	24.2	26.9
Manganese	5E-005 to 0.0015	0.0239	0.0139	0.0164	0.00874	0.00781	0.253	0.0634	0.0217	0.0263	0.0309	0.0852	0.0367	0.0626	0.0269	0.0481	0.0207	0.038
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00341	0.00306	0.00322	0.0035	0.00339	0.00327	0.00207	0.00231	0.00245	0.00246	0.00241	0.00301	0.0038	0.00376	0.00308	0.00343	0.00378
Nickel	0.0005 to 0.005	0.00074	<0.0005	0.00075	0.00053	0.0006	0.00381	0.00205	0.00092	0.00099	0.00092	0.0015	0.00089	0.0011	0.00078	0.00083	0.00068	0.00107
Phosphorus	0.05 to 0.3	0.059	<0.05	<0.05	<0.05	<0.05	0.212	0.097	<0.05	<0.05	0.051	0.09	<0.05	0.064	<0.05	0.069	<0.05	0.056
Potassium	0.05 to 2	8.7	8.04	10.1	9.91	9.56	8.95	6.66	6.56	7.58	8.45	8.77	9.67	9.21	10.4	9.82	10.6	10.1
Selenium	0.0001 to 0.006	0.00033	0.00038	0.0003	0.00032	0.0003	0.00043	0.00028	0.00026	0.00019	0.00021	0.00029	0.00022	0.00019	0.0002	0.00018	0.00016	0.00017
Silicon	0.05	9.02	8.9	7.85	8.33	8.41	11.9	9.71	8.52	8.58	8.06	8.28	9.4	10.7	9.96	10.5	8.86	10.4
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000038	0.000012	<0.00001	<0.00001	<0.00001	0.000014	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	41.9	33.5	54.3	57.8	58.4	56.2	24.6	24.4	29.5	37.7	39.6	41.7	39.4	48.7	45.5	51.1	47.8
Strontium	0.0001 to 0.005	0.41	0.383	0.401	0.421	0.419	0.377	0.224	0.254	0.277	0.305	0.311	0.336	0.384	0.397	0.345	0.378	0.429
Sulphur	0.5	12.1	9.79	12.7	12.6	12.8	10.9	6.86	7.81	6.07	6.39	6.57	6.2	6.3	8.08	7.55	8.97	8.69
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000019	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.103	0.038	<0.01	<0.01	<0.01	0.025	<0.01	0.014	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002																	
Uranium	1E-005 to 0.001	0.00461	0.00418	0.00509	0.00579	0.00578	0.00485	0.00239	0.00241	0.00246	0.00255	0.00247	0.00297	0.00348	0.00381	0.00316	0.00332	0.00421
Vanadium	0.001 to 0.03	0.0022	0.002	0.0018	0.0017	0.0018	0.0085	0.0047	0.0025	0.0028	0.0025	0.0036	0.0028	0.0035	0.0023	0.0028	0.0019	0.0026
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	0.0082	0.0032	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics																		
Carbon Organic (Dissolved)	0.5 to 5	9.12	8.42	12.3	10.6	11.8	11.1	13.8	13.2	13	12.8	14.4	11.3	10	10.3	9.09	12.2	9
Carbon Organic (Total)	0.5 to 5	8.9	8.48	12.9	10.5	11.5	13	14.6	14.1	13.3	13.4	16.9	12.9	11.6	9.8	10.4	12.1	11.6
Nitrogen Organic (Dissolved)	0.05 to 0.26																	
Nitrogen Organic (Total)	0.05 to 0.3																	
ALS LAB ID		**L1419486**	**L1432163**	**L1434695**	**L1437439**	**L1439655**	**L1441961**	**L1447300**	**L1452368**	**L1459728**	**L1465478**	**L1472862**	**L1481215**	**L1488139**	**L1494491**	**L1500711**	**L1513418**	**L1519657**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C1.10 - CC02
PAGE 1 OF 3

Site ID		CC02	CC02	CC02	CC02	CC02	CC02	CC02	CC02	CC02	CC02	CC02	CC02	CC02	CC02
Analytes	**MDL**	**1-May-07**	**18-Jul-07**	**14-Sep-07**	**28-Apr-08**	**7-Jul-08**	**4-Sep-08**	**02/Sep/2010**	**22-Nov-10**	**28-Mar-11**	**14-Apr-11**	**21-Apr-11**	**28-Apr-11**	**5-May-11**	**12-May-11**
In Situ Parameters															
Conductivity µS/cm	...	223		408	548	460	461	455	403	522	578	537	469	256	165
Oxygen Dissolved %	...				95	99	96.8	91.6	76.7	97		98.2	80.3	96.6	93.3
Oxygen Dissolved	...	15	11.8	11.7	11.4	10.7	10.4	10.1	11.3	12.3		14.1	10.7	12.3	12
pH (unitless)	...	8.03	7.9	8.29	7.87	8.02	8.25	7.9	7.65	8.39	8.5	8.15	8.11	8.13	7.91
Redox Potential mV	...	-56.7				-103	-75.6	11.6	268	117	20.2	165	114	119	97.9
Salinity ppt	...											0.49	0.39	0.2	0.13
Specific Conductivity µS/cm	...	352	582	534	828	615	614	622	773	840	892	1025	802	413	270
Temperature °C	...	5.78	12.1	12.6	7.97	11.9	12	10.9	-0.05	5.14	6.61	-0.02	3.39	5.08	4.66
Total Dissolved Solids	...							405	503	547	580	660	520	269	175
Turbidity NTU	...														
Physical Tests															
Acidity to pH 8.3 (as CaCO3)	1														
Alkalinity (Total as CaCO3)	1 to 2	150	232	240	334	260	262	255	309	325	343	315	322	170	122
Bicarbonate Alkalinity	1 to 2								309			305			
Carbonate Alkalinity	1 to 2								<1			10.2			
Color TCU	5	16.4	9.4	8.4	7.1	9.5	7.3	10.7	7.1	9.2	10.6	7	6.9	21.1	54.3
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	187	270	246	404	281	295	284	365	391	427	414	432	213	142
Hydroxide Alkalinity	1 to 2								<1			<1			
pH (unitless)	0.01 to 0.1	8.33	8.37	8.44	7.91	8.38	8.46	8.29	8.32	8.27	8.46	8.35	8.31	8.31	
Specific Conductivity µS/cm	2	336	541	538	807	602	624	591	749	802	825	835	813	396	271
Total Dissolved Solids	1 to 2	222	338	340	528	390	386	374	476	536	560	548	547	261	196
Total Suspended Solids	3	9	6.6	6.2	<3	<3	<3	<3	<3	<3	<3	<3	<3	65.5	542
Turbidity NTU	0.1				0.91	1.25	1.01	0.77	1.41	0.79	1.03	1.22	0.61	26.3	192
Dissolved Anions															
Bromide	0.05 to 2.495	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.69	<0.76	<0.5	<0.25	<0.05	<0.05
Chloride	0.5 to 1	1.41	2.48	2.45	7.02	3.71	3.23	2.8	3.77	8.1	9	8.6	6.6	2	1.42
Fluoride	0.02 to 0.4	0.093		0.116	0.094	0.116	0.113	0.106	0.101	<0.2	<0.2	<0.2	<0.1	0.078	0.072
Sulphate	0.5 to 1	30.3	66.5	61.4	134	85.3	86.2	74.5	111	137	151	156	157	45.4	23.8
Nutrients															
Ammonia (Total)	0.005 to 0.05	0.023	0.031	0.024	0.031	<0.02	0.024	<0.005	0.0319	0.0269	0.0168	0.0144	0.0193	0.0122	0.0214
Nitrate (as N)	0.005 to 0.1	0.033	0.0389	0.0322	0.224	0.14	0.0677	0.0905	0.29	0.448	0.32	0.417	0.357	0.161	0.0491
Nitrite (as N)	0.001 to 0.02	<0.001	0.0022	<0.001	0.0029	0.0026	0.0015	<0.001	0.002	<0.01	<0.01	<0.01	<0.005	<0.001	<0.001
Nitrogen (Dissolved)	0.05 to 0.1												0.74	0.4	0.56
Nitrogen (Total)	0.0025 to 0.11							0.618	0.491	0.779	0.599	0.748	0.628	0.47	2.17
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.247	0.335	0.177	0.299	0.277	0.221	0.527	0.199	0.331	0.279	0.331	0.271	0.309	1.75
Orthophosphate (Dissolved)	0.001 to 0.01	0.0088	0.0192	0.015	0.0104	0.0172	0.0279	0.0169	0.0155	0.0286					
Phosphorus - Dissolved	0.002 to 0.02			0.0169				0.019			0.0196	0.0128	0.0217	0.0242	0.0517
Phosphorus - Total	0.002 to 0.02	0.025	0.0315	0.0258	0.0257	0.0222	0.0335	0.0233	0.0208	0.0402	0.029	0.0198	0.0207	0.206	0.87
Cyanide															
Cyanide (Free)	0.005				<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	0.0055	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005		<0.005	<0.005	0.008	0.0217
Cyanide (WAD)	0.005	<0.005			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Dissolved Metals															
Aluminum	0.001 to 0.025	0.006	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.01	<0.005	<0.005	0.0199
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005
Arsenic	0.0001 to 0.0025	0.00057	0.00095	0.00075	<0.001	0.00076	0.00075	0.00069	<0.001	0.00051	<0.001	<0.001	0.00052	0.00059	0.0007
Barium	5E-005 to 0.02	0.051	0.06	0.07	0.114	0.085	0.08	0.077	0.104	0.104	0.109	0.108	0.111	0.055	0.036
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001
Bismuth	0.0005 to 0.2									<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	1E-005 to 8.5E-005	<0.000017	<0.000017	<0.000017	<0.000034	<0.000017	0.000031	0.00003	<0.000034	0.000025	<0.000034	<0.000034	0.000021	0.000029	0.000043
Calcium	0.05 to 0.1	50.1	66.6	60.2	100	70.8	72.9	69.7	90.5	98	106	103	107	57.1	38.1
Chromium	0.0001 to 0.018	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001
Cobalt	0.0001 to 0.0015	<0.0003	<0.0003	<0.0003	<0.0006	<0.0003	<0.0003	<0.0003	<0.0006	<0.0003	<0.0006	<0.0006	<0.0003	<0.0003	<0.0003
Copper	0.0002 to 0.006	0.0026	0.0019	0.0017	<0.002	0.002	0.0015	0.0019	<0.002	0.0013	<0.002	<0.002	0.0014	0.0023	0.0045
Dissolved Cadmium (by saltwater extrac	0.00002														
Iron	0.01 to 0.03	<0.03	<0.03	<0.03	0.031	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.084
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005
Lithium	0.0005 to 0.025	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.01	<0.005	<0.005	<0.005
Magnesium	0.1	15	25.1	23.3	37.1	25.3	27.5	26.8	33.8	35.7	39.3	38.2	40	17.1	11.3
Manganese	5E-005 to 0.0015	0.00466	0.0279	0.0208	0.0542	0.0283	0.0207	0.0264	0.0388	0.0353	0.0345	0.0355	0.0336	0.00883	0.00513
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0122	0.0106	0.0103	0.0085	0.01	0.0099	0.0099	0.0081	0.0083	0.008	0.0082	0.0079	0.0088	0.0078
Nickel	0.0005 to 0.005	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001
Phosphorus	0.05 to 0.3									<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	2	2.3	3.3	4.6	3.5	3.8	3.9	4.2	5.1	5.7	4.5	4.8	2.4	2.7
Selenium	0.0001 to 0.006	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	0.0018	<0.001	<0.001
Silicon	0.05									6.65	6.12	6.17	6.46	6.86	6.21
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00004	<0.00002	<0.00002	<0.00002	<0.00004	<0.00002	<0.00004	<0.00004	<0.00002	<0.00002	<0.00002
Sodium	0.05 to 2	8.9	20.3	22.5	36.5	27.2	28.3	28	36.6	37.4	41.8	40.3	40.9	11.2	7.3
Strontium	0.0001 to 0.005									0.408	0.447	0.446	0.464	0.223	0.148
Sulphur	0.5														
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0004	<0.0002	<0.0002	<0.0002	<0.0004	<0.0002	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00046	0.00063	0.00056	0.00089	0.00062	0.00063	0.00067	0.0008	0.00097	0.00108	0.0011	0.00102	0.00049	0.00025
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.03	<0.002	0.0019	0.002	0.0018	<0.002	0.0019	0.0021	<0.002	0.0018	0.0015	0.0018
Zinc	0.001 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Metals															
Aluminum	0.003 to 0.025	0.107	0.0894	0.0249	<0.01	0.0186	0.0117	0.0202	0.022	0.0213	0.018	0.025	0.0237	1.32	11.5
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005
Arsenic	0.0001 to 0.0025	0.00059	0.00074	0.00073	<0.001	0.00078	0.00073	0.00073	<0.001	<0.0005	<0.001	<0.001	<0.0005	0.00087	0.00409
Barium	5E-005 to 0.02	0.052	0.063	0.073	0.116	0.089	0.079	0.081	0.099	0.106	0.112	0.111	0.106	0.072	0.183
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001
Bismuth	0.0005 to 0.2									<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	1E-005 to 8.5E-005	<0.000017	<0.000017	<0.000017	<0.000034	0.000031	0.000027	<0.000017	<0.000034	0.000036	<0.000034	<0.000034	0.000021	0.000039	0.000116
Calcium	0.05 to 0.1	47.7	67.8	59.3	100	72.7	71.6	70.8	89.7	98.7	105	102	101	56.5	52.6
Chromium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.001	0.0025	0.0211
Cobalt	0.0001 to 0.0015	<0.0003	<0.0003	<0.0003	<0.0006	<0.0003	<0.0003	<0.0003	<0.0006	<0.0003	<0.0006	<0.0006	<0.0003	0.00116	0.0106
Copper	0.0005 to 0.007	0.0035	0.0032	0.0022	<0.002	0.0023	0.0016	0.0022	<0.002	0.0014	<0.002	<0.002	0.0016	0.0098	0.0658
Iron	0.01 to 0.03	0.131	0.169	0.069	0.068	0.06	0.041	0.055	0.067	0.086	0.071	0.076	0.073	1.9	17
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.0005	0.00183
Lithium	0.0005 to 0.025	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.01	<0.005	<0.005	0.0073
Magnesium	0.1	14.9	25.6	22.7	37.1	26.4	27.5	28.7	33.2	36.6	41.6	38.5	38.9	17.5	21.1
Manganese	5E-005 to 0.0015	0.0125	0.0459	0.0333	0.0683	0.0352	0.0255	0.035	0.0463	0.047	0.0394	0.0433	0.0413	0.0735	0.631
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000033
Molybdenum	5E-005 to 0.005	0.0121	0.0111	0.0103	0.0084	0.0099	0.0096	0.011	0.0084	0.0089	0.0086	0.0091	0.0086	0.0095	0.0084
Nickel	0.0005 to 0.005	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.001	0.0023	0.017
Phosphorus	0.05 to 0.3									<0.3	<0.3	<0.3	<0.3	<0.3	1.19
Potassium	0.05 to 2	<2	2.4	3.2	4.6	3.6	3.8	4	4.2	5.2	6.4	4.6	4.5	2.6	4.8
Selenium	0.0001 to 0.006	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	0.0012	<0.001	<0.001
Silicon	0.05									6.74	6.21	6.28	6.21	9.67	30.7
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00004	<0.00002	<0.00002	0.000046	0.000057	<0.00002	<0.00004	<0.00004	<0.00002	<0.00002	0.000076
Sodium	0.05 to 2	8.8	20.8	21.9	37	28.4	28	28.9	36.8	37.5	45.3	41.2	38.4	11	8.2
Strontium	0.0001 to 0.005									0.411	0.462	0.459	0.439	0.225	0.221
Sulphur	0.5														
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0004	<0.0002	<0.0002	<0.0002	<0.0004	<0.0002	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	0.06	0.518
Total Cadmium (by saltwater extraction)	0.00002														
Uranium	1E-005 to 0.001	0.00046	0.00068	0.00054	0.00087	0.00061	0.00063	0.00072	0.0008	0.001	0.00117	0.00117	0.0011	0.00051	0.00055
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.03	<0.002	0.002	0.002	0.0022	<0.002	0.0021	0.0024	0.002	0.0018	0.0069	0.0504
Zinc	0.003 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0335
Organics															
Carbon Organic (Dissolved)	0.5 to 5		6.11	5.35	5.12	6.03	5.39	5.87	5.33	5.86	5.35	4.75	4.22	10.5	16.5
Carbon Organic (Total)	0.5 to 5	8.76									4.96	4.7	4.26	10.6	33.3
Nitrogen Organic (Dissolved)	0.05 to 0.26												0.36	0.227	0.49
Nitrogen Organic (Total)	0.05 to 0.3										0.262		0.252	0.297	1.73
ALS LAB ID		**L501128**	**L532402**	**L554763**	**L623545**	**L652819**	**L678833**	**L927930**	**L956921**	**L990458**	**L995583**	**L997645**	**L999654**	**L1002049**	**L1005044**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

CC02 30-May-11	CC02 28-Jun-11	CC02 28-Jul-11	CC02 1-Sep-11	CC02 27-Sep-11	CC02 26-Oct-11	CC02 5-Dec-11	CC02 10-Jan-12	CC02 13-Feb-12	CC02 7-Mar-12	CC02 10-Apr-12	CC02 26-Apr-12	CC02 4-May-12	CC02 10-May-12	CC02 16-May-12	CC02 24-May-12	CC02 12-Jul-12	CC02 8-Aug-12
207	394	422	383		436	414	384	428	422	479	127	200	223	254	319	368	454
78.6	94.7	90.8	104	93.2	94.3	91.4	88.4	92.3	93.3		96.3	90.8	94.7	90.7	95	95.7	95.3
9.08	10.3	10.2	12.4	10	12.4	12.7	12.8	12.8	12.9	15.7	12.9	11.5	11.3	10.6	10.6	10.4	9.51
5.8	7.97	8.07	8.1	8.26	8.26	8.23	8.25	8.08	8.09	8.36	7.85	8.4	8.25	8.25	8.31	8.14	8.17
511	184	80	112	217	163	73.5	103	144	66	106	130	91.2	136	155	130	132	91.1
0.14	0.26	0.29	0.28		0.36	0.36	0.35	0.37	0.37	0.37	0.1	0.15	0.16	0.18	0.21		0.27
297	531	585	573	630	730	747	727	766	755	762	219	320	333	370	442	496	557
8.99	11.6	10.4	7.65	12.1	3.93	1.69	0.31	1.88	1.93	5.51	3.14	5.4	7.68	8.61	10.4	11.5	15.3
193	345	380	373		474	485	473	498	491	495	142	208	216	240	287		362
57.4		1	0.95			8.2	1	0	0.8		167	9.6	3.4	2.4	1.8	0.2	2.6
		3															
134	214	239	234	273	291	316	256	288	290	314	97.9	128	136	150	182	199	248
							256	288	280	287	97.9	128	136	150	182	199	238
							<1	<2	10.3	26.8	<2	<2	<1	<1	<1	<1	10.8
48.7	16	11.7	10.2	10.8	8.3	6.7	5.7	5.4	8.7	7.1	55.9	41.2	33.4	28.4	19.7	15	13
145	244	274	260	290	330	339	349	371	379	387	115	164	164	177	209	235	261
							<1	<2	<1	<1	<2	<2	<1	<1	<1	<1	<1
8.26	8.36	8.22	8.34	8.36	8.37	8.34	8.34	8.28	8.34	8.54	7.97	8.19	8.33	8.31	8.18	8.38	8.45
275	491	562	538	612	686	723	714	730	753	759	215	312	337	362	432	480	556
186	328	351	333	389	429	449	472	482	510	509	162	221	218	244	291	336	368
195	<3	<3	4.4	<3	<3	3.3	<3	<3	<3	3.3	611	23.3	10.7	6.8	3.3	5.3	3.1
	0.84	1.06	0.92	0.54	1.43	2.02	1.12	1.05	1.07	0.81	184	7.81	2.4	1.76	1.12	1.37	1.5
<0.25	<0.05	<0.05	<0.05	<0.05	<0.25	<0.25	<0.25	<0.25	<0.5	<0.25	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
2.5	3.02	3.19	2.82	3.49	4.5	3.9	4.3	4.8	5.1	5.9	1.32	2.29	2.06	2.16	2.68	2.46	2.83
<0.1	0.109	0.125	0.128	0.135	0.12	0.11	0.11	0.1	<0.2	<0.1	0.079	0.096	0.09	0.093	0.102	0.118	0.134
19.3	65	71.6	67.9	84.1	100	111	126	128	141	135	19.1	39.9	45	52.8	69	63	78.5
0.0185	0.0116	0.0109	0.009	0.0077	0.0228	0.0405	0.0232	0.053	0.0831	0.0099	0.0095	0.0062	<0.005	0.0069	<0.005	0.0072	0.008
<0.025	0.0886	0.0815	0.109	0.107	0.265	0.287	0.37	0.469	0.635	0.331	0.0341	0.0495	0.0213	0.0624	0.0496	0.103	0.0938
<0.005	<0.001	<0.001	<0.001	0.0015	0.0068	0.0052	0.006	0.0065	<0.01	<0.005	0.0045	<0.001	<0.001	0.001	<0.001	<0.001	<0.001
0.48	0.44	0.37	0.36	0.29	0.26		0.45	0.84	0.96	0.55	0.61	0.38	0.32	0.32	0.25	0.18	0.42
0.47	0.44	0.39	0.38	0.372		0.49	0.593	0.73	0.972	0.502	0.593	0.508	0.345	0.368	0.331		0.336
0.47	0.351	0.308	0.215	0.263	0.266	0.27	0.217	0.25	0.337	0.171	0.555	0.459	0.324	0.305	0.281	0.274	0.242
0.0257	0.0218	0.0239			0.0224												
0.0317	0.0258	0.0283	0.0306	0.0419	0.0263	0.0372	0.0279	0.0272	0.0829	0.0111	0.0567	0.0312	0.0186	0.0172	0.0145	0.03	0.0411
0.249	0.0314	0.0333	0.0341	0.0467	0.0321	0.045	0.033	0.0327	0.0921	0.0202	0.742	0.0916	0.0415	0.0296	0.02	0.0384	0.0495
<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
0.0124	0.0051	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0119	<0.005	<0.005	<0.005	<0.005	<0.005
<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
0.0118	<0.005	<0.005	<0.005	<0.005	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0165	0.0079	0.007	0.0044	0.0029	0.0019	0.0049
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	0.00012	0.0001	<0.0001
0.00078	0.00073	0.00071	0.00069	0.0007	0.00057	0.0005	0.00048	0.00047	0.00063	0.0005	0.00052	0.00064	0.00057	0.00052	0.00061	0.00072	0.00078
0.039	0.072	0.076	0.07	0.082	0.0834	0.0902	0.0941	0.107	0.101	0.108	0.0309	0.0417	0.048	0.0513	0.0589	0.0638	0.0703
<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.2	<0.2	<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
<0.1	<0.1	<0.1	<0.1	<0.1	0.037	0.039	0.04	0.034	0.036	0.036	<0.01	0.013	0.014	0.015	0.019	0.027	0.039
0.000028	0.000036	0.000042	<0.000017	<0.000017	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000011	<0.00001
38.5	60.7	68.2	64.2	72.2	82.5	82.7	86.5	93.2	92.9	93.8	32.3	42.9	42.5	45.7	53.6	60.1	63.6
<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00015	0.00014	0.0002	0.00015	0.00012	<0.0001	<0.0001
<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
0.0043	0.0028	0.0022	0.0019	0.0018	0.00139	0.00098	0.00106	0.00118	0.00151	0.00122	0.0042	0.00403	0.00376	0.0035	0.00301	0.00274	0.00214
0.045	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.116	0.04	<0.03	<0.03	0.011	0.014	0.017
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
<0.005	<0.005	<0.005	<0.005	<0.005	0.00248	0.00321	0.00285	0.00245	0.00242	0.00267	<0.0005	0.00125	0.00118	0.00132	0.00143	0.00178	0.00255
11.8	22.5	25.2	24.2	26.6	30	32.2	32.3	33.7	35.7	37.1	8.38	13.9	14.2	15.3	18.3	20.6	24.9
0.00491	0.0131	0.0171	0.0139	0.0169	0.0233	0.0308	0.0305	0.0308	0.0311	0.0347	0.00626	0.00305	0.00391	0.00465	0.00655	0.0132	0.0159
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
0.0081	0.0088	0.0096	0.0102	0.0101	0.00958	0.00941	0.00898	0.00931	0.00931	0.0086	0.00803	0.0099	0.00957	0.00935	0.00885	0.00935	0.00989
<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00054	0.00055	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
2.4	3.4	3.7	3.5	4.2	4.14	4.31	4.07	4.63	6.24	4.13	2.19	2.57	2.3	2.24	2.6	2.94	3.72
<0.001	<0.001	<0.001	<0.001	<0.001	0.00029	0.00039	0.00047	0.00054	0.00064	0.00062	0.00035	0.0004	0.00039	0.00038	0.00053	0.00037	0.00034
7.48	7.76	7.96	8.19	8.62	8.05	8.19	7.6	7.3	7.19	6.31	5.44	6.49	6.32	6.47	6.57	7.84	8.12
<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
7.8	23.1	26.3	25	31.9	31.4	35.2	32.8	30.1	30.1	30.9	4.5	9.22	10.2	11.5	15.3	19.7	27.5
0.156	0.29	0.314	0.297	0.331	0.326	0.401	0.386	0.376	0.377	0.403	0.108	0.175	0.176	0.2	0.231	0.254	0.281
<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.01	<0.01	<0.01	<0.01	<0.01	0.012	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0.00022	0.00047	0.00055	0.00053	0.00059	0.000668	0.000749	0.000768	0.000894	0.000989	0.000979	0.000167	0.00031	0.000298	0.000318	0.000407	0.000434	0.000597
0.0018	0.0018	0.0017	0.0018	0.0021	0.0016	0.0016	0.0015	0.0018	0.0023	0.002	0.0014	0.0016	0.0016	0.0015	0.0017	0.002	0.0021
<0.005	<0.005	<0.005	<0.005	<0.005	0.0043	<0.003	0.0032	0.0256	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0049	0.0029	0.0016
3.3	0.058	0.0551	0.0315	<0.025	0.0302	0.0583	0.0648	0.0209	0.0224	0.01	8.32	0.425	0.219	0.107	0.0575	0.0987	0.0829
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	0.00021	0.00011	<0.0001	0.00011	<0.0001	0.0001	0.00012
0.00183	0.00074	0.00072	0.0007	0.00061	0.00054	0.00048	0.00049	0.00051	0.00059	0.00051	0.00304	0.00084	0.0006	0.00059	0.00064	0.00073	0.00075
0.081	0.071	0.08	0.075	0.082	0.083	0.088	0.0953	0.111	0.103	0.104	0.142	0.0469	0.0482	0.0546	0.0566	0.0648	0.0748
<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00018	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.2	<0.2	<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
<0.1	<0.1	<0.1	<0.1	<0.1	0.042	0.04	0.044	0.044	0.044	0.04	0.017	0.017	0.018	0.021	0.023	0.03	0.047
0.000051	<0.000017	<0.000017	<0.000017	<0.000017	<0.00001	<0.00001	<0.00001	0.00001	<0.00001	<0.00001	0.000065	0.000012	<0.00001	<0.00001	<0.00001	0.000016	<0.00001
41.6	59.6	70.1	65	71.3	81.4	82.6	87.7	96.4	92.9	93.8	39.2	42.3	41.6	46.8	50.3	61.8	63.3
0.0059	<0.001	<0.001	<0.001	<0.001	0.00017	0.0002	0.00036	0.00253	0.00026	0.00019	0.015	0.00101	<0.0006	0.00041	0.00027	0.00034	0.0003
0.00292	<0.0003	<0.0003	<0.0003	<0.0003	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	0.00773	0.00045	0.00021	0.00014	<0.0001	0.00015	0.00012
0.0209	0.0034	0.0028	0.0023	0.0019	0.00165	0.00151	0.00154	0.00154	0.00185	0.00145	0.0528	0.0067	0.00462	0.00469	0.00344	0.0035	0.00313
4.32	0.101	0.102	0.067	0.059	0.076	0.117	0.132	0.076	0.071	0.046	12.2	0.686	0.27	0.17	0.09	0.149	0.121
0.00056	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00142	0.000089	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
<0.005	<0.005	<0.005	<0.005	<0.005	0.00287	0.00303	0.0029	0.00264	0.00275	0.00252	0.00495	0.00149	0.00121	0.00154	0.00147	0.00176	0.00283
14	22.2	26	25.2	26.9	30	31.5	32.9	35.2	36	37.1	14.7	14	14	15.9	17.7	21	25
0.14	0.0193	0.0256	0.0201	0.0213	0.0284	0.0399	0.0462	0.0393	0.0367	0.0364	0.426	0.0221	0.0115	0.00985	0.0102	0.0202	0.0249
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000035	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
0.009	0.0103	0.0112	0.0109	0.0103	0.00994	0.00941	0.0095	0.0107	0.00996	0.00854	0.0106	0.00952	0.00967	0.0101	0.00911	0.0102	0.0107
0.0049	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	0.00225	<0.0005	<0.0005	0.0133	0.00125	0.00071	0.00057	<0.0005	0.00059	0.00057
0.4	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.83	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
2.9	3.4	3.9	3.8	4.2	4.13	4.26	4.21	4.77	6.48	4.1	3.48	2.54	2.23	2.34	2.52	3	3.75
<0.001	<0.001	<0.001	<0.001	<0.001	0.00026	0.00033	0.00039	0.00056	0.0006	0.00061	0.0006	0.00035	0.00038	0.00043	0.00052	0.00037	0.00029
14.5	7.78	8.29	8.46	8.49	8.08	8.16	7.84	7.62	7.29	6.33	23.1	7.31	6.54	6.87	6.21	8.25	8.35
<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000048	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
8.1	23.2	27.5	26.8	31.2	31.2	34.2	34	31.5	31	30	4.79	9.01	9.83	12	14.9	20.2	27.2
0.175	0.289	0.327	0.312	0.329	0.33	0.393	0.39	0.399	0.387	0.393	0.152	0.166	0.173	0.208	0.229	0.262	0.303
<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000034	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
0.156	<0.01	<0.01	0.013	<0.01	0.015	<0.01	0.012	<0.01	<0.01	<0.01	0.375	0.023	0.01	<0.01	<0.01	0.012	<0.01
0.00035	0.00056	0.0006	0.00058	0.00061	0.00067	0.000744	0.000792	0.000956	0.00104	0.000929	0.000394	0.000311	0.000311	0.000343	0.00044	0.000473	0.000652
0.0161	0.0023	0.0021	0.002	0.0021	0.0017	0.0019	0.0019	0.0022	0.0024	0.002	0.0359	0.0034	0.0022	0.0021	0.0021	0.0024	0.0026
0.0097	<0.005	<0.005	<0.005	<0.005	<0.003	<0.003	0.0084	0.0033	0.0033	<0.003	0.0238	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
17.4	9.35	7.2	6.9	6.76	5.6	5.1	4.6	4.61	5.22	5.05	16.2	13.5	10.3	10.4	9.33	7.97	6.7
17.7	9.4	7.43	6.92	6.76	6.45	5.02	4.61	4.76	5.27	5.13	26.6	13.6	10.8	10.6	9.47	8.06	6.91
0.461	0.34	0.278	0.242	0.174	<0.052		<0.09	0.31	0.24	0.21	0.562	0.324	0.294	0.25	0.196	0.07	0.318
0.451	0.34	0.298	0.262	0.164	0.095	0.158	0.194	<0.3	0.254	0.161	0.545	0.453	0.324	0.298	0.281	0.266	0.234
L1011001	**L1025075**	**L1038168**	**L1053400**	**L1065234**	**L1077732**	**L1092368**	**L1103104**	**L1114029**	**L1122039**	**L1133342**	**L1140194**	**L1143149**	**L1146570**	**L1148880**	**L1152500**	**L1178283**	**L1191600**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

CC02 5-Sep-12	CC02 11-Oct-12	CC02 5-Nov-12	CC02 4-Dec-12	CC02 10-Jan-13	CC02 5-Feb-13	CC02 5-Mar-13	CC02 2-Apr-13	CC02 6-May-13	CC02 4-Jun-13	CC02 2-Jul-13	CC02 6-Aug-13	CC02 3-Sep-13	CC02 8-Oct-13	CC02 6-Nov-13	CC02 4-Dec-13	CC02 10-Apr-14	CC02 10-Sep-14
4.4	425	293	433	384	0.397	422	555	178	264	349	425		633	404	365	462	387
103	96.1	100	85.7	90.3	90.4	107		89.4	91.6	95.7	104	85.9	91.6	94.5	98	102	90.1
11.4	11.8	11.9	11	12.9	12.6	14.2		9.9	9.58	9.27	10.4	9.1	10.3	12.2	14.3	12.9	10.3
8.29	8.14	8.14	8.26	8.65	8.08	8.46	8.18	7.95	8.22	8.19	8.13	8.17	8.24	8.38	8.06	8.41	8.25
85.9	-233	97.4	176	109	153	80.4	144	214	110	104	222	233	82.2	74.5	110	129	170
0.29	0.32	0.21	0.34	0.34	0.34	0.35	0.42	0.12	0.16	0.2	0.25	0.3	0.31	0.32	0.33	0.36	0.27
603	661	434	708	716	713	714	850	245	339	414	521	616	451	662	697	740	552
10.8	6.32	7.89	4.66	0.73	1.79	3.6	6.83	10.8	13.3	16.9	15.3	12.7	9.96	4.65	0.04	5.28	9.36
392	430	282	460	465	463	464	552	159	220	269	339	400	412	430	453	481	359
1.1	0.9	1	0	0.5	0.7	0.6	0.8	134	17.5	3	1.2		0	1.2	0.6	0.6	
<1														<1			
259	283	284	290	298	283	290	313	110	152	170	209	267	276	287	291	312	267
251	283	284	284	298	283	273	300	110	152	164	202	263		283	291	290	263
7.9	<2	<1	6	<2	<1	17	13	<2	<1	6.4	7.5	3.6		3.8	<2	21.3	4.3
9.5	8	8.6	6.8	5.4	6.4	9	7.7	41.3	34.1	25.4	12.2	9.8	9.3	7.9	6.2		
285	323	316	331	335	347	374	387	116	162	194	233	263	301	298	312	379	275
<1	<2	<1	<1	<2	<1	<1	<1	<2	<1	<1	<1	<1		<1	<2	<1	<1
8.46	8.27	8.41	8.33	8.3	8.31	8.41	8.36	8.25	8.38	8.37	8.41	8.41	8.46	8.37	8.18	8.42	8.32
593	618	668	670	660	695	741	797	229	328	391	505	580	611	666	623	762	567
389	425	460	449	426	444	492	533	151	222	272	334	380	391	431	428	513	381
<3	<3	<3	<3	<3	<3	4	<3	346	41.7	10.9	<3	<3	<3	<3	<3	<3	<3
0.92	0.59	0.83	0.47	1.01	0.66	0.66	1.13	123	14.2	1.56	0.66	1.13	0.75	1.31	0.67	1.69	0.7
<0.05	<0.05	<0.5	<0.25	<0.25	<0.5	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.25	<0.05
2.92	3.23	<5	4.1	3.9	<5	5.44	5.4	1.24	2.14	2.38	2.86	3.25	3.75	5	3.95	6.5	2.76
0.135	0.13	0.27	0.1	0.17	<0.2	0.117	0.27	0.101	0.113	0.126	0.13	0.13	0.136	0.12	0.132	0.11	0.142
80.7	94.5	96.7	105	110	120	131	153	18.3	24.8	31	56	66.1	73.8	85.2	85.9	125	67.3
0.0082	0.0089	0.0183	0.0272	0.0151	0.03	0.0151	0.021	0.0148	0.0061	0.0087	0.0103	0.0106	0.006	0.0102	0.0279	0.0109	0.0073
0.108	0.0689	0.236	0.277	0.326	0.41	0.385	0.518	0.0199	0.042	0.0625	0.0719	0.166	0.16	0.311	0.402	0.552	0.145
0.0018	0.007	0.012	0.0101	0.0073	<0.01	0.0047	0.016	<0.001	<0.001	<0.001	<0.001	<0.001	0.0018	0.0056	0.0032	0.0058	<0.001
0.36	0.37	0.56	0.588	0.527	0.671	0.616	0.758				0.361	0.375					
	0.318	0.497	0.526	0.502	0.669	0.655	0.834	1.37	0.364	0.453	0.377	0.394	0.36	0.499			
0.232	0.242	0.249	0.24	0.208	0.291	0.337	0.3	1.62	0.426	0.391	0.277	0.332	0.237	0.285	0.27	0.331	0.24
	0.0224												0.0185	0.0195	0.0408	0.0336	0.038
0.0353	0.0261	0.0325	0.0269	0.0397	0.0345	0.0544	0.0367	0.0335	0.0288	0.058	0.0206	0.0326		0.0216	0.0454	0.0381	
0.0374	0.031	0.0364	0.0301		0.0375	0.0587	0.0449	0.844	0.116	0.0343	0.0343	0.0368	0.0276	0.0278	0.049	0.0498	0.0508
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
0.0015	<0.001	<0.001	<0.001	0.0012	0.0012	0.001	<0.001	0.0156	0.0066	0.0035	0.0015	0.0015	0.0019	<0.001	<0.001	<0.001	<0.001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
0.00072	0.00053	0.0005	0.00048	0.00049	0.00048	0.0005	0.00056	0.00061	0.00072	0.00091	0.00079	0.00073	0.00066	0.00057	0.00047	0.00054	0.00066
0.0756	0.0815	0.0866	0.0913	0.0901	0.0965	0.0929	0.108	0.031	0.0451	0.0564	0.07	0.0791	0.0846	0.0921	0.0863	0.0937	0.0773
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
0.042	0.039	0.041	0.042	0.037	0.04	0.035	0.044	<0.01	0.014	0.02	0.036	0.044	0.042	0.043	0.039	0.038	0.041
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
71.7	79.4	79	84.2	82.7	85.3	90.4	96.6	31.6	43.1	49.9	58.3	64.7	76.5	75.6	75.9	94.2	68.1
0.00011	<0.0001	<0.0001	0.00014	<0.0001	<0.0001	<0.0001	<0.0001	0.00015	0.00015	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
0.00137	0.00136	0.00113	0.00112	0.00105	0.00123	0.0016	0.00126	0.00391	0.00357	0.00297	0.00223	0.00177	0.00139	0.00115	0.00101	0.00152	0.00126
0.02	0.019	0.017	0.021	0.016	0.017	0.022	0.015	0.048	0.02	0.017	0.018	0.018	0.017	0.015	0.013	0.017	0.022
<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
0.003	0.00229	0.00251	0.00289	0.0022	0.00306	0.00285	0.00198	0.00093	0.00102	0.00133	0.00212	0.00353	0.00161	0.00296	0.00268	0.00261	0.00211
25.8	30.4	28.8	29.3	31.2	32.6	36	35.3	8.93	13.3	16.7	21.3	24.8	26.6	26.6	29.7	34.8	25.4
0.0181	0.0212	0.0223	0.0236	0.0249	0.0236	0.0239	0.0302	0.00501	0.00363	0.00726	0.0129	0.0148	0.0154	0.0213	0.0194	0.0275	0.0223
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
0.0101	0.00945	0.00839	0.00923	0.0088	0.00945	0.00884	0.00866	0.00982	0.00954	0.01	0.0105	0.0104	0.00958	0.00861	0.0098	0.00908	0.0093
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00053	0.00052	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
<0.05	<0.3	<0.3	<0.05	<0.05	<0.05	0.056	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
4.04	3.71	4.04	4.17	4.16	4.69	6.53	4.92	2.1	2.35	3.05	3.56	4.02	4.15	4.38	4.24	4.91	3.57
0.00025	0.00023	0.00022	0.00028	0.00038	0.0005	0.00057	0.00133	0.00024	0.00023	0.00023	0.00027	0.00027	0.00026	0.00026	0.00038	0.00098	0.00034
7.86	8.2	8.06	7.77	7.49	7.25	7.03	6.76	6.38	7.2	7.77	7.9	8.36	7.98	8.29	7.89	6.54	7.97
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
30.3	31	30.4	36.2	31	33.3	32.2	34.4	5.45	8.7	12.8	24.4	30.7	30.6	31.3	28.7	32.5	26.2
0.307	0.328	0.33	0.356	0.364	0.386	0.391	0.407	0.124	0.175	0.221	0.27	0.297	0.322	0.325	0.33	0.377	0.293
			34.5	36.4	38.3	42.2	47.6	6.07	8.01	10.2	18.1	21.4	24.1	29	28	42.4	22
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0.000578	0.000672	0.000659	0.000714	0.000771	0.000817	0.000877	0.00101	0.000169	0.000278	0.000363	0.000537	0.000618	0.000586	0.000638	0.000716	0.000979	0.000545
0.0019	0.0016	0.0015	0.0015	0.0017	0.0017	0.0019	0.0021	0.0017	0.0019	0.0022	0.0023	0.0022	0.002	0.0016	0.0016	0.0023	0.0018
0.0019	<0.001	<0.001	<0.001	0.002	0.0011	<0.001	0.0019	<0.001	0.0015	0.0017	0.0011	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
0.0382	0.0172	0.0231	0.0146	0.0093	0.0168	0.0062	0.0159	7.23	0.581	0.283	0.0505	0.0372	0.0268	0.0429	0.0263	0.0383	0.0305
<0.0001	<0.0001	<0.0001	<0.0001	0.00011	0.00011	<0.0001	<0.0001	0.0002	0.00013	0.00014	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	0.00011	0.00012
0.00074	0.00054	0.00055	0.00046	0.0005	0.00049	0.00057	0.00053	0.00301	0.00096	0.00101	0.00079	0.00069	0.00068	0.00068	0.00051	0.00059	0.00065
0.0773	0.0779	0.0913	0.0859	0.087	0.0965	0.0948	0.105	0.13	0.0558	0.0605	0.0734	0.076	0.0886	0.0946	0.0886	0.0958	0.074
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00017	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
0.048	0.039	0.046	0.043	0.04	0.045	0.038	0.048	0.011	0.017	0.023	0.043	0.047	0.046	0.043	0.042	0.042	0.045
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000015	0.000012	0.000064	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
71.9	75.9	79.4	80.4	82.5	88	94.5	93.3	39.2	43.1	50.2	61.9	65.8	76.5	78	78	93.5	64.7
0.00033	0.00016	0.00014	0.00019	0.00016	0.00018	0.00011	0.00015	0.0135	0.0012	0.0006	0.00033	0.00019	0.00017	0.00023	0.00015	0.00019	0.00016
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00731	0.00058	0.00031	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	<0.0001
0.00229	0.00158	0.00154	0.00334	0.00142	0.00174	0.00175	0.00162	0.0483	0.00679	0.00491	0.00288	0.00212	0.00176	0.00165	0.00136	0.0018	0.00153
0.082	0.049	0.062	0.053	0.035	0.055	0.042	0.053	11	0.838	0.425	0.097	0.093	0.068	0.098	0.062	0.085	0.084
0.000051	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00132	0.000118	0.000057	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
0.00298	0.00192	0.00281	0.00294	0.00241	0.00314	0.00315	0.00202	0.00472	0.00168	0.00166	0.00222	0.00375	0.00162	0.00257	0.00278	0.00281	0.00191
26.3	27	28.1	27.8	31.4	32.7	35.3	33.9	14.7	13.6	17.3	22.5	25.2	26.7	28.8	29	34.8	24.5
0.0245	0.0251	0.0295	0.0272	0.0274	0.0277	0.0256	0.0336	0.381	0.0296	0.0231	0.0209	0.0221	0.0212	0.0318	0.0247	0.0312	0.0283
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000029	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
0.0107	0.00932	0.00914	0.00889	0.00939	0.0101	0.00968	0.0087	0.00835	0.0112	0.011	0.0114	0.0108	0.0102	0.00933	0.0102	0.0103	0.00905
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0122	0.00156	0.00096	0.00052	<0.0005	<0.0005	0.00052	<0.0005	<0.0005	<0.0005
<0.05	<0.3	<0.3	<0.05	<0.05	<0.05	0.064	<0.05	0.816	0.081	0.053	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.056
4.28	3.72	4.1	3.94	4.26	4.85	6.78	4.97	3.27	2.44	3.22	3.84	4.06	4.13	5.31	4.53	4.91	3.49
0.00022	0.00023	0.00024	0.00027	0.00052	0.00052	0.00057	0.00118	0.00042	0.00026	0.00025	0.00026	0.00025	0.00025	0.00023	0.00037	0.00088	0.0003
8.13	7.8	8.16	7.47	7.57	7.34	7.16	6.67	21.1	8.41	8.63	8.32	8.41	8.17	8.56	8.06	6.7	7.88
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000043	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
31.7	30.2	30.9	29.9	31.6	34.2	32.6	33.4	5.73	9.14	13.3	25.6	31.2	31.7	31.7	29.5	33.4	25
0.319	0.319	0.345	0.329	0.357	0.39	0.417	0.404	0.156	0.184	0.236	0.292	0.304	0.334	0.336	0.333	0.409	0.284
			34.3	37.4	40.4	44.8	47.2	6.16	8.29	10.2	19.5	22.3	25.1	30.6	29.1	44	22.1
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000028	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.245	0.024	0.012	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0.00061	0.00064	0.000684	0.000684	0.000809	0.000872	0.000957	0.001	0.000353	0.000306	0.00039	0.000582	0.000639	0.000616	0.000676	0.000789	0.00109	0.00053
0.0023	0.0017	0.0017	0.0017	0.0018	0.002	0.0022	0.0022	0.0319	0.0044	0.0034	0.0026	0.0024	0.0023	0.0023	0.0018	0.0027	0.002
<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0218	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
5.81	5.77	5.49	4.79	4.56	4.45	5.32	5.42	11.9	12	11	7.57	6.48	5.37	5.46	4.86	5.41	5.07
5.82	5.75	5.51	4.88	4.41	4.53	5.25	5.48	13.2	12.9	11.4	7.62	6.29	5.79	5.72	5	5.37	5.24
0.242	0.285	0.29	0.27				0.2										
0.223	0.233	0.231	0.212	0.193	0.261	0.322	0.279										
L1205273	**L1222966**	**L1233797**	**L1245799**	**L1256678**	**I1265809**	**L1275746**	**L1285503**	**L1298960**	**L1311741**	**L1326032**	**L1344180**	**L1357647**	**L1376311**	**L1388680**	**L1399806**	**L1442672**	**L1516193**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C1.11 - CC08
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Site ID		CC08	CC08	CC08	CC08	CC08	CC08	CC08	CC08	CC08	CC08	CC08	CC08	CC08	CC08
Analytes	**MDL**	**1-May-07**	**18-Jul-07**	**14-Sep-07**	**28-Apr-08**	**7-Jul-08**	**4-Sep-08**	**02/Sep/2010**	**22-Nov-10**	**28-Mar-11**	**14-Apr-11**	**21-Apr-11**	**28-Apr-11**	**5-May-11**	**12-May-11**
In Situ Parameters															
Conductivity µS/cm	...	158	233	166	107	220	212	201	171	196	194	201	185	163	106
Oxygen Dissolved %	...				94.1	96.6	89.4	88.3	75.2	88.4	90.4	91.9	79.1	91.8	89.5
Oxygen Dissolved	...	11.8	10.2	12.9	13	10.6	9.85	10.3	10.9	12.2	12.5	15.9	11.5	12.5	12.1
pH (unitless)	...	8.34	7.82	8.6	8.2	8.16	8.21	7.91	7.48	8.85	8.18	8.14	8.05	8.26	7.85
Redox Potential mV	...	-72.6	-60.4			-106	-92.9	26	251	95.4	66.2	150	109	97.4	171
Salinity ppt	...							0.14				0.19	0.17	0.13	0.09
Specific Conductivity µS/cm	...	252	300	228	333	299	290	293	327	348	347	388	351	284	184
Temperature °C	...	5.46	13.3	10.3	2.02	11.3	11	8.65	0.07	2.13	1.9	-0.13	0.17	2.66	2.76
Total Dissolved Solids	...							190	212	226	225	254	228	185	119
Turbidity NTU	...														
Physical Tests															
Acidity to pH 8.3 (as CaCO3)	1														
Alkalinity (Total as CaCO3)	1 to 2	108	135	130	158	143	149	138	161	167	170	171	166	134	90.6
Bicarbonate Alkalinity	1 to 2								161			171			
Carbonate Alkalinity	1 to 2								<2			<2			
Color TCU	5	20.7	18.4	15.1	7.7	15.1	9.7	15.7	7.4	5.1	8.1	5.7	7.1	30.7	57.3
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	133	158	118	182	153	153	143	179	181	186	184	187	157	102
Hydroxide Alkalinity	1 to 2								<2			<2			
pH (unitless)	0.01 to 0.1	8.31	8.29	8.32	8.11	8.36	8.34	8.22	8.2	8.2	8.31	8.21	8.24	8.22	
Specific Conductivity µS/cm	2	230	280	232	333	290	292	266	322	329	320	328	316	269	186
Total Dissolved Solids	1 to 2	161	186	149	195	197	179	175	196	196	194	204	209	190	152
Total Suspended Solids	3	3	3.1	4.7	10.4	<3	<3	<3	<3	<3	<3	<3	<3	6	179
Turbidity NTU	0.1				3.08	0.22	0.51	0.37	0.32	0.17	0.18	0.38	0.26	1.82	54
Dissolved Anions															
Bromide	0.05 to 2.495	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.073	<0.05	<0.05	<0.05	<0.05	<0.05
Chloride	0.5 to 1	0.54	<0.5	0.55	0.95	0.66	0.62	0.58	0.83	0.99	1.04	1.15	0.98	1.1	0.6
Fluoride	0.02 to 0.4	0.067		0.069	0.094	0.083	0.076	0.066	0.066	0.067	0.074	0.084	0.072	0.055	0.057
Sulphate	0.5 to 1	14.6	13.4	3.4	25.3	11.3	8.4	7.4	15.6	14.6	15	15.3	15.5	13.9	9.16
Nutrients															
Ammonia (Total)	0.005 to 0.05	<0.02	0.03	0.031	<0.02	<0.02	0.036	<0.005	<0.005	<0.005	0.0064	<0.005	0.0074	<0.005	0.0082
Nitrate (as N)	0.005 to 0.1	0.0082	0.0634	0.0379	0.167	0.0085	<0.005	0.006	<0.005	0.176	0.0936	0.0754	0.0613	0.0845	0.0352
Nitrite (as N)	0.001 to 0.02	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen (Dissolved)	0.05 to 0.1												0.37	0.33	0.43
Nitrogen (Total)	0.0025 to 0.11							0.351	0.112	0.3	0.222	0.19	0.219	0.42	0.95
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.232	0.307	0.18	0.243	0.215	0.14	0.345	0.112	0.124	0.128	0.115	0.157	0.336	0.854
Orthophosphate (Dissolved)	0.001 to 0.01	0.0039	0.0109	0.0094	0.0076	0.0108	0.0117	0.0095	0.0104	0.0081					
Phosphorus - Dissolved	0.002 to 0.02			0.0122				0.0121			0.007	0.0051	0.0095	0.0149	0.0336
Phosphorus - Total	0.002 to 0.02	0.0105	0.0198	0.0194	0.0213	0.0226	0.0155	0.0121	0.0126	0.0104	0.0075	0.0072	0.0081	0.0266	0.241
Cyanide															
Cyanide (Free)	0.005				<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	0.0061	0.0065	0.006	<0.005	0.0061		0.0061	<0.005	<0.005		<0.005	<0.005	0.0069	0.0205
Cyanide (WAD)	0.005	<0.005			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Dissolved Metals															
Aluminum	0.001 to 0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0052	0.0317
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Barium	5E-005 to 0.02	0.04	0.043	0.04	0.055	0.055	0.052	0.052	0.058	0.052	0.052	0.051	0.05	0.042	0.029
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth	0.0005 to 0.2									<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	1E-005 to 8.5E-005	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	0.000027	0.000024	0.000023	0.000037	0.000036	0.00003	0.000024	0.000029	0.000028
Calcium	0.05 to 0.1	41.1	47.4	35.2	54.1	45.7	45.9	42.9	53.7	53.5	54.9	54.5	55.5	47.4	30.5
Chromium	0.0001 to 0.018	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	0.0001 to 0.0015	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Copper	0.0002 to 0.006	0.0025	0.0026	0.0024	0.0016	0.0029	0.0025	0.0029	0.0018	0.0016	0.0016	0.0017	0.0016	0.0027	0.004
Dissolved Cadmium (by saltwater extrac	0.00002														
Iron	0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.098
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Lithium	0.0005 to 0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Magnesium	0.1	7.48	9.68	7.31	11.3	9.54	9.28	8.75	11	11.4	11.8	11.6	11.7	9.45	6.39
Manganese	5E-005 to 0.0015	<0.0003	0.00144	0.0007	0.00033	0.00159	0.00074	0.00071	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.00047	0.00206
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0122	0.0111	0.0057	0.0103	0.0106	0.0087	0.0079	0.0086	0.0095	0.0096	0.0096	0.0099	0.0086	0.0072
Nickel	0.0005 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Phosphorus	0.05 to 0.3									<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Selenium	0.0001 to 0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon	0.05									5.9	5.8	5.75	5.86	6.85	6.01
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	0.05 to 2	3.1	3.2	3.4	4.5	4.2	4	3.8	4.5	5.1	5.3	5.1	5.1	3.8	2.9
Strontium	0.0001 to 0.005									0.159	0.158	0.157	0.156	0.132	0.0865
Sulphur	0.5														
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	0.00051	<0.0002	<0.0002	<0.0002	0.00026	0.00049	0.0005	0.00052	0.00052	0.00028	<0.0002
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.03	<0.001	0.0013	0.0013	0.0012	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	0.001 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0076
Total Metals															
Aluminum	0.003 to 0.025	0.0391	0.0549	0.0339	0.0737	0.0106	<0.005	0.0083	<0.005	<0.005	<0.005	0.0135	0.0073	0.127	4.96
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00161
Barium	5E-005 to 0.02	0.039	0.04	0.041	0.051	0.056	0.052	0.051	0.054	0.051	0.052	0.053	0.052	0.045	0.096
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth	0.0005 to 0.2									<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	1E-005 to 8.5E-005	<0.000017	<0.000017	0.00002	0.000034	<0.000017	0.000027	0.000031	0.000027	<0.000017	<0.000017	<0.000017	<0.000017	0.000034	0.000064
Calcium	0.05 to 0.1	39.4	45	34.5	51.7	45.8	45.6	43.9	52.3	52.3	54	53.4	54.4	47.4	36.3
Chromium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0085
Cobalt	0.0001 to 0.0015	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.00419
Copper	0.0005 to 0.007	0.0028	0.003	0.0027	0.0027	0.003	0.0025	0.0032	0.0019	0.0017	0.0017	0.0019	0.0018	0.0033	0.0285
Iron	0.01 to 0.03	0.068	0.092	0.06	0.121	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.208	6.71
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00068
Lithium	0.0005 to 0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Magnesium	0.1	7.32	9.17	7.21	10.9	9.56	9.44	8.98	10.6	11.2	11.8	11.7	11.6	9.56	10.2
Manganese	5E-005 to 0.0015	0.00225	0.00458	0.00375	0.00515	0.00194	0.00103	0.00126	0.00058	<0.0003	<0.0003	<0.0009	0.00042	0.00528	0.248
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	0.000494	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0125	0.0109	0.0057	0.0099	0.0105	0.0087	0.0092	0.0092	0.0103	0.0111	0.0109	0.0109	0.0096	0.0081
Nickel	0.0005 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0059
Phosphorus	0.05 to 0.3									<0.3	<0.3	<0.3	<0.3	<0.3	0.66
Potassium	0.05 to 2	<2	<2	<2	<2	<2	<2	<2	<2	<2	2.1	<2	<2	<2	2.5
Selenium	0.0001 to 0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon	0.05									5.73	5.72	5.77	5.84	7.12	15.4
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	0.000028
Sodium	0.05 to 2	3.1	3	3.3	4.2	4.1	4.1	3.8	4.4	5	5.6	5.2	5.2	3.9	3.1
Strontium	0.0001 to 0.005									0.158	0.159	0.161	0.158	0.136	0.11
Sulphur	0.5														
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.012	0.242
Total Cadmium (by saltwater extraction)	0.00002														
Uranium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	0.00053	<0.0002	<0.0002	<0.0002	0.00028	0.00053	0.00056	0.00054	0.00056	0.00031	0.00024
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.03	0.0014	0.0013	0.0013	0.0014	0.001	0.001	0.0011	<0.001	<0.001	0.0014	0.0213
Zinc	0.003 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0145
Organics															
Carbon Organic (Dissolved)	0.5 to 5		8.52	8.21	5.8	7.89	6.81	7.06	5.31	4.83	4.87	4.61	4.57	13.4	17.4
Carbon Organic (Total)	0.5 to 5	9.52									4.62	4.8	4.66	13.5	22.4
Nitrogen Organic (Dissolved)	0.05 to 0.26												0.301	0.242	0.387
Nitrogen Organic (Total)	0.05 to 0.3										0.122		0.15	0.332	0.846
ALS LAB ID		**L501128**	**L532402**	**L554763**	**L623545**	**L652819**	**L678833**	**L927930**	**L956921**	**L990458**	**L995583**	**L997645**	**L999654**	**L1002049**	**L1005044**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

CC08 30-May-11	CC08 28-Jun-11	CC08 28-Jul-11	CC08 1-Sep-11	CC08 27-Sep-11	CC08 26-Apr-12	CC08 4-May-12	CC08 10-May-12	CC08 16-May-12	CC08 24-May-12	CC08 12-Jul-12	CC08 8-Aug-12	CC08 5-Sep-12	CC08 8-Jan-13	CC08 5-Feb-13	CC08 5-Mar-13	CC08 2-Apr-13	CC08 6-May-13
129	219	215	167		97	109	116	120	122	203	212	176	179	177	279	205	121
76.4	92.6	89.9	92.7	84.4	95.8	88.9	92.4	88.4	90.1	92	88.2	98	85.6	85.4	93.2		85.7
9.12	10.3	10.1	11.1	10.1	13.2	11.6	11.8	10.4	10.7	9.85	8.97	10.9	12.2	12	12.8		9.74
7.3	7.97	8.04	7.93	7.98	7.88	8.08	8.18	8.11	8.02	8.18	8.1	8.12	8.41	8.16	8.29	8.05	8.1
436	194	76.5	100	157	124	120	164	152	141	114	109	96	84.1	216	116	186	192
0.09	0.14	0.14	0.12		0.08	0.09	0.09	0.08	0.09		0.13	0.12	0.16	0.15	0.13	0.17	0.08
193	301	301	250	256	172	181	189	177	182	268	265	243	330	321	158	348	170
7.65	10.7	10.1	7.65	9.79	2.08	4.21	4.92	8.2	4.81	12.3	14.6	10.6	1.01	1.53	2.26	3.44	9.69
126	195	195	162		112	118	123	115	118		172	158	214	209	181	226	111
9.6		0.2	2.6		49.8	2.9	1.6	1.2	0.6	-2	0.6	0.3	0.1	0.1	1.3	0	33.2
		2.9										<1					
97.4	143	153	124	138	82.4	81	90.6	94.2	103	131	144	125	156	156	157	152	79.5
					82.4	81	90.6	94.2	103	131	142	125	156	156	150	152	79.5
					<2	<2	<2	<1	<1	<1	2	<1	<2	<2	7.3	<1	<2
55.8	25.9	19.9	22.9	17.7	58.6	49.3	42.8	42	33.6	25.2	21.6	20.4	5.7	5.3	5.1	6.6	46.1
104	151	162	130	136	89.4	100	100	98.4	106	143	148	136	164	163	165	168	83.9
					<2	<2	<2	<1	<1	<1	<1	<1	<2	<2	<1	<1	<2
8.09	8.3	8.25	8.23	8.2	8.15	8.1	8.26	8.17	7.58	8.35	8.33	8.38	8.23	8.2	8.37	8.15	8.14
183	267	296	232	253	172	178	191	186	196	260	263	237	281	295	307	306	161
141	198	170	160	163	139	140	142	138	140	186	181	163	184	181	185	195	119
18.1	<3	<3	<3	<3	120	3.3	<3	3.5	<3	<3	<3	<3	<3	<3	<3	<3	76.7
	0.32	0.41	0.37	0.33	34	1.66	1.05	0.68	0.39	0.41	0.49	0.42	0.24	0.4	0.2	0.19	22.2
<0.25	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
<2.5	0.51	0.55	0.54	0.62	1.07	0.93	0.86	0.85	0.79	0.55	0.56	0.63	0.96	1.02	1.06	1.03	0.64
<0.1	0.086	0.097	0.081	0.087	0.066	0.07	0.068	0.07	0.073	0.091	0.094	0.084	0.083	0.077	0.088	0.09	0.068
8.1	8.83	8.84	6.45	4.56	9.9	13.2	12.4	10.3	10.2	8.97	10.5	5.94	10.7	11.6	13.5	15.9	9.12
0.0159	<0.005	<0.005	0.0052	<0.005	0.0138	<0.005	0.0058	<0.005	<0.005	<0.005	<0.005	0.0057	<0.005	<0.005	<0.005	<0.005	0.0053
<0.025	0.0068	0.0163	0.0114	<0.005	0.0461	0.02	<0.005	<0.005	<0.005	0.0561	0.0264	0.0142	0.0075	0.0239	0.014	0.302	<0.005
<0.005	<0.001	<0.001	<0.001	<0.001	0.0032	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0011	<0.001
0.41	0.35	0.31	0.32	0.17	0.57	0.3	0.29	0.29	0.2	0.13	0.34	0.29	0.14	0.155	0.16	0.429	
0.64	0.35	0.32	0.33	0.231	0.921	0.44	0.351	0.328	0.323		0.283		0.181	0.141	0.122	0.47	0.683
0.64	0.343	0.304	0.281	0.231	0.871	0.42	0.351	0.328	0.323	0.28	0.256	0.23	0.132	0.158	0.146	0.167	0.622
0.0084	0.0132	0.0139															
0.0147	0.0157	0.0166	0.0112	0.0144	0.0369	0.018	0.0142	0.0134	0.01	0.0166	0.0126	0.0104	0.0131	0.0101	0.0088	0.009	0.0149
0.0416	0.0171	0.0183	0.0127	0.0148	0.224	0.0278	0.0209	0.0169	0.012	0.0168	0.0145	0.0112		0.0098	0.0097	0.0102	0.219
<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
0.0132	0.0078	<0.005		0.0054	<0.005	0.0104	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
0.0218	<0.005	<0.005	<0.005	<0.005	0.0219	0.0129	0.0118	0.0074	0.0059	0.0033	0.0023	0.0023	0.0012	0.0011	<0.001	<0.001	0.0191
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00038	0.00032	0.00031	0.00031	0.00031	0.00041	0.00043	0.00037	0.00037	0.00036	0.00035	0.00035	0.0003
0.032	0.05	0.051	0.042	0.047	0.0287	0.03	0.0315	0.0323	0.033	0.045	0.0485	0.043	0.0464	0.047	0.0449	0.0475	0.0267
<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.2	<0.2	<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0.00003	0.000042	0.000036	<0.000017	<0.000017	0.000013	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
31.2	44.8	48.1	39	40.5	26.3	30.4	29.9	29.5	32.1	43.1	44.2	41.4	48.5	48.2	49.1	49.7	25.3
<0.001	<0.001	<0.001	<0.001	<0.001	0.00013	0.00018	0.00026	0.00016	0.00016	0.00011	<0.0001	0.00013	<0.0001	<0.0001	<0.0001	<0.0001	0.00017
<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
0.0043	0.0031	0.0028	0.003	0.0031	0.00372	0.00413	0.0037	0.00376	0.0035	0.00329	0.00295	0.00254	0.00154	0.00143	0.00146	0.00148	0.00373
0.06	<0.03	<0.03	<0.03	<0.03	0.125	0.061	0.054	0.04	0.023	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.055
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
<0.005	<0.005	<0.005	<0.005	<0.005	<0.0005	<0.0005	0.00064	0.00051	0.00055	0.00089	0.00088	0.00096	<0.0005	0.00082	0.00077	0.00053	<0.0005
6.4	9.5	10.2	7.9	8.55	5.74	5.94	6.26	6.03	6.3	8.6	9.09	7.94	10.4	10.2	10.4	10.8	5.05
0.00094	0.00068	0.00047	0.00053	0.00077	0.00571	0.00038	0.000329	0.000228	0.000224	0.000754	0.000728	0.000565	0.000102	0.000078	<0.00005	0.000197	0.000822
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
0.0083	0.0088	0.0088	0.0079	0.0076	0.00728	0.0116	0.0104	0.00907	0.0084	0.00958	0.011	0.00794	0.00825	0.00911	0.00934	0.00991	0.00972
<0.001	<0.001	<0.001	<0.001	<0.001	0.00062	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
<2	<2	<2	<2	<2	1.75	1.31	1.2	1.25	1.2	1.52	1.58	1.62	1.61	1.45	1.55	1.91	1.16
<0.001	<0.001	<0.001	<0.001	<0.001	0.00019	0.00022	0.00013	0.00011	0.00011	0.00012	0.00013	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00013
7.04	7.75	7.55	7.71	7.51	5.18	5.82	5.82	5.95	6.14	7.78	7.86	6.7	6.08	5.84	5.83	5.58	5.87
<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
3	4.2	4.3	3.3	3.8	2.52	2.59	2.53	2.73	2.85	3.73	3.85	3.38	4.06	4.25	4.08	4.3	2.44
0.0911	0.133	0.143	0.117	0.125	0.0757	0.0887	0.0837	0.0878	0.0883	0.129	0.128	0.115	0.149	0.149	0.147	0.139	0.076
													3.73	4.06	4.46	5.32	3.1
<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.000093	0.000075	0.000076	0.000062	0.000065	0.000113	0.000128	0.000102	0.000308	0.000345	0.000372	0.000391	0.000049
0.0011	0.0013	0.0012	0.001	0.0011	<0.001	<0.001	<0.001	<0.001	<0.001	0.0014	0.0013	0.0011	<0.001	<0.001	<0.001	<0.001	<0.001
<0.005	<0.005	<0.005	<0.005	<0.005	<0.003	<0.003	<0.003	<0.003	0.0014	0.0059	<0.001	0.0016	<0.001	0.0022	<0.001	<0.001	0.0023
0.492	0.0184	0.0161	0.018	<0.01	2.27	0.1	0.0638	0.0633	0.0221	0.0482	0.0185	0.0124	<0.003	<0.003	<0.003	0.0041	1.76
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00011
<0.0015	<0.0005	<0.0005	<0.0005	<0.0005	0.00093	0.00031	0.00031	0.00035	0.00033	0.00046	0.00045	0.00042	0.00045	0.00035	0.00039	0.00035	0.00087
0.038	0.049	0.053	0.044	0.048	0.0627	0.03	0.0315	0.0336	0.0316	0.0453	0.0477	0.0427	0.0486	0.047	0.0471	0.0471	0.0569
<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.2	<0.2	<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0.000033	0.000021	0.000039	<0.000017	<0.000017	0.000021	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00002
31.2	43.7	48.2	39.2	41.4	28.8	29.9	29.2	29.8	30.4	44.2	42.3	41.1	48.9	49.6	51.2	48.8	27.8
0.0012	<0.001	<0.001	<0.001	<0.001	0.0044	0.00039	<0.0004	0.00057	0.00024	0.00033	0.00016	0.00029	0.00013	0.00017	<0.0001	0.00013	0.00348
0.00041	<0.0003	<0.0003	<0.0003	<0.0003	0.00224	0.00012	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00186
0.0064	0.0034	0.0027	0.0032	0.0033	0.0165	0.00466	0.0155	0.00458	0.00354	0.00357	0.00343	0.00362	0.00207	0.00195	0.0016	0.00177	0.0144
0.67	<0.03	0.03	0.031	<0.03	3.5	0.181	0.124	0.106	0.045	0.039	0.033	0.025	<0.01	<0.01	<0.01	<0.01	2.95
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00037	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0003
<0.005	<0.005	<0.005	<0.005	<0.005	0.00157	<0.0005	0.00061	0.00061	<0.0005	0.00078	0.00099	0.0009	<0.0005	0.00097	0.00087	0.0006	0.00162
6.6	9.34	10.3	8.14	8.67	7.35	5.91	6.19	6.24	6.04	8.82	8.88	7.91	10.5	10.6	10.8	10.7	6.53
0.0223	0.00151	0.00125	0.00137	0.00126	0.134	0.00345	0.00236	0.00237	0.00105	0.00181	0.0018	0.00143	0.00011	0.000169	<0.00005	0.000423	0.112
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000012	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
0.0093	0.01	0.0096	0.0087	0.0078	0.00759	0.0111	0.0107	0.00961	0.00875	0.0102	0.0119	0.00845	0.0087	0.00963	0.00993	0.0105	0.00932
<0.001	<0.001	<0.001	<0.001	<0.001	0.00365	0.0006	0.0137	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00297
<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.05	<0.05	<0.05	<0.05	<0.05	0.262
<2	<2	<2	<2	<2	2.05	1.28	1.18	1.3	1.15	1.52	1.56	1.67	1.63	1.5	1.6	1.94	1.51
<0.004	<0.001	<0.001	<0.001	<0.001	0.00027	0.00016	0.00014	0.00012	0.00012	0.00014	0.00012	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00017
7.92	7.64	7.57	7.9	7.66	9.73	5.89	5.8	6.19	5.79	7.94	7.82	6.75	6.06	5.97	5.88	5.61	9.36
<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	0.000023	0.000012	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000019
2.9	4.2	4.5	3.5	3.8	2.5	2.53	2.51	2.85	2.75	3.86	3.71	3.48	4.12	4.38	4.33	4.52	2.45
0.0929	0.134	0.148	0.123	0.13	0.0833	0.0818	0.0839	0.0897	0.0872	0.127	0.131	0.122	0.153	0.162	0.155	0.147	0.0824
													3.9	4.18	4.71	5.45	3.1
<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
0.034	<0.01	<0.01	<0.01	<0.01	0.112	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.079
<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.000171	0.000075	0.000079	0.000067	0.000072	0.000121	0.000138	0.000106	0.000318	0.000342	0.000402	0.000411	0.000099
0.0039	0.0015	0.0014	0.0011	0.0012	0.0107	0.0011	0.0011	0.0012	0.0011	0.0016	0.0015	0.0013	0.001	0.001	0.0012	<0.001	0.0089
<0.005	<0.005	<0.005	<0.005	<0.005	0.0087	<0.003	0.0044	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0055	<0.003	<0.003	0.0075
18.3	12	9.86	10.8	9.65	16.6	14.8	11.8	13.4	12.2	10.2	9.13	8.97	4.21	3.8	4.09	4.47	12.4
19.2	12.2	9.96	10.9	9.51	16.8	14.7	11.8	13.6	12.6	10.4	9.36	8.83	4.26	3.67	4.12	4.26	12.2
0.394	0.34	0.289	0.303	0.166	0.507	0.275	0.284	0.285	0.197	0.07	0.31	0.27				0.122	
0.624	0.34	0.299	0.313	0.186	0.857	0.42	0.345	0.328	0.323	0.28	0.256	0.224	0.132	0.158	0.146	0.167	
L1011001	L1025075	L1038168	L1053400	L1065234	L1140194	L1143149	L1146570	L1148880	L1152500	L1178283	L1191600	L1205273	L1256678	I1265809	L1275746	L1285503	L1298960

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

CC08 4-Jun-13	CC08 2-Jul-13	CC08 6-Aug-13	CC08 3-Sep-13	CC08 8-Oct-13	CC08 6-Nov-13	CC08 10-Apr-14	CC08 8-May-14	CC08 5-Jun-14	CC08 2-Jul-14	CC08 28-Jul-14	CC08 2-Sep-14
168	241	195		305	192	172	133	149	201	185	
91.8	93.2		80.3	87	87	7.97	95.1	76.3	83.1	68.5	
10.1	9.24		8.62	10.3	11.5	116	11.9	8.63	9.02	7.47	
8.21	8.1	8.08	7.82	8.03	8.14	-0.9	8.62	8.28	8.26	8.23	8.16
149	142	238	225	151	102	91.2	63.4	190	141	64.4	
0.11	0.12	0.12	0.14	0.15	0.16	0.15	0.1	0.1	0.13	0.12	
228	260	245	300	207	327	307	210	209	270	249	
11.2	15.7	14.3	12.1	8.12	3.35	2.06	5.8	9.91	11.6	11.5	11.1
148	169	159	195	198	213	199	1365	136	175	162	
2.7	0	0.7		0	-0.1	12.6					
					<1						
109	121	126	137	165	173	161	79.2	1770	143	129	143
109	118	126	137		173	161	79.2	948	143	129	142
<2	2.9	<2	<1		<2	<2	<2	825	<1	<2	<1
40	34	26.7	16.1	9.2	9.7						
112	135	128	141	179	163	170	95.3	948	148	141	146
<2	<1	<2	<1		<2	<2	<2	<1	<1	<2	<1
8.29	8.32	8.27	8.3	8.38	8.29	8.24	8	9.41	8.35	8.24	8.31
214	243	232	266	304	319	312	173	4880	262	252	263
156	184	166	187	195	209	208	147	3940	154	166	180
<3	<3	5.1	<3	<3	<3	<3	7.5	7.6	<3	<3	<3
1.57	0.85	0.43	0.3	0.18	0.19	0.18	2.92	0.97	0.37	0.49	0.29
<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	1.4	<0.05	<0.05	<0.05
0.53	<0.5	0.53	0.6	0.71	0.84	1.03	0.76	107	0.59	<0.5	0.53
0.089	0.093	0.085	0.081	0.09	0.101	0.092	0.064	0.046	0.093	0.094	0.091
8.75	7.09	6.07	5.31	7.56	9.4	20.4	11	1390	8.4	6.43	7.08
<0.005	0.0066	0.0065	0.0059	<0.005	<0.005	<0.005	0.0069	0.101	0.0063	<0.005	0.0058
0.0059	0.0405	0.0224	0.0459	<0.005	<0.005	0.207	0.0214	<0.1	0.0253	0.0408	0.0351
<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.02	<0.001	<0.001	<0.001
		0.279	0.241								
0.288	0.378	0.29	0.246	0.15	0.141						
0.362	0.338	0.258	0.217	0.182	0.18	0.136	0.508	7.54	0.305	0.241	0.226
				0.0133	0.034	0.0065	0.0046	0.0097	0.0127	0.009	0.0096
0.0145	0.0188	0.0112	0.0127		0.0371	0.0083	0.0158	0.0661	0.0152	0.0125	0.0129
0.0194	0.0138	0.0146	0.0137	0.017	0.0381	0.0086	0.0353	0.0721	0.0194	0.0128	0.0091
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
0.0076	0.0049	0.0035	0.002	0.0015	<0.001	<0.001	0.0247	<0.005	0.0036	0.0029	0.0019
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00201	<0.0001	<0.0001	<0.0001
0.00034	0.00039	0.00041	0.00042	0.00046	0.00046	0.00036	0.00032	0.0195	0.00043	0.0004	0.00043
0.036	0.0447	0.0435	0.0508	0.0537	0.0595	0.0474	0.029	0.017	0.047	0.0443	0.0493
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0025	<0.0005	<0.0005	<0.0005
<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.248	<0.01	<0.01	<0.01
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001
33.7	41	38.6	42	54.1	48	50.9	29.7	7.41	44.5	42.3	43.6
0.00017	<0.0001	0.00012	<0.0001	<0.0001	<0.0001	<0.0001	0.00019	<0.0005	<0.0001	<0.0001	<0.0001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001
0.00354	0.00323	0.0032	0.00281	0.00215	0.00167	0.00148	0.00426	<0.001	0.00326	0.0029	0.00266
								<0.00002			
0.027	0.02	0.013	<0.01	<0.01	<0.01	<0.01	0.068	<0.01	<0.01	<0.01	<0.01
<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00025	<0.00005	<0.00005	<0.00005
<0.0005	<0.0005	<0.0005	0.001	<0.0005	0.00104	<0.0005	<0.0005	0.0668	0.00072	0.00078	0.00089
6.79	7.87	7.54	8.68	10.7	10.4	10.4	5.13	226	9.05	8.45	8.93
0.000382	0.000913	0.000756	0.000882	0.000631	0.00181	0.000132	0.000739	0.00095	0.000668	0.000536	0.000572
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
0.00974	0.0111	0.00902	0.00839	0.00808	0.00738	0.00928	0.01	0.00426	0.0096	0.00961	0.00897
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0025	<0.0005	<0.0005	<0.0005
<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.053	<0.05	<0.05	<0.05
1.25	1.54	1.56	1.81	1.86	1.92	1.68	1.3	170	1.75	1.81	1.75
0.00012	0.00011	0.00012	0.00011	<0.0001	<0.0001	0.0001	0.00017	<0.0005	0.00011	0.0001	<0.0001
6.81	7.57	7.4	7.45	7.43	7.28	5.78	5.99	0.185	7.22	7.23	7.35
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001
2.9	3.24	3.25	3.84	4.22	4.31	4.27	2.59	932	3.76	3.54	3.56
0.0983	0.124	0.112	0.126	0.148	0.154	0.139	0.0792	0.52	0.126	0.124	0.133
2.98	2.46	2.26	1.94	2.64	3.34	7.21	3.74	395	3	2.35	2.6
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001
<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01
0.000078	0.000107	0.000091	0.000122	0.000202	0.000252	0.000423	0.000065	0.00423	0.000136	0.000119	0.000124
0.0012	0.0012	0.0012	0.0012	0.0013	<0.001	<0.001	<0.001	<0.005	0.0012	0.0011	0.0011
0.0014	0.0012	0.001	<0.001	<0.001	<0.001	0.0012	<0.001	<0.005	0.0026	<0.001	<0.001
0.103	0.0742	0.0578	0.0089	0.0134	0.007	<0.003	0.273	<0.015	0.013	0.018	0.022
0.00011	0.00012	<0.0001	<0.0001	<0.0001	0.00011	<0.0001	0.00011	0.00191	<0.0001	<0.0001	<0.0001
0.00039	0.00043	0.00042	0.00041	0.00052	0.00055	0.00035	0.00042	0.0191	0.00049	0.00041	0.0004
0.0369	0.0459	0.0446	0.0489	0.0546	0.0607	0.0474	0.0298	0.018	0.0479	0.0418	0.0489
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0025	<0.0005	<0.0005	<0.0005
<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.242	<0.01	<0.01	<0.01
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001
34.8	40.2	40.6	42.6	51.8	50.5	50	28.8	7.58	44.8	38.5	42.9
0.00037	0.00028	0.00029	0.00014	0.00016	0.00013	0.00011	0.00058	<0.0005	0.00014	0.00018	0.00022
0.00013	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00025	<0.0005	<0.0001	<0.0001	<0.0001
0.00439	0.00383	0.00376	0.00303	0.00271	0.00199	0.00179	0.00559	<0.0025	0.00336	0.003	0.00297
0.165	0.125	0.102	0.017	0.016	0.011	<0.01	0.408	0.025	0.021	0.024	0.038
<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000053	<0.00025	<0.00005	<0.00005	<0.00005
0.00052	<0.0005	<0.0005	0.00184	<0.0005	0.00093	0.00076	<0.0005	0.0695	0.00074	0.00071	0.00082
6.98	7.9	7.98	8.88	10.3	11.2	10.1	5.17	228	9.41	7.82	8.81
0.00518	0.00472	0.00368	0.00164	0.00161	0.00243	0.000191	0.0111	0.00116	0.00129	0.00125	0.00221
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
0.0108	0.0116	0.00969	0.009	0.009	0.00833	0.0102	0.0103	0.00437	0.0105	0.00877	0.00972
0.00068	0.00052	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00079	<0.0025	<0.0005	0.00054	<0.0005
<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.074	<0.05	<0.05	<0.05
1.27	1.59	1.71	1.87	1.78	2.24	1.62	1.34	176	1.77	1.74	1.76
0.00013	0.00013	0.00012	0.00012	<0.0001	<0.0001	<0.0001	0.00017	<0.0005	0.00013	0.00011	<0.0001
7.17	7.72	7.73	7.38	7.18	7.48	5.69	6.29	0.217	7.44	6.68	7.28
0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000011	<0.00005	<0.00001	<0.00001	<0.00001
3.03	3.25	3.33	3.89	4.42	4.43	4.32	2.49	983	3.9	3.29	3.63
0.106	0.128	0.119	0.131	0.155	0.169	0.148	0.0792	0.53	0.13	0.111	0.14
3.1	2.49	2.36	1.99	2.71	3.57	7.09	3.72	430	3.17	2.17	2.64
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	<0.0005	<0.0001	<0.0001	<0.0001
<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.012	<0.05	<0.01	<0.01	<0.01
								<0.00002			
0.000086	0.000109	0.000097	0.00013	0.000216	0.000275	0.000428	0.000075	0.00436	0.00015	0.000111	0.000131
0.0016	0.0016	0.0016	0.0014	0.0014	0.0015	<0.001	0.0017	<0.005	0.0015	0.0012	0.0013
<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.015	<0.003	<0.003	<0.003
12.9	12.6	10.9	8.34	5.69	6.08	5.1	14.4	122	8.76	8.73	8.03
14.2	12.9	11.1	8.34	5.7	6.39	5.14	14.5	128	9.85	8.66	7.61
L1311741	**L1326032**	**L1344180**	**L1357647**	**L1376311**	**L1388680**	**L1442672**	**L1453031**	**L1466627**	**L1481215**	**L1494516**	**L1511703**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C1.12 - EDITH-01D
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Site ID		EDITH-01D	EDITH-01D	EDITH-01D	EDITH-01D	EDITH-01D	EDITH-01D	EDITH-01D	EDITH-01D	EDITH-01D	EDITH-01D	EDITH-01D
Analytes	**MDL**	**30-Apr-14**	**14-May-14**	**27-May-14**	**10-Jun-14**	**27-Jun-14**	**8-Jul-14**	**22-Jul-14**	**7-Aug-14**	**20-Aug-14**	**14-Sep-14**	**30-Sep-14**
In Situ Parameters												
Conductivity µS/cm	...	527	677	712	720	765	642	875	614	614	660	1148
Oxygen Dissolved %	...		76.5	87.8	92.3		1.6	81.4	5.1	2.7	3.4	4.4
Oxygen Dissolved	...		8.13	9	8.99		0.17	7.38	0.61	0.33	0.41	0.53
pH (unitless)	...	8.14	8.81	8.75	8.76	8.81	8.12	7.88	8.03	7.65	7.26	7.41
Redox Potential mV	...	0.8	71.3	49.9	27.8	-52.6	88.5	-49.2	-105	-161	272	-279
Salinity ppt	...	0.39	0.44	0.44	0.42	0.44	0.46	0.43	0.46	0.47	0.51	0.89
Specific Conductivity µS/cm	...	798	885	897	859	883	921	792	926	956	1021	1765
Temperature °C	...	7.23	12.7	14.3	16.6	17.9	9.12	20	7.51	6.27	6.49	6.7
Total Dissolved Solids	...	518	575	584	559	574	600	569	603	622	664	1461
Turbidity NTU	...	-0.9	-0.3	-0.4	0.8	3.7	3.2	1.5	2.5	2.2	2.6	-8.7
Physical Tests												
Acidity to pH 8.3 (as CaCO3)	1											
Alkalinity (Total as CaCO3)	1 to 2	400	394	390	401	413	418	409	419	442	426	552
Bicarbonate Alkalinity	1 to 2	368	356	370	383	404	410	379	406	442	377	552
Carbonate Alkalinity	1 to 2	31.9	38.1	20.4	18.3	9.4	8.3	29.8	12.7	<2	49.3	<20
Color TCU	5											
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	393	383	401	402	389	397	397	388	422	407	407
Hydroxide Alkalinity	1 to 2	<1	<1	<1	<1	<1	<1	<1	<1	<2	<1	<20
pH (unitless)	0.01 to 0.1	8.61	8.77	8.46	8.45	8.34	8.34	8.36	8.37	8.17	8.75	8.25
Specific Conductivity µS/cm	2	871	880	880	900	900	912	872	916	969	898	954
Total Dissolved Solids	1 to 2	371	533	527	518	533	526	527	540	568	546	565
Total Suspended Solids	3	6.9	<3	<3	<3	<3	<3	<3	5.8	4.5	<3	<3
Turbidity NTU	0.1	1.56	1.2	0.5	0.5	1.11	3.9	3.73	2.81	4.62	1.09	43.3
Dissolved Anions												
Bromide	0.05 to 2.495	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	0.5 to 1	52	48.4	51.6	50.3	50.8	48.6	47.9	49.4	49.4	50.2	50.4
Fluoride	0.02 to 0.4	0.21	0.21	0.25	0.23	0.24	0.33	0.242	0.42	0.228	0.248	0.246
Sulphate	0.5 to 1	39.7	40.6	42.7	42.6	41.3	41.2	40.5	41.9	27.5	41.9	25.6
Nutrients												
Ammonia (Total)	0.005 to 0.05	0.0169	0.0163	0.147	0.238	0.32	0.402	0.322	0.152	2.42	0.0186	1.87
Nitrate (as N)	0.005 to 0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.051	<0.05
Nitrite (as N)	0.001 to 0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen (Dissolved)	0.05 to 0.1											
Nitrogen (Total)	0.0025 to 0.11											
Nitrogen Kjeldahl (Total)	0.05 to 0.2	1.58	1.58	1.44	1.5	1.72	1.61	1.99	1.7	3.64	1.44	3.2
Orthophosphate (Dissolved)	0.001 to 0.01	0.0023	0.0019	0.0236	0.0532	0.0772	0.0367	<0.001	<0.001	0.434	0.0011	0.32
Phosphorus - Dissolved	0.002 to 0.02	0.0254	0.0245	0.0467	0.0746	0.117	0.0607	0.021	0.0198	0.502	0.0197	0.375
Phosphorus - Total	0.002 to 0.02	0.0732	0.0535	0.0495	0.0806	0.12	0.12	0.0528	0.054	0.504	0.038	0.34
Cyanide												
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals												
Aluminum	0.001 to 0.025	<0.001	<0.001	0.0011	0.001	0.0016	0.0011	0.0041	0.0023	0.0014	0.0037	0.002
Antimony	0.0001 to 0.0025	0.00011	0.00012	0.00011	0.00012	0.0001	0.00011	0.00014	0.00012	<0.0001	0.00013	<0.0001
Arsenic	0.0001 to 0.0025	0.00151	0.00145	0.0015	0.00151	0.0014	0.00149	0.00166	0.00158	0.00154	0.00161	0.00159
Barium	5E-005 to 0.02	0.0537	0.0486	0.0496	0.0508	0.0541	0.0549	0.0488	0.0572	0.066	0.0506	0.0679
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.015	0.018	0.019	0.018	0.017	0.019	0.016	0.018	0.017	0.016	0.019
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	40.2	41.1	41.7	41.5	41.7	42	39	42	45.8	39.8	43.7
Chromium	0.0001 to 0.018	<0.0001	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00012	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015	0.0001	<0.0001	0.00011	0.00011	0.0001	0.00012	0.00014	0.0001	0.00011	0.00012	0.00011
Copper	0.0002 to 0.006	0.00124	0.00099	0.00172	0.0047	0.00081	0.00104	0.0016	0.0014	0.00027	0.00152	<0.0002
Dissolved Cadmium (by saltwater extrac	0.00002											
Iron	0.01 to 0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.016	<0.01	0.012
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.0111	0.0117	0.0115	0.0123	0.0108	0.0127	0.0113	0.012	0.0117	0.0109	0.0123
Magnesium	0.1	71.1	68.1	72.1	72.4	69.1	70.9	72.7	68.8	74.6	74.6	72.3
Manganese	5E-005 to 0.0015	0.00189	0.0015	0.00858	0.0375	0.0908	0.127	0.00217	0.166	0.173	0.00507	0.254
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00184	0.00246	0.0018	0.00195	0.00169	0.00168	0.00198	0.00167	0.000476	0.00193	0.000589
Nickel	0.0005 to 0.005	0.00088	0.00079	0.00089	0.00075	0.00063	0.00075	0.0007	0.00065	0.00069	0.00065	0.00071
Phosphorus	0.05 to 0.3	<0.05	<0.05	<0.05	0.074	0.1	0.09	<0.05	<0.05	0.474	<0.05	0.375
Potassium	0.05 to 2	17.7	17	17.1	20	17.8	19.9	17.5	20.4	21.3	18.8	18.1
Selenium	0.0001 to 0.006	0.0001	0.0001	0.00012	0.00011	0.00027	0.00035	<0.0001	<0.0001	0.00052	<0.0001	0.00791
Silicon	0.05	0.054	0.124	0.424	1.08	1.46	1.58	0.178	1.58	3.81	0.897	3.55
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	56.4	53.7	55.6	50.8	53	54.1	55.7	55.5	57.4	56.5	59.5
Strontium	0.0001 to 0.005	0.274	0.262	0.269	0.287	0.283	0.293	0.278	0.292	0.317	0.278	0.331
Sulphur	0.5	13.6	14.7	14.6	14.1	15.2	19.9	14.8	14	119	14.8	150
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00146	0.0013	0.00141	0.00154	0.00161	0.00161	0.00167	0.00163	0.00143	0.00167	0.00155
Vanadium	0.001 to 0.03	0.0022	0.0022	0.0022	0.002	0.0019	0.002	0.0032	0.0021	0.002	0.0032	0.0021
Zinc	0.001 to 0.006	0.0011	<0.001	<0.001	0.0013	<0.001	<0.001	<0.001	0.0022	<0.001	<0.001	<0.001
Total Metals												
Aluminum	0.003 to 0.025	0.0104	0.0072	0.0058	0.0056	0.0092	0.009	0.0124	0.0169	0.0078	0.0218	0.011
Antimony	0.0001 to 0.0025	0.00011	0.00015	0.00017	0.00013	0.00012	0.00015	0.00013	0.00014	0.00011	0.00013	0.00011
Arsenic	0.0001 to 0.0025	0.00136	0.00137	0.00131	0.00153	0.0015	0.00156	0.00158	0.00148	0.00163	0.00185	0.00158
Barium	5E-005 to 0.02	0.0492	0.0486	0.0495	0.0496	0.0539	0.0554	0.0574	0.0539	0.0635	0.0556	0.0619
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.015	0.016	0.016	0.018	0.019	0.021	0.018	0.017	0.02	0.021	0.024
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	38.2	41.5	40.9	39.5	41.1	41.1	42.2	39.3	46.8	38.8	41.4
Chromium	0.0001 to 0.005	0.00014	0.00014	0.0001	<0.0001	0.00018	0.0001	0.00012	0.0001	0.00016	<0.0003	0.00031
Cobalt	0.0001 to 0.0015	0.00012	0.00012	0.00012	0.00012	0.00012	0.00013	0.00014	0.00013	0.00014	0.00017	0.00014
Copper	0.0005 to 0.007	0.00404	0.00226	0.00234	0.00472	0.00284	0.00319	0.00242	0.00152	0.00672	0.00163	0.00093
Iron	0.01 to 0.03	0.019	0.013	0.01	0.012	0.018	0.019	0.021	0.023	0.045	0.026	0.053
Lead	5E-005 to 0.0025	<0.00005	<0.00005	0.000054	<0.00005	<0.00005	0.000206	<0.00005	<0.00005	0.000157	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.0105	0.0114	0.00979	0.0109	0.0105	0.0123	0.0111	0.0104	0.012	0.0112	0.0105
Magnesium	0.1	65.1	67.7	69.3	69.7	68.3	68.8	71.4	65.5	76.2	72.8	68.8
Manganese	5E-005 to 0.0015	0.0157	0.0103	0.0103	0.041	0.0918	0.132	0.146	0.163	0.188	0.0234	0.235
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00188	0.00237	0.00186	0.00189	0.00179	0.00174	0.00178	0.00166	0.0015	0.00198	0.000903
Nickel	0.0005 to 0.005	0.00082	0.00093	0.00091	0.00078	0.00073	0.00076	0.00078	0.00069	0.00081	0.00088	0.00081
Phosphorus	0.05 to 0.3	0.076	0.058	0.076	0.072	0.114	0.104	0.062	0.055	0.518	<0.05	0.376
Potassium	0.05 to 2	16.5	17.1	16.8	17.5	17.5	18.8	17.5	19	21.6	18.6	17.3
Selenium	0.0001 to 0.006	<0.0001	0.00013	<0.0001	0.00011	0.0001	<0.0001	<0.0001	<0.0001	0.0001	0.00019	<0.0001
Silicon	0.05	0.106	0.144	0.428	1.1	1.45	1.58	1.55	1.55	3.93	0.942	3.41
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	50.3	56.3	52.7	53.6	53.4	54	56.3	53	60.3	61.3	53.7
Strontium	0.0001 to 0.005	0.272	0.273	0.261	0.284	0.284	0.299	0.294	0.282	0.347	0.281	0.285
Sulphur	0.5	13.7	14.4	14.5	15.1	14.2	14.5	14.7	13.8	13.2	15	11
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002											
Uranium	1E-005 to 0.001	0.00175	0.00179	0.00178	0.00175	0.00172	0.00171	0.00166	0.0016	0.00158	0.00176	0.00143
Vanadium	0.001 to 0.03	0.0022	0.0024	0.0022	0.0023	0.0022	0.0022	0.0022	0.0022	0.0022	0.0039	0.0022
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0041	0.0031	<0.003
Organics												
Carbon Organic (Dissolved)	0.5 to 5	19.1	20.1	18.4	18	19.4	9.78	19.4	19.6	20.8	20.5	20
Carbon Organic (Total)	0.5 to 5	20.1	19.4	18.7	18.1	19.3	9.89	19.7	20	21.5	19.8	20.2
Nitrogen Organic (Dissolved)	0.05 to 0.26											
Nitrogen Organic (Total)	0.05 to 0.3											
ALS LAB ID		**L1449318**	**L1455480**	**L1461081**	**L1469099**	**L1478913**	**L1483419**	**L1490937**	**L1499202**	**L1506521**	**L1518246**	**L1526071**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C1.13 - EDITH-01M

Site ID		EDITH-01M	EDITH-01M	EDITH-01M
Analytes	MDL	20-Aug-14	14-Sep-14	30-Sep-14
In Situ Parameters				
Conductivity µS/cm	...	723	699	1227
Oxygen Dissolved %	...	25.4	5.4	18.8
Oxygen Dissolved	...	2.3	0.59	2
pH (unitless)	...	8.5	7.93	8.31
Redox Potential mV	...	130	-233	109
Salinity ppt	...	0.44	0.48	0.83
Specific Conductivity µS/cm	...	893	978	1640
Temperature °C	...	15.1	10	11.8
Total Dissolved Solids	...	581	634	1066
Turbidity NTU	...	1.1	9.6	-10.1
Physical Tests				
Acidity to pH 8.3 (as CaCO3)	1			
Alkalinity (Total as CaCO3)	1 to 2	418	448	407
Bicarbonate Alkalinity	1 to 2	418	447	374
Carbonate Alkalinity	1 to 2	<1	<1	32.8
Color TCU	5			
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	400	414	397
Hydroxide Alkalinity	1 to 2	<1	<1	<1
pH (unitless)	0.01 to 0.1	8.37	8.36	8.58
Specific Conductivity µS/cm	2	917	942	906
Total Dissolved Solids	1 to 2	549	562	534
Total Suspended Solids	3	5.8	<3	<3
Turbidity NTU	0.1	5.22	23.8	1.02
Dissolved Anions				
Bromide	0.05 to 2.495	<0.5	<0.5	<0.5
Chloride	0.5 to 1	48.7	49.7	50.8
Fluoride	0.02 to 0.4	0.232	0.247	0.252
Sulphate	0.5 to 1	40.5	26.5	42.1
Nutrients				
Ammonia (Total)	0.005 to 0.05	0.36	1.56	0.243
Nitrate (as N)	0.005 to 0.1	<0.05	<0.05	<0.05
Nitrite (as N)	0.001 to 0.02	<0.01	<0.01	<0.01
Nitrogen (Dissolved)	0.05 to 0.1			
Nitrogen (Total)	0.0025 to 0.11			
Nitrogen Kjeldahl (Total)	0.05 to 0.2	2.09	3.18	1.51
Orthophosphate (Dissolved)	0.001 to 0.01	0.0011	0.325	0.0114
Phosphorus - Dissolved	0.002 to 0.02	0.0217	0.377	0.0297
Phosphorus - Total	0.002 to 0.02	0.0699	0.407	0.044
Cyanide				
Cyanide (Free)	0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005
Dissolved Metals				
Aluminum	0.001 to 0.025	0.0021	0.0015	0.0033
Antimony	0.0001 to 0.0025	0.00012	<0.0001	0.00013
Arsenic	0.0001 to 0.0025	0.00156	0.00164	0.00158
Barium	5E-005 to 0.02	0.0592	0.0673	0.0525
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.017	0.018	0.018
Cadmium	1E-005 to 8.5E-005	0.000011	<0.00001	<0.00001
Calcium	0.05 to 0.1	42.1	44.9	40.2
Chromium	0.0001 to 0.018	<0.0001	0.0001	<0.0001
Cobalt	0.0001 to 0.0015	0.0001	0.00011	0.00012
Copper	0.0002 to 0.006	0.00122	0.00026	0.00099
Dissolved Cadmium (by saltwater extrac	0.00002			
Iron	0.01 to 0.03	<0.01	0.015	<0.01
Lead	5E-005 to 0.0025	0.000051	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.0108	0.011	0.0123
Magnesium	0.1	71.6	73.4	72
Manganese	5E-005 to 0.0015	0.215	0.204	0.107
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00141	0.000298	0.00237
Nickel	0.0005 to 0.005	0.00063	0.00071	0.00064
Phosphorus	0.05 to 0.3	<0.05	0.343	<0.05
Potassium	0.05 to 2	19.4	19.4	18.7
Selenium	0.0001 to 0.006	<0.0001	0.00018	<0.0001
Silicon	0.05	1.97	3.4	1.36
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	56.3	59.1	55
Strontium	0.0001 to 0.005	0.29	0.292	0.305
Sulphur	0.5	13.8	113	14.6
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00153	0.00147	0.00171
Vanadium	0.001 to 0.03	0.0021	0.0021	0.0029
Zinc	0.001 to 0.006	0.0032	<0.001	<0.001
Total Metals				
Aluminum	0.003 to 0.025	0.0136	0.0056	0.0165
Antimony	0.0001 to 0.0025	0.00012	0.00011	0.00013
Arsenic	0.0001 to 0.0025	0.00158	0.00165	0.00164
Barium	5E-005 to 0.02	0.0583	0.0643	0.0546
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.019	0.022	0.024
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	42.1	42.6	38.8
Chromium	0.0001 to 0.005	0.00015	<0.0003	0.00016
Cobalt	0.0001 to 0.0015	0.00014	0.00014	0.00014
Copper	0.0005 to 0.007	0.00155	0.00173	0.00149
Iron	0.01 to 0.03	0.024	0.046	0.023
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.0114	0.0112	0.0117
Magnesium	0.1	71.9	72	69.8
Manganese	5E-005 to 0.0015	0.225	0.198	0.121
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00163	0.00096	0.00241
Nickel	0.0005 to 0.005	0.00076	0.00085	0.00071
Phosphorus	0.05 to 0.3	0.075	0.328	<0.05
Potassium	0.05 to 2	19.2	18.1	17.9
Selenium	0.0001 to 0.006	<0.0001	<0.0001	<0.0001
Silicon	0.05	2	3.21	1.35
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	56.5	56.4	55.8
Strontium	0.0001 to 0.005	0.312	0.304	0.299
Sulphur	0.5	14.4	11.4	14.5
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002			
Uranium	1E-005 to 0.001	0.00158	0.00151	0.00183
Vanadium	0.001 to 0.03	0.0023	0.0025	0.0031
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003
Organics				
Carbon Organic (Dissolved)	0.5 to 5	19.1	20.8	19.7
Carbon Organic (Total)	0.5 to 5	20.3	20.9	19.7
Nitrogen Organic (Dissolved)	0.05 to 0.26			
Nitrogen Organic (Total)	0.05 to 0.3			
ALS LAB ID		**L1506521**	**L1518246**	**L1526071**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C1.14 - EDITH-01S
PAGE 1 OF 1

Site ID		EDITH-01S	EDITH-01S	EDITH-01S	EDITH-01S	EDITH-01S	EDITH-01S	EDITH-01S	EDITH-01S	EDITH-01S	EDITH-01S	EDITH-01S	EDITH-01S
Analytes	**MDL**	**5-Feb-14**	**30-Apr-14**	**13-May-14**	**27-May-14**	**10/Jun/2014**	**27-Jun-14**	**8-Jul-14**	**22-Jul-14**	**7-Aug-14**	**20-Aug-14**	**14-Sep-14**	**30-Sep-14**
In Situ Parameters													
Conductivity µS/cm	...		527	677	712	720	765	782	792	833	794	794	1236
Oxygen Dissolved %	...			76.5	87.8	92.3		12.9	81.4	52.2	88.1	85.1	84.1
Oxygen Dissolved	...			8.13	9	8.99		1.21	7.38	4.6	7.92	8.75	8.75
pH (unitless)	...		8.14	8.81	8.75	8.76	8.81	8.69	7.88	8.82	8.75	8.78	8.72
Redox Potential mV	...		0.8	71.1	49.9	27.8	-52.6	-196	-49.2	58.7	123	168	81.9
Salinity ppt	...		0.39	0.44	0.44	0.42	0.44	0.44	0.43	0.44	0.43	0.46	0.81
Specific Conductivity µS/cm	...		798	885	897	859	883	894	875	888	872	929	1597
Temperature °C	...		7.23	12.7	14.3	16.6	17.6	18.5	20	21.8	20.4	14	13.2
Total Dissolved Solids	...		518	575	584	559	574	581	569	577	566	603	1037
Turbidity NTU	...		-0.9	-0.3	-0.4	0.8	3.7	1.9	1.5	0.7	1.2	1.6	-9.9
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1												
Alkalinity (Total as CaCO3)	1 to 2		384	355	394	393	404	403	400	416	402	421	408
Bicarbonate Alkalinity	1 to 2		344	304	346	343	355	345	339	358	345	382	364
Carbonate Alkalinity	1 to 2		39.9	51.1	47.8	50.3	49.5	58.3	60.7	58.1	56.6	39.3	43.5
Color TCU	5												
Hardness as CaCO3 (Dissolved)	0.5 to 1.1		393	394	387	382	382	391	396	387	390	408	394
Hydroxide Alkalinity	1 to 2		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1		8.7	8.84	8.68	8.73	8.71	8.8	8.77	8.79	8.77	8.76	8.63
Specific Conductivity µS/cm	2		842	864	867	861	858	860	846	891	883	898	901
Total Dissolved Solids	1 to 2		501	527	528	457	481	525	494	545	541	547	538
Total Suspended Solids	3		7.4	<3	<3	<3	5	<3	<3	3.8	5.5	<3	3.1
Turbidity NTU	0.1		1.69	0.69	0.52	1.48	6.47	1.98	1.95	1.1	3.41	1.18	2.22
Dissolved Anions													
Bromide	0.05 to 2.495		<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	0.5 to 1		47.3	48.1	46.6	49.8	50	48.8	49.2	50.8	50	50.3	51
Fluoride	0.02 to 0.4		0.22	0.21	0.25	0.23	0.23	0.35	0.257	0.46	0.235	0.244	0.25
Sulphate	0.5 to 1		38.9	40.5	41.1	41.6	40.7	41.1	42	42.4	42	42.1	42.4
Nutrients													
Ammonia (Total)	0.005 to 0.05		0.0183	0.0293	0.0922	0.0238	0.0161	0.0319	0.0238	0.0288	0.0125	0.0172	0.052
Nitrate (as N)	0.005 to 0.1		<0.05	<0.05	0.0063	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrite (as N)	0.001 to 0.02		<0.01	<0.01	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen (Dissolved)	0.05 to 0.1												
Nitrogen (Total)	0.0025 to 0.11												
Nitrogen Kjeldahl (Total)	0.05 to 0.2		1.58	1.39	1.36	1.32	1.64	1.26	1.42	1.66	1.5	1.43	1.4
Orthophosphate (Dissolved)	0.001 to 0.01		0.0024	0.004	0.0078	<0.001	<0.001	<0.001	0.0012	<0.001	<0.001	<0.001	<0.001
Phosphorus - Dissolved	0.002 to 0.02		0.0251	0.0263	0.0314	0.0217	0.0216	0.0221	0.0214	0.0212	0.0214	0.0179	0.0183
Phosphorus - Total	0.002 to 0.02		0.0698	0.0313	0.0371	0.034	0.0395	0.0308	0.0328	0.0281	0.0314	0.0298	0.029
Cyanide													
Cyanide (Free)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	0.001 to 0.025		<0.001	0.0012	0.0021	0.0019	0.0041	0.0049	0.0042	0.0116	0.0059	0.0044	0.0105
Antimony	0.0001 to 0.0025		0.0001	0.00012	0.00011	0.00013	0.00013	0.00013	0.00012	0.00014	0.00012	0.00013	0.00013
Arsenic	0.0001 to 0.0025		0.00141	0.00141	0.00141	0.00149	0.00149	0.00158	0.00162	0.00176	0.00173	0.00175	0.0017
Barium	5E-005 to 0.02		0.0494	0.0488	0.0455	0.0418	0.0469	0.0467	0.0476	0.0502	0.0489	0.054	0.0543
Beryllium	0.0001 to 0.005		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1		0.014	0.015	0.015	0.016	0.015	0.016	0.015	0.018	0.016	0.016	0.02
Cadmium	1E-005 to 8.5E-005		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1		40.4	42	40.7	39.2	40.5	39.1	39.4	38.9	37.7	40.5	39.8
Chromium	0.0001 to 0.018		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015		<0.0001	<0.0001	0.00011	0.00011	0.00012	0.00012	0.00014	0.00014	0.00014	0.00013	0.00013
Copper	0.0002 to 0.006		0.00074	0.00079	0.00102	0.00103	0.00114	0.0011	0.00115	0.00123	0.0014	0.00105	0.00108
Dissolved Cadmium (by saltwater extrac	0.00002												
Iron	0.01 to 0.03		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead	5E-005 to 0.0025		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025		0.0106	0.0118	0.0108	0.0119	0.0104	0.012	0.0112	0.0125	0.0113	0.0102	0.0129
Magnesium	0.1		70.9	70.3	69.2	69	68.2	71.1	72.2	70.4	71.8	74.5	71.5
Manganese	5E-005 to 0.0015		0.00106	0.00238	0.00483	0.00375	0.00249	0.00176	0.00172	0.00185	0.00104	0.00487	0.00936
Mercury	1E-005 to 5E-005		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005		0.00185	0.00201	0.00186	0.002	0.00186	0.00188	0.00203	0.00208	0.00204	0.00189	0.00217
Nickel	0.0005 to 0.005		0.00061	0.00063	0.00074	0.00069	0.00062	0.00058	0.00065	0.00067	0.00064	0.00067	0.00066
Phosphorus	0.05 to 0.3		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	0.05 to 2		17.6	16.9	16.8	17.2	17.4	18.2	17.8	20.9	19.3	19.1	18.7
Selenium	0.0001 to 0.006		0.00013	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	0.0001	<0.0001	<0.0001
Silicon	0.05		<0.05	<0.05	0.16	0.282	0.32	0.511	0.174	0.202	0.324	0.899	1.03
Silver	1E-005 to 0.0001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2		52.2	53	53.7	52.6	54.5	53.7	57.2	57.4	56.5	59.8	60.8
Strontium	0.0001 to 0.005		0.282	0.271	0.267	0.287	0.272	0.267	0.282	0.277	0.289	0.273	0.331
Sulphur	0.5		13.7	14.8	14.2	15.7	13.8	14.7	14.6	14.7	14.3	14.2	14.5
Thallium	1E-005 to 0.001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001		0.00156	0.00143	0.00162	0.00162	0.00168	0.0016	0.00169	0.00177	0.00155	0.00166	0.00177
Vanadium	0.001 to 0.03		0.0021	0.0022	0.0023	0.0023	0.0026	0.0028	0.0032	0.0033	0.0033	0.0033	0.0033
Zinc	0.001 to 0.006		<0.001	0.0012	0.0034	<0.001	<0.001	<0.001	<0.001	0.0011	0.0017	<0.001	0.0013
Total Metals													
Aluminum	0.003 to 0.025		0.0088	0.0037	0.006	0.0056	0.0149	0.0137	0.017	0.0224	0.0232	0.0144	0.0141
Antimony	0.0001 to 0.0025		0.00013	0.00013	0.00015	0.00014	0.00012	0.00015	0.00014	0.00017	0.00016	0.00014	0.00013
Arsenic	0.0001 to 0.0025		0.00136	0.00133	0.00129	0.00148	0.00153	0.00156	0.00169	0.00162	0.00172	0.00167	0.00159
Barium	5E-005 to 0.02		0.0483	0.0463	0.0423	0.0408	0.0461	0.0467	0.0495	0.0478	0.0451	0.052	0.0505
Beryllium	0.0001 to 0.005		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1		0.014	0.015	0.015	0.017	0.017	0.019	0.018	0.018	0.018	0.02	0.022
Cadmium	1E-005 to 8.5E-005		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1		38.5	40.7	39.3	37.8	39.9	39.5	39.4	37.1	37.9	38.3	37.2
Chromium	0.0001 to 0.005		0.00011	<0.0001	<0.0001	<0.0001	0.00015	<0.0001	<0.0001	0.00012	0.00015	<0.0003	0.00018
Cobalt	0.0001 to 0.0015		0.00011	<0.0001	0.00011	0.00011	0.00016	0.00013	0.00016	0.00016	0.00017	0.00015	0.00014
Copper	0.0005 to 0.007		0.00099	0.00095	0.00106	0.00111	0.00128	0.00123	0.00144	0.00142	0.00277	0.0013	0.00212
Iron	0.01 to 0.03		0.016	0.049	0.012	0.011	0.021	0.014	0.02	0.027	0.03	0.023	0.02
Lead	5E-005 to 0.0025		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000077	<0.00005	<0.00005
Lithium	0.0005 to 0.025		0.00996	0.0112	0.00936	0.0112	0.0101	0.0114	0.0111	0.0112	0.0118	0.0102	0.011
Magnesium	0.1		64.7	68.8	68.7	68.5	67.4	71.2	73.4	68.6	72.6	72.2	67.6
Manganese	5E-005 to 0.0015		0.0107	0.00389	0.00573	0.00649	0.00691	0.00395	0.00419	0.00523	0.00506	0.0205	0.0232
Mercury	1E-005 to 5E-005		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005		0.00195	0.00202	0.00191	0.00206	0.00206	0.00208	0.00213	0.00212	0.00218	0.00211	0.00207
Nickel	0.0005 to 0.005		0.00071	0.00072	0.00072	0.00073	0.00072	0.00065	0.00074	0.00079	0.00074	0.00083	0.00076
Phosphorus	0.05 to 0.3		0.078	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	0.05 to 2		16.7	16.3	16.5	17	17.5	18.4	18.1	20.2	19.5	18.4	17.5
Selenium	0.0001 to 0.006		0.00012	<0.0001	0.00011	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	0.0001
Silicon	0.05		0.071	0.057	0.168	0.292	0.36	0.54	0.232	0.24	0.378	0.911	1.01
Silver	1E-005 to 0.0001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2		50.9	53.4	52.8	53.7	53.9	55.8	56.6	55.2	58.1	57.7	54.4
Strontium	0.0001 to 0.005		0.28	0.27	0.261	0.288	0.278	0.295	0.291	0.277	0.295	0.289	0.293
Sulphur	0.5		13.6	14.5	14.3	14.7	14	15.1	15.5	14.6	14.8	14.6	14
Thallium	1E-005 to 0.001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002												
Uranium	1E-005 to 0.001		0.00168	0.00176	0.00181	0.00182	0.0018	0.00178	0.00187	0.00183	0.00188	0.00183	0.00187
Vanadium	0.001 to 0.03		0.0023	0.0023	0.0023	0.0026	0.0026	0.003	0.0034	0.0035	0.0036	0.0035	0.0031
Zinc	0.003 to 0.006		<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics													
Carbon Organic (Dissolved)	0.5 to 5		18.4	19.5	18.6	19.1	18.8	9.75	19.2	19.9	19	20.2	19.7
Carbon Organic (Total)	0.5 to 5		20.4	19.3	18.9	19.8	20	9.96	19.9	20.1	20.1	20.4	20.3
Nitrogen Organic (Dissolved)	0.05 to 0.26												
Nitrogen Organic (Total)	0.05 to 0.3												
ALS LAB ID			**L1449318**	**L1455480**	**L1461081**	**L1469099**	**L1478913**	**L1483419**	**L1490937**	**L1499202**	**L1506521**	**L1518246**	**L1526071**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C1.15 - GOOSE LAKE
PAGE 1 OF 1

Site ID		GOOSE LAKE	GOOSE LAKE	GOOSE LAKE	GOOSE LAKE	GOOSE LAKE	GOOSE LAKE	GOOSE LAKE	GOOSE LAKE	GOOSE LAKE	GOOSE LAKE	GOOSE LAKE	GOOSE LAKE
Analytes	**MDL**	**5-Jun-10**	**2-Sep-10**	**8-May-14**	**23-May-14**	**5-Jun-14**	**18-Jun-14**	**3-Jul-14**	**15-Jul-14**	**29-Jul-14**	**11-Aug-14**	**3-Sep-14**	**18-Sep-14**
In Situ Parameters													
Conductivity µS/cm	...	2631	2923	3284	4046	4884	5436	5259	5310	5357	6755		5332
Oxygen Dissolved %	...	12.6	90.3	60.3	91.8	30.8	87	84.9	75.6	61.6	33.1		36.9
Oxygen Dissolved	...	1.4	10.5	6.28	8.73	6.94	6.97	6.92	5.92	5.15	2.78		3.42
pH (unitless)	...	9.49	9.53	9.58	9.59	9.59	9.58	9.57	9.36	9.77	9.35	9.35	9.33
Redox Potential mV	...	-241	67.4	-6.2	-21.4	34.9	43	-63.7	-349	-296	-280		-237
Salinity ppt	...	1.96	2.29	2.29	2.57	2.79	2.89	2.87	2.74	2.97	3.85		3.49
Specific Conductivity µS/cm	...	3703	4284	4281	4776	5172	5374	5272	5117	5504	7000		6361
Temperature °C	...	9.84	8.33	12.8	16.9	22.1	25.6	24.6	27	23.6	23.2	17.9	16.5
Total Dissolved Solids	...	2407	2787	2782	3105	3362	3492	3459	3326	3578	4550		4134
Turbidity NTU	...												
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1												
Alkalinity (Total as CaCO3)	1 to 2	1310	1370	1540	1640	1770	1800	2040	2100	2220	2420	2200	2450
Bicarbonate Alkalinity	1 to 2	732	790	863	902	955	994	1070	1170	1120	1230	1290	1360
Carbonate Alkalinity	1 to 2	576	584	677	736	816	808	966	939	1100	1180	911	1090
Color TCU	5												
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	676	752	850	918	955	1040	1130	1170	1160	1160	1030	1230
Hydroxide Alkalinity	1 to 2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1	9.42	9.45	9.34	9.4	9.4	9.39	9.42	9.45	9.52	9.47	9.34	9.43
Specific Conductivity µS/cm	2	3730	4190	4630	4620	4850	5200	5660	6330	6510	7290	6620	7140
Total Dissolved Solids	1 to 2	2980	3470	3850	3870	4240	4470	4940	6150	5920	6260	5680	6040
Total Suspended Solids	3	26.7	15.6	5.1	<3	13.8	4.5	17.5	41	50.1	36.6	218	19.9
Turbidity NTU	0.1	50.2	3.78	1.21	0.76	1	1.48	3.5	5.67	10.7	12	161	19.3
Dissolved Anions													
Bromide	0.05 to 2.495	1.1	1.1	1.5	<2.5	1.3	1.4	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Chloride	0.5 to 1	86	100	103	103	106	114	147	143	145	169	148	162
Fluoride	0.02 to 0.4	<0.4	<0.4	<0.4	<1	0.045	0.039	0.033	0.031	<0.03	<1	<0.03	<0.03
Sulphate	0.5 to 1	997	1120	1250	1280	1370	1480	1620	1850	1870	2170	1880	2130
Nutrients													
Ammonia (Total)	0.005 to 0.05	0.341	0.0633	0.0818	0.124	0.127	0.148	0.137	0.186	0.0913	0.147	0.167	0.149
Nitrate (as N)	0.005 to 0.1	<0.1	<0.1	<0.1	<0.25	<0.1	<0.1	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Nitrite (as N)	0.001 to 0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.065	<0.05
Nitrogen (Dissolved)	0.05 to 0.1												
Nitrogen (Total)	0.0025 to 0.11												
Nitrogen Kjeldahl (Total)	0.05 to 0.2	10.8	7.22	8.67	7.73	7.57	9.71	10.6	12.5	16.5	17.2	14.4	14.3
Orthophosphate (Dissolved)	0.001 to 0.01	0.0027	0.0013	0.0018	0.0092	0.0196	0.0017	0.0011	0.0022	0.0042	0.0041	0.0216	0.0043
Phosphorus - Dissolved	0.002 to 0.02	0.196	0.127	0.0415	0.0613	0.0766	0.06	0.0311	0.0858	0.0939		0.178	0.135
Phosphorus - Total	0.002 to 0.02	0.0516	0.0423	0.0611	0.113	0.0801	0.0817	0.0746	0.165	0.295	0.4	0.38	0.301
Cyanide													
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	0.001 to 0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.007	<0.005	<0.005	<0.01	<0.005	<0.005
Antimony	0.0001 to 0.0025	0.00153	0.00165	0.00191	0.00198	0.00206	0.00177	0.00229	0.00234	0.0027	0.0028	0.00306	0.00319
Arsenic	0.0001 to 0.0025	0.0193	0.0201	0.0204	0.0198	0.0192	0.0181	0.0193	0.0198	0.0226	0.0283	0.0302	0.0325
Barium	5E-005 to 0.02	0.011	0.0148	0.0158	0.0182	0.017	0.0168	0.0186	0.0164	0.007	0.00662	0.00584	0.00472
Beryllium	0.0001 to 0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005
Bismuth	0.0005 to 0.2	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.005	<0.0025	<0.0025
Boron	0.01 to 0.1	0.161	0.17	0.224	0.242	0.228	0.229	0.325	0.341	0.308	0.32	0.314	0.326
Cadmium	1E-005 to 8.5E-005	<0.00005		<0.00005	<0.00005	0.000058	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.00005
Calcium	0.05 to 0.1	5.67	6.01	7.35	8.98	7.42	7.4	6.91	6.52	6.06	5.92	5.55	5.64
Chromium	0.0001 to 0.018	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005
Cobalt	0.0001 to 0.0015	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005
Copper	0.0002 to 0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	0.0014
Dissolved Cadmium (by saltwater extrac	0.00002		<0.00002	<0.00002	<0.00002		<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	
Iron	0.01 to 0.03	0.027	0.016	<0.01	0.029	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	0.058	<0.02
Lead	5E-005 to 0.0025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.0005	<0.00025	<0.00025
Lithium	0.0005 to 0.025	0.0503	0.0511	0.0623	0.0653	0.0611	0.0611	0.0832	0.0881	0.0938	0.0927	0.0892	0.0829
Magnesium	0.1	161	179	202	218	227	249	270	280	278	279	247	294
Manganese	5E-005 to 0.0015	0.00247	0.00167	0.00079	0.00077	0.00112	0.00109	0.00158	0.00073	0.00107	0.00087	0.00146	0.00076
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00323	0.00377	0.00424	0.00435	0.0043	0.00449	0.00512	0.0051	0.00507	0.00495	0.00456	0.00439
Nickel	0.0005 to 0.005	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.005	<0.0025	<0.0025
Phosphorus	0.05 to 0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.1	<0.1	0.14	0.11	<0.1	<0.1
Potassium	0.05 to 2	138	146	157	160	173	177	214	237	236	287	250	269
Selenium	0.0001 to 0.006	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005
Silicon	0.05	3.67	1.8	0.336	0.698	0.184	0.58	0.58	0.62	0.78	1.82	3.82	4.17
Silver	1E-005 to 0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.00005
Sodium	0.05 to 2	719	792	852	860	884	891	1110	1230	1320	1440	1280	1370
Strontium	0.0001 to 0.005	0.375	0.377	0.46	0.54	0.518	0.523	0.555	0.583	0.546	0.449	0.467	0.483
Sulphur	0.5	319	339	366	372	399	450	524	548	575	689	610	684
Thallium	1E-005 to 0.001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.00005
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005
Titanium	0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05
Uranium	1E-005 to 0.001	0.00342	0.00367	0.00418	0.00447	0.00442	0.00431	0.00499	0.00507	0.00526	0.00525	0.00433	0.00473
Vanadium	0.001 to 0.03	<0.005	0.005	0.0058	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005
Zinc	0.001 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	0.0055	<0.005
Total Metals													
Aluminum	0.003 to 0.025	0.465	<0.015	<0.015	0.027	<0.015	0.02	<0.015	0.016	0.056	<0.03	0.031	<0.015
Antimony	0.0001 to 0.0025	0.00153	0.00175	0.00212	0.00204	0.00207	0.00181	0.00245	0.00233	0.00262	0.0025	0.00293	0.00323
Arsenic	0.0001 to 0.0025	0.0189	0.0202	0.0222	0.0191	0.0195	0.018	0.0187	0.0192	0.0211	0.0271	0.0294	0.0309
Barium	5E-005 to 0.02	0.0247	0.0137	0.0177	0.0184	0.0184	0.0175	0.0185	0.0177	0.0093	0.00839	0.00702	0.00542
Beryllium	0.0001 to 0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005
Bismuth	0.0005 to 0.2	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.005	<0.0025	<0.0025
Boron	0.01 to 0.1	0.153	0.168	0.224	0.245	0.232	0.229	0.32	0.356	0.289	0.3	0.298	0.341
Cadmium	1E-005 to 8.5E-005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.00005
Calcium	0.05 to 0.1	9.82	5.93	7.46	8.38	7.6	7.63	6.93	6.78	6.61	6.15	5.23	5.7
Chromium	0.0001 to 0.005	0.00165	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005
Cobalt	0.0001 to 0.0015	0.00059	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005
Copper	0.0005 to 0.007	0.003	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.005	<0.0025	<0.0025
Iron	0.01 to 0.03	0.814	0.031	0.016	0.021	0.022	0.041	<0.02	0.03	0.107	0.062	0.065	0.034
Lead	5E-005 to 0.0025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.0005	<0.00025	<0.00025
Lithium	0.0005 to 0.025	0.0453	0.051	0.0625	0.0642	0.0658	0.0608	0.0806	0.095	0.0871	0.0808	0.0831	0.0869
Magnesium	0.1	155	178	195	222	232	258	272	293	279	275	233	289
Manganese	5E-005 to 0.0015	0.0271	0.00175	0.00113	0.00129	0.0011	0.00183	0.00179	0.00131	0.00413	0.00383	0.00331	0.00174
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0032	0.00424	0.00444	0.0045	0.00437	0.00452	0.00536	0.00542	0.00481	0.00464	0.00432	0.00438
Nickel	0.0005 to 0.005	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.005	<0.0025	<0.0025
Phosphorus	0.05 to 0.3	0.308	0.107	0.07	0.059	0.058	<0.1	<0.1	0.12	0.29	0.37	0.33	0.21
Potassium	0.05 to 2	129	144	154	161	179	181	211	241	234	278	229	262
Selenium	0.0001 to 0.006	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005
Silicon	0.05	5.58	1.89	0.345	0.737	0.219	0.65	0.59	0.7	1.01	1.93	3.69	4.18
Silver	1E-005 to 0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.00005
Sodium	0.05 to 2	691	784	908	845	992	896	1090	1240	1270	1350	1200	1300
Strontium	0.0001 to 0.005	0.442	0.395	0.486	0.563	0.529	0.532	0.556	0.622	0.555	0.433	0.46	0.48
Sulphur	0.5	313	357	375	409	429	477	541	598	600	690	579	671
Thallium	1E-005 to 0.001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.00005
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005
Titanium	0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05
Total Cadmium (by saltwater extraction)	0.00002		<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	
Uranium	1E-005 to 0.001	0.00336	0.0037	0.00464	0.00447	0.00433	0.00449	0.00486	0.005	0.00512	0.00499	0.00506	0.00484
Vanadium	0.001 to 0.03	0.0051	0.005	0.0063	0.0052	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005
Zinc	0.003 to 0.006	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.03	<0.015	<0.015
Organics													
Carbon Organic (Dissolved)	0.5 to 5	102	119	109	111	120	123	144	159	169	184	170	199
Carbon Organic (Total)	0.5 to 5	111	112	107	117	137	123	147	168	176	187	181	196
Nitrogen Organic (Dissolved)	0.05 to 0.26												
Nitrogen Organic (Total)	0.05 to 0.3												
ALS LAB ID		**L1441961**	**L1447300**	**L1453031**	**L1459728**	**L1466627**	**L1473827**	**L1481215**	**L1488139**	**L1494491**	**L1500711**	**L1513418**	**L1520952**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C1.16 - HUMPH02
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Site ID		HUMPH02	HUMPH02	HUMPH02	HUMPH02	HUMPH02	HUMPH02	HUMPH02	HUMPH02	HUMPH02	HUMPH02	HUMPH02	HUMPH02	HUMPH02	HUMPH02	HUMPH02	HUMPH02
Analytes	**MDL**	**13-Mar-14**	**21-Mar-14**	**26-Mar-14**	**3-Apr-14**	**10-Apr-14**	**24-Apr-14**	**7-May-14**	**22-May-14**	**4-Jun-14**	**17-Jun-14**	**3-Jul-14**	**15-Jul-14**	**29-Jul-14**	**11-Aug-14**	**3-Sep-14**	**17-Sep-14**
In Situ Parameters																	
Conductivity µS/cm	...	904	840	814	919	854	859	814	861	772	600	828	767	828	920		882
Oxygen Dissolved %	...	83.9	82.4	79.5	70.7	88.6	83.9	106	87	104	89.9	88.1	96.7	88.3	89.8		89.4
Oxygen Dissolved	...	11.6	11	10.2	8.91	11.3	10.5	13.3	9.82	12.2	9.89	9.01	9.67	9.1	9.43		10
pH (unitless)	...	8.33	8.14	8.24	8.28	8.27	8.3	8.37	8.39	8.35	8.5	8.41	8.54	8.68	8.4	8.5	8.36
Redox Potential mV	...	64.5	52.3	117	-0.9	-70.4	87.8	217	58.9	151	80.9	68.4	118	48.9	54		109
Salinity ppt	...	0.81	0.72	0.66	0.74	0.69	0.68	0.64	0.61	0.57	0.41	0.52	0.417	0.52	0.6		0.62
Specific Conductivity µS/cm	...	1619	1443	1330	1470	1384	1354	12850	1215	1141	825	1044	942	1051	1187		1231
Temperature °C	...	1.87	3.11	4.72	5.37	4.98	5.85	5.8	9.79	8.07	10.7	14.7	15.3	13.9	13	11.5	10.1
Total Dissolved Solids	...	1052	937	863	955	900	880	832	789	742	542	679	612	683	780		800
Turbidity NTU	...																
Physical Tests																	
Acidity to pH 8.3 (as CaCO3)	1																
Alkalinity (Total as CaCO3)	1 to 2	469	484	289	473	495	481	475	465	443	482	453	442	473	489	494	508
Bicarbonate Alkalinity	1 to 2	469	476	188	443	450	439	442	444	425	429	434	409	440	460	452	464
Carbonate Alkalinity	1 to 2	<2	8.5	101	30.1	45.2	42.1	32.8	21.4	17.3	53.3	19.4	33.1	32.9	28.3	41.3	44.1
Color TCU	5							17.7									
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	850	782	760	733	721	675	651	597	639	632	489	483	562	583	635	642
Hydroxide Alkalinity	1 to 2	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1	8.28	8.44	8.39	8.39	8.36	8.49	8.43	8.48	8.51	8.53	8.54	8.45	8.49	8.49	8.52	8.56
Specific Conductivity µS/cm	2	1540	1450	1420	1380	1370	1310	1240	1210	1200	1230	1000	1030	1150	1230	1260	1270
Total Dissolved Solids	1 to 2	1000	1050	1010	988	963	946	851	800	801	826	493	664	728	804	858	934
Total Suspended Solids	3	17.7	19.3	28.3	14.5	13	11.6	19.7	5.8	22.7	9.4	4.3	3.9	9.3	4.6	10.5	9.1
Turbidity NTU	0.1	7.22	5.55	4.9	3.24	2.14	1.89	3.39	0.47	7.59	1.95	1.12	0.98	3.52	1.4	2.56	1.88
Dissolved Anions																	
Bromide	0.05 to 2.495	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	0.5 to 1	25.4	30.6	28.4	29.1	30.4	32.1	34	32.4	35.2	32.2	47.7	48.9	45.3	43.1	38.2	40.9
Fluoride	0.02 to 0.4	0.36	0.25	0.25	0.26	0.28	0.26	0.23	0.28	0.26	0.285	0.27	0.293	0.282	0.4	0.257	0.25
Sulphate	0.5 to 1	478	386	369	342	329	313	248	230	224	231	95.5	84.9	158	200	217	238
Nutrients																	
Ammonia (Total)	0.005 to 0.05	0.0237	0.018	0.012	0.0105	0.0077	0.0062	0.0063	0.0083	0.0071	0.0073	0.0186	0.019	0.0112	0.012	0.0107	0.0098
Nitrate (as N)	0.005 to 0.1	0.053	0.18	0.129	0.088	0.055	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.055	<0.05	<0.05
Nitrite (as N)	0.001 to 0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen (Dissolved)	0.05 to 0.1																
Nitrogen (Total)	0.0025 to 0.11																
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.92	0.678	0.679	0.605	0.646	0.552	0.591	0.597	0.916	0.611	0.97	1.05	0.86	0.805	0.598	0.637
Orthophosphate (Dissolved)	0.001 to 0.01	0.0866	0.0817	0.0771	0.0753	0.0744	0.0767	0.0864	0.0819	0.0856	0.0834	0.123	0.133	0.0934	0.0961	0.102	0.103
Phosphorus - Dissolved	0.002 to 0.02	0.0893	0.0901	0.0879	0.114	0.0777	0.094	0.0921	0.0875	0.0891	0.0878	0.146	0.16	0.0995		0.138	0.12
Phosphorus - Total	0.002 to 0.02	0.144	0.152	0.16	0.0811	0.092	0.0813	0.142	0.0914	0.114	0.116	0.141	0.166	0.114	0.132	0.153	0.166
Cyanide																	
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																	
Aluminum	0.001 to 0.025	0.0019	<0.001	0.0014	<0.001	<0.001	<0.001	0.0013	0.0016	<0.001	0.0018	0.0018	0.0019	0.0018	0.0026	0.0017	0.0021
Antimony	0.0001 to 0.0025	0.0002	0.00026	0.00021	0.00023	0.00023	0.00021	0.00019	0.00021	0.00021	0.00021	0.00019	0.00018	0.00021	0.00018	0.00013	0.00014
Arsenic	0.0001 to 0.0025	0.0028	0.00352	0.00331	0.00325	0.00356	0.00345	0.00327	0.00383	0.00361	0.00358	0.00306	0.00327	0.00346	0.00318	0.00319	0.00291
Barium	5E-005 to 0.02	0.069	0.0635	0.0586	0.0547	0.0552	0.0554	0.0567	0.0567	0.0528	0.0576	0.0672	0.067	0.065	0.0675	0.0648	0.0651
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.039	0.029	0.029	0.027	0.026	0.028	0.023	0.029	0.029	0.032	0.029	0.033	0.033	0.037	0.034	0.034
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	132	121	113	114	113	106	99.2	92.7	96.8	99.6	69.8	68.8	86.7	90.6	101	101
Chromium	0.0001 to 0.018	0.00044	0.00013	0.00012	0.00014	0.00012	0.00016	0.00016	0.00021	0.00015	0.00014	<0.0001	0.00011	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015	<0.0001	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	0.00013	<0.0001	<0.0001	<0.0001	<0.0001
Copper	0.0002 to 0.006	0.004	0.00632	0.00608	0.00629	0.00681	0.00635	0.00724	0.00741	0.00671	0.00641	0.00732	0.00722	0.00679	0.00631	0.00547	0.00512
Dissolved Cadmium (by saltwater extrac	0.00002								<0.00002		<0.00002						
Iron	0.01 to 0.03	0.028	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	0.012	0.012	0.012
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00715	0.00699	0.00717	0.00643	0.00673	0.00646	0.00643	0.00702	0.0066	0.00672	0.00783	0.00804	0.00766	0.00753	0.00759	0.00775
Magnesium	0.1	126	117	116	109	107	99.5	98.1	88.9	96.6	93	76.5	75.6	83.8	86.5	92.9	94.7
Manganese	5E-005 to 0.0015	0.0248	0.0153	0.0126	0.00971	0.00772	0.00923	0.00531	0.00697	0.0103	0.0128	0.00358	0.00583	0.00923	0.0204	0.0241	0.0216
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0199	0.0248	0.0245	0.0242	0.0239	0.0235	0.0205	0.0226	0.0233	0.0228	0.0126	0.0135	0.0212	0.0191	0.0172	0.017
Nickel	0.0005 to 0.005	0.00134	0.00135	0.00113	0.00114	0.00123	0.00115	0.00121	0.00128	0.0012	0.00122	0.00152	0.00166	0.00142	0.00138	0.00128	0.00145
Phosphorus	0.05 to 0.3	0.096	0.101	0.071	0.095	0.074	0.078	0.099	0.078	0.081	0.093	0.138	0.145	0.109	0.115	0.113	0.118
Potassium	0.05 to 2	14.5	15.2	14.2	13.8	13.7	13.2	13.8	13.2	13.9	14.5	18	17	15.7	15.5	15.4	15.1
Selenium	0.0001 to 0.006	0.00211	0.00618	0.00486	0.00505	0.00477	0.00448	0.00333	0.0027	0.0021	0.00178	0.00072	0.00064	0.0008	0.00056	0.00073	0.00075
Silicon	0.05	9.5	8.79	8.64	8.29	8.4	8.04	8.51	8.64	8.96	9.15	7.98	8.45	9.75	9.96	10.4	10.3
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	68.5	65.6	63.7	62.5	63.7	63.8	57.3	62.5	58.8	60.3	54.4	57.8	60	63	59.4	63.6
Strontium	0.0001 to 0.005	1.19	1.01	0.985	0.959	0.955	0.972	0.83	0.888	0.815	0.839	0.593	0.621	0.81	0.892	0.875	0.962
Sulphur	0.5	150	123	113	110	109	100	84.7	72.5	76.9	75.6	31.1	28.4	52.2	64.3	73	76.2
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.0038	0.00471	0.00455	0.0045	0.00435	0.004	0.00377	0.00363	0.0036	0.00326	0.00258	0.0024	0.00277	0.0026	0.00243	0.00251
Vanadium	0.001 to 0.03	0.0042	0.0049	0.0052	0.0051	0.0053	0.0051	0.0052	0.0059	0.0055	0.0054	0.0056	0.0044	0.0048	0.0039	0.0034	0.0033
Zinc	0.001 to 0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0011	<0.001	<0.001	<0.001	<0.001	0.0011	<0.001	0.0018	<0.001
Total Metals																	
Aluminum	0.003 to 0.025	0.19	0.345	0.36	0.205	0.18	0.156	0.192	0.186	0.0788	0.129	0.0484	0.0604	0.07	0.054	0.182	0.211
Antimony	0.0001 to 0.0025	0.0002	0.00028	0.00023	0.00026	0.00021	0.00022	0.00024	0.00021	0.00021	0.00019	0.0002	0.00019	0.00021	0.00018	0.00018	0.00016
Arsenic	0.0001 to 0.0025	0.00275	0.00338	0.00326	0.00332	0.00333	0.00329	0.00317	0.00341	0.00331	0.00332	0.00312	0.00305	0.00327	0.00322	0.00297	0.00311
Barium	5E-005 to 0.02	0.0717	0.0687	0.0637	0.0605	0.0585	0.0595	0.0604	0.06	0.0515	0.0554	0.0684	0.0659	0.0628	0.0673	0.0685	0.0713
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.04	0.032	0.032	0.03	0.029	0.028	0.024	0.028	0.032	0.035	0.032	0.032	0.032	0.043	0.038	0.041
Cadmium	1E-005 to 8.5E-005	0.000012	0.000016	0.000012	0.000012	0.000012	0.000011	0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	129	116	107	111	109	108	99.5	93.2	90.1	95.1	68.7	67.9	81.3	90.5	102	102
Chromium	0.0001 to 0.005	0.00055	0.00086	0.00093	0.00057	0.00055	0.00047	0.00064	0.00059	0.00033	0.00046	0.00027	0.00025	0.00023	0.00021	0.0005	0.00058
Cobalt	0.0001 to 0.0015	0.00027	0.00049	0.00047	0.0003	0.00031	0.0003	0.00035	0.00027	0.00014	0.0002	0.00016	0.00017	0.00016	0.00015	0.0003	0.00028
Copper	0.0005 to 0.007	0.00741	0.0134	0.0143	0.0111	0.0112	0.0111	0.0143	0.0117	0.00864	0.0101	0.00892	0.00871	0.00909	0.00821	0.00967	0.00956
Iron	0.01 to 0.03	0.282	0.518	0.571	0.327	0.32	0.243	0.341	0.294	0.114	0.197	0.072	0.095	0.096	0.087	0.29	0.285
Lead	5E-005 to 0.0025	0.00007	0.000132	0.000131	0.000074	0.000088	0.000071	0.000092	0.000065	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000065
Lithium	0.0005 to 0.025	0.00696	0.00734	0.00651	0.00691	0.00659	0.00635	0.00675	0.00681	0.00634	0.0065	0.00794	0.00676	0.00694	0.00774	0.00758	0.00802
Magnesium	0.1	122	110	103	107	103	101	89.9	89.3	91.4	87.9	75.8	72.9	78.5	86.9	94.8	96
Manganese	5E-005 to 0.0015	0.065	0.0848	0.0739	0.0458	0.0537	0.0454	0.0399	0.0317	0.0189	0.0308	0.00848	0.0125	0.0227	0.0282	0.0587	0.0552
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0199	0.0251	0.024	0.0253	0.0239	0.0238	0.0219	0.0234	0.0229	0.0228	0.0136	0.014	0.02	0.0206	0.0183	0.0188
Nickel	0.0005 to 0.005	0.00186	0.00252	0.00242	0.00185	0.0019	0.00179	0.00202	0.00197	0.00139	0.00162	0.00178	0.00184	0.00166	0.0015	0.00193	0.00209
Phosphorus	0.05 to 0.3	0.122	0.13	0.126	0.116	0.105	0.106	0.122	0.106	0.1	0.105	0.137	0.158	0.108	0.095	0.127	0.14
Potassium	0.05 to 2	14.1	14.1	13.3	13.3	12.9	13.6	13.3	13.2	12.9	13.6	17.4	16.5	14.8	15.5	15.4	15.3
Selenium	0.0001 to 0.006	0.00196	0.0051	0.00477	0.00492	0.00443	0.00384	0.00292	0.00245	0.00173	0.00162	0.00057	0.00059	0.00077	0.0007	0.00071	0.00077
Silicon	0.05	9.67	9.13	9.02	8.64	8.48	8.44	8.76	9.12	8.64	9.24	8.04	8.43	9.29	10.1	11	11
Silver	1E-005 to 0.0001	<0.00001	0.000017	<0.00001	<0.00001	<0.00001	<0.00001	0.00003	<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	67.2	64.9	59.8	63	62.9	63.1	56.3	60.6	55.7	57.1	56	51.4	56.2	60.8	59.8	64.9
Strontium	0.0001 to 0.005	1.16	1.04	0.967	0.985	0.982	0.969	0.846	0.855	0.794	0.833	0.617	0.599	0.775	0.906	0.919	0.99
Sulphur	0.5	147	122	110	111	109	102	85.4	74.3	74.5	75	32.5	28.8	49.7	66.6	76	80.3
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	0.013	0.015	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002										<0.00002						
Uranium	1E-005 to 0.001	0.00386	0.00476	0.0044	0.00462	0.00431	0.00405	0.00399	0.00384	0.0035	0.00327	0.0027	0.00249	0.00263	0.00272	0.00257	0.00271
Vanadium	0.001 to 0.03	0.0049	0.0062	0.0064	0.0062	0.0061	0.0058	0.0063	0.0067	0.0057	0.0058	0.0062	0.0045	0.005	0.0041	0.004	0.0044
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0031
Organics																	
Carbon Organic (Dissolved)	0.5 to 5	9.93	10.9	10.2	10.8	9.87	9.63	10.4	9.83	9.31	9.8	17.2	17.1	12.8	11.9	11.5	11.1
Carbon Organic (Total)	0.5 to 5	13.3	11.5	12.3	12.4	11.8	10.1	10.6	10.3	20.6	10.8	16.4	17	13.2	12.1	12.4	12.6
Nitrogen Organic (Dissolved)	0.05 to 0.26																
Nitrogen Organic (Total)	0.05 to 0.3																
ALS LAB ID		**L1432163**	**L1435186**	**L1437439**	**L1439655**	**L1442672**	**L1447300**	**L1452368**	**L1459064**	**L1465478**	**L1472862**	**L1481215**	**L1488139**	**L1494491**	**L1500711**	**L1513418**	**L1519657**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		HUMPH-08	HUMPH-08	HUMPH-08	HUMPH-08	HUMPH-08	HUMPH-08	HUMPH-08	HUMPH-08	HUMPH-08
Analytes	**MDL**	**22-May-14**	**5-Jun-14**	**17-Jun-14**	**3-Jul-14**	**15-Jul-14**	**30-Jul-14**	**11-Aug-14**	**3-Sep-14**	**18-Sep-14**
In Situ Parameters										
Conductivity µS/cm	...	750	709	714	855	792	686	836		723
Oxygen Dissolved %	...	76.4	73.2	90.9	81.2	86.4	83.3	76.1		73.4
Oxygen Dissolved	...	8.05	8.15	9.98	7.32	7.63	8.68	7.21		7.74
pH (unitless)	...	8.23	8.35	8.47	8.41	8.53	8.59	8.46	8.57	8.28
Redox Potential mV	...	45.9	56.8	72.4	76.8	93	171	72.3		134
Salinity ppt	...	0.48	0.49	0.48	0.47	0.42	0.44	0.48		0.47
Specific Conductivity µS/cm	...	975	981	972	942	850	884	964		942
Temperature °C	...	12.9	10.5	11.2	20.1	21.4	13.1	18.1	13.8	12.8
Total Dissolved Solids	...	630	638	632	612	553	575	627		613
Turbidity NTU	...									
Physical Tests										
Acidity to pH 8.3 (as CaCO3)	1									
Alkalinity (Total as CaCO3)	1 to 2	413	433	431	427	415	462	465	472	463
Bicarbonate Alkalinity	1 to 2	405	397	385	410	385	433	433	430	463
Carbonate Alkalinity	1 to 2	7.7	36.2	45.3	16.7	29.8	29.3	31.5	42.1	<1
Color TCU	5									
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	458	447	451	418	407	432	429	461	447
Hydroxide Alkalinity	1 to 2	<1	<1	<1	<1	<1	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1	8.48	8.4	8.54	8.55	8.44	8.43	8.56	8.59	8.63
Specific Conductivity µS/cm	2	973	934	949	898	920	973	974	990	970
Total Dissolved Solids	1 to 2	566	586	572	487	578	577	605	593	616
Total Suspended Solids	3	49.7	26.5	22.1	40.5	66.8	42.8	12.8	17.2	24.9
Turbidity NTU	0.1	12.9	10	9.05	13	15.1	14.7	6.47	9.27	17.4
Dissolved Anions										
Bromide	0.05 to 2.495	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	0.5 to 1	37	39.3	44.4	49	50.3	47.6	45	41.4	39.6
Fluoride	0.02 to 0.4	0.23	0.22	0.24	0.24	0.255	0.24	0.43	0.236	0.235
Sulphate	0.5 to 1	91.7	80.2	76.2	41.7	38.8	47.3	53.5	68.1	75.7
Nutrients										
Ammonia (Total)	0.005 to 0.05	0.0207	0.0166	0.0115	0.0433	0.0654	0.0328	0.024	0.0183	0.0273
Nitrate (as N)	0.005 to 0.1	<0.05	0.066	0.063	<0.05	0.078	0.064	0.071	0.118	0.165
Nitrite (as N)	0.001 to 0.02	<0.01	<0.01	<0.01	<0.01	0.014	0.012	<0.01	<0.01	<0.01
Nitrogen (Dissolved)	0.05 to 0.1									
Nitrogen (Total)	0.0025 to 0.11									
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.905	0.653	0.819	1.83	1.73	1.28	1.02	0.709	0.9
Orthophosphate (Dissolved)	0.001 to 0.01	0.13	0.114	0.107	0.153	0.183	0.158	0.137	0.135	0.137
Phosphorus - Dissolved	0.002 to 0.02	0.153	0.115	0.118	0.192	0.242	0.167		0.169	0.179
Phosphorus - Total	0.002 to 0.02	0.222	0.155	0.187	0.294	0.332	0.298	0.176	0.201	0.245
Cyanide										
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals										
Aluminum	0.001 to 0.025	0.0014	<0.001	0.002	0.0045	0.0101	0.0023	0.0026	0.0015	0.0017
Antimony	0.0001 to 0.0025	0.00021	0.00019	0.00017	0.00014	0.00014	0.00019	0.0002	0.0002	0.00022
Arsenic	0.0001 to 0.0025	0.00384	0.00389	0.00406	0.00245	0.00264	0.0048	0.00497	0.00521	0.00492
Barium	5E-005 to 0.02	0.0689	0.0648	0.065	0.0618	0.0582	0.0695	0.0772	0.0733	0.0748
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.031	0.028	0.029	0.019	0.022	0.027	0.033	0.029	0.032
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	66.1	64.5	66	48.4	46	61.3	62.5	67.5	66.4
Chromium	0.0001 to 0.018	0.00023	0.00027	0.00027	<0.0001	0.00014	0.00015	0.00016	0.00023	0.00021
Cobalt	0.0001 to 0.0015	0.00019	0.00015	0.00012	0.00029	0.00029	0.00017	0.00013	0.00012	0.00015
Copper	0.0002 to 0.006	0.00534	0.00523	0.00515	0.00292	0.00314	0.00494	0.00589	0.0055	0.00463
Dissolved Cadmium (by saltwater extrac	0.00002									
Iron	0.01 to 0.03	0.023	0.017	0.011	0.026	0.041	0.015	0.011	<0.01	<0.01
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00668	0.00614	0.00595	0.00989	0.011	0.00698	0.00702	0.00705	0.00687
Magnesium	0.1	71.1	69.5	69.6	72.2	71	67.8	66.3	71.1	68.2
Manganese	5E-005 to 0.0015	0.0434	0.0348	0.0308	0.03	0.0365	0.0556	0.0233	0.0181	0.0275
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0119	0.0124	0.0126	0.00387	0.00422	0.0127	0.0147	0.0156	0.0155
Nickel	0.0005 to 0.005	0.00224	0.00174	0.00165	0.00175	0.00174	0.00204	0.00184	0.00155	0.00148
Phosphorus	0.05 to 0.3	0.144	0.133	0.126	0.182	0.221	0.167	0.164	0.145	0.161
Potassium	0.05 to 2	15.4	15.3	16.3	20.5	18.7	18.9	18	18.2	18.1
Selenium	0.0001 to 0.006	0.0013	0.00101	0.00085	0.00019	0.00018	0.00064	0.00081	0.00114	0.00132
Silicon	0.05	8.31	8.21	8.32	3.23	3.65	9.16	8.98	8.99	8.71
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	50	50.9	51	54.2	57.2	52.9	58.3	53.3	50.6
Strontium	0.0001 to 0.005	0.595	0.536	0.509	0.354	0.371	0.513	0.555	0.561	0.537
Sulphur	0.5	29.7	26.7	25.3	14.6	13.7	15.6	18.1	22.7	24.8
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00315	0.00321	0.00334	0.00183	0.00172	0.00262	0.00302	0.00352	0.00338
Vanadium	0.001 to 0.03	0.0076	0.0074	0.0074	0.0043	0.004	0.0076	0.0099	0.0099	0.0103
Zinc	0.001 to 0.006	<0.001	<0.001	0.0018	<0.001	0.0028	<0.001	0.0014	<0.001	<0.001
Total Metals										
Aluminum	0.003 to 0.025	1.18	0.604	0.518	0.276	3.42	1.37	0.302	0.455	1.05
Antimony	0.0001 to 0.0025	0.00024	0.00023	0.00019	0.00016	0.00024	0.00023	0.00023	0.00023	0.00023
Arsenic	0.0001 to 0.0025	0.00403	0.00397	0.00414	0.00253	0.00353	0.00482	0.00437	0.00517	0.0049
Barium	5E-005 to 0.02	0.0794	0.0707	0.0701	0.0661	0.0992	0.0829	0.069	0.0781	0.0793
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.032	0.029	0.031	0.021	0.026	0.029	0.037	0.033	0.037
Cadmium	1E-005 to 8.5E-005	0.000018	0.000013	0.000015	<0.00001	0.000028	0.000017	<0.00001	0.00001	<0.00001
Calcium	0.05 to 0.1	62.7	62.5	62.5	47.2	47.2	60.3	60.6	67.2	60.8
Chromium	0.0001 to 0.005	0.00317	0.00171	0.00162	0.00084	0.00744	0.00352	0.00088	0.00144	0.00282
Cobalt	0.0001 to 0.0015	0.00105	0.00054	0.0005	0.00068	0.00253	0.00112	0.00032	0.00043	0.00088
Copper	0.0005 to 0.007	0.0171	0.0123	0.0124	0.00935	0.0295	0.0192	0.00933	0.0113	0.0154
Iron	0.01 to 0.03	1.65	0.811	0.727	0.374	3.88	1.89	0.451	0.614	1.46
Lead	5E-005 to 0.0025	0.000294	0.000118	0.000116	0.00015	0.000626	0.000272	0.000067	0.000101	0.000197
Lithium	0.0005 to 0.025	0.00744	0.00602	0.00581	0.0094	0.0125	0.00732	0.00704	0.00727	0.00721
Magnesium	0.1	69.2	68.1	66.9	69.8	70.5	68.1	64.5	71.6	64.2
Manganese	5E-005 to 0.0015	0.0656	0.0472	0.0421	0.0521	0.16	0.0866	0.0288	0.0315	0.0491
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0127	0.0126	0.0128	0.00367	0.00433	0.0129	0.015	0.0167	0.0154
Nickel	0.0005 to 0.005	0.00575	0.00345	0.00333	0.00332	0.0102	0.00611	0.00253	0.00312	0.0048
Phosphorus	0.05 to 0.3	0.208	0.161	0.153	0.216	0.425	0.246	0.177	0.188	0.198
Potassium	0.05 to 2	14.8	14.9	15.6	18.5	18.4	18.7	17.5	18.2	16.8
Selenium	0.0001 to 0.006	0.00133	0.00091	0.00082	0.0002	0.00048	0.00066	0.00078	0.0011	0.00126
Silicon	0.05	10.8	9.63	9.39	3.61	11.2	12.7	9.59	10.1	11
Silver	1E-005 to 0.0001	0.000103	<0.00001	0.000013	<0.00001	0.000032	0.000024	0.000011	<0.00001	0.000017
Sodium	0.05 to 2	49.3	49	50.2	53.7	54.3	51.8	47.9	53.7	47.1
Strontium	0.0001 to 0.005	0.62	0.515	0.503	0.359	0.412	0.506	0.544	0.577	0.53
Sulphur	0.5	29.1	26.6	25.6	14.8	13.8	16.1	18.1	23.3	23.7
Thallium	1E-005 to 0.001	0.000011	<0.00001	<0.00001	<0.00001	0.000016	0.000011	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	0.047	0.027	0.02	<0.01	0.13	0.053	0.013	0.019	0.04
Total Cadmium (by saltwater extraction)	0.00002									
Uranium	1E-005 to 0.001	0.00326	0.00341	0.00343	0.00188	0.0019	0.00283	0.00316	0.0037	0.00333
Vanadium	0.001 to 0.03	0.0112	0.0092	0.0088	0.0054	0.0133	0.0116	0.0096	0.0115	0.013
Zinc	0.003 to 0.006	0.0033	<0.003	<0.003	0.0031	0.0087	0.0041	0.0034	<0.003	0.0043
Organics										
Carbon Organic (Dissolved)	0.5 to 5	11.1	9.14	9.48	19.7	20.2	13.8	11.6	10.7	10.6
Carbon Organic (Total)	0.5 to 5	14.4	10.5	12	19.7	21.1	20.1	11.9	12.2	12.6
Nitrogen Organic (Dissolved)	0.05 to 0.26									
Nitrogen Organic (Total)	0.05 to 0.3									
ALS LAB ID		**L1459064**	**L1466627**	**L1472862**	**L1481215**	**L1488139**	**L1495443**	**L1500711**	**L1513418**	**L1520952**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C1.18 - HUMPH10
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Site ID		HUMPH-10	HUMPH-10	HUMPH-10	HUMPH-10	HUMPH-10	HUMPH-10	HUMPH-10	HUMPH-10	HUMPH-10	HUMPH-10	HUMPH-10	HUMPH-10	HUMPH-10	HUMPH-10	HUMPH-10
Analytes	**MDL**	**12-Mar-14**	**19-Mar-14**	**26-Mar-14**	**2-Apr-14**	**9-Apr-14**	**23-Apr-14**	**6-May-14**	**########**	**3-Jun-14**	**17-Jun-14**	**3-Jul-14**	**15-Jul-14**	**29-Jul-14**	**11-Aug-14**	**3-Sep-14**
In Situ Parameters																
Conductivity µS/cm	...	386	588	539	672	511	638	364	797	831	930	812	727	895	898	
Oxygen Dissolved %	...	56.9	73.6	66.6	67.9	52.9	82.8		95.6	55.4	65.1	87.1	85.7	49.7	79.4	
Oxygen Dissolved	...	7.57	9.61	8.89	7.79	6.81	9.41		9.08	5.38	5.78	7.86	7.38	3.75	6.88	
pH (unitless)	...	7.75	7.86	7.75	7.78	7.76	7.92	8.72	8.49	7.81	7.96	8.91	9.11	7.99	7.77	8.25
Redox Potential mV	...	-24.3	-9	30.7	54.3	-22.8	49	175	35.4	39.6	82.7	31.2	53.1	55.2	35.8	
Salinity ppt	...	0.32	0.48	0.45	0.48	0.41	0.45	0.45	0.46	0.49	0.5	0.44	0.4	0.42	0.47	
Specific Conductivity µS/cm	...	658	982	926	963	837	906	908	932	992	1007	892	813	865	951	
Temperature °C	...	3.48	3.95	3.09	9.16	4.61	9.53	12.3	17.8	16.5	20.9	20.3	22.7	26.9	22	17.5
Total Dissolved Solids	...	427	638	602	626	544	588	591	600	645	655	580	529	591	618	
Turbidity NTU	...															
Physical Tests																
Acidity to pH 8.3 (as CaCO3)	1															
Alkalinity (Total as CaCO3)	1 to 2	280	451	452	438	382	407	411	406	419	474	414	396	487	474	462
Bicarbonate Alkalinity	1 to 2	280	451	452	438	382	407	379	397	419	436	361	340	487	474	438
Carbonate Alkalinity	1 to 2	<1	<2	<2	<2	<2	<2	31.9	8.7	<1	37.9	52.7	55.4	<2	<1	24.6
Color TCU	5															
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	292	437	437	418	369	394	401	421	424	436	403	397	411	397	415
Hydroxide Alkalinity	1 to 2	<1	<2	<2	<2	<2	<2	<1	<1	<1	<1	<1	<1	<2	<1	<1
pH (unitless)	0.01 to 0.1	8.33	8.22	8.24	8.2	8.1	8.28	8.59	8.48	8.4	8.46	8.79	8.78	8.2	8.3	8.47
Specific Conductivity µS/cm	2	671	959	926	877	820	887	874	895	960	959	862	884	978	955	936
Total Dissolved Solids	1 to 2	372	546	537	541	497	469	490	532	539	592	527	526	572	567	552
Total Suspended Solids	3	6.4	8.3	7.1	4.5	14.1	<3	84.5	<3	30.7	5.9	17	11.5	51.9	68.6	7.6
Turbidity NTU	0.1	3.51	0.78	0.84	2.14	1.45	0.92	0.98	1.04	5.54	2.9	5.67	2	10.9	10.1	2.53
Dissolved Anions																
Bromide	0.05 to 2.495	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	0.5 to 1	31.1	52.5	49.5	47.4	41	41.2	50.5	48.9	48.7	50.2	52.7	50.5	50.4	50.8	51
Fluoride	0.02 to 0.4	0.177	0.23	0.24	0.25	0.25	0.24	0.23	0.23	0.3	0.34	0.24	0.265	0.317	0.46	0.288
Sulphate	0.5 to 1	32.4	39.2	37.9	37.8	37	52.6	42.9	40.3	30.6	26.3	40	42.3	19.8	15.4	21.6
Nutrients																
Ammonia (Total)	0.005 to 0.05	0.386	0.088	0.0571	0.0769	0.0869	0.0782	0.0199	0.0282	0.0883	0.0563	0.0648	0.0857	0.535	0.227	0.0886
Nitrate (as N)	0.005 to 0.1	0.0779	0.068	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.025	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrite (as N)	0.001 to 0.02	0.0058	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0052	<0.01	0.01	<0.01	<0.01	0.017	0.025
Nitrogen (Dissolved)	0.05 to 0.1															
Nitrogen (Total)	0.0025 to 0.11								1.25							
Nitrogen Kjeldahl (Total)	0.05 to 0.2	2.13	1.16	1.21	1.01	1.32	1.11	1.53	1.34	1.37	1.37	1.59	1.65	2.35	2.12	1.29
Orthophosphate (Dissolved)	0.001 to 0.01	0.401	0.0493	0.0423	0.0363	0.0434	0.0543	0.0098	0.0351	0.077	0.0613	<0.001	0.0055	0.0969	0.0448	0.0349
Phosphorus - Dissolved	0.002 to 0.02	0.479	0.0697	0.058	0.0529	0.107	0.0636	0.0316	0.0624	0.0913	0.0723	0.0241	0.03	0.131		0.0487
Phosphorus - Total	0.002 to 0.02	0.574	0.113	0.14	0.11	0.0595	0.103	0.0528	0.0747	0.176	0.126	0.0609	0.0533	0.248	0.165	0.0618
Cyanide																
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																
Aluminum	0.001 to 0.025	0.0027	0.0016	<0.001	0.0017	<0.001	<0.001	0.0028	0.0027	0.0015	0.0026	0.0045	0.0051	0.0032	0.0026	0.002
Antimony	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	0.00011	<0.0001	0.00011	0.00013	0.00013	0.00013	0.00015	0.00014	0.00014	0.00018	0.00019	0.00016
Arsenic	0.0001 to 0.0025	0.00133	0.00149	0.00137	0.00158	0.00143	0.00153	0.00158	0.00192	0.00243	0.00256	0.00163	0.00171	0.00379	0.00312	0.00275
Barium	5E-005 to 0.02	0.0658	0.0903	0.0879	0.093	0.0805	0.0828	0.0576	0.0646	0.107	0.129	0.0484	0.0471	0.138	0.145	0.118
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.012	<0.01	<0.01	<0.01	<0.01	<0.01	0.015	0.017	0.019	0.021	0.014	0.018	0.025	0.023	0.021
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	33.3	47.5	45.5	45.2	41.2	42.1	42.4	44.3	47.1	50.5	41.1	39.6	47.6	45.5	48.4
Chromium	0.0001 to 0.018	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00012	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	0.00016
Cobalt	0.0001 to 0.0015	0.00055	0.00053	0.00049	0.00062	0.00072	0.00077	0.00023	0.0004	0.00098	0.00118	0.00017	0.00016	0.00146	0.00139	0.0008
Copper	0.0002 to 0.006	0.00399	0.00329	0.00308	0.00269	0.00296	0.00331	0.00142	0.00226	0.00286	0.00271	0.00118	0.00118	0.00309	0.00417	0.00376
Dissolved Cadmium (by saltwater extrac	0.00002															
Iron	0.01 to 0.03	0.086	0.074	0.076	0.055	0.095	0.097	0.024	0.033	0.151	0.082	0.011	<0.01	0.095	0.097	0.044
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00424	0.00601	0.00513	0.00596	0.00508	0.00506	0.0107	0.0104	0.0076	0.00744	0.0112	0.0121	0.00884	0.00907	0.00932
Magnesium	0.1	50.6	77.4	78.6	74	64.7	70.2	71.8	75.4	74.5	75.2	72.9	72.3	70.9	68.8	71.5
Manganese	5E-005 to 0.0015	0.221	0.262	0.232	0.283	0.385	0.428	0.0717	0.118	0.577	0.666	0.015	0.0146	0.694	0.561	0.203
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	0.000013	0.000012	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000013	0.000015	0.000012
Molybdenum	5E-005 to 0.005	0.00455	0.00442	0.00379	0.00498	0.00435	0.00463	0.00285	0.00369	0.00736	0.00846	0.00195	0.00217	0.00484	0.00457	0.00431
Nickel	0.0005 to 0.005	0.00366	0.00457	0.00426	0.00477	0.00473	0.00463	0.00127	0.00218	0.00568	0.00648	0.00075	0.00069	0.0068	0.00743	0.007
Phosphorus	0.05 to 0.3	0.504	0.059	0.066	0.063	0.074	0.089	<0.05	0.062	0.112	0.093	<0.05	<0.05	0.14	0.071	<0.05
Potassium	0.05 to 2	13	13.4	13	13.5	12.4	12.9	17.1	17.8	16.2	19.2	19.8	18.8	21.8	20.7	20.3
Selenium	0.0001 to 0.006	0.0001	0.00012	0.00011	0.00013	0.00012	0.00021	0.00013	0.00013	0.00015	0.00017	0.00011	<0.0001	0.00018	0.00016	0.00016
Silicon	0.05	3.64	4.14	4.05	4.22	4.2	4.59	0.761	1.71	5.54	6.53	0.576	0.611	6.13	5.86	6.78
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	36.4	60.2	58	58.2	53.6	51.1	53.3	58.6	59.5	61.4	54.9	57.4	60.7	55.9	55.7
Strontium	0.0001 to 0.005	0.27	0.402	0.37	0.379	0.345	0.353	0.299	0.328	0.444	0.45	0.272	0.289	0.408	0.391	0.383
Sulphur	0.5	10.8	13.7	12.9	13.2	12.5	18	14.4	15.3	11.7	9.17	14.3	14.8	7.25	5.81	8.02
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00144	0.00216	0.0021	0.00216	0.00178	0.00169	0.00193	0.00178	0.00199	0.00191	0.00162	0.0017	0.00145	0.00133	0.00112
Vanadium	0.001 to 0.03	0.002	0.0013	0.0012	0.0018	0.0015	0.0019	0.0026	0.0026	0.0024	0.0031	0.0031	0.0034	0.0055	0.0045	0.0032
Zinc	0.001 to 0.006	0.0015	<0.001	<0.001	<0.001	0.0017	<0.001	<0.001	0.0017	<0.001	<0.001	<0.001	<0.001	0.0022	<0.001	0.0013
Total Metals																
Aluminum	0.003 to 0.025	0.0857	0.0187	0.0329	0.121	0.47	0.0161	0.0376	0.0308	0.171	0.129	0.099	0.233	0.376	0.711	0.136
Antimony	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	0.00012	0.00013	0.00012	0.00017	0.00013	0.00014	0.00016	0.00012	0.00014	0.00021	0.00021	0.00017
Arsenic	0.0001 to 0.0025	0.00146	0.00147	0.00142	0.00161	0.00179	0.0016	0.00148	0.00182	0.00257	0.00276	0.00167	0.00173	0.00384	0.00347	0.00297
Barium	5E-005 to 0.02	0.0654	0.09	0.0918	0.0935	0.112	0.0889	0.0563	0.0622	0.117	0.133	0.0509	0.0502	0.146	0.149	0.123
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.014	<0.01	<0.01	0.014	0.014	<0.01	0.015	0.017	0.019	0.024	0.015	0.019	0.026	0.03	0.023
Cadmium	1E-005 to 8.5E-005	0.000013	<0.00001	<0.00001	<0.00001	0.000018	<0.00001	<0.00001	<0.00001	0.000014	0.000012	<0.00001	<0.00001	0.000013	0.000018	<0.00001
Calcium	0.05 to 0.1	32.7	46.9	44.9	42.5	40.3	43.1	40.3	43.5	46.7	47.6	40.3	38.6	46.8	45.1	47.7
Chromium	0.0001 to 0.005	0.00024	0.00013	0.00013	0.00031	0.00088	0.00012	0.00015	0.00017	0.00037	0.00037	0.00022	0.00048	0.00068	0.00125	0.00035
Cobalt	0.0001 to 0.0015	0.00066	0.00058	0.00066	0.00073	0.00184	0.00085	0.00028	0.00041	0.00136	0.00133	0.00028	0.00033	0.00179	0.00204	0.00096
Copper	0.0005 to 0.007	0.00601	0.00529	0.00559	0.00611	0.00916	0.00646	0.00203	0.00308	0.00697	0.00702	0.00243	0.00273	0.00885	0.0133	0.00821
Iron	0.01 to 0.03	0.206	0.147	0.174	0.337	0.836	0.207	0.073	0.092	0.516	0.491	0.135	0.266	0.836	1.1	0.374
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	0.000121	<0.00005	<0.00005	<0.00005	0.000053	0.000054	0.000058	0.000059	0.000139	0.000215	0.000055
Lithium	0.0005 to 0.025	0.00407	0.00534	0.00544	0.00562	0.00504	0.00528	0.00972	0.00936	0.00695	0.00699	0.00973	0.0123	0.00838	0.00958	0.00917
Magnesium	0.1	49.9	72.8	73.5	68	62.7	67.7	65.8	73.8	73.1	70.5	71.5	69.6	69.1	68.5	71.8
Manganese	5E-005 to 0.0015	0.254	0.273	0.309	0.278	1.04	0.454	0.081	0.129	0.678	0.675	0.0335	0.0299	0.708	0.576	0.22
Mercury	1E-005 to 5E-005	0.000014	0.000015	0.000017	0.000025	0.000027	0.000023	<0.00001	<0.00001	0.000021	0.000019	<0.00001	<0.00001	0.000029	0.000038	0.000027
Molybdenum	5E-005 to 0.005	0.00505	0.00474	0.00413	0.00512	0.0041	0.00512	0.00273	0.00374	0.00689	0.00887	0.00171	0.00233	0.00482	0.00475	0.00473
Nickel	0.0005 to 0.005	0.00384	0.00459	0.00474	0.00502	0.00666	0.00504	0.00149	0.00222	0.00628	0.00696	0.00113	0.00125	0.00796	0.00995	0.00776
Phosphorus	0.05 to 0.3	0.63	0.087	0.084	0.107	0.179	0.141	0.051	0.079	0.151	0.14	<0.05	0.064	0.216	0.16	0.079
Potassium	0.05 to 2	12.9	12.9	12.6	12.7	12.2	13.2	16	17.7	15.9	17.8	18.8	18.1	20.9	20.3	20.5
Selenium	0.0001 to 0.006	0.00013	0.00011	0.00011	0.00012	0.00017	0.00021	0.00012	0.00012	0.00016	0.00018	0.00011	0.00011	0.00018	0.00011	0.00014
Silicon	0.05	3.85	4.06	4.02	4.28	5.13	4.67	0.79	1.76	5.84	6.55	0.724	1.08	6.77	7.22	7.07
Silver	1E-005 to 0.0001	0.000016	0.000016	0.000016	0.000019	0.000061	0.000019	<0.00001	<0.00001	0.000019	0.00004	<0.00001	<0.00001	0.00002	0.000023	0.000015
Sodium	0.05 to 2	36.2	57.8	57.2	56.4	52.5	52.9	54.2	55.5	56.7	59.1	54.6	55.4	59.2	55.4	56.9
Strontium	0.0001 to 0.005	0.266	0.425	0.379	0.357	0.352	0.373	0.279	0.33	0.41	0.432	0.257	0.303	0.404	0.426	0.401
Sulphur	0.5	10.9	13.9	13.4	13.2	12.7	18.9	14.4	15.1	11.5	9.4	14.6	14.6	7.32	5.98	8.12
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	0.016	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.014	0.026	<0.01
Total Cadmium (by saltwater extraction)	0.00002															
Uranium	1E-005 to 0.001	0.00156	0.00225	0.00222	0.00221	0.00187	0.00182	0.00189	0.0019	0.00199	0.00207	0.00145	0.00178	0.00148	0.00138	0.00119
Vanadium	0.001 to 0.03	0.0024	0.0016	0.0015	0.0023	0.0034	0.0022	0.0028	0.003	0.0031	0.004	0.0036	0.0039	0.0067	0.0068	0.0037
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	0.0055	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.005	0.0062	<0.003
Organics																
Carbon Organic (Dissolved)	0.5 to 5	16.9	16.4	16.2	15.8	14.3	15.3	17.7	18.1	18	18.9	19.1	19.6	19.6	19.5	19
Carbon Organic (Total)	0.5 to 5	18	16.8	16.1	16.3	15.4	15.6	18.3	18.3	18.9	19.9	20.5	21.9	20.1	20.4	19.3
Nitrogen Organic (Dissolved)	0.05 to 0.26															
Nitrogen Organic (Total)	0.05 to 0.3															
ALS LAB ID		**L1432163**	**L1434695**	**L1437439**	**L1439467**	**L1441961**	**L1446462**	**L1451608**	**L1458340**	**L1465108**	**L1472862**	**L1481215**	**L1488139**	**L1494491**	**L1500711**	**L1513418**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C1.19 - INKS-S
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Site ID			INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S
Analytes		**MDL**	**05/Jun/2010**	**30-Aug-10**	**28-Mar-11**	**14-Apr-11**	**1-Jun-11**	**29-Jun-11**	**28-Jul-11**	**31-Aug-11**	**27-Sep-11**	**26-Oct-11**	**10-Jan-12**	**14-Feb-12**	**6-Mar-12**	**25-Apr-12**
In Situ Parameters																
Conductivity µS/cm	...		7072	9736	1355	4417	7138	8247	9936	85.3		3719	6314	6675	4054	7949
Oxygen Dissolved %	...		88.3	66.3	66.7	106	87.2	67.6		7.2		91.2	52.7	78.8		
Oxygen Dissolved	...		8.8	6.53	9.37	13.1	8.24	6.22		0.66		11.9	7.33	11		11
pH (unitless)	...		8.57	8.91	8.95	8.28	8.75	8.8	8.85	8.84	9.25	9.14	8.89	8.81	9.25	8.68
Redox Potential mV	...			9.3	151	71.1	-176	-53.7	146	78.4	171	118	244	-295	143	155
Salinity ppt	...			5.51			4.75	5.41	5.96	5.59		3.42	6.68	7.1	4.19	5.6
Specific Conductivity µS/cm	...		8935	7800	2493	792	8480	9586	10500	9906	804	6350	12040	12750	7802	9907
Temperature °C	...		14.1	14.6	1.09	5.23	16.7	17.7	22.1	17.7	14.4	3.37	0.5	0.02	-0.14	14.7
Total Dissolved Solids	...			6330	1620	4613	5500	6230	6833	6435		4150	7829	8298	5068	6432
Turbidity NTU	...								12.3	17	18.2	10.2	0.5		6.6	3
Physical Tests																
Acidity to pH 8.3 (as CaCO3)	1		<1						<1							
Alkalinity (Total as CaCO3)	1 to 2		615	656	183	498	580	625	641	683	700	721	767	830	518	671
Bicarbonate Alkalinity	1 to 2		315										606		293	493
Carbonate Alkalinity	1 to 2		300										161		225	178
Color TCU	5		19.5	26.1	17	17.3	17.1	17.4	19.4	22.8	23.7	21.6	20.6	21.5	28.6	20.1
Hardness as CaCO3 (Dissolved)	0.5 to 1.1		3170	3480	741	2500	3170	3420	3500	3860	3990	4170	5280	4660	3080	3790
Hydroxide Alkalinity	1 to 2		<1										<1		<1	<1
pH (unitless)	0.01 to 0.1		9.18	8.86	8.82	8.94	8.87	8.76	8.87	9.01	8.84	8.74	8.66	8.67	9.13	8.78
Specific Conductivity µS/cm	2		8500	9350	2360	6920	9010	9380	10100	10600	10700	10900	11600	12000	8120	10300
Total Dissolved Solids	1 to 2		7900	9680	1810	6670	8550	8880	9000	9750	8310	10600	11400	11300	7370	9660
Total Suspended Solids	3		55	13.3	6	14.5	5.9	8	14.1	283	8.4	18	6.9	16.5	17.3	5.3
Turbidity NTU	0.1		41.5	1.92	3.98	8.78	0.73	0.99	10.5	16.4	2.37	6.63	4.32	2.45	8.74	2.56
Dissolved Anions																
Bromide	0.05 to 2.495		<1	<2.5	<5.5	<20	<2.5	<2.5	<2.5	<2.5	<5	<5	<2.5	<2.5	<2.5	<2.5
Chloride	0.5 to 1		345	376	76	285	352	393	431	420	382	431	472	504	343	453
Fluoride	0.02 to 0.4		<0.4	<1	<0.4	<1	<1	1	<1	<1	<2	0.247	<1	<1	<1	<1
Sulphate	0.5 to 1		4840	5390	1090	3990	5150	5530	6150	5990	5570	6360	6910	7260	4530	6390
Nutrients																
Ammonia (Total)	0.005 to 0.05		0.129	0.0748	0.0086	0.0271	0.102	0.148	0.0407	0.0469	0.0639	0.161	0.327	0.208	0.0394	0.0348
Nitrate (as N)	0.005 to 0.1		<0.1	<0.25	<0.1	<0.25	<0.25	<0.25	<0.25	<0.25	<0.5	<0.5	<0.25	<0.25	<0.25	<0.25
Nitrite (as N)	0.001 to 0.02		<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.1	0.086	0.052	0.051	<0.05
Nitrogen (Dissolved)	0.05 to 0.1						2.83	3.4	3.44	4.32	3.19	3.68	3.75	3.51	2.67	3.11
Nitrogen (Total)	0.0025 to 0.11		2.94	3.24	0.078	2.19	2.52	3.25	3.55	4.36	3.42		3.42	3.35	3.61	3.36
Nitrogen Kjeldahl (Total)	0.05 to 0.2		2.94	3.5	0.078	2.19	2.52	3.25	3.55	3.23	3.42	3.38	3.33	3.3	3.56	3.36
Orthophosphate (Dissolved)	0.001 to 0.01		0.0553	0.0502	0.0178	<0.001	0.0226	0.0284	0.0019	0.008	0.0424	0.0649	0.0779	0.0474	<0.001	0.0039
Phosphorus - Dissolved	0.002 to 0.02		0.116	0.104		0.0373	0.0835	0.088	0.0669	0.0785	0.105	0.112	0.142	0.111	0.0564	0.0764
Phosphorus - Total	0.002 to 0.02			0.121	0.105	0.0908	0.0845	0.0948	0.116	0.117	0.112	0.152	0.159	0.188	0.394	0.122
Cyanide																
Cyanide (Free)	0.005		<0.005		<0.005		<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005		0.0075	0.0084	0.0067		0.006	0.0094	0.0077		0.0078	0.0085	0.0076	0.0076	0.0082	<0.005
Cyanide (WAD)	0.005		<0.005		<0.005		<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																
Aluminum	0.001 to 0.025		<0.05	<0.1	<0.025	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.03	<0.03	<0.03	<0.03	<0.03
Antimony	0.0001 to 0.0025		<0.005	<0.01	<0.0025	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001
Arsenic	0.0001 to 0.0025		0.0164	0.021	0.0068	0.013	0.016	<0.02	0.021	0.022	0.022	0.0204	0.0219	0.0218	0.016	0.0169
Barium	5E-005 to 0.02		<0.04	<0.04	<0.02	<0.04	<0.04	<0.06	<0.06	0.054	<0.06	0.0331	0.0317	0.0336	0.0391	0.0266
Beryllium	0.0001 to 0.005		<0.01	<0.02	<0.005	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth	0.0005 to 0.2				<0.2	<0.4	<0.4	<0.6	<0.6	<0.4	<0.6	<0.005	<0.005	<0.005	<0.005	<0.005
Boron	0.01 to 0.1		1.58	1.79	0.37	1.25	1.66	1.8	1.89	1.96	2.12	1.84	2.43	2.63	1.68	1.88
Cadmium	1E-005 to 8.5E-005		<0.00017	<0.00034	<0.000085	<0.00034	<0.00034	<0.00034	<0.00034	<0.00034	<0.00034	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium	0.05 to 0.1		72.9	80.5	31.6	56.3	70.4	70.7	72.8	80.4	76.9	80.8	103	94.1	66.5	75.1
Chromium	0.0001 to 0.018		<0.01	<0.02	<0.005	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	0.0001 to 0.0015		<0.003	<0.006	<0.0015	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	0.0002 to 0.006		<0.02	<0.02	0.0066	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.005	<0.005	<0.005	0.0124	<0.005
Dissolved Cadmium (by saltwater extrac	0.00002															
Iron	0.01 to 0.03		<0.06	<0.06	<0.03	<0.06	<0.06	<0.09	<0.09	<0.06	<0.09	<0.09	<0.09	<0.09	<0.06	<0.06
Lead	5E-005 to 0.0025		<0.005	<0.01	<0.0025	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Lithium	0.0005 to 0.025		<0.05	<0.1	<0.025	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.0238	0.0479	0.0603	0.0393	0.042
Magnesium	0.1		727	797	161	573	728	788	805	887	922	964	1220	1070	708	876
Manganese	5E-005 to 0.0015		0.0539	0.108	0.101	0.0706	0.0515	0.0435	0.101	0.0477	0.0494	0.0359	0.0451	0.0821	0.0702	0.138
Mercury	1E-005 to 5E-005		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005		0.03	0.029	0.0073	0.02	0.027	0.029	0.03	0.032	0.032	0.0322	0.0353	0.0359	0.0278	0.0305
Nickel	0.0005 to 0.005		<0.01	<0.02	<0.005	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.005	<0.005	<0.005	<0.005	<0.005
Phosphorus	0.05 to 0.3				<0.3	<0.6	<0.6	<0.9	<0.9	<0.6	<0.9	<0.9	<0.9	<0.9	<0.6	<0.6
Potassium	0.05 to 2		163	183	36.5	129	167	178	187	202	214	222	244	291	175	202
Selenium	0.0001 to 0.006		<0.01	<0.02	<0.005	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon	0.05				0.496	0.45	0.16	0.17	0.85	1.24	1.32	1.06	1.02	0.99	1.07	0.88
Silver	1E-005 to 0.0001		<0.0002	<0.0004	<0.0001	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Sodium	0.05 to 2		1220	1490	288	1000	1370	1450	1520	1660	1680	1550	1830	2000	1370	1610
Strontium	0.0001 to 0.005				1.13	3.75	4.86	5.29	5.57	5.95	6.18	5.99	6.35	6.82	4.58	5.56
Sulphur	0.5															
Thallium	1E-005 to 0.001		<0.002	<0.004	<0.001	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Tin	0.0001 to 0.0025		<0.005	<0.01	<0.0025	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001
Titanium	0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.03	<0.03	<0.02	<0.03	<0.03	<0.03	<0.03	<0.02	<0.02
Uranium	1E-005 to 0.001		0.003	<0.004	<0.001	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	0.00308	0.00354	0.00355	0.00266	0.00328
Vanadium	0.001 to 0.03		<0.01	<0.02	<0.005	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	0.001 to 0.006		<0.01	<0.01	<0.005	<0.01	0.01	<0.015	<0.015	<0.01	<0.015	<0.03	0.129	0.043	<0.03	<0.03
Total Metals																
Aluminum	0.003 to 0.025		<0.05	<0.1	0.138	0.17	<0.1	<0.1	<0.1	0.42	<0.1	0.911	<0.03	<0.03	1.33	0.044
Antimony	0.0001 to 0.0025		<0.005	<0.01	<0.0025	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	0.001	<0.001	<0.001	<0.001
Arsenic	0.0001 to 0.0025		0.017	0.021	0.0066	0.013	0.017	<0.03	0.022	0.021	0.021	0.0203	0.0227	0.0229	0.0157	0.018
Barium	5E-005 to 0.02		<0.04	<0.04	<0.02	<0.04	<0.04	<0.06	<0.06	0.042	<0.06	0.0444	0.0335	0.0362	0.0418	0.0279
Beryllium	0.0001 to 0.005		<0.01	<0.02	<0.005	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth	0.0005 to 0.2				<0.2	<0.4	<0.4	<0.6	<0.6	<0.4	<0.6	<0.005	<0.005	<0.005	<0.005	<0.005
Boron	0.01 to 0.1		1.59	1.74	0.36	1.29	1.76	1.89	2.03	2	2.05	2.03	2.68	2.77	1.7	1.94
Cadmium	1E-005 to 8.5E-005		<0.00017	<0.00034	<0.000085	<0.00034	<0.00034	<0.00034	<0.00034	<0.00034	<0.00034	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium	0.05 to 0.1		73.2	79	31.1	58.6	73.3	74.4	80.4	82.2	76.6	81.1	105	95.8	69.2	76.8
Chromium	0.0001 to 0.005		<0.01	<0.02	<0.005	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.0028	<0.001	<0.001	0.0012	<0.001
Cobalt	0.0001 to 0.0015		<0.003	<0.006	<0.0015	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	0.0005 to 0.007		<0.02	<0.02	0.011	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.0097	<0.005	<0.005	0.0183	<0.005
Iron	0.01 to 0.03		<0.06	<0.06	0.166	0.232	<0.06	0.097	<0.09	0.464	0.112	1.19	<0.09	<0.09	0.226	<0.06
Lead	5E-005 to 0.0025		<0.005	<0.01	<0.0025	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Lithium	0.0005 to 0.025		<0.05	<0.1	<0.025	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.0361	0.054	0.0631	0.0423	0.0441
Magnesium	0.1		731	776	158	586	767	818	861	905	894	930	1240	1100	742	888
Manganese	5E-005 to 0.0015		0.0692	0.113	0.112	0.0908	0.0573	0.0474	0.139	0.0742	0.0514	0.08	0.0472	0.0875	0.0794	0.15
Mercury	1E-005 to 5E-005		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005		0.032	0.027	0.0073	<0.02	0.029	0.03	0.031	0.033	0.031	0.0314	0.0374	0.0373	0.0286	0.0319
Nickel	0.0005 to 0.005		<0.01	<0.02	<0.005	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.0052	<0.005	<0.005	<0.005	<0.005
Phosphorus	0.05 to 0.3				<0.3	<0.6	<0.6	<0.9	<0.9	<0.6	<0.9	<0.9	<0.9	<0.9	<0.6	<0.6
Potassium	0.05 to 2		161	178	35.6	122	175	186	209	205	211	214	251	296	177	205
Selenium	0.0001 to 0.006		<0.01	<0.02	<0.005	<0.02	<0.02	<0.03	<0.02	<0.02	<0.02	<0.001	<0.001	<0.001	0.0012	<0.001
Silicon	0.05				0.848	0.81	0.2	0.3	0.95	2.1	1.5	3.31	1.07	1.01	1.5	0.99
Silver	1E-005 to 0.0001		<0.0002	<0.0004	<0.0001	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Sodium	0.05 to 2		1210	1460	280	964	1450	1520	1680	1680	1650	1530	1910	2060	1400	1620
Strontium	0.0001 to 0.005				1.12	3.61	5.08	5.56	6.09	6.02	5.99	5.85	6.76	6.91	4.77	5.76
Sulphur	0.5															
Thallium	1E-005 to 0.001		<0.002	<0.004	<0.001	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Tin	0.0001 to 0.0025		<0.005	<0.01	<0.0025	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001
Titanium	0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.03	<0.03	<0.02	<0.03	0.052	<0.03	<0.03	<0.02	<0.02
Total Cadmium (by saltwater extraction)	0.00002															
Uranium	1E-005 to 0.001		0.0032	<0.004	<0.001	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	0.00312	0.0038	0.00345	0.00242	0.00337
Vanadium	0.001 to 0.03		<0.01	<0.02	<0.005	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	0.003 to 0.006		<0.01	<0.01	<0.005	<0.01	<0.01	<0.015	<0.015	<0.01	<0.015	<0.03	<0.03	0.063	<0.03	<0.03
Organics																
Carbon Organic (Dissolved)	0.5 to 5		33.9	39.9	12.2	29.2	36	41.8	38.2	46.1	46.2	46.4	45.6	45.5	37.5	40.2
Carbon Organic (Total)	0.5 to 5					27.8	35.9	38.8	37.5	44.5	47.4	46.4	42.5	50.9	38.5	40.8
Nitrogen Organic (Dissolved)	0.05 to 0.26						2.73	3.25	3.4	4.27	3.13	3.52	3.34	3.25	2.58	3.08
Nitrogen Organic (Total)	0.05 to 0.3					2.17	2.42	3.1	3.51	4.31	3.24	3.91	3.01	3.09	3.52	3.33
ALS LAB ID			**L894378**	**L927439**	**L990458**	**L995583**	**L1012627**	**L1025917**	**L1038168**	**L1052924**	**L1065234**	**L1077732**	**L1103104**	**L1114498**	**L1122039**	**L1140194**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

INKS-S 2-May-12	INKS-S 10-Jul-12	INKS-S 7-Aug-12	INKS-S 12-Oct-12	INKS-S 7-Nov-12	INKS-S 9-Jan-13	INKS-S 7-Feb-13	INKS-S 3-Apr-13	INKS-S 7-May-13	INKS-S 5-Jun-13	INKS-S 3-Jul-13	INKS-S 7-Aug-13	INKS-S 5-Sep-13	INKS-S 9-Oct-13	INKS-S 7-Nov-13
8222	1082	1137	8469	7570	6717	7024	6975	10470	11220	11600	12760		13.6	7735
		39.8	81.3	72.7	63.3	47.7					59.4			27.8
11.1		3.13	8.69	8.84	8.84	6.61					4.75			3.45
8.94	8.84	8.63	8.68	8.72	9.15	8.78	9.15	9.03	8.83	8.87	8.84	8.83	9.06	9.01
131	-40.6	-121	-254	54.8	154	240	106	94.7	191	8.1	196	158	40.5	119
5.99		6.43	6.69	6.94	7.21	7.5	5.23	6.99	7.18	7.04	7.4	7.94	7.88	7.32
10533	1143	1131	11700	12230	12950	13430	9295	12170	12500	12270	12890	13687	9.79	12890
13.5	22.3	25.2	10.5	5.08	-0.21	0.01	11.8	17.7	19.6	22.1	24.5	19	10.5	4.05
6846		7357	7608	7950	8420	8731	6038	7910	8120	7980	8377	8898	8847	8380
4.5	1.4	14.2	8.7	25.7	2.9	1.3	23.1	5.8	4.6	182	17.3		3.8	17.1
			<1									<1		
680	720	760	793	828	855	867	619	771	782	814	815	876	818	760
495	551	573	667	728	784	790		513	534	556	563	553	542	550
185	169	187	126	100	70.4	77.1		258	247	258	252	324	276	210
20.7	19.9	21.6	25	22.4	21.7	22.1	15.8	19.3	19.3	19.9	24.3	20.8	23	
3690	4200	4080	4570	4800	4990	4670	3280	4480	4620	4270	4640	5110	5150	5050
<1	<1	<1	<1	<1	<1	<1		<1	<1	<1	<1	<1	<1	<1
8.78	8.73	8.72	8.59	8.53	8.51	8.5	8.78	8.89	8.83	8.87	8.88	8.96	8.91	8.78
10300	10900	11100	12000	12000	12600	12400	9000	11700	12200	12100	12400	12900	13300	12800
10300	11900	12400	11400		12600	13000	9300	11300	12200	11900	12600	13700	12600	12500
13.1	6.2	10.1	28.8	31.8	7	9.5	33.8	32.1	17.8	24.3	25.7	34.7	13.1	35.7
3.84	0.94	0.98	14.2	18.6	3.37	2.88	14.2	3.54	1.92	0.92	24.9	6.51	8.41	12.8
<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	2.7	<2.5	2.6	<2.5	<2.5
426	459	466	505	524	523	529	391	486	502	497	529	574	561	535
<1	<1	<1	<1	<1	<1	<1	<1	<1	1.1	<1	<1	<0.4	<1	<1
6130	6620	6830	7480	7650	7870	7930	5540	7220	7540	7190	7900	8070	8390	7870
0.0355	0.14	0.221	0.803	1.52	1.67	1.68	0.07	0.044	0.0289	0.069	0.053	0.0426	0.0466	0.132
<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.1	<0.25	<0.25
<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.05
2.85	0.407	5.06	4.7	4.35	5.49	5.07	2.38				3.63			
2.89	3.28	3.71	5.15	1.28	5.51	5.18	4.71	3.74	3.54	3.68	4.27	17.5	4.46	4.54
2.89	3.28	3.71	5.15	1.28	5.72	6.19	4.71	3.74	3.63	3.68	4.03	4.58	5.21	4.83
0.0164	0.0929	0.127	0.162	0.178	0.161	0.204	<0.001		0.133	0.096		0.0026	0.0029	0.0019
0.0938	0.178	0.196	0.235	0.233	0.245	0.275	0.0601	0.0956	0.226	0.176	0.202	0.0926	0.0819	0.0667
0.135	0.173	0.216	0.3	0.29	0.28	0.308	0.354	0.146	0.241	0.188	0.324	0.312	0.256	2.77
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
0.0093	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.03	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
<0.001	0.0011	<0.001	0.0011	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	0.0012	0.0012	0.001	<0.001
0.0171	0.0207	0.0235	0.021	0.0161	0.0133	0.0153	0.0094	0.0146	0.0173	0.0197	0.0229	0.023	0.0199	0.0161
0.0278	0.0345	0.035	0.0338	0.0292	0.0258	0.0302	0.0207	0.0268	0.0315	0.026	0.0186	0.0215	0.0215	0.0198
<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2.21	2.18	1.83	2.68	2.26	2.11	2.59	1.61	1.99	2.15	2.05	2.44	2.63	2.68	2.32
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
72.9	79.2	79.7	90	96.2	96.5	97.2	68.1	92.2	90.2	89.4	89	88.4	83.2	75.6
<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
<0.005	0.0029	<0.002	<0.002	<0.002	<0.004	0.0022	0.0056	0.003	0.0025	0.003	0.0032	<0.002	<0.002	0.0031
<0.09	<0.1	<0.1	<0.1	0.057	0.055	0.052	0.023	<0.03	<0.05	<0.03	<0.05	<0.05	<0.05	<0.05
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
0.0479	0.0483	0.0427	0.0627	0.0497	0.043	0.0524	0.0298	0.0545	0.0461	0.0398	0.0499	0.0601	0.0598	0.0537
852	973	943	1060	1110	1150	1070	755	963	1070	983	1070	1190	1200	1180
0.138	0.175	0.205	0.1	0.0982	0.0534	0.0659	0.0423	0.132	0.108	0.0416	0.096	0.0328	0.0182	0.069
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
0.0315	0.0321	0.0252	0.0376	0.038	0.0351	0.0387	0.027	0.0411	0.0347	0.0351	0.0368	0.0382	0.0387	0.0379
<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	0.0082	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.9	<0.9	<0.9	<1.5	0.26	<0.25	0.24	<0.1	<0.15	<0.25	0.18	<0.25	<0.25	<0.25	<0.25
200	231	249	272	252	258	258	164	239	245	224	253	271	281	263
<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	0.0017	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0011
1.12	0.64	1.51	2.15	2.7	2.96	3.25	1.83	2.96	1.02	0.32	2.01	3.74	3.64	3.5
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
1600	1790	1890	2120	1950	1910	2030	1290	1870	1950	1830	2170	2260	2140	1860
5.55	6.33	5.69	7.3	6.83	6.59	7.11	4.78	6.63	6.3	6.3	7.2	7.56	7.57	6.89
				2430	2570	2470	1690	2310	2380	2240	2520	2700	2630	2590
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
<0.03	<0.03	<0.03	<0.05	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
0.00331	0.00346	0.00276	0.00387	0.00392	0.00377	0.00426	0.00286	0.00408	0.00374	0.00378	0.0039	0.00403	0.004	0.00421
<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	0.012	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
<0.03	<0.01	<0.01	<0.01	<0.01	<0.02	0.01	0.013	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0.805	<0.03	<0.03	0.353	0.704	<0.06	<0.03	0.174	0.074	0.065	<0.03	0.036	<0.03	0.059	0.123
<0.001	<0.001	0.0011	0.0011	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	0.0032	0.0012	0.0013	<0.001	<0.001
0.0175	0.0194	0.0236	0.0215	0.0166	0.0133	0.015	0.01	0.0145	0.0173	0.0199	0.0228	0.0234	0.0199	0.0149
0.0296	0.0323	0.0351	0.0379	0.0392	0.0269	0.0299	0.0228	0.0276	0.0328	0.0267	0.0201	0.0221	0.0226	0.0197
<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2.21	1.89	2.14	2.71	2.22	2.21	2.48	1.65	2.04	2.16	2.06	2.49	2.58	2.58	2.06
<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
72	77.3	84.8	96	102	103	100	71.9	92.9	91.1	91.8	95.2	90.5	81.1	71.9
<0.001	<0.001	<0.001	0.0015	0.0018	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
<0.005	<0.005	<0.005	<0.005	0.0074	<0.01	<0.005	<0.005	0.0052	<0.005	<0.005	<0.005	<0.005	<0.005	0.0053
0.161	<0.1	<0.1	0.48	0.966	0.136	0.117	0.254	0.116	0.131	0.052	0.051	<0.05	0.111	0.188
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
0.0485	0.0459	0.0504	0.0648	0.048	0.047	0.0512	0.032	0.0553	0.0486	0.0414	0.0516	0.0587	0.0633	0.0474
825	941	984	1090	1140	1220	1130	793	959	1090	1010	1120	1210	1200	1080
0.148	0.173	0.195	0.129	0.141	0.0638	0.0717	0.0733	0.141	0.123	0.0511	0.122	0.048	0.0702	0.0851
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
0.031	0.0299	0.0296	0.0388	0.0379	0.0373	0.0378	0.0285	0.0437	0.036	0.0393	0.0376	0.0387	0.0378	0.0339
<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.9	<0.9	<0.9	<1.5	0.36	0.31	0.31	0.36	<0.15	0.27	0.21	0.33	0.3	0.31	0.3
196	214	240	270	260	275	263	171	237	250	236	267	279	271	243
<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	0.0019	<0.001	<0.001	<0.001	0.001	0.0011	<0.001	0.0012
1.32	0.61	1.62	3.43	4.75	3.22	3.39	2.35	3.1	1.24	0.39	2.22	3.86	3.71	3.71
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00012	<0.0001	<0.0001
1560	1650	1840	2100	1940	1860	2010	1310	1870	1920	1880	2180	2260	2050	1730
5.6	5.88	6.61	7.51	6.85	6.95	6.94	4.83	6.66	6.47	6.29	7.31	7.54	7.23	6.16
				2500	2740	2620	1780	2330	2430	2320	2660	2770	2630	2380
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	0.00024	<0.0001	<0.0001	<0.0001	<0.0001
<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
<0.03	<0.03	<0.03	<0.05	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
0.00324	0.00324	0.00323	0.00402	0.00399	0.00388	0.00416	0.00287	0.00414	0.00411	0.00401	0.00396	0.00416	0.00405	0.00379
<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	0.013	0.011	<0.01	<0.01	<0.01	<0.01	<0.01
<0.03	<0.03	<0.03	<0.03	<0.03	<0.06	<0.03	0.031	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
41.8	42.9	42.8	49.7	47.4	51.1	46.9	34.9	45	48.1	50.6	53.2	47.2	49.7	43.4
42.1	40.6	43.5	51.1	54.9	49.4	46.3	38	48	47.9	51.2	56.3	51.8	55.1	48.9
2.81	0.267	4.84	3.9	2.83		3.39	2.31							
2.85	3.14	3.49	4.35	<0.08	4.05	4.51	4.64							
L1142492	**L1176520**	**L1190914**	**L1223406**	**L1235306**	**L1256679**	**L1266846**	**L1286585**	**L1298960**	**L1312719**	**L1327102**	**L1344180**	**L1358626**	**L1375698**	**L1389979**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C1.20 - JACL-D
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Site ID			JACL-D	JACL-D	JACL-D	JACL-D	JACL-D	JACL-D	JACL-D	JACL-D	JACL-D	JACL-D	JACL-D	JACL-D	JACL-D	JACL-D
Analytes	**MDL**		**3-May-07**	**19-Jul-07**	**20-Sep-07**	**29-Apr-08**	**10-Jul-08**	**7-Sep-08**	**3-Jun-10**	**1-Sep-10**	**1-Jun-11**	**29-Jun-11**	**28-Jul-11**	**31-Aug-11**	**28-Sep-11**	**3-Nov-11**
In Situ Parameters																
Conductivity µS/cm	...		492	499	511	484	503	503	483	531	432	484	503	466		144
Oxygen Dissolved %	...					62.3	1.3	1.5	9.4	0.4	1.3	-0.4	0	0.8	0.1	
Oxygen Dissolved	...		0.47	0.01	0.21	7.99	0.16	0.19	1.22	0.05	0.18	-0.06	0	0.11	0.01	12.2
pH (unitless)	...		7.76	7.54	8	8.1	7.42	7.29	7.84	7.71	6.52	7.36	7.55		7.45	7.74
Redox Potential mV	...						-64.4				-57.9	-178		-124	-224	258
Salinity ppt	...										0.35	0.4	0.41	0.41		0.11
Specific Conductivity µS/cm	...		754	787	792	790	801	803	802	869	729	814	840	847	843	232
Temperature °C	...		5.44	5.85	6.42	4.72	5.47	5.43	4.18	4.62	3.69	3.77	3.99	1.46	4.2	5.21
Total Dissolved Solids	...			512							474	529	547	550		153
Turbidity NTU	...											300	1.6	1.5		
Physical Tests																
Acidity to pH 8.3 (as CaCO3)	1			5.2		4.2							7.7		4.9	
Alkalinity (Total as CaCO3)	1 to 2		248	247	280	257	250	255	236	244	255	259	280	256	272	272
Bicarbonate Alkalinity	1 to 2					257		255	236						272	
Carbonate Alkalinity	1 to 2					<2		<2	<2						<2	
Color TCU	5			13.9	15.3	21.3	12.6	14.2	13.7	14.3	15.6	14.7	17.1	16.4	16	16.6
Hardness as CaCO3 (Dissolved)	0.5 to 1.1		321	337	329	341	322	320	318	336	324	321	331	333	325	323
Hydroxide Alkalinity	1 to 2					<2		<2	<2						<2	
pH (unitless)	0.01 to 0.1		8.24	7.99	7.9	8.12	8.2	7.85	8.3	7.97	8.11	8.09	8	8.04	8.04	8.1
Specific Conductivity µS/cm	2		749	774	779	790	793	801	758	769	785	751	811	800	809	774
Total Dissolved Solids	1 to 2		461	471	465	447	492	470	454	480	469	458	507	472	482	474
Total Suspended Solids	3		<3	3.6	<3	3.2	<3	<3	<3	<3	5.2	3.3	<3	<3	4	3
Turbidity NTU	0.1					2.43	2.15	9.9	0.78	2.2	2.07	1.67	13	1.61		23.4
Dissolved Anions																
Bromide	0.05 to 2.495		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.25	<0.25	<0.5	<0.5	<0.25	<0.5
Chloride	0.5 to 1		61.4	60	59.8	60.6	61.9	62.5	60.5	60.6	61	62.6	65	61.7	60.8	63.8
Fluoride	0.02 to 0.4		0.191		0.207	0.172	0.175	0.198	0.172	<0.2	0.21	0.32	0.34	<0.2	0.21	0.22
Sulphate	0.5 to 1		86.4	83.7	82.5	83.7	85.2	73.9	79.5	70.7	74.5	77.3	64.8	73.7	73.3	71.3
Nutrients																
Ammonia (Total)	0.005 to 0.05		0.131	0.932	1.57	0.076	0.448	1.94	0.19	0.939	0.499	0.513	1.19	0.93	1.59	0.294
Nitrate (as N)	0.005 to 0.1		0.161	<0.005	<0.005	0.0299	<0.005	<0.005	<0.005	<0.05	<0.025	<0.025	<0.05	<0.05	<0.025	0.062
Nitrite (as N)	0.001 to 0.02		0.0106	<0.001	<0.001	0.0045	<0.001	<0.001	<0.001	<0.01	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01
Nitrogen (Dissolved)	0.05 to 0.1										1.59	1.61	2.28	2.25	2.45	2.83
Nitrogen (Total)	0.0025 to 0.11								1.06	2.01	1.56	1.68	2.3	2.55	2.5	2.77
Nitrogen Kjeldahl (Total)	0.05 to 0.2		1.02	1.95	2.94	1.13	1.34	3.17	1.06	2.01	1.56	1.68	2.3	1.97	2.5	2.38
Orthophosphate (Dissolved)	0.001 to 0.01		0.0523	0.216	0.336	0.0281	0.116	0.343	0.0261	0.168	0.109	0.0991	0.278	0.178	0.277	0.273
Phosphorus - Dissolved	0.002 to 0.02									0.179	0.118	0.106	0.279	0.178	0.278	0.276
Phosphorus - Total	0.002 to 0.02		0.0788	0.257	0.362	0.0816	0.16	0.383	0.0498	0.193	0.138	0.127	0.317	0.198	0.336	0.284
Cyanide																
Cyanide (Free)	0.005					<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005
Cyanide (Total)	0.005		0.006	0.0051	0.0117	<0.005	0.006		<0.005	0.0064	0.0052	0.0063	0.0055		<0.005	<0.005
Cyanide (WAD)	0.005					<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0063	<0.005		<0.005	<0.005
Dissolved Metals																
Aluminum	0.001 to 0.025		<0.01	<0.005	0.009	<0.005	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.003
Antimony	0.0001 to 0.0025		<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001
Arsenic	0.0001 to 0.0025		0.0014	0.00138	0.00123	0.00126	0.0013	0.0016	0.00144	0.00131	0.00143	0.00145	0.00143	0.00136	0.00135	0.00137
Barium	5E-005 to 0.02		0.059	0.065	0.067	0.059	0.067	0.069	0.056	0.07	0.067	0.066	0.07	0.071	0.074	0.07
Beryllium	0.0001 to 0.005		<0.002	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001
Bismuth	0.0005 to 0.2										<0.2	<0.2	<0.2	<0.2	<0.2	<0.0005
Boron	0.01 to 0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.02
Cadmium	1E-005 to 8.5E-005		<0.000034	<0.000017	<0.000017	<0.000017	<0.000034	<0.000034	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.00001
Calcium	0.05 to 0.1		57.5	60.2	61.1	57.9	56.4	58.5	50.1	53.5	56.3	54.7	59	57.4	57.1	56.2
Chromium	0.0001 to 0.018		<0.002	<0.002	<0.001	<0.001	<0.002	<0.004	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.0001
Cobalt	0.0001 to 0.0015		<0.0006	<0.0003	<0.0003	<0.0003	<0.0006	<0.0006	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0001
Copper	0.0002 to 0.006		<0.002	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005
Dissolved Cadmium (by saltwater extrac	0.00002															
Iron	0.01 to 0.03		<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Lead	5E-005 to 0.0025		<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005
Lithium	0.0005 to 0.025		<0.01	0.0072	0.0063	0.0062	<0.01	<0.01	0.0055	0.0067	0.0062	<0.005	<0.005	0.0082	0.0072	0.00646
Magnesium	0.1		43	45.3	43	46.7	44	42.3	46.8	49.2	44.6	44.9	44.7	46	44.3	44.3
Manganese	5E-005 to 0.0015		0.0297	0.0995	0.107	0.00936	0.086	0.0982	0.00902	0.0578	0.122	0.103	0.1	0.101	0.108	0.102
Mercury	1E-005 to 5E-005		<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005		<0.004	0.0021	0.0011	0.0024	0.0025	<0.002	0.0023	0.0018	0.002	0.002	0.0012	0.0014	<0.001	0.00066
Nickel	0.0005 to 0.005		<0.002	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00078
Phosphorus	0.05 to 0.3										<0.3	<0.3	<0.3	<0.3	0.33	0.3
Potassium	0.05 to 2		12.3	12.6	12.4	12.2	12.6	13	14.7	14.2	13.1	12.9	13.5	13.5	13.2	13.2
Selenium	0.0001 to 0.006		<0.002	0.0034	<0.001	<0.001	<0.002		<0.001	<0.001	<0.001	<0.001	0.0019	<0.001	<0.001	0.00021
Silicon	0.05										3.19	3.13	3.94	3.41	4.13	3.95
Silver	1E-005 to 0.0001		<0.00004	<0.00002	<0.00002	<0.00002	<0.00004	<0.00004	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001
Sodium	0.05 to 2		39.8	42	43.4	40.7	41.3	39.2	42.9	44.6	42.4	42.2	42.1	42.6	42	47
Strontium	0.0001 to 0.005										0.429	0.419	0.427	0.428	0.428	0.446
Sulphur	0.5															
Thallium	1E-005 to 0.001		<0.0004	<0.0002	<0.0002	<0.0002	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001
Tin	0.0001 to 0.0025		<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001
Titanium	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001		0.00129	0.00118	0.00098	0.00109	0.00121	0.00112	0.00118	0.00118	0.00111	0.00117	0.00106	0.00117	0.00116	0.000948
Vanadium	0.001 to 0.03		<0.03	<0.03	<0.03	0.0016	<0.002	<0.002	0.0019	0.0018	0.0023	0.0018	0.0018	0.0018	0.0017	0.0017
Zinc	0.001 to 0.006		<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.003
Total Metals																
Aluminum	0.003 to 0.025		<0.01	0.0058	0.0092	<0.005	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0033
Antimony	0.0001 to 0.0025		<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001
Arsenic	0.0001 to 0.0025		0.0012	0.00137	0.0012	0.00127	0.0013	0.0016	0.00105	0.00132	0.00131	0.00137	0.00128	0.00139	0.00138	0.00125
Barium	5E-005 to 0.02		0.058	0.066	0.07	0.062	0.067	0.069	0.054	0.068	0.068	0.069	0.073	0.067	0.071	0.065
Beryllium	0.0001 to 0.005		<0.002	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001
Bismuth	0.0005 to 0.2										<0.2	<0.2	<0.2	<0.2	<0.2	<0.0005
Boron	0.01 to 0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.024
Cadmium	1E-005 to 8.5E-005		<0.000034	<0.000017	<0.000017	<0.000017	<0.000034	<0.000034	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.00001
Calcium	0.05 to 0.1		58.8	60.9	62.1	58.6	56.9	58	48.8	53	55.4	56.2	59.5	55.2	56.2	53.6
Chromium	0.0001 to 0.005		<0.002	<0.002	<0.001	<0.001	<0.002	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00029
Cobalt	0.0001 to 0.0015		<0.0006	<0.0003	<0.0003	<0.0003	<0.0006	<0.0006	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0001
Copper	0.0005 to 0.007		<0.002	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00087
Iron	0.01 to 0.03		<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.038	<0.03	0.031	0.064
Lead	5E-005 to 0.0025		<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005
Lithium	0.0005 to 0.025		<0.01	0.0067	0.0063	0.0064	<0.01	<0.01	0.006	0.0077	0.0074	0.0059	0.0074	0.0077	0.0071	0.00576
Magnesium	0.1		44	45.9	43.2	47.2	44.3	42.3	45.1	48.2	44.7	46	45.3	44.7	43.9	41.7
Manganese	5E-005 to 0.0015		0.0479	0.0965	0.106	0.0359	0.0855	0.0982	0.0137	0.0642	0.13	0.11	0.109	0.102	0.108	0.0995
Mercury	1E-005 to 5E-005		<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005		<0.004	0.002	0.0014	0.0024	0.0024	<0.002	0.0025	0.0024	0.0025	0.0024	0.0019	0.0022	0.0018	0.00138
Nickel	0.0005 to 0.005		<0.002	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00164
Phosphorus	0.05 to 0.3										<0.3	<0.3	0.31	<0.3	0.33	<0.3
Potassium	0.05 to 2		12.2	12.6	12.3	12.4	12.6	13	13.9	13.9	13.3	13.4	13.9	13.1	13.2	12.6
Selenium	0.0001 to 0.006		<0.002	0.0034	<0.001	<0.001	<0.002		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0001
Silicon	0.05										3.23	3.18	3.98	3.29	4.08	3.73
Silver	1E-005 to 0.0001		<0.00004	<0.00002	<0.00002	<0.00002	<0.00004	<0.00004	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001
Sodium	0.05 to 2		39.6	41.4	43	41.4	41.2	39.3	41.8	43.9	42.9	43.8	44	41.7	41.8	44.8
Strontium	0.0001 to 0.005										0.435	0.437	0.445	0.422	0.43	0.42
Sulphur	0.5															
Thallium	1E-005 to 0.001		<0.0004	<0.0002	<0.0002	<0.0002	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001
Tin	0.0001 to 0.0025		<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001
Titanium	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002															
Uranium	1E-005 to 0.001		0.00126	0.00105	0.00083	0.00077	0.00115	0.00095	0.00129	0.00136	0.00131	0.0013	0.00127	0.00127	0.00126	0.000938
Vanadium	0.001 to 0.03		<0.03	<0.03	<0.03	0.0017	<0.002	<0.002	0.002	0.002	0.0025	0.002	0.002	0.0018	0.0018	0.0016
Zinc	0.003 to 0.006		<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.003
Organics																
Carbon Organic (Dissolved)	0.5 to 5		14.2	14.7	14.1	14.7	14.9	13.2	13.7	13.3	14.5	14.7	15.4	16.8	15.9	14.5
Carbon Organic (Total)	0.5 to 5										15.9	15.1	16	16.8	15.9	15.6
Nitrogen Organic (Dissolved)	0.05 to 0.26										1.09	1.1	1.09	1.32	0.86	2.47
Nitrogen Organic (Total)	0.05 to 0.3										1.06	1.17	1.11	1.62	0.91	2.41
ALS LAB ID			**L502198**	**L532652**	**L557583**	**L624228**	**L654416**	**L679955**	**L894163**	**L927896**	**L1012627**	**L1025917**	**L1038168**	**L1052924**	**L1066047**	**L1081228**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

JACL-D 10-Jan-12	JACL-D 13-Feb-12	JACL-D 7-Mar-12	JACL-D 26-Apr-12	JACL-D 3-May-12	JACL-D 11-Jul-12	JACL-D 8-Aug-12	JACL-D 6-Sep-12	JACL-D 6-Nov-12	JACL-D 9-Jan-13	JACL-D 7-Feb-13	JACL-D 8-May-13	JACL-D 4-Sep-13	JACL-D 7-Nov-13	JACL-D 9-Jan-14	JACL-D 28-Apr-14	JACL-D 13-May-14	JACL-D 26-May-14
436	457	433	452	453	468	456	470	447	414	427	739		446	429	426	542	542
33.2	24.4	5.2	2.5	3.5	15.8	1.9	0	57.2	39.1	20.1	39.7	2.4	45.8	19.1	12.4	69.2	69.2
4.44	3.25	0.7	0.33	0.46	2.12	0.25	0	6.8	5.31	2.72	5.08	0.31	5.82	2.55	13.2	7.15	7.15
7.77	7.64	7.62	7.48	7.74	7.48	7.5	7.46	7.94	8.23	7.8	7.87	7.44	8.08	7.68	8.55	8.55	8.55
219	183	75.1	41.3	123	-140	-264	-225	135	102	212	229	-41.3	136	154	102	112	112
0.36	0.38	0.36	0.37	0.37		0.36	0.38	0.34	0.35	0.36	0.36	0.37	0.35	0.36	0.3	0.34	0.34
747	782	741	760	758	774	744	770	695	726	747	739	762	721	733	624	690	690
3.23	3.26	3.24	3.76	3.91	4.29	4.72	4.54	6.29	2.51	2.57	4.86	5.03	5.04	3.25	8.37	13.8	13.8
485	508	482	494	493		484	500	452	472	485	474	495	468	477	405	449	449
0.6	0.1	0.6	2.6	1.2	0.8	1	0.6	1.2	2	0.4	0		0.9	1.4	2.1	-0.4	
								<1									
258	250	253	258	257	247	264	277	245	251	252	259	252	251	246	244	244	219
258	250	253	258	257	247	264	277	245	251	252	252	252	251	246	244	244	219
<2	<2	<2	<2	<2	<2	<1	<1	<1	<2	<1	6.6	<2	<2	<2	<2	<2	<1
16.2	16.1	16.7	17.6	16.4	16.4	16.2	16	14.9	15.4	15	13.1	15.2		16.3			
308	316	316	321	323	319	315	326	296	304	297	300	308	298	321	294	299	291
<2	<2	<2	<2	<2	<2	<1	<1	<1	<2	<1	<1	<2	<2	<2	<2	<2	<1
8.21	8.17	8.11	8.23	8.13	8.14	8.22	8.11	8.33	8.21	8.33	8.35	8.08	8.19	8.15	8.21	8.15	8.21
741	746	740	746	735	740	739	744	693	680	705	717	742	686	711	659	698	695
458	454	452	448	462	494	488	486	428	413	419	439	448	430	445	427	362	370
<3	7.3	3.3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	4.7	<3	<3
1.4	5.24	1.04	1.82	1.21	2.05	2.26	0.92	0.87	2.06	1.04	1.1	7.14	1.21	1.64	2.33	0.72	0.46
<0.5	<0.25	<0.5	<0.05	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.5	<0.25	<0.25	<0.25	<0.05	<0.05
59.6	60	58.9	59.3	59.7	59.6	60.4	57.4	55.6	56	55.9	56.5	60.5	53.8	58.3	56	56	54.2
0.21	0.21	0.2	0.229	0.21	0.21	0.22	0.2	0.19	0.28	0.21	0.23	0.26	0.19	0.2	0.19	0.224	0.212
67.2	67.9	65.9	66.9	67.6	65.9	67.5	63.6	59.4	60	60	58.8	55.4	51.4	53.4	51.5	54.1	51.3
0.283	<0.05	0.0396	0.39	0.144	0.673	0.564	0.962	0.29	0.447	0.472	0.0716	0.863	0.251	0.0207	0.0068	0.0438	0.0906
0.297	0.557	0.562	<0.005	0.225	<0.025	<0.025	<0.025	<0.025	0.08	0.115	0.357	<0.05	0.121	0.503	0.107	0.149	0.0535
0.018	<0.005	<0.01	0.0042	0.0295	<0.005	<0.005	<0.005	0.0067	0.0086	0.0232	0.0363	<0.01	0.0312	<0.005	0.0056	0.0054	0.0027
1.24	1.49	1.52	1.23	1.14	1.41	1.51	1.95	0.92	1.43	1.44		3.5					
1.39	1.59	1.44	1.01	1.26	1.52	1.45	1.77	1.16	1.45	1.41	1.36	1.67	1.14		1.05		
1.07	1.03	0.876	1.01	1	1.52	1.45	1.77	1.15	1.32	1.48	0.969	1.9	1.14	0.852	1.08	0.899	0.888
0.0676	0.0708	0.079	0.115	0.0641	0.182	0.162	0.22	0.0575	0.0836	0.096	0.0936	0.337	0.0938	0.113	0.0423	0.0781	0.0704
0.0863	0.0879	0.0986	0.122	0.0798	0.193	0.159	0.217	0.0685	0.0998	0.108	0.105	0.392	0.135	0.119	0.113	0.0969	0.088
0.0885	0.092	0.099	0.14	0.0921	0.208	0.186	0.253	0.0771	0.092	0.108	0.111		0.141	0.125	0.0558	0.113	0.0907
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.005	<0.005	<0.005	<0.005	0.007	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.003	<0.003	<0.003	<0.003	<0.003	<0.001	<0.001	<0.001	0.0011	<0.001	0.0012	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
0.00011	0.0001	0.0001	<0.0001	0.0001	<0.0001	<0.0001	0.00012	<0.0001	0.00011	0.00012	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	0.0001	<0.0001
0.00142	0.00141	0.00139	0.00132	0.00137	0.00132	0.00133	0.00131	0.00124	0.00132	0.00142	0.00133	0.00128	0.00133	0.00132	0.00126	0.00123	0.00126
0.0632	0.0751	0.07	0.0724	0.0674	0.0733	0.0681	0.0737	0.0452	0.0478	0.05	0.0547	0.0715	0.0625	0.0641	0.0649	0.0654	0.0643
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
0.022	0.021	0.022	0.02	0.022	0.02	0.023	0.024	0.019	0.02	0.024	0.02	0.021	0.02	0.025	0.023	0.022	0.022
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
54.4	55.8	55.6	56.8	57.3	57.7	55.2	60.4	51.6	54.7	52.3	53.9	56.8	53.8	59.7	56.6	58.3	55.8
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	0.00055	0.0012	0.00159	0.0006	0.00023	0.00043	0.00046	0.00141	0.00126	0.00219
<0.03	<0.03	<0.03	<0.03	<0.03	0.017	0.018	0.019	<0.01	0.01	0.01	<0.01	0.013	<0.01	<0.01	<0.01	<0.01	<0.01
<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000066	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000056	<0.00005	<0.00005
0.0061	0.00627	0.00607	0.00615	0.00633	0.00698	0.00651	0.00606	0.00574	0.00572	0.00577	0.00579	0.00593	0.00498	0.0059	0.00576	0.00585	0.00525
41.9	42.9	43.1	43.5	43.6	42.5	43.1	42.6	40.5	40.6	40.4	40.1	40.4	39.7	41.8	37.1	37.2	36.7
0.0151	0.0173	0.031	0.147	0.0423	0.102	0.0937	0.104	0.0319	0.02	0.0278	0.0311	0.168	0.0198	0.00371	0.00146	0.00107	0.00116
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
0.00243	0.00238	0.00223	0.00184	0.00212	0.00181	0.00183	0.00109	0.00189	0.00325	0.00276	0.00227	0.0015	0.00207	0.00233	0.0021	0.00324	0.00233
0.00071	0.00077	0.00072	0.00065	0.00071	0.00075	0.0007	0.0007	0.00062	0.0007	0.00071	0.00067	0.0007	0.00062	0.00069	0.00072	0.00109	0.00079
<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.075	0.104	0.109	0.11	0.364	0.111	0.131	0.065	0.094	0.089
12.6	13.1	12.1	12.4	12.5	12.2	11.5	12.3	12.5	13.1	11.9	11.8	11.9	11.8	11.6	11	11.5	10.1
0.00015	0.00014	0.00015	0.00014	0.00015	0.00059	0.00068	0.00042	0.00012	0.00015	0.00015	0.00014	0.00043	0.00017	0.00013	0.00014	0.00017	0.00014
3.42	3.57	3.79	4.2	3.73	4.62	4.41	4.87	3.33	3.98	4.04	4.28	5.76	5.78	6.49	5.34	5.85	4.85
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
38.4	38.6	39	39.3	39.2	38.8	39.4	39	35.3	34.2	39.2	37.4	37.5	32.9	36	37.3	33.5	34.6
0.418	0.412	0.383	0.39	0.389	0.443	0.385	0.398	0.356	0.369	0.374	0.373	0.398	0.332	0.391	0.374	0.385	0.364
								0.0196	20.5	20.5	20.9	29.9	17.1	18.8	17.4	17.4	17.5
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0.00122	0.00121	0.00118	0.00111	0.00113	0.00119	0.00113	0.00103	0.00104	0.0012	0.00116	0.00114	0.000957	0.00105	0.00112	0.00103	0.00108	0.00102
0.002	0.002	0.0017	0.0019	0.0018	0.0017	0.0017	0.0017	0.0018	0.0022	0.0022	0.0019	0.0015	0.0023	0.0022	0.002	0.0019	0.002
<0.003	<0.003	<0.003	<0.003	0.0034	0.0011	<0.001	0.0012	0.0014	0.0043	0.0029	0.0038	0.0012	<0.001	0.0016	0.0033	<0.001	0.0014
0.0261	0.0841	0.0138	0.0049	0.0072	0.0035	0.0125	<0.003	0.0158	0.0175	0.008	0.0066	0.004	0.0081	0.0149	0.0081	0.0049	<0.003
0.00011	0.00011	0.00011	0.00011	0.0001	0.0002	0.00013	0.00028	0.00011	0.00012	0.00012	0.00012	<0.0001	0.00011	0.0001	<0.0001	0.00011	0.00013
0.00126	0.00119	0.00135	0.00133	0.00139	0.00141	0.00136	0.0014	0.00137	0.00138	0.00143	0.00132	0.00126	0.00139	0.00127	0.00124	0.00128	0.00117
0.0635	0.0669	0.0707	0.071	0.0655	0.0746	0.0691	0.0742	0.0495	0.0486	0.0511	0.0553	0.0705	0.0605	0.0651	0.0661	0.0723	0.0645
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
0.025	0.026	0.028	0.025	0.025	0.024	0.028	0.029	0.02	0.02	0.03	0.023	0.025	0.023	0.025	0.024	0.023	0.023
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
53.5	56.1	55.4	56.6	56.1	56.8	54.1	61	52.2	53.4	52.9	53.9	57.6	55.2	58	56.1	56.9	56.1
0.00022	0.00043	0.00019	0.00018	0.00012	0.00018	0.00019	0.00022	0.00014	0.00014	0.00022	0.00027	0.00013	0.00012	0.00017	<0.0001	0.00013	<0.0001
<0.0001	0.00013	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
0.00053	0.00113	<0.0005	<0.0005	0.00071	0.00061	0.00079	0.00051	0.00073	0.00101	0.00282	0.00068	0.00054	0.00073	0.00069	0.00155	0.00589	0.00166
<0.03	0.144	<0.03	<0.03	<0.03	0.022	0.035	0.026	0.032	0.038	0.024	0.017	0.019	0.017	0.023	0.019	0.013	<0.01
<0.00005	0.00006	<0.00005	<0.00005	<0.00005	<0.00005	0.000083	<0.00005	<0.00005	0.000179	0.000588	0.000585	0.000081	<0.00005	<0.00005	0.00012	<0.00005	<0.00005
0.00586	0.00634	0.0059	0.00616	0.00571	0.00668	0.00628	0.0063	0.00556	0.00596	0.00566	0.00594	0.00602	0.00513	0.00549	0.00576	0.00531	0.00433
41.7	43.5	43.1	43.8	42.7	42.6	43.1	42.9	40.1	39.3	39.7	40.5	39.3	38.7	39.2	36.6	36.9	35.9
0.023	0.0264	0.0421	0.149	0.0471	0.104	0.0952	0.11	0.0378	0.028	0.0342	0.0541	0.172	0.0333	0.00974	0.0165	0.0191	0.0048
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
0.00258	0.00262	0.00239	0.00226	0.00212	0.00223	0.00214	0.00169	0.0021	0.0031	0.00293	0.00244	0.00179	0.00228	0.00245	0.00228	0.0033	0.0022
0.00073	0.00092	0.00078	0.00077	0.00083	0.00081	0.00076	0.00079	0.00077	0.00073	0.00082	0.00075	0.00077	0.00068	0.00076	0.00073	0.0012	0.00072
<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.077	0.101	0.11	0.122	0.37	0.116	0.139	0.105	0.096	0.082
12.9	11.4	12.3	12.2	12.1	12.3	11.6	12.7	12.2	12.6	12.3	11.8	12.2	12.6	11.4	11.1	11.4	10.1
0.00012	0.00015	0.00015	0.00014	0.00015	0.00013	0.00012	0.00013	0.00013	0.00015	0.00017	0.00014	0.00013	0.00021	0.00013	0.00014	0.00013	0.00012
3.39	3.96	3.77	4.21	3.6	4.66	4.45	4.98	3.41	3.96	4.11	4.38	5.75	5.79	6.42	5.47	5.73	4.88
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
39.6	33.5	40	38.8	38.1	39.3	39.9	41.7	37.9	35.3	41	38.8	38.5	33.6	35.8	36.4	37.3	34
0.426	0.418	0.389	0.412	0.366	0.461	0.376	0.409	0.365	0.376	0.385	0.399	0.404	0.348	0.392	0.394	0.402	0.35
								20.1	20.3	21.2	21.7	18.3	17.8	18.3	17.5	17.5	17.9
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0.0013	0.00135	0.00128	0.00127	0.00114	0.00133	0.00118	0.0011	0.00115	0.00125	0.00121	0.00117	0.00101	0.00113	0.0012	0.00112	0.00114	0.00118
0.002	0.0022	0.0018	0.0019	0.0019	0.0019	0.002	0.0019	0.0021	0.0024	0.0026	0.0021	0.0016	0.0025	0.0023	0.0022	0.0023	0.0021
<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.004	<0.003	<0.003
14.1	15.8	15.8	16	15.3	15	14.6	14.8	12.3	13.7	13	14.4	13.6	13.1	14.5	13.6	13.1	12.4
14.3	18	15.7	16.1	15.4	15	15	14.9	12.4	14.2	13.3	13	14.3	13.3	14.9	14.7	13	13
0.64	0.92	0.92	0.835	0.74	0.74	0.95	0.99	0.623		0.83		2.64					
0.791	1.03	0.837	0.62	0.859	0.844	0.888	0.81	0.86	0.875	1		1.04					
L1103104	**L1114029**	**L1122039**	**L1140194**	**L1143149**	**L1177597**	**L1191600**	**L1206738**	**I1234688**	**L1256679**	**L1266846**	**L1299444**	**L1358222**	**L1389979**	**L1410216**	**L1448657**	**L1454705**	**L1461081**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

JACL-D 10-Jun-14	JACL-D 27-Jun-14	JACL-D 8-Jul-14	JACL-D 22-Jul-14	JACL-D 7-Aug-14	JACL-D 20-Aug-14	JACL-D 14/Sep/2014	JACL-D 30-Sep-14
558	588	447	600	439	440	465	804
		2.1	86.6	2.6	1.3	4.1	3.3
		0.27	7.78	0.28	0.16	0.51	0.42
8.8	8.84	7.74	8.66	7.62	7.76	7.35	7.16
-21.3	-37.4	21.4	-23.3	-88.9	-158	-276	-253
0.31	0.32	0.35	0.32	0.34	0.35	0.37	0.65
644	656	714	657	704	714	750	1302
18	19.6	5.41	20.5	5.31	4.89	5.1	4.98
418	426	464	427	457	464	487	846
2.9	11.7		1.2	0.5	0.3	0.5	-10.9
244	236	249	252	238	264	264	285
244	214	249	252	238	264	264	285
<1	22.6	<1	<2	<2	<2	<1	<2
296	281	300	308	295	310	315	304
<1	<1	<1	<2	<2	<2	<1	<2
8.18	8.64	8.1	8.15	8.23	8.03	8.32	8.21
709	637	691	678	699	720	717	718
424	399	436	399	429	430	454	428
<3	6.8	<3	<3	<3	<3	<3	<3
1.2	11	2.22	1.96	0.76	3.12	3.49	1.82
<0.05	<0.25	<0.25	<0.25	<0.05	<0.05	<0.25	<0.25
55.7	55.3	57.3	54.6	55.2	55.6	56.9	56.6
0.214	0.21	0.3	0.217	0.213	0.227	0.207	0.206
53.3	45.2	54	52	52.7	52.2	51.7	46.2
0.194	0.0112	0.241	0.161	0.0344	0.917	0.768	0.906
0.011	<0.025	<0.025	0.05	0.245	<0.005	<0.025	<0.025
0.004	<0.005	0.0078	0.0214	0.0128	0.005	0.0066	<0.005
0.981	1.29	0.985	0.981	0.925	1.88	1.59	1.68
0.142	<0.001	0.155	0.114	<0.001	0.302	0.299	0.304
0.183	0.0148	0.175	0.141	0.0106	0.351	0.352	0.356
0.188	0.0368	0.18	0.145	0.0187	0.355	0.353	0.43
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.001	0.0021	<0.001	<0.001	0.0011	<0.001	0.0011	0.0019
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
0.00131	0.00126	0.00124	0.00126	0.00122	0.00115	0.00123	0.00134
0.0723	0.0539	0.0687	0.0702	0.0661	0.0751	0.0793	0.0778
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
0.023	0.02	0.024	0.023	0.021	0.024	0.026	0.026
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
56.2	57.9	57	60	57.8	59.7	61.3	58.1
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
0.00149	0.00143	0.00075	0.00115	0.00117	0.00037	0.00032	<0.0002
<0.01	0.011	<0.01	<0.01	<0.01	0.012	0.015	<0.01
<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
0.00541	0.00466	0.00566	0.00556	0.00494	0.00568	0.00628	0.0057
37.9	33.2	38.2	38.3	36.5	39.1	39.3	38.5
0.0383	0.00329	0.0596	0.0383	0.00182	0.112	0.111	0.0977
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
0.00205	0.00236	0.00208	0.00204	0.00202	0.00139	0.00143	0.00227
0.0007	0.00069	0.00067	0.00094	0.00064	0.00073	0.0007	0.00066
0.151	<0.05	0.154	0.127	<0.05	0.34	0.315	0.174
11	9.79	11.4	11.2	12.2	12.7	12.1	11.2
0.00012	0.00015	0.00012	0.00012	0.00014	0.00043	0.00017	0.00139
6.43	5.76	6.18	6.04	5.19	7.15	7.11	6.3
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
34.8	31.7	33.6	35.3	34.8	35.5	36.4	36.8
0.385	0.354	0.385	0.385	0.343	0.384	0.397	0.416
17.9	14.5	18.7	18.1	17.7	64.8	70.1	38.9
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0.000979	0.00106	0.00104	0.00101	0.00103	0.000965	0.000961	0.00108
0.0018	0.0026	0.0017	0.0018	0.002	0.0018	0.0018	0.0017
<0.001	<0.001	0.0012	0.0013	0.0039	<0.001	<0.001	0.0015
0.0032	0.0089	0.0031	0.0058	0.005	0.0044	0.0038	0.0034
0.00011	0.0001	0.00013	0.00011	0.00012	<0.0001	<0.0001	<0.0001
0.0013	0.00131	0.00123	0.00132	0.00127	0.00128	0.00129	0.00129
0.068	0.0539	0.0693	0.0718	0.0661	0.0749	0.077	0.0758
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
0.026	0.022	0.026	0.026	0.025	0.025	0.03	0.03
<0.00001	<0.00001	<0.00001	<0.00001	0.000012	<0.00001	<0.00001	<0.00001
54.1	56.3	57.8	59.4	57.5	60.5	56.4	56
<0.0001	0.00011	0.00013	0.0001	<0.0001	0.00014	<0.0003	0.0002
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
0.00161	0.00179	0.00147	0.00245	0.00202	0.00116	0.00115	0.00153
<0.01	0.021	<0.01	0.01	0.01	0.021	0.023	0.02
<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
0.0052	0.00449	0.00515	0.00548	0.0051	0.00551	0.00613	0.00518
36.5	32	38.7	38.1	36.7	39.8	38.1	37.2
0.046	0.00731	0.0638	0.0403	0.00447	0.12	0.11	0.111
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
0.0021	0.00249	0.00211	0.00215	0.00232	0.0017	0.00169	0.00329
0.00072	0.00073	0.00073	0.00081	0.00071	0.00085	0.00081	0.0008
0.152	<0.05	0.169	0.135	<0.05	0.356	0.305	0.338
10.8	9.66	11.5	11.2	12.4	13	11.2	10.6
0.00015	0.00016	0.00012	0.00014	0.00015	0.00013	0.00012	<0.0001
6.27	5.67	6.23	6.01	5.18	7.31	6.69	6.8
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
33.3	31.4	34.2	36.2	35.1	37.3	35.2	34.6
0.381	0.355	0.386	0.394	0.384	0.379	0.388	0.41
17.9	14.3	18.5	18.6	17.9	18	16.4	16.5
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0.00108	0.0011	0.00108	0.00109	0.00116	0.000996	0.000999	0.00106
0.002	0.0027	0.0019	0.0019	0.0021	0.002	0.0022	0.0017
<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
12.8	13.8	14.1	14.7	13.2	14.6	14.3	13.4
13	14.3	14.1	15	13.2	15.1	14.8	14.6
L1469099	**L1478913**	**L1483419**	**L1490937**	**L1499202**	**L1506521**	**L1518246**	**L1526071**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C1.21 - JACL-M
PAGE 1 OF 1

Site ID		JACL-M	JACL-M	JACL-M	JACL-M	JACL-M
Analytes	**MDL**	**1-Jun-11**	**29-Jun-11**	**20-Aug-14**	**14/Sep/2014**	**30-Sep-14**
In Situ Parameters						
Conductivity µS/cm	...	453	553	530	525	934
Oxygen Dissolved %	...	23.5	45.8	53.8	17.6	67.6
Oxygen Dissolved	...	2.95	4.94	5.47	1.94	6.99
pH (unitless)	...	6.97	8.33	8.39	7.7	8.42
Redox Potential mV	...	-143	-44.9	34.9	96.5	161
Salinity ppt	...	35	0.36	0.33	0.35	0.6
Specific Conductivity µS/cm	...	721	734	678	718	1195
Temperature °C	...	5.52	7.93	13.5	11.1	13.6
Total Dissolved Solids	...	469	478	440	465	778
Turbidity NTU	...		1.4	3.1	0.7	-11.4
Physical Tests						
Acidity to pH 8.3 (as CaCO3)	1					
Alkalinity (Total as CaCO3)	1 to 2	248	237	234	247	213
Bicarbonate Alkalinity	1 to 2			230	244	205
Carbonate Alkalinity	1 to 2			3.7	3.8	7.7
Color TCU	5	14.5	10.6			
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	308	310	293	296	285
Hydroxide Alkalinity	1 to 2			<1	<1	<1
pH (unitless)	0.01 to 0.1	8.21	8.24	8.36	8.45	8.47
Specific Conductivity µS/cm	2	758	716	661	684	664
Total Dissolved Solids	1 to 2	448	447	419	427	419
Total Suspended Solids	3	<3	<3	4.1	<3	<3
Turbidity NTU	0.1	0.46	1.81	7.29	0.69	1.67
Dissolved Anions						
Bromide	0.05 to 2.495	<0.25	<0.05	<0.05	<0.25	<0.05
Chloride	0.5 to 1	59.8	59.7	53.6	55.8	55.8
Fluoride	0.02 to 0.4	0.24	0.216	0.218	0.203	0.231
Sulphate	0.5 to 1	73.7	72.3	49.1	50.3	48.3
Nutrients						
Ammonia (Total)	0.005 to 0.05	0.0869	0.0884	0.0097	0.0993	0.0242
Nitrate (as N)	0.005 to 0.1	0.042	0.0847	<0.005	0.064	0.0109
Nitrite (as N)	0.001 to 0.02	<0.005	0.0105	<0.001	0.0222	0.0029
Nitrogen (Dissolved)	0.05 to 0.1	1.06	1.22			
Nitrogen (Total)	0.0025 to 0.11	1.1	1.16			
Nitrogen Kjeldahl (Total)	0.05 to 0.2	1.06	1.06	1.11	0.925	0.892
Orthophosphate (Dissolved)	0.001 to 0.01	0.022	0.0209	<0.001	0.0016	<0.001
Phosphorus - Dissolved	0.002 to 0.02	0.0364	0.0337	0.0121	0.0132	0.0129
Phosphorus - Total	0.002 to 0.02	0.0405	0.0415	0.0181	0.0157	0.0157
Cyanide						
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals						
Aluminum	0.001 to 0.025	0.0075	<0.005	0.0019	0.0013	<0.001
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	<0.0001	<0.0001	0.0001
Arsenic	0.0001 to 0.0025	0.00136	0.00134	0.00125	0.00132	0.00135
Barium	5E-005 to 0.02	0.06	0.06	0.059	0.0625	0.0583
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	0.021	0.023	0.022
Cadmium	1E-005 to 8.5E-005	<0.000017	<0.000017	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	54	53.5	57.1	56.1	53.6
Chromium	0.0001 to 0.018	<0.001	<0.002	<0.0001	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015	<0.0003	<0.0003	<0.0001	<0.0001	<0.0001
Copper	0.0002 to 0.006	<0.001	<0.001	0.00149	0.00275	0.00099
Dissolved Cadmium (by saltwater extrac	0.00002					
Iron	0.01 to 0.03	<0.03	<0.03	<0.01	<0.01	<0.01
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.0062	0.0055	0.00514	0.00583	0.00541
Magnesium	0.1	42.1	42.7	36.5	37.8	36.6
Manganese	5E-005 to 0.0015	0.0034	0.00385	0.00185	0.000537	0.000814
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0024	0.0025	0.00232	0.0023	0.00317
Nickel	0.0005 to 0.005	<0.001	<0.001	0.00055	0.00064	0.00059
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.05	<0.05	<0.05
Potassium	0.05 to 2	12.5	12.3	11.2	11.1	11
Selenium	0.0001 to 0.006	<0.001	<0.001	0.00011	0.00014	0.00012
Silicon	0.05	1.57	1.76	5.36	5.7	6.25
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	40.6	40.7	34	35.3	34.5
Strontium	0.0001 to 0.005	0.409	0.403	0.374	0.363	0.375
Sulphur	0.5			16.8	17	16.1
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00119	0.0012	0.0011	0.00104	0.0011
Vanadium	0.001 to 0.03	0.0023	0.0017	0.0023	0.0023	0.0028
Zinc	0.001 to 0.006	<0.005	<0.005	0.004	<0.001	<0.001
Total Metals						
Aluminum	0.003 to 0.025	0.0086	<0.005	0.0099	0.0077	0.0083
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	<0.0001	0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00121	0.00119	0.00128	0.00131	0.0013
Barium	5E-005 to 0.02	0.061	0.062	0.0619	0.061	0.0551
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	0.024	0.027	0.025
Cadmium	1E-005 to 8.5E-005	0.000018	<0.000017	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	54	54.1	57.5	54.6	49.8
Chromium	0.0001 to 0.005	<0.001	<0.001	0.00013	<0.0003	0.00018
Cobalt	0.0001 to 0.0015	<0.0003	<0.0003	<0.0001	<0.0001	<0.0001
Copper	0.0005 to 0.007	<0.001	<0.001	0.00122	0.00213	0.00119
Iron	0.01 to 0.03	<0.03	<0.03	0.016	0.013	0.014
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.0068	<0.005	0.00538	0.00594	0.00489
Magnesium	0.1	43.3	42.5	37.2	35.2	34.8
Manganese	5E-005 to 0.0015	0.007	0.00762	0.00457	0.00361	0.00185
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0028	0.0027	0.00252	0.00231	0.00286
Nickel	0.0005 to 0.005	<0.001	<0.001	0.0007	0.00077	0.00064
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.05	<0.05	<0.05
Potassium	0.05 to 2	12.7	12.5	11.8	10.7	10.3
Selenium	0.0001 to 0.006	<0.001	<0.001	0.00014	0.00015	0.00011
Silicon	0.05	1.63	1.75	5.51	5.6	5.93
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	41.1	41.2	35.6	34.6	32.3
Strontium	0.0001 to 0.005	0.415	0.412	0.381	0.369	0.369
Sulphur	0.5			17.4	16.9	15.5
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002					
Uranium	1E-005 to 0.001	0.0014	0.00134	0.00118	0.00109	0.00119
Vanadium	0.001 to 0.03	0.0025	0.0019	0.0026	0.0027	0.0027
Zinc	0.003 to 0.006	<0.005	<0.005	<0.003	<0.003	<0.003
Organics						
Carbon Organic (Dissolved)	0.5 to 5	14.2	14.3	14	15.1	13.8
Carbon Organic (Total)	0.5 to 5	14.4	14.3	15.1	15.1	14.4
Nitrogen Organic (Dissolved)	0.05 to 0.26	0.931	1.04			
Nitrogen Organic (Total)	0.05 to 0.3	0.971	0.976			
ALS LAB ID		**L1012627**	**L1025917**	**L1506521**	**L1518246**	**L1526071**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C1.22 - JACL-S
PAGE 1 OF 3

Site ID		JACL-S	JACL-S	JACL-S	JACL-S	JACL-S	JACL-S	JACL-S	JACL-S	JACL-S	JACL-S	JACL-S	JACL-S	JACL-S	JACL-S
Analytes	**MDL**	**3-May-07**	**19-Jul-07**	**20-Sep-07**	**29-Apr-08**	**10-Jul-08**	**7-Sep-08**	**2-Jun-10**	**1-Sep-10**	**28-Mar-11**	**1-Jun-11**	**29-Jun-11**	**28-Jul-11**	**31-Aug-11**	**28-Sep-11**
In Situ Parameters															
Conductivity µS/cm	...	518	692	608	490	612	264	563	662	420	531	547	586	547	
Oxygen Dissolved %	...				94.2	92	106	94.2	8.36	74.9	96.9			82.9	86.6
Oxygen Dissolved	...	14.7	9.67	8.2	11.9	8.43	10.5	9.78	8.36	9.78	9.46			8.34	9.1
pH (unitless)	...	8.73	8.62	8.87	8.21	8.29	8.39	8.66	8.66	8.03	8.15	8.82	8.6	8.23	8.27
Redox Potential mV	...					-116				115	27.5	136	155	136	105
Salinity ppt	...										0.31	0.32	0.32	0.33	
Specific Conductivity µS/cm	...	749	745	762	778	684	275	720	771	694	637	647	657		748
Temperature °C	...	8.81	21.3	14.5	5.61	19.5	15.7	13.6	14.9	4.37	16.3	16.9	19.4	15.2	13
Total Dissolved Solids	...									452	414	421	427	437	
Turbidity NTU	...											20.4	8	1.5	
Physical Tests															
Acidity to pH 8.3 (as CaCO3)	1		<1		<1								<1		<1
Alkalinity (Total as CaCO3)	1 to 2	246	229	231	252	218	230		222	113	230	206	222	227	227
Bicarbonate Alkalinity	1 to 2				252		218								221
Carbonate Alkalinity	1 to 2				<2		12.7								6.4
Color TCU	5		13.9	12.7	12.4	19.4	16.3	22.8	20.4	11.9	20.4	24.5	21.1	19.3	17.2
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	322	323	309	335	273	291	308	302	165	283	267	268	273	280
Hydroxide Alkalinity	1 to 2				<2		<1								<1
pH (unitless)	0.01 to 0.1	8.55	8.58	8.36	8.1	8.44	8.35	8.69	8.47	8.06	8.5	8.53	8.68	8.42	8.35
Specific Conductivity µS/cm	2	725	732	736	777	678	717	681	698	367	670	582	627	659	693
Total Dissolved Solids	1 to 2	450	453	461	465	416	431	420	455	213	418	362	398	394	404
Total Suspended Solids	3	<3	5.6	<3	5.8	4.3	<3	<3	<3	<3	7.2	11.3	6.1	<3	<3
Turbidity NTU	0.1				2.31	8.57	1.09	0.75	1.02	4.08	1.83	15.9	7.32	1.33	
Dissolved Anions															
Bromide	0.05 to 2.495	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.19	<0.05	<0.05	<0.05	<0.25	<0.05
Chloride	0.5 to 1	60.3	59.6	61.6	60.5	53.4	59.1	54		25.2	52.6	47.8	48.9	50	53.7
Fluoride	0.02 to 0.4	0.19		0.2	0.174	0.174	0.199	0.161		0.088	0.169	0.216	0.209	0.18	0.222
Sulphate	0.5 to 1	84.5	81.7	83.9	83.5	66.2	74.6	70.2		37	57.4	50.3	50.1	49.9	57.9
Nutrients															
Ammonia (Total)	0.005 to 0.05	0.028	0.035	0.055	<0.02	0.037	0.098	0.044	0.0425	0.0078	0.0288	0.0291	0.0327	0.121	0.0827
Nitrate (as N)	0.005 to 0.1	<0.005	<0.005	0.0118	<0.005	<0.005	0.0293	<0.005		0.0253	<0.005	<0.005	<0.005	0.035	0.0633
Nitrite (as N)	0.001 to 0.02	<0.001	<0.001	0.0034	<0.001	<0.001	0.0136	<0.001		<0.001	<0.001	<0.001	0.001	0.0175	0.0243
Nitrogen (Dissolved)	0.05 to 0.1										0.88	1.07	1.12	1.4	1.03
Nitrogen (Total)	0.0025 to 0.11							0.909	1.34	0.716	0.99	1.99	1.35	1.46	1.06
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.895	1.1	0.943	1.62	1.38	1.26	0.909	1.34	0.691	0.99	1.99	1.35	0.94	0.972
Orthophosphate (Dissolved)	0.001 to 0.01	<0.001	<0.001	0.0016	0.0074	<0.001	0.0021		<0.001	0.0125	0.0013	<0.001	<0.001	<0.001	0.0017
Phosphorus - Dissolved	0.002 to 0.02								0.036		0.017	0.0131	0.0123	0.0122	0.013
Phosphorus - Total	0.002 to 0.02	0.0343	0.0279	0.0203	0.124	0.0307	0.0227	0.0253	0.0167	0.0498	0.0365	0.0375	0.0274	0.0236	0.0232
Cyanide															
Cyanide (Free)	0.005				<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005
Cyanide (Total)	0.005	0.0062	0.0056	0.0099	<0.005	0.0082		0.0083	0.0106	0.0061	<0.005	0.0103	0.0077		0.0069
Cyanide (WAD)	0.005				<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005
Dissolved Metals															
Aluminum	0.001 to 0.025	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Antimony	0.0001 to 0.0025	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic	0.0001 to 0.0025	0.0012	0.00141	0.00131	0.00118	0.00138	0.00168	0.00136	0.00147	0.00081	0.00125	0.00132	0.00123	0.00133	0.00131
Barium	5E-005 to 0.02	0.057	0.056	0.057	0.058	0.051	0.06	0.027	0.05	0.031	0.055	0.054	0.056	0.063	0.066
Beryllium	0.0001 to 0.005	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth	0.0005 to 0.2									<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	1E-005 to 8.5E-005	<0.000034	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
Calcium	0.05 to 0.1	58.8	54	50.8	57.3	45.1	48.6	52.6	49.2	28.9	54.1	51.7	50.9	50.3	50.8
Chromium	0.0001 to 0.018	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.0015	<0.001	<0.0015	<0.001	<0.001	<0.001
Cobalt	0.0001 to 0.0015	<0.0006	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Copper	0.0002 to 0.006	<0.002	<0.001	<0.001	<0.001	0.0013	0.0016	0.0013	0.0011	0.0014	0.0012	0.0013	<0.001	<0.001	<0.001
Dissolved Cadmium (by saltwater extrac	0.00002														
Iron	0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Lead	5E-005 to 0.0025	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Lithium	0.0005 to 0.025	<0.01	0.0068	0.0069	0.0063	<0.007	0.0066	0.0056	0.006	<0.005	0.0053	<0.005	0.0053	0.0059	0.0059
Magnesium	0.1	42.6	45.7	44.3	46.7	38.9	41.2	42.9	43.6	22.6	36	33.5	34.1	35.8	37.3
Manganese	5E-005 to 0.0015	0.00088	0.001	0.00129	0.00111	0.00446	0.00216	0.00261	0.00122	0.016	0.00551	0.00396	0.00264	0.001	0.00725
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	<0.004	0.0029	0.0031	0.0025	0.0027	0.003	0.003	0.003	0.0035	0.0024	0.0023	0.002	0.0025	0.0025
Nickel	0.0005 to 0.005	<0.002	<0.001	<0.001	<0.001	<0.001	0.0015	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Phosphorus	0.05 to 0.3									<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	11.8	12.4	12.4	12.1	11.8	13.3	13.5	13.2	7.3	10.6	10	10.5	10.7	11.4
Selenium	0.0001 to 0.006	<0.002	<0.001	<0.001	<0.001	<0.001	0.0011	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon	0.05									1.11	2.44	3.58	3.87	3.93	3.45
Silver	1E-005 to 0.0001	<0.00004	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	0.05 to 2	39	41.9	44.2	40.7	36.5	37.3	39.3	41	21.4	35.6	33.1	33.5	34.2	36
Strontium	0.0001 to 0.005									0.232	0.365	0.345	0.345	0.351	0.37
Sulphur	0.5														
Thallium	1E-005 to 0.001	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin	0.0001 to 0.0025	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00129	0.0012	0.00117	0.00116	0.00111	0.00118	0.00141	0.00133	0.00058	0.00112	0.001	0.00094	0.00101	0.00116
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.03	0.0016	0.0019	0.0023	0.0028	0.0026	0.0011	0.0026	0.0021	0.0021	0.0023	0.0024
Zinc	0.001 to 0.006	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0386	<0.005	<0.005	<0.005	0.0103
Total Metals															
Aluminum	0.003 to 0.025	<0.01	0.0051	0.0079	<0.005	0.0105	0.0065	<0.005	0.007	0.0709	0.0074	0.007	0.0101	0.0111	0.0081
Antimony	0.0001 to 0.0025	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic	0.0001 to 0.0025	0.0012	0.00143	0.00128	0.00116	0.00144	0.00177	0.00142	0.00159	0.00079	0.00114	0.00115	0.00114	0.00132	0.00122
Barium	5E-005 to 0.02	0.058	0.056	0.058	0.06	0.051	0.059	0.026	0.048	0.033	0.057	0.056	0.059	0.061	0.062
Beryllium	0.0001 to 0.005	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth	0.0005 to 0.2									<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	1E-005 to 8.5E-005	<0.000034	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	0.00002	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
Calcium	0.05 to 0.1	59.3	54.9	50.3	57.8	44.2	48.4	51.4	49.5	28.9	55.5	52.7	51.9	48.7	49.1
Chromium	0.0001 to 0.005	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	0.0001 to 0.0015	<0.0006	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Copper	0.0005 to 0.007	<0.002	0.0011	0.0011	<0.001	0.0014	0.001	0.0015	0.0012	0.0023	0.0014	0.0015	0.001	<0.001	0.0011
Iron	0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.096	<0.03	<0.03	<0.03	<0.03	<0.03
Lead	5E-005 to 0.0025	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Lithium	0.0005 to 0.025	<0.01	0.0069	0.0075	0.0062	<0.008	0.0069	0.0064	0.0062	<0.005	0.006	<0.005	0.0056	0.0054	0.0055
Magnesium	0.1	43	45.8	44	46.9	37.9	40.9	41.4	43.7	22.6	36.7	32.9	34.6	35.7	35.7
Manganese	5E-005 to 0.0015	0.00622	0.0029	0.0027	0.0101	0.0102	0.00411	0.00341	0.003	0.0253	0.00666	0.0068	0.00463	0.00359	0.0101
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	<0.004	0.0028	0.0029	0.0023	0.0029	0.0031	0.0035	0.0035	0.004	0.0027	0.0024	0.0022	0.0026	0.0026
Nickel	0.0005 to 0.005	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	0.0012	<0.001	0.0011	<0.001	<0.001	<0.001	<0.001	<0.001
Phosphorus	0.05 to 0.3									<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	12	12.3	12.5	12.3	11.5	13.2	12.7	12.9	7.3	10.9	9.9	11.1	10.7	10.9
Selenium	0.0001 to 0.006	<0.002	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon	0.05									1.28	2.52	3.51	3.96	3.85	3.31
Silver	1E-005 to 0.0001	<0.00004	<0.00002	0.000033	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	0.05 to 2	39.1	41	44.5	41.5	35.4	38.4	37.2	40	21.5	36.7	32.7	35.1	34.2	35.5
Strontium	0.0001 to 0.005									0.235	0.378	0.349	0.361	0.352	0.359
Sulphur	0.5														
Thallium	1E-005 to 0.001	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin	0.0001 to 0.0025	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002														
Uranium	1E-005 to 0.001	0.00121	0.00099	0.00107	0.00079	0.00131	0.00113	0.00159	0.00152	0.00067	0.00132	0.00109	0.00116	0.00108	0.00117
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.03	0.0015	0.0021	0.0023	0.003	0.0028	0.0015	0.0029	0.0022	0.0025	0.0023	0.0023
Zinc	0.003 to 0.006	<0.01	<0.005	<0.005	<0.005	0.032	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.01	<0.005	<0.005
Organics															
Carbon Organic (Dissolved)	0.5 to 5	14.5	15.1	15.3	14.4	16.7	15	13.6	14.6	9.13	13.9	15.3	16	16.8	14.7
Carbon Organic (Total)	0.5 to 5										14.2	17.5	17.7	16.9	15.3
Nitrogen Organic (Dissolved)	0.05 to 0.26										0.851	1.04	1.09	1.23	0.86
Nitrogen Organic (Total)	0.05 to 0.3										0.961	1.96	1.32	1.29	0.89
ALS LAB ID		**L502198**	**L532652**	**L557583**	**L624228**	**L654416**	**L679955**	**L893847**	**L927896**	**L990458**	**L1012627**	**L1025917**	**L1038168**	**L1052924**	**L1066047**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

JACL-S 26-Oct-11	JACL-S 10-Jan-12	JACL-S 13-Feb-12	JACL-S 7-Mar-12	JACL-S 26-Apr-12	JACL-S 3-May-12	JACL-S 11-Jul-12	JACL-S 8-Aug-12	JACL-S 6-Sep-12	JACL-S 6-Nov-12	JACL-S 9-Jan-13	JACL-S 7-Feb-13	JACL-S 8-May-13	JACL-S 4-Sep-13	JACL-S 7-Nov-13	JACL-S 9-Jan-14	JACL-S 28-Apr-14	JACL-S 13-May-14
486	113	403	337	502	496	278	600	555	440	407	410	563		454	406	426	542
67.5	52.1	67.9	63.3	97.5	85.9	72.4	97.3	87.9	70.1	63.8	56.9	109	85.9	51	42.7	12.4	69.2
8.32	7.57	9.8	8.94	10.8	9.66	6.82	8.38	8.5	8.6	8.71	8.05	11	8.16	4.63	5.95	13.2	7.15
8.31	7.59	7.91	7.89	8.13	8.45	9.21	8.62	8.48	8.14	8.46	7.76	7.77	8.14	8.26	7.91	8.55	8.55
12.7	232	226	51.2	142	115	33.6	130		134	91.7	223	277	223	149	149	102	112
	0.12	0.37	0.3	0.34	0.34		0.3		0.34	0.35	0.36	0.34	0.34	0.36	0.36	0.3	0.34
756	211	760	620	690	694	263	628	657	687	725	756	696	687	731	726	624	690
6.12	0.51	0.38	1.38	10.7	10.1	17.9	22.7	16.8	6.44	2.28	1.02	15.1	17.7	5.13	1.97	8.37	13.8
493	165	494	402	449	451		408	427	447	469	491	452	446	475	480	405	449
	0.2	0.2	2	0.8	0.6	17.9	1.5	0.7	0.9	0.3	-1.1	0		1	0.1	2.1	-0.4
									<1								
247	191	250	184	244	237	229	228	236	239	250	253	246	235	251	253	230	230
	191	250	184	244	237	205	211	225	239	250	253	235	235	251	253	221	218
	<2	<2	<2	<1	<2	23.8	16.7	10.9	<1	<2	<1	11.2	<1	<2	<2	8.5	12
17	11.4	15.3	15.9	15.8	17.1	16.8	16.9	14.4	14.8	14.5	14.4	16.1	18.5		15.8		
301	230	309	242	300	306	282	266	282	296	300	301	287	265	299	314	287	289
	<2	<2	<2	<1	<2	<1	<1	<1	<1	<2	<1	<1	<1	<2	<2	<1	<1
8.35	8.22	8.17	8.19	8.5	8.12	8.61	8.58	8.41	8.37	8.25	8.35	8.38	8.41	8.26	8.18	8.44	8.63
722	555	721	556	681	677	623	619	634	695	687	717	679	643	689	718	645	663
426	325	454	335	413	433	423	409	402	416	414	427	431	394	413	449	344	350
10	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	3	<3
6.66	0.7	1.04	10.5	0.87	0.71	0.84	1.45	0.77	0.73	0.3	0.31	0.59	1.86	0.84	0.31	1.17	0.54
<0.25	<0.05	<0.25	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.25	<0.5	<0.05	<0.05	<0.25	<0.25	<0.05	<0.05
56.3	43.6	58.1	43.5	54.5	54.4	49	49.4	51.7	56.1	56.5	58.1	55.3	51	54.6	59	53.8	54.5
0.2	0.176	0.2	0.176	0.216	0.208	0.201	0.209	0.208	0.19	0.3	0.21	0.211	0.221	0.2	0.2	0.201	0.217
62.8	49.2	65.9	50.6	62.3	61.7	51.6	54.8	54.3	59	60.1	61.8	54.8	44.2	52.1	55.1	51.9	50.4
0.206	0.2	<0.05	0.0108	0.0334	0.0655	0.012	0.0183	0.0591	0.247	0.361	0.306	0.0553	0.0631	0.252	<0.005	0.0064	0.0591
0.121	0.2	0.546	0.265	0.0382	0.0326	<0.005	<0.005	0.0056	0.037	0.07	0.172	0.0381	0.0576	0.129	0.48	<0.005	<0.005
0.0235	0.0058	<0.005	0.0028	0.0026	0.0027	<0.001	<0.001	0.003	0.0105	0.0064	0.018	0.0036	0.0133	0.0313	<0.005	<0.001	<0.001
0.82	0.82	1.48	0.99	0.89	0.78	0.58	0.88	0.97	0.88	1.28	1.27		2.1				
	0.976	1.44	1.11	0.767	0.876	0.831	0.85	0.866	1.12	1.33	1.27	0.909	1.1	1.17		0.831	
1.33	0.771	0.9	0.844	0.726	0.841	0.831	0.85	0.857	1.07	1.22	1.19	0.868	1.03	1.12	0.852	0.955	0.93
0.0197	0.0355	0.0641	0.0391	0.0038	0.0079	<0.001	<0.001	<0.001	0.0465	0.0718	0.0737	0.0125	0.0013	0.0958	0.0981	0.0132	0.0122
0.0324	0.0489	0.0839	0.0595	0.0227	0.026	0.014	0.0113	0.0106	0.0565	0.092	0.086	0.0291	0.0279	0.135	0.115	0.0542	0.0293
0.0513	0.0521	0.0925	0.0887	0.0449	0.034	0.021	0.0172	0.0153	0.0644	0.093	0.0902	0.0411		0.14	0.116	0.0329	0.0353
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
0.0061	0.0054	0.0054	0.0061	<0.005	0.0061	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.003	<0.003	<0.003	<0.003	<0.003	0.0034	0.0012	0.0011	0.0013	0.0016	<0.001	<0.001	0.0015	<0.001	0.0013	<0.001	<0.001	0.0011
0.00011	<0.0001	0.00011	<0.0001	<0.0001	0.0001	0.00011	0.0001	0.00013	0.00012	<0.0001	0.00011	<0.0001	0.00011	<0.0001	0.00011	<0.0001	<0.0001
0.00132	0.00098	0.00131	0.00102	0.00122	0.00114	0.0012	0.0013	0.00134	0.00134	0.00138	0.00144	0.00124	0.00139	0.00136	0.0014	0.00118	0.0012
0.0646	0.0493	0.0712	0.0519	0.0602	0.0595	0.0443	0.0462	0.0456	0.0454	0.0477	0.0487	0.0488	0.0714	0.0636	0.0642	0.0619	0.0595
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
0.02	0.018	0.02	0.019	0.018	0.021	0.017	0.02	0.021	0.019	0.019	0.025	0.018	0.023	0.021	0.023	0.021	0.019
<0.00001	<0.00001	0.000034	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
53.9	40.8	54.8	42.6	52.8	55.8	55.6	47.8	52.9	52.2	53.5	52.5	54.7	47.7	53.7	58.3	56	59
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
0.00067	<0.0005	0.00055	0.0009	<0.0005	0.00071	0.00072	0.00069	0.00072	0.00046	0.00042	0.00152	0.001	0.00082	0.00044	0.00048	0.00059	0.00132
<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	<0.01	0.011	<0.01	<0.01	<0.01
<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
0.00539	0.00469	0.00602	0.00457	0.00565	0.00582	0.00568	0.00537	0.00542	0.00566	0.00576	0.00579	0.00543	0.00539	0.00548	0.00591	0.00559	0.00536
40.4	31	41.8	32.8	40.8	40.5	34.9	35.7	36.3	40.2	40.4	41.2	36.5	35.6	40	40.8	35.8	34.4
0.0186	0.0167	0.0138	0.0141	0.00179	0.00361	0.00213	0.000889	0.0017	0.0273	0.0206	0.0158	0.00494	0.00307	0.02	0.00152	0.00083	0.00363
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
0.00263	0.00175	0.00233	0.00212	0.00219	0.00235	0.00232	0.00195	0.00229	0.00195	0.00218	0.00226	0.00223	0.00242	0.00222	0.00234	0.00226	0.0024
0.0007	0.00054	0.00073	0.00064	0.00062	0.00068	0.00074	0.00063	0.0006	0.00068	0.00065	0.00073	0.00069	0.00066	0.00062	0.00094	0.00064	0.00118
<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.059	0.095	0.089	<0.05	<0.05	0.111	0.119	<0.05	<0.05
11.5	10.4	12.6	9.75	11.4	11.3	10.4	10	11	12.2	13.1	12.1	10.6	11.2	12.3	11.4	10.8	10.8
0.00013	0.0001	0.00012	0.00011	0.00011	0.00016	0.00013	0.00014	0.00014	0.00012	0.00013	0.00015	0.00016	0.00014	0.00018	0.00015	0.00012	0.00016
3.08	2.35	3.4	2.61	1.87	2.16	0.929	1.4	2.11	3.23	3.56	3.63	3.96	6.35	5.76	6.06	3.98	4.74
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
36.3	31.6	37.1	29.7	35.8	35.8	32.8	32.8	34.9	37	35.3	39.7	34.7	34.4	34	36.6	33.7	32.5
0.358	0.306	0.395	0.291	0.355	0.379	0.375	0.313	0.339	0.35	0.362	0.385	0.357	0.352	0.358	0.386	0.37	0.365
									0.0197	20.1	20.9	19.2	14.7	17.1	18.8	17.1	16.2
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0.00117	0.000862	0.00114	0.000913	0.0011	0.00119	0.00108	0.000988	0.000966	0.00106	0.00115	0.00112	0.00106	0.000891	0.00104	0.00109	0.00111	0.00116
0.0023	0.0015	0.002	0.0016	0.002	0.0021	0.0019	0.0018	0.0021	0.0019	0.0019	0.002	0.0022	0.0026	0.0023	0.0023	0.0022	0.0025
<0.003	0.164	0.0497	0.015	0.0039	0.007	0.0046	0.0013	0.0122	0.0018	0.0012	0.0152	<0.001	0.0012	<0.001	0.0015	<0.001	<0.001
0.191	0.004	0.0126	0.0816	0.0069	0.0086	0.0059	0.0062	0.0081	0.0068	<0.003	0.0037	0.0082	0.0064	0.0071	0.0034	0.0079	0.0048
0.00011	<0.0001	0.00012	0.0001	<0.0001	0.00011	0.00011	0.00012	0.00026	0.00011	0.00012	0.00011	0.00013	0.00012	0.00011	0.00012	0.0001	<0.0001
0.00133	0.00096	0.0013	0.00106	0.00118	0.00123	0.00122	0.00131	0.00128	0.00131	0.00133	0.00143	0.00127	0.00137	0.00135	0.00146	0.00119	0.00117
0.0672	0.0473	0.0702	0.0528	0.0606	0.06	0.0443	0.0474	0.0454	0.0463	0.0476	0.0488	0.051	0.0698	0.0661	0.0645	0.0617	0.0583
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
0.025	0.022	0.026	0.025	0.021	0.022	0.023	0.024	0.026	0.02	0.02	0.03	0.021	0.026	0.023	0.028	0.022	0.02
<0.00001	<0.00001	0.000043	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000019	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
55.4	39.8	52	42.2	53	55.2	54.4	47.3	52.6	51.8	54.6	53.3	54.2	49.1	55.1	58.7	56.3	57.1
0.00049	0.00017	0.0003	0.00039	<0.0001	0.00011	0.00023	0.00015	0.00027	<0.0001	<0.0001	0.00016	0.00016	<0.0001	0.00014	0.0001	<0.0001	<0.0001
0.0002	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00019	0.0001	<0.0001	<0.0001	<0.0001	<0.0001
0.00181	<0.0005	0.00086	0.00154	0.00062	0.00115	0.00118	0.0014	0.00106	0.00052	0.00058	0.00374	0.00126	0.00105	0.00069	0.00074	0.00097	0.00096
0.244	<0.03	0.036	0.075	<0.03	<0.03	0.012	0.01	0.011	0.017	<0.01	0.011	0.019	0.016	0.017	<0.01	0.017	0.014
0.000053	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00006	<0.00005	<0.00005	<0.00005
0.00595	0.00423	0.00588	0.00484	0.00543	0.00537	0.00505	0.00546	0.00538	0.00543	0.00591	0.00595	0.00544	0.0052	0.00537	0.006	0.0055	0.00475
41	30.4	41.2	32.9	41.6	40.7	34.5	35.9	36.1	39.8	40.5	40.7	36.3	34.8	38.7	40.6	35.2	33.2
0.0235	0.0173	0.0172	0.0184	0.00356	0.00503	0.00452	0.00334	0.00374	0.0306	0.0222	0.0185	0.00572	0.00517	0.0338	0.00335	0.00446	0.00432
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
0.00278	0.00199	0.00238	0.00235	0.00246	0.00248	0.00228	0.0022	0.00238	0.00212	0.00229	0.00241	0.00239	0.00248	0.00231	0.00253	0.00245	0.00255
0.00108	0.00057	0.00085	0.00084	0.0007	0.00078	0.00086	0.00069	0.00068	0.00068	0.00069	0.00082	0.00076	0.00073	0.00069	0.00097	0.00073	0.00072
<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.062	0.09	0.091	<0.05	<0.05	0.133	0.118	0.073	<0.05
11.6	10.1	12.7	10	11.5	11.4	10.3	10.3	10.9	12	13.4	12.2	10.7	11.2	12.4	11.8	10.9	10.3
0.00014	<0.0001	0.00013	0.00013	0.00012	0.00016	0.00019	0.00013	0.00016	0.00014	0.00013	0.00014	0.00016	0.00014	0.00023	0.00016	0.00013	0.00016
3.68	2.3	3.33	2.72	1.94	2.17	0.938	1.41	2.14	3.24	3.69	3.59	3.99	6.38	5.8	6.2	4.07	4.56
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
37	31.2	37.2	30.2	36.6	36.1	32	32.8	34.6	36.7	34.9	39.9	35.3	34.6	33.9	38.7	33.7	31.6
0.366	0.312	0.391	0.303	0.373	0.383	0.345	0.34	0.339	0.36	0.385	0.384	0.367	0.358	0.357	0.407	0.398	0.368
									19.8	21.2	21.6	19.6	15.4	17.9	19.2	17.1	16
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
0.017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0.00127	0.000932	0.0012	0.001	0.00127	0.00127	0.0011	0.00108	0.0011	0.00114	0.00124	0.00116	0.00113	0.001	0.00118	0.00121	0.00116	0.00121
0.0028	0.0015	0.002	0.0018	0.002	0.0022	0.0023	0.0021	0.0022	0.002	0.0021	0.0025	0.0025	0.0028	0.0025	0.0026	0.0023	0.0026
0.0037	0.0295	0.059	0.0261	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0133	<0.003	0.0035	<0.003	<0.003	<0.003	<0.003
15.2	10.4	15.6	13.2	15	14.3	13.8	13.8	14.7	11.6	13.5	13.2	13.4	15.1	13.8	14.1	13	12.7
15.2	10.7	15.8	13.7	14.8	14.4	14.2	14	14.4	12.3	13.9	13.3	12.7	15.1	13.4	13.9	14.4	12.3
0.47	0.41	0.92	0.711	0.816	0.679	0.568	0.862	0.902	0.59		0.77		1.97				
0.5	0.571	0.9	0.834	0.693	0.775	0.819	0.832	0.798	0.822	0.863	0.888		0.964				
L1077732	**L1103104**	**L1114029**	**L1122039**	**L1140194**	**L1143149**	**L1177597**	**L1191600**	**L1206738**	**l1234688**	**L1256679**	**L1266846**	**L1299444**	**L1358222**	**L1389979**	**L1410216**	**L1448657**	**L1454705**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

JACL-S 26-May-14	JACL-S 10-Jun-14	JACL-S 27-Jun-14	JACL-S 8-Jul-14	JACL-S 22-Jul-14	JACL-S 7-Aug-14	JACL-S 20-Aug-14	JACL-S 14/Sep/2014	JACL-S 30-Sep-14
542	558	588	641	600	620	622	556	934
69.2			95.1	86.6	64.4	79.5	90.7	67.9
7.15			8.17	7.78	5.58	6.88	9.12	6.99
8.55	8.8	8.84	8.65	8.66	8.41	8.99	8.58	8.42
112	-21.3	-37.4	18.4	-23.3	71.7	-34.3	72.5	161
0.34	0.31	0.32	0.32	0.32	0.32	0.32	0.34	0.6
690	644	656	667	657	661	660	687	1182
13.8	18	19.6	23	20.5	22.5	21.9	15	14
449	418	426	434	427	430	429	446	778
-0.4	2.9	11.7	1.1	1.2	1	0.5	1.3	-11.4
220	234	236	237	230	235	229	242	215
212	207	213	219	212	217	213	229	206
8.3	27.4	23.1	17.5	18.1	17.7	15.7	12.6	8.8
284	283	282	292	281	283	281	289	285
<1	<1	<1	<1	<1	<1	<1	<1	<1
8.39	8.71	8.64	8.58	8.54	8.58	8.56	8.55	8.43
652	651	636	645	632	655	652	664	665
387	402	398	407	419	407	406	420	403
4.4	3.2	7.9	<3	<3	3.4	<3	<3	<3
2.56	1.46	13.3	1.62	1.78	0.7	1.73	0.95	1.73
<0.05	<0.05	<0.25	<0.05	<0.25	<0.05	<0.05	<0.05	<0.05
51.7	52.1	52.7	52.9	53.1	54.6	54	55.7	55.9
0.217	0.211	0.199	0.222	0.223	0.22	0.225	0.235	0.232
45.9	45.6	43.8	44.8	44.6	46.3	45.5	47.8	48
0.0143	0.0181	0.0106	0.0478	0.0207	0.0259	0.0283	0.0147	0.0174
<0.005	<0.005	<0.025	0.0178	<0.025	0.0092	<0.005	0.0109	<0.005
<0.001	<0.001	<0.005	0.0064	0.0064	0.0023	0.0011	0.0028	0.0021
1.01	0.983	1.32	0.861	0.909	0.921	0.961	0.89	0.881
<0.001	<0.001	<0.001	<0.001	0.001	<0.001	0.0011	0.0013	<0.001
0.0139	0.0146	0.0149	0.0155	0.015	0.0125	0.0141	0.0135	0.0131
0.0379	0.0294	0.033	0.0232	0.0211	0.0165	0.0195	0.0184	0.0156
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
0.0011	0.0014	0.0093	<0.001	0.0015	0.0017	0.0018	0.0013	0.0013
<0.0001	<0.0001	0.0001	0.00011	<0.0001	0.00011	0.0001	<0.0001	<0.0001
0.00121	0.00128	0.00121	0.00131	0.00135	0.0014	0.00137	0.00139	0.00131
0.0545	0.0515	0.0547	0.0566	0.0556	0.0463	0.0415	0.054	0.0591
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
0.019	0.02	0.02	0.021	0.021	0.021	0.02	0.021	0.021
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
58.1	57.3	58.1	57.1	55	55.1	53	53.7	53.3
<0.0001	0.00027	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
0.00136	0.00159	0.00106	0.00099	0.00092	0.00091	0.00094	0.00092	0.00073
0.013	0.023	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
0.00482	0.00508	0.00462	0.00486	0.00517	0.0053	0.00541	0.00556	0.00498
33.7	33.9	33.4	36.2	34.8	35.4	36.2	37.7	36.9
0.0061	0.00413	0.00332	0.00301	0.00165	0.00113	0.00138	0.00111	0.000736
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
0.00239	0.00246	0.00232	0.00241	0.00246	0.00254	0.00241	0.0024	0.00251
0.00072	0.00077	0.00064	0.00065	0.0007	0.00066	0.00064	0.00061	0.00062
<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
9.23	9.95	9.9	10.4	9.95	11.8	11.4	11	10.9
0.00017	0.00014	0.00015	0.00014	0.00015	0.00015	0.00016	0.00015	0.00011
4.8	5.46	5.84	6.16	6.13	6.59	6.77	6.48	6.23
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
31.6	31.3	31.9	32.4	33.8	34.2	34.1	35.6	34.8
0.35	0.364	0.355	0.362	0.365	0.357	0.349	0.349	0.363
15.5	15.6	14.6	15.9	15.3	15.8	15.6	16.3	16.2
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0.00104	0.00104	0.00105	0.00102	0.001	0.00107	0.00101	0.00107	0.00111
0.0025	0.0026	0.0025	0.0026	0.0027	0.0029	0.0028	0.0028	0.0028
0.001	0.0012	<0.001	<0.001	<0.001	<0.001	0.0011	<0.001	0.001
0.0057	0.0067	0.0069	0.0033	0.0069	0.0047	0.0061	0.0053	0.0058
0.00013	0.00011	0.00012	0.00013	0.00014	0.00013	0.0001	0.00011	0.0001
0.00118	0.00134	0.00128	0.00135	0.00143	0.00136	0.00137	0.0014	0.00135
0.0528	0.0522	0.0536	0.0583	0.059	0.0443	0.0425	0.0534	0.0551
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
0.021	0.022	0.023	0.027	0.025	0.022	0.02	0.026	0.025
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
56.7	56.3	57.5	55.2	57.1	52	52.3	52.2	50.2
0.00011	0.00072	0.00012	0.0001	0.00012	<0.0001	0.00014	<0.0003	0.00015
<0.0001	<0.0001	0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001
0.00127	0.0013	0.00156	0.00226	0.0011	0.00104	0.0011	0.00101	0.00089
0.024	0.027	0.018	0.013	0.014	0.011	0.011	0.012	0.012
<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
0.00396	0.00482	0.00467	0.0045	0.00564	0.00484	0.0051	0.00587	0.00483
32.6	33.4	32.5	34.1	36.6	34	36.1	34.6	34.7
0.00781	0.00792	0.00684	0.0048	0.00364	0.00265	0.00311	0.00196	0.0017
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
0.0025	0.00252	0.00248	0.00253	0.00271	0.00255	0.00241	0.0025	0.00267
0.00078	0.00106	0.0007	0.00071	0.0008	0.00071	0.00073	0.00073	0.00066
<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
9.45	9.75	9.71	10.5	10.2	11.5	11.3	10.4	10.2
0.00016	0.00014	0.00016	0.00013	0.00015	0.00014	0.00016	0.00014	0.0001
4.79	5.48	5.73	5.92	6.4	6.31	6.74	6.28	5.94
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
30.6	31.8	31.3	32.3	35.2	33.3	35.7	34.4	32.6
0.346	0.363	0.359	0.373	0.389	0.352	0.338	0.356	0.368
15.8	15.8	14.4	15.4	16.5	15.2	16	16	15.5
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0.00117	0.00118	0.00117	0.0011	0.00117	0.00111	0.00105	0.00109	0.00118
0.0026	0.0028	0.0027	0.0028	0.0031	0.003	0.0031	0.0032	0.0028
<0.003	<0.003	0.0047	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
12.2	12.6	13.7	14.1	14.3	13.7	14.2	14.4	13.8
12.6	12.8	14.4	14.3	14.8	13.8	15.5	14.9	14.5
L1461081	**L1469099**	**L1478913**	**L1483419**	**L1490937**	**L1499202**	**L1506521**	**L1518246**	**L1526071**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C1.23 - JC03
PAGE 1 OF 2

Site ID		JC03	JC03	JC03	JC03	JC03	JC03	JC03	JC03	JC03	JC03	JC03	JC03	JC03	JC03
Analytes	**MDL**	**28-Apr-08**	**7-Jul-08**	**3-Jun-10**	**29-Mar-11**	**14-Apr-11**	**21-Apr-11**	**28-Apr-11**	**5-May-11**	**12-May-11**	**1-Jun-11**	**28-Jun-11**	**28-Jul-11**	**1-Sep-11**	**27-Sep-11**
In Situ Parameters															
Conductivity µS/cm	...	598	519	500	482	511	574	600	675	345	351	430	525	522	
Oxygen Dissolved %	...	82.2	81.5	75.3	75.5	80.8	80.7	71.4	83.4	85.8	77.7	85.2	81.1	96.2	58.2
Oxygen Dissolved	...	9.18	8.56	7.99	10.5	11.3	13.1	9.48	9.71	10.3	8.56	8.88	8.74	12.3	6.67
pH (unitless)	...		7.8	8.17	8.11	7.92	7.95	8.08	8.21	7.88	8.27	8.17	8.13	8	7.89
Redox Potential mV	...		-86.1	-305	113	175	88.4	126	110	149	-144	149	96.3	93.3	218
Salinity ppt	...						0.59	0.5	0.49	0.25	0.23	0.27	0.34	0.42	
Specific Conductivity µS/cm	...	830	675	652	872	930	1320	1024	984	519	480	551	699	855	850
Temperature °C	...	10.4	13	12.8	1.62	1.56	4.76	3.32	8.55	7.39	11	13.4	11.9	4.64	9.27
Total Dissolved Solids	...				507	604	859	666	639	338	312	359	455	556	
Turbidity NTU	...											6.7	5.1	2.6	0.1
Physical Tests															
Acidity to pH 8.3 (as CaCO3)	1												<1		
Alkalinity (Total as CaCO3)	1 to 2	306	295	261	308	306	333	295	272	205	215	228	292	351	370
Bicarbonate Alkalinity	1 to 2			261			333								
Carbonate Alkalinity	1 to 2			<2			<2								
Color TCU	5	20	27.4	69	40.2	18.5	16.2	14.8	18.2	37.5	48.9	28.7	26.4	16.1	24.1
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	383	306	302	385	421	438	446	421	236	234	245	317	385	384
Hydroxide Alkalinity	1 to 2			<2			<2								
pH (unitless)	0.01 to 0.1	8.2	8.4	8.24	8.16	8.26	8.24	8.29	8.37		8.28	8.35	8.3	8.24	8.22
Specific Conductivity µS/cm	2	842	665	655	831	881	954	955	946	527	504	512	673	794	811
Total Dissolved Solids	1 to 2	516	397	419	524	536	584	609	588	334	315	325	404	497	497
Total Suspended Solids	3	89.8	12.5	35.8	35	19.4	6.5	47.4	80.5	116	39.2	21.1	12.1	10.4	<3
Turbidity NTU	0.1	66.7	8.04	10.3	7.61	10.1	4.06	19.8	40.1	45.8	11.6	7.95	4.99	2.72	1.53
Dissolved Anions															
Bromide	0.05 to 2.495	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.25	<0.05	<0.05	<0.5	<0.5
Chloride	0.5 to 1	71.4	31.7	40.1	64	97.3	99.3	123	122	40.9	27.4	29.6	40.4	45.5	46.5
Fluoride	0.02 to 0.4	0.167	0.22	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.142	0.19	0.168	0.217	<0.2	0.21
Sulphate	0.5 to 1	47.8	24	30.9	52	47	54.7	50.2	53.3	26.7	20.6	17.8	22	36	35.4
Nutrients															
Ammonia (Total)	0.005 to 0.05	0.079	0.075	0.026	0.119	0.0279	0.0212	0.0248	0.021	0.0261	0.0231	0.0135	0.0182	0.0383	0.0183
Nitrate (as N)	0.005 to 0.1	0.0717	0.056	<0.05	0.134	0.14	0.172	0.098	<0.05	0.04	0.029	0.0311	0.0688	<0.05	<0.05
Nitrite (as N)	0.001 to 0.02	0.0042	0.0036	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.005	<0.001	<0.001	<0.01	<0.01
Nitrogen (Dissolved)	0.05 to 0.1							0.51	0.51	0.57	0.74	0.48	0.52	0.59	0.41
Nitrogen (Total)	0.0025 to 0.11			0.99	1.38	0.601	0.32	1.07	0.39	1.09	1.1	0.54	0.57	0.59	0.531
Nitrogen Kjeldahl (Total)	0.05 to 0.2	2.24	0.516	0.994	1.25	0.461	0.148	0.975	0.39	1.15	1.07	0.509	0.501	0.461	0.531
Orthophosphate (Dissolved)	0.001 to 0.01	0.0645	0.119	0.196	0.126						0.12	0.0578	0.0806		
Phosphorus - Dissolved	0.002 to 0.02					0.0539	0.0555	0.192	0.0508	0.0759	0.122	0.0643	0.0909	0.0681	0.099
Phosphorus - Total	0.002 to 0.02	0.435	0.161	0.261	0.254	0.0865	0.0715	0.181	0.23	0.259	0.197	0.092	0.11	0.0872	0.119
Cyanide															
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005
Cyanide (Total)	0.005	0.0134	0.0081	0.0127	0.0055		<0.005	0.0051	0.0077	0.0136	0.0082	0.0079	0.0065		0.0057
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005
Dissolved Metals															
Aluminum	0.001 to 0.025	0.0064	<0.005	<0.005	<0.005	<0.01	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Arsenic	0.0001 to 0.0025	0.00108	0.00164	0.00226	0.00139	<0.001	0.0011	<0.001	<0.001	0.00084	0.00143	0.0011	0.00145	0.00112	0.0012
Barium	5E-005 to 0.02	0.089	0.075	0.074	0.065	0.085	0.087	0.098	0.096	0.056	0.059	0.069	0.073	0.09	0.084
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002
Bismuth	0.0005 to 0.2				<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	1E-005 to 8.5E-005	<0.000017	<0.000017	<0.000017	<0.000017	<0.000034	<0.000034	<0.000034	<0.000034	<0.000017	0.000021	<0.000017	<0.000017	<0.000017	<0.000034
Calcium	0.05 to 0.1	95.2	78.1	66.1	89	109	109	117	114	62.3	57.9	65	80.9	93.4	93.2
Chromium	0.0001 to 0.018	0.0011	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002
Cobalt	0.0001 to 0.0015	<0.0003	<0.0003	<0.0003	0.00032	<0.0006	<0.0006	<0.0006	<0.0006	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0006
Copper	0.0002 to 0.006	0.002	0.0017	0.0045	0.0016	<0.002	<0.002	<0.002	<0.002	0.0024	0.003	0.0018	0.0015	0.0011	<0.002
Dissolved Cadmium (by saltwater extrac	0.00002														
Iron	0.01 to 0.03	0.04	0.119	0.038	0.109	0.043	0.049	<0.03	<0.03	0.039	0.059	0.049	0.066	0.053	0.114
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Lithium	0.0005 to 0.025	<0.005	<0.005	<0.005	<0.005	<0.01	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	0.0054	<0.01
Magnesium	0.1	35.4	26.9	33.3	39.6	36	40.3	37.2	33.4	19.5	21.7	20.1	27.9	36.8	36.7
Manganese	5E-005 to 0.0015	0.0748	0.0581	0.0256	0.104	0.0283	0.0404	0.0323	0.0257	0.0343	0.0206	0.0233	0.0329	0.144	0.115
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0017	0.0018	0.0038	0.0022	<0.002	<0.002	<0.002	<0.002	0.0017	0.0018	0.0014	0.0017	0.0021	<0.002
Nickel	0.0005 to 0.005	<0.001	0.0012	0.0019	0.0015	<0.002	<0.002	<0.002	<0.002	<0.001	0.001	<0.001	<0.001	0.0022	<0.002
Phosphorus	0.05 to 0.3				<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	9.3	9.2	11.7	11.6	8.6	9.2	8.7	8.5	7.1	7.2	6.4	8.1	11.7	12
Selenium	0.0001 to 0.006	<0.001	<0.001	<0.001	0.001	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002
Silicon	0.05				8.85	8.57	8.75	8.3	7.73	7.35	9.1	8.57	9.48	10.8	11.4
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00004	<0.00004	<0.00004	<0.00004	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00004
Sodium	0.05 to 2	33	25.9	31.6	36	37.5	40.6	43.8	43.9	23.4	21.6	21.7	28.8	33.6	34.5
Strontium	0.0001 to 0.005				0.391	0.41	0.441	0.444	0.42	0.235	0.264	0.259	0.338	0.412	0.437
Sulphur	0.5														
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0004	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.013	<0.01
Uranium	1E-005 to 0.001	0.00135	0.00093	0.00142	0.00229	0.00186	0.00167	0.00158	0.00168	0.00088	0.00072	0.00056	0.00071	0.00109	0.00094
Vanadium	0.001 to 0.03	0.003	0.0027	0.0044	0.0025	0.0024	0.0023	0.0023	0.0024	0.0024	0.0028	0.0019	0.0018	0.0016	<0.002
Zinc	0.001 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Metals															
Aluminum	0.003 to 0.025	1.7	0.157	0.599	0.455	0.228	0.123	1.1	1.17	2.22	0.328	0.369	0.175	0.418	<0.03
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Arsenic	0.0001 to 0.0025	0.00153	0.00163	0.00238	0.00142	0.001	0.0011	0.001	0.0011	0.0013	0.0013	0.00112	0.00136	0.00121	0.0012
Barium	5E-005 to 0.02	0.115	0.075	0.08	0.072	0.085	0.086	0.119	0.112	0.087	0.061	0.068	0.078	0.101	0.086
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002
Bismuth	0.0005 to 0.2				<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	1E-005 to 8.5E-005	0.000027	<0.000017	0.000018	0.000028	<0.000034	<0.000034	<0.000034	<0.000034	0.000028	0.000075	<0.000017	<0.000017	<0.000017	<0.000034
Calcium	0.05 to 0.1	99.4	74.2	66.5	87.9	103	103	121	111	65.8	55	64.1	81.9	96.2	93.6
Chromium	0.0001 to 0.005	0.0047	<0.001	0.0019	0.0013	<0.002	<0.002	0.0024	0.0028	0.0056	0.0011	0.0012	<0.001	0.0012	<0.002
Cobalt	0.0001 to 0.0015	0.0017	<0.0003	0.00077	0.00062	<0.0006	<0.0006	0.00079	0.00094	0.00167	0.00039	0.00041	<0.0003	0.00059	<0.0006
Copper	0.0005 to 0.007	0.0151	0.0032	0.0084	0.0046	0.0033	0.0025	0.0071	0.0079	0.014	0.005	0.0041	0.0026	0.0037	<0.002
Iron	0.01 to 0.03	2.89	0.382	0.849	0.851	0.37	0.244	1.63	1.78	3.27	0.517	0.58	0.347	0.698	0.246
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Lithium	0.0005 to 0.025	0.0058	<0.005	<0.005	<0.005	<0.01	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	0.0061	0.0058	<0.01
Magnesium	0.1	35.7	26.6	32.8	39.2	33.8	38.7	38.9	32.6	20.2	20.7	19.3	28.3	38	36.8
Manganese	5E-005 to 0.0015	0.179	0.0723	0.0579	0.13	0.04	0.0455	0.086	0.0959	0.166	0.0412	0.0575	0.0561	0.203	0.127
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0016	0.0021	0.0043	0.0024	<0.002	<0.002	<0.002	<0.002	0.002	0.0021	0.0017	0.0019	0.0022	0.002
Nickel	0.0005 to 0.005	0.0055	0.0018	0.0036	0.0023	<0.002	<0.002	0.0027	0.0035	0.005	0.0016	0.0016	<0.001	0.0032	0.0021
Phosphorus	0.05 to 0.3				<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	9.5	8.7	11.1	11.5	8.3	8.8	9.3	8.4	7.4	6.8	6.2	8.3	12.2	12.2
Selenium	0.0001 to 0.006	<0.001	<0.001	<0.001	0.001	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002
Silicon	0.05				9.99	8.53	8.51	11.8	10.5	12.9	9.42	9.04	9.9	12.1	11.5
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00004	<0.00004	<0.00004	<0.00004	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00004
Sodium	0.05 to 2	31.7	24.3	30	35.5	35.6	38.8	45.6	42.3	23	20.5	20.8	29.1	34.9	34.9
Strontium	0.0001 to 0.005				0.391	0.391	0.427	0.47	0.417	0.25	0.253	0.249	0.344	0.43	0.445
Sulphur	0.5														
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0004	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Titanium	0.01	0.072	0.012	0.026	0.029	0.016	0.011	0.075	0.058	0.093	0.02	0.02	0.016	0.036	<0.01
Total Cadmium (by saltwater extraction)	0.00002														
Uranium	1E-005 to 0.001	0.00149	0.00097	0.00158	0.00261	0.00193	0.00164	0.00172	0.00165	0.00104	0.00078	0.00064	0.00082	0.00116	0.00094
Vanadium	0.001 to 0.03	0.0089	0.0035	0.0063	0.004	0.0031	0.0027	0.0053	0.0058	0.0088	0.0039	0.0032	0.0026	0.0029	<0.002
Zinc	0.003 to 0.006	0.0076	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0057	0.0077	<0.005	<0.005	<0.005	<0.005	<0.005
Organics															
Carbon Organic (Dissolved)	0.5 to 5	9.19	11.2	16.4	14.3	7.92	7.83	6.72	8.56	14.3	13.3	12.4	11.3	10.7	12.2
Carbon Organic (Total)	0.5 to 5					8.05	7.8	6.68	9.09	14.7	13.5	12.9	11.9	10.6	12.3
Nitrogen Organic (Dissolved)	0.05 to 0.26							0.387	0.489	0.504	0.688	0.435	0.433	0.552	0.392
Nitrogen Organic (Total)	0.05 to 0.3					0.433		0.95	0.369	1.13	1.05	0.495	0.483	0.552	0.432
ALS LAB ID		**L623545**	**L653575**	**L894163**	**L990459**	**L995583**	**L997645**	**L999654**	**L1002049**	**L1005044**	**L1012627**	**L1025075**	**L1038168**	**L1053400**	**L1065234**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

JC03 10-Apr-12	JC03 25-Apr-12	JC03 2-May-12	JC03 10-May-12	JC03 16-May-12	JC03 24-May-12	JC03 10-Jul-12	JC03 6-Sep-12	JC03 7-Nov-12	JC03 9-Jan-13	JC03 6-Feb-13	JC03 5-Mar-13	JC03 4-Apr-13	JC03 7-May-13	JC03 3-Jul-13
643	645	248	257	293	393	480	198	558	596	585	498	576	396	417
64	84.8	85.2	88.8	83	80.1	87.8	91.3	69.4	61.9	57.1	67		83.4	85.9
7.92	9.32	10.7	11.1	9.41	9.13	8.32	9.64	8.97	8.61	7.95	9.36		8.78	8.69
7.5	8.16	8.5	8.1	8.21	8.01	8.06	7.92	7.83	7.91	7.59	7.85	8.38	8.09	8.14
91.8	82.6	91.8	140	144	134	202	38.5	21.5	102	67	76.9	103	177	113
0.5	0.44	0.19	0.2	0.2	0.27		0.12	0.45	0.52	0.52	0.44	0.47	0.25	0.26
1007	880	395	409	412	558	557	260	919	1068	1058	902	951	514	517
6.09	11	5.46	5.6	9.79	9.49	17.8	12.9	4.43	1.88	1.61	1.52	4.39	13	14.8
654	572	257	266	269	362		167	598	694	688	586	618	335	336
	66	10	10.2	58.9	21.8	8.2	3.8	2.8	0.6	0.7	6.1	36	18	9.4
417	254	151	168	177	335	231	373	410	427	439	379	252	197	219
417	254	151	168	177	326	223	365	410	427	439	379		197	205
<1	<1	<1	<1	<1	8.1	8	7.6	<2	<2	<2	<2		<1	14.5
38.7	20.3	38.3	30	41.6	52.5	26.4	15.7	27.4	27.7	32.8	34.7	13.5	40.5	44
470	390	184	188	186	368	259	416	462	512	493	458	368	219	223
<1	<1	<1	<1	<1	<1	<1	<1	<2	<2	<2	<2		<1	<1
8.4	8.4	8.19	8.41	8.33	8.29	8.37	8.35	8.19	8.06	7.97	8.28	8.4	8.39	8.48
997	862	388	415	399	767	528	816	905	1020	978	959	871	478	498
635	570	255	255	258	501	340	546		650	649	589	536	293	337
34	101	7.7	8	90.2	10.7	16.9	37.1	3.1	3.7	<3	10.7	58.3	15.3	23.7
13	47.3	6.98	4.13	37.1	5.53	6.11	7.98	1	1.21	1.32	8.36	27.2	21.4	6.28
<0.5	<0.5	<0.05	<0.05	<0.05	<0.25	<0.05	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05
66	109	25.6	25.7	20.8	41.5	34	53.5	57	65.8	64.7	71.6	116	34	24.3
<0.2	<0.2	0.148	0.144	0.174	0.22	0.186	<0.2	<0.4	0.36	<0.2	0.31	<0.2	0.19	0.234
67.1	64.6	21.1	20.3	19.3	55.7	20.4	42.1	47	73.7	59.5	68.4	56.2	22.4	12.8
0.139	0.0228	<0.005	0.0068	0.0146	0.0329	0.0138	0.0209	0.0115	0.043	0.0346	0.0598	0.031	0.0126	0.0225
0.077	0.096	0.0123	<0.005	0.0412	1.04	0.0374	<0.05	<0.1	<0.05	<0.05	0.168	0.138	0.0198	0.0559
<0.01	<0.01	<0.001	<0.001	0.0012	0.0085	<0.001	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	0.0011	0.0012
1.01	0.43	0.37	0.29	0.48	2.1	0.47	0.49	0.62	0.674	0.652	0.857	0.364		
1.4	1.14	0.511	0.317	0.738	2.09	0.459	0.468	0.61	0.685	0.676	1.14	0.695	0.636	0.568
1.33	1.05	0.499	0.317	0.696	1.04	0.421	0.468	0.606	0.721	0.705	1.08	0.558	0.6	0.511
0.0507	0.0538	0.0432	0.0315	0.0716	0.206	0.07	0.0636	0.0618	0.0368	0.0311	0.138	0.0469	0.0721	0.127
0.169	0.207	0.0615	0.0464	0.234	0.233	0.103	0.116	0.0696	0.0447	0.0387	0.178	0.169	0.144	0.177
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
0.0113	<0.005	0.0097	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.003	<0.003	0.0057	0.004	0.0044	0.0028	0.008	0.0016	0.002	0.0014	0.0024	0.0018	0.0013	0.0059	0.003
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00012	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
0.00114	0.00098	0.00075	0.00067	0.00089	0.00221	0.00134	0.00125	0.00104	0.001	0.00106	0.00139	0.00073	0.00104	0.00182
0.104	0.0967	0.0468	0.0512	0.0517	0.0803	0.0732	0.0938	0.0936	0.103	0.089	0.078	0.0884	0.0483	0.0594
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
0.01	<0.01	<0.01	<0.01	<0.01	0.013	<0.01	0.016	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	0.012
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
104	107	51.6	53.5	52.6	80	71.8	104	107	118	113	102	97.4	55.2	53
0.00024	<0.0001	0.00017	0.00041	0.00014	0.00019	<0.0001	0.00011	0.00021	0.00017	0.00018	0.00015	<0.0001	<0.0001	0.00016
0.00062	0.00015	<0.0001	<0.0001	0.00011	0.00029	0.00013	0.00022	0.00025	0.00051	0.00054	0.00036	0.00011	0.00014	0.00015
0.00213	0.0018	0.00299	0.00261	0.00333	0.0047	0.00205	0.00155	0.00116	0.00126	0.00111	0.00143	0.00125	0.00287	0.00248
0.242	<0.03	0.034	<0.03	<0.03	0.083	0.039	0.028	0.074	0.153	0.195	0.125	0.016	0.036	0.073
<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
0.006	0.005	0.00231	0.00262	0.00295	0.00345	0.00386	0.00562	0.00512	0.00589	0.00551	0.00508	0.00463	0.00284	0.00191
50.9	29.8	13.4	13.2	13.3	40.9	19.3	38	47.2	52.9	51.3	49	30.4	19.7	22
0.235	0.0454	0.0124	0.0153	0.0161	0.0561	0.0321	0.124	0.0873	0.147	0.144	0.0975	0.0361	0.0241	0.0341
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
0.00267	0.00215	0.00159	0.00158	0.00193	0.00364	0.00173	0.00249	0.0033	0.00381	0.0026	0.00261	0.00156	0.00211	0.00208
0.00261	0.00092	0.00075	0.00087	0.00099	0.00199	0.00113	0.0023	0.00225	0.0025	0.00246	0.00151	0.0008	0.00088	0.00106
<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.068	<0.05	<0.05	0.153	<0.05	0.074	0.136
13.8	8.71	4.77	4.64	5.41	12.8	6.59	11.9	13.2	14.2	13.2	14.4	7.87	6.82	6.64
0.00022	0.00049	0.00044	0.0003	0.00027	0.00039	0.00018	0.00014	0.00016	0.00023	0.00023	0.00037	0.00037	0.00034	0.00022
11.3	7.37	6.56	6.66	7.88	11	8.26	11.1	11.7	11.4	12.1	10.5	7.35	8.34	9.98
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
41.5	35.2	14.2	14.6	13.6	34.7	19.5	30.9	34.4	42.3	42.6	38.8	35.6	20.3	21.7
0.5	0.379	0.164	0.176	0.201	0.379	0.265	0.422	0.416	0.507	0.459	0.467	0.374	0.232	0.231
								15.7	24.7	20.3	22.4	18.8	7.68	4.55
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0.00408	0.00157	0.000632	0.000633	0.000623	0.00151	0.000659	0.00111	0.00378	0.00752	0.00521	0.00296	0.00139	0.000835	0.000579
0.003	0.0031	0.0021	0.002	0.0028	0.004	0.0026	0.0021	0.0016	0.0017	0.0017	0.0027	0.0021	0.003	0.0029
0.0082	<0.003	0.0088	0.0036	0.0031	0.004	0.0312	0.0023	0.0014	0.0013	0.0085	0.0018	<0.001	0.0018	0.0013
0.665	2.21	0.262	0.187	1.33	0.2	0.311	0.357	0.0607	0.0131	0.0113	0.51	1.08	1.02	0.514
<0.0001	0.00012	0.0001	<0.0001	0.00012	0.00016	<0.0001	0.00021	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00011
0.0015	0.00157	0.00079	0.00077	0.00126	0.00211	0.00136	0.00138	0.00121	0.00104	0.00107	0.00163	0.00112	0.00126	0.00191
0.112	0.124	0.048	0.0516	0.0683	0.079	0.0754	0.0983	0.0956	0.108	0.0917	0.0867	0.103	0.0654	0.0653
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
0.014	0.011	<0.01	<0.01	0.013	0.017	0.013	0.019	0.013	0.01	0.01	<0.01	<0.01	0.013	0.015
0.000011	0.00002	<0.00001	<0.00001	0.000015	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000011	<0.00001
104	111	51	52.4	54.4	78.5	70.8	100	108	117	113	106	98	54.5	49.9
0.00184	0.00571	0.00083	<0.0007	0.00332	0.00071	0.00102	0.00107	0.00036	0.00021	0.00022	0.00143	0.00265	0.00258	0.00141
0.00105	0.00176	0.00027	0.00021	0.00105	0.00041	0.00033	0.00051	0.00032	0.00056	0.00058	0.00076	0.00096	0.00082	0.00054
0.00635	0.0141	0.00538	0.00364	0.0116	0.00593	0.00407	0.00378	0.00183	0.0018	0.00156	0.00502	0.00857	0.00917	0.00546
1.47	3.09	0.406	0.283	1.98	0.38	0.424	0.621	0.218	0.198	0.234	0.939	1.59	1.53	0.815
0.000145	0.000469	0.000069	<0.00005	0.000332	0.000056	0.00007	0.000088	<0.00005	<0.00005	<0.00005	0.00012	0.000228	0.000214	0.000128
0.00527	0.00561	0.00246	0.00256	0.00376	0.00328	0.00392	0.00562	0.00538	0.0062	0.00548	0.00574	0.00496	0.0034	0.0022
50.4	30.6	12.9	13.2	13.6	38.2	19.4	36.7	47.3	53.1	50.5	48.4	28.9	19.4	20.7
0.24	0.143	0.0235	0.023	0.0886	0.067	0.0478	0.161	0.108	0.152	0.15	0.118	0.0919	0.0731	0.0725
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
0.00285	0.00246	0.00169	0.0016	0.00202	0.00408	0.00174	0.00246	0.00346	0.00392	0.00259	0.00292	0.00165	0.00203	0.0021
0.00394	0.00588	0.00136	0.00114	0.00396	0.00235	0.00177	0.00314	0.00238	0.00272	0.00259	0.00274	0.00343	0.00301	0.00215
<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.078	<0.05	<0.05	0.223	0.137	0.154	0.164
13.5	8.84	4.71	4.5	5.6	12.3	6.2	11.7	13.4	14.1	12.9	14.8	8.04	6.56	6.23
0.00027	0.00065	0.00042	0.00031	0.00034	0.0004	0.00019	0.00014	0.00018	0.00023	0.00018	0.00037	0.00037	0.00031	0.00028
12.7	12.9	7.04	7	10.8	10.9	8.83	11.4	12	11.4	11.9	12.1	9.64	10.5	10.5
<0.00001	0.000015	<0.00001	<0.00001	0.000016	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	<0.00001	<0.00001
40.1	34.5	14.2	14.3	13.6	33.2	18.9	30.1	36.1	45	44	39.6	35.9	20.9	20.3
0.442	0.388	0.174	0.175	0.211	0.372	0.263	0.421	0.429	0.517	0.429	0.489	0.372	0.22	0.227
								16.2	25.5	21	23.9	18.9	7.53	4.41
<0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
0.033	0.091	0.017	<0.01	0.055	0.012	0.018	0.021	<0.01	<0.01	<0.01	0.017	0.035	0.038	0.018
0.00364	0.00172	0.000663	0.000654	0.000693	0.00157	0.000669	0.00113	0.00383	0.00762	0.00535	0.00314	0.00148	0.000796	0.000587
0.0053	0.0094	0.0027	0.0025	0.0065	0.0046	0.0035	0.0031	0.0019	0.002	0.0019	0.0047	0.0052	0.006	0.0043
0.005	0.0084	0.0048	<0.003	0.0067	0.0032	0.0032	<0.003	<0.003	<0.003	<0.003	0.0034	0.0048	0.0054	<0.003
15.4	8.86	13.6	9.1	13.1	16.5	10.1	9.45	12.6	12	11.7	12	6.8	12.4	16.2
16.8	15.1	14.2	9.46	16.3	17.9	9.99	9.29	12.6	12.4	12.1	12.2	7.5	12.4	17
0.794	0.311	0.353	0.283	0.423	1.02	0.419	0.469	0.609				0.196		
1.19	1.02	0.499	0.31	0.681	1.01	0.407	0.447	0.594	0.678	0.67	1.02	0.527		
L1133342	**L1140194**	**L1142492**	**L1146570**	**L1148880**	**L1152500**	**L1176520**	**L1206738**	**L1235306**	**L1256679**	**L1265999**	**L1275746**	**L1286585**	**L1298960**	**L1327102**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		KC03	KC03	KC03	KC03	KC03	KC03
Analytes	MDL	21-Mar-14	10-Apr-14	24-Apr-14	7-May-14	23-May-14	4-Jun-14
In Situ Parameters							
Conductivity µS/cm	...	829	939	828	963	997	993
Oxygen Dissolved %	...	52.3	58.5	70.8	78.4	61.5	35.6
Oxygen Dissolved	...	7.02	7.4	9.27	9.8	7.44	4.37
pH (unitless)	...	7.91	7.94	8.03	8.12	7.99	7.87
Redox Potential mV	...	75.2	-38	150	216	74.5	214
Salinity ppt	...	0.71	0.76	0.69	0.77	0.77	0.78
Specific Conductivity µS/cm	...	1434	1511	1386	1537	1534	1542
Temperature °C	...	2.93	5.18	3.92	5.5	6.68	6.34
Total Dissolved Solids	...	932	982	901	1001	997	1003
Turbidity NTU	...						
Physical Tests							
Acidity to pH 8.3 (as CaCO3)	1						
Alkalinity (Total as CaCO3)	1 to 2	533	610	501	553	565	576
Bicarbonate Alkalinity	1 to 2	533	610	473	525	565	576
Carbonate Alkalinity	1 to 2	<1	<20	27.2	28	<20	<1
Color TCU	5				32.6		
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	684	706	628	694	713	739
Hydroxide Alkalinity	1 to 2	<1	<20	<1	<1	<20	<1
pH (unitless)	0.01 to 0.1	8.43	8.24	8.43	8.31	8.25	8.33
Specific Conductivity µS/cm	2	1460	1500	1370	1490	1490	1480
Total Dissolved Solids	1 to 2	979	1010	963	1060	1010	988
Total Suspended Solids	3	<3	<3	3.8	<3	<3	15.1
Turbidity NTU	0.1	0.6	0.44	0.43	0.42	0.37	3.76
Dissolved Anions							
Bromide	0.05 to 2.495	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	0.5 to 1	17.1	16.1	17.8	19.1	17.2	21
Fluoride	0.02 to 0.4	0.3	0.3	0.26	0.27	0.29	0.26
Sulphate	0.5 to 1	351	344	308	348	336	320
Nutrients							
Ammonia (Total)	0.005 to 0.05	0.01	0.0059	0.0104	0.0078	0.0092	0.0073
Nitrate (as N)	0.005 to 0.1	0.092	0.198	0.162	0.113	0.067	<0.05
Nitrite (as N)	0.001 to 0.02	<0.01	<0.01	<0.01	<0.01	<0.01	0.01
Nitrogen (Dissolved)	0.05 to 0.1						
Nitrogen (Total)	0.0025 to 0.11						
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.726	0.691	0.874	0.678	0.689	0.588
Orthophosphate (Dissolved)	0.001 to 0.01	0.129	0.0912	0.19	0.134	0.106	0.0956
Phosphorus - Dissolved	0.002 to 0.02	0.163	0.0963	0.223	0.16	0.124	0.097
Phosphorus - Total	0.002 to 0.02	0.18	0.0967	0.209	0.164	0.124	0.145
Cyanide							
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals							
Aluminum	0.001 to 0.025	0.0012	<0.001	0.0019	0.0012	0.0012	<0.001
Antimony	0.0001 to 0.0025	0.00017	0.00016	0.00019	0.0002	0.0002	0.00018
Arsenic	0.0001 to 0.0025	0.00676	0.00618	0.0054	0.00573	0.00547	0.00542
Barium	5E-005 to 0.02	0.0724	0.0764	0.0659	0.0738	0.0752	0.079
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.104	0.105	0.1	0.116	0.133	0.119
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	70.8	74.3	65.9	72.1	71.9	74.4
Chromium	0.0001 to 0.018	0.00052	0.00044	0.00044	0.00049	0.00046	0.00041
Cobalt	0.0001 to 0.0015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	0.0002 to 0.006	0.0068	0.0057	0.00606	0.00574	0.00537	0.0049
Dissolved Cadmium (by saltwater extrac	0.00002						
Iron	0.01 to 0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.0125	0.0121	0.0123	0.0136	0.0143	0.0132
Magnesium	0.1	123	126	113	125	129	134
Manganese	5E-005 to 0.0015	0.000301	0.000188	0.00059	0.00017	0.000208	0.000217
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0138	0.0112	0.0131	0.0138	0.0136	0.012
Nickel	0.0005 to 0.005	0.00168	0.00145	0.00171	0.0015	0.00146	0.00147
Phosphorus	0.05 to 0.3	0.142	0.1	0.188	0.152	0.102	0.11
Potassium	0.05 to 2	21.8	22	21.6	21.8	22.7	22.9
Selenium	0.0001 to 0.006	0.00767	0.00833	0.00563	0.00649	0.0058	0.00437
Silicon	0.05	9.58	9.82	9.03	9.29	9.79	9.65
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	97.3	101	91.6	98.7	98.5	98.9
Strontium	0.0001 to 0.005	1.18	1.18	1.13	1.26	1.26	1.26
Sulphur	0.5	109	114	99.1	116	111	110
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00544	0.00518	0.00488	0.00581	0.0056	0.00525
Vanadium	0.001 to 0.03	0.0074	0.0075	0.0065	0.0073	0.0071	0.0066
Zinc	0.001 to 0.006	<0.001	<0.001	<0.001	<0.001	0.0011	<0.001
Total Metals							
Aluminum	0.003 to 0.025	0.0044	0.0073	0.0047	0.0034	0.0043	0.0356
Antimony	0.0001 to 0.0025	0.0002	0.00017	0.00021	0.00019	0.0002	0.00019
Arsenic	0.0001 to 0.0025	0.00612	0.00557	0.00512	0.00499	0.00533	0.00483
Barium	5E-005 to 0.02	0.0708	0.0772	0.0673	0.0695	0.0743	0.0759
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.104	0.11	0.1	0.099	0.129	0.122
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	69.8	72.8	65.8	69.3	70.9	70.5
Chromium	0.0001 to 0.005	0.0006	0.0006	0.00042	0.0005	0.0005	0.00056
Cobalt	0.0001 to 0.0015	<0.0001	<0.0001	<0.0001	<0.0001	0.00026	<0.0001
Copper	0.0005 to 0.007	0.0074	0.00589	0.00652	0.00568	0.00546	0.0055
Iron	0.01 to 0.03	0.012	0.01	<0.01	<0.01	<0.01	0.045
Lead	5E-005 to 0.0025	0.00012	0.000059	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.0119	0.012	0.0125	0.012	0.0132	0.0135
Magnesium	0.1	118	123	111	114	128	129
Manganese	5E-005 to 0.0015	0.000509	0.000675	0.00101	0.00024	0.000376	0.00388
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0141	0.0127	0.0143	0.0129	0.0138	0.0124
Nickel	0.0005 to 0.005	0.0018	0.00154	0.00178	0.00145	0.00154	0.00164
Phosphorus	0.05 to 0.3	0.147	0.092	0.201	0.136	0.114	0.13
Potassium	0.05 to 2	21.4	21.3	21.6	20.6	22.6	21.7
Selenium	0.0001 to 0.006	0.00859	0.00687	0.00469	0.00538	0.00495	0.00366
Silicon	0.05	9.52	9.8	9.04	8.82	9.78	9.42
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	99.4	100	94	95.3	95.9	95
Strontium	0.0001 to 0.005	1.15	1.23	1.17	1.11	1.23	1.25
Sulphur	0.5	113	116	103	117	113	108
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002						
Uranium	1E-005 to 0.001	0.00557	0.0052	0.00517	0.00533	0.00606	0.00531
Vanadium	0.001 to 0.03	0.0077	0.0078	0.0068	0.0072	0.0073	0.0067
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics							
Carbon Organic (Dissolved)	0.5 to 5	14.2	12.6	17.5	13.8	12.3	11.6
Carbon Organic (Total)	0.5 to 5	14.2	12.9	18.2	14.7	12.1	11.7
Nitrogen Organic (Dissolved)	0.05 to 0.26						
Nitrogen Organic (Total)	0.05 to 0.3						
ALS LAB ID		**L1435186**	**L1442672**	**L1447300**	**L1452368**	**L1459728**	**L1465478**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		MAKAOO-01	MAKAOO-01	MAKAOO-01	MAKAOO-01	MAKAOO-01	MAKAOO-01	MAKAOO-01
Analytes	**MDL**	**5-Jun-14**	**18-Jun-14**	**4-Jul-14**	**15-Jul-14**	**28-Jul-14**	**13-Aug-14**	**2-Sep-14**
In Situ Parameters								
Conductivity µS/cm	...	1217	1356	5259	1595	1758	2025	
Oxygen Dissolved %	...			84.9		108		
Oxygen Dissolved	...			6.92		9.53		
pH (unitless)	...	8.56	9.24	9.57	9.67	9.89	9.78	9.94
Redox Potential mV	...	132	58.6	-63.7	-61.7	67.8	-10.1	
Salinity ppt	...	0.67	0.77	2.87	0.84	0.96	1.02	
Specific Conductivity µS/cm	...	1342	1528	5272	1657	1891	2013	
Temperature °C	...	20.1	19.1	24.6	23.1	21.3	25.3	15.6
Total Dissolved Solids	...	872	993	3459	1077	1229	1310	
Turbidity NTU	...	1.7						
Physical Tests								
Acidity to pH 8.3 (as CaCO3)	1	1.1						
Alkalinity (Total as CaCO3)	1 to 2	160	179	208	205	204	181	197
Bicarbonate Alkalinity	1 to 2	160	167	162	105	85	55.1	73.6
Carbonate Alkalinity	1 to 2	<2	12.6	45.7	99.4	119	126	124
Color TCU	5							
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	566	675	746	806	866	891	891
Hydroxide Alkalinity	1 to 2	<2	<1	<1	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1	8.23	8.53	8.97	9.53	9.68	9.81	9.62
Specific Conductivity µS/cm	2	1330	1530	1690	1770	1930	1980	2040
Total Dissolved Solids	1 to 2	979	1150	1250	982	1520	1770	1680
Total Suspended Solids	3	14	3.3	3.1	8	5.4	6	9.7
Turbidity NTU	0.1	1.98	1.52	1.14	1.48	1.5	1.8	2.3
Dissolved Anions								
Bromide	0.05 to 2.495	<0.5	<0.5	<0.5	<1	<1	<1	<1
Chloride	0.5 to 1	8.4	11	10	12	13	15	14
Fluoride	0.02 to 0.4	0.039	0.043	0.053	0.036	0.053	0.051	0.054
Sulphate	0.5 to 1	616	739	818	917	972	1030	1100
Nutrients								
Ammonia (Total)	0.005 to 0.05	0.0566	0.0985	0.0222	0.0357	0.029	0.0284	0.0314
Nitrate (as N)	0.005 to 0.1	<0.05	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Nitrite (as N)	0.001 to 0.02	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02
Nitrogen (Dissolved)	0.05 to 0.1							
Nitrogen (Total)	0.0025 to 0.11							
Nitrogen Kjeldahl (Total)	0.05 to 0.2	1.79	1.76	1.93	1.63	1.76	2.21	1.92
Orthophosphate (Dissolved)	0.001 to 0.01	1.28	1.41	1.5	0.447	0.394	0.199	0.258
Phosphorus - Dissolved	0.002 to 0.02	1.52	1.77	1.48	0.567	0.44	0.306	0.368
Phosphorus - Total	0.002 to 0.02	1.56	1.76	1.53	0.692	0.558	0.304	0.368
Cyanide								
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals								
Aluminum	0.001 to 0.025	0.0108	0.0055	0.0024	0.0016	0.0029	0.0014	<0.001
Antimony	0.0001 to 0.0025	0.00028	0.00027	0.00028	0.00027	0.00033	0.00034	0.00037
Arsenic	0.0001 to 0.0025	0.00292	0.00282	0.00296	0.00286	0.00368	0.00365	0.00338
Barium	5E-005 to 0.02	0.0198	0.0208	0.0221	0.0181	0.0177	0.00809	0.00281
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.064	0.074	0.086	0.086	0.067	0.067	0.063
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	76.8	90	104	106	113	120	114
Chromium	0.0001 to 0.018	<0.0001	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015	0.00024	0.00024	0.00021	0.0002	0.00019	0.00018	0.00015
Copper	0.0002 to 0.006	0.00183	0.00121	0.00097	0.0009	0.00091	0.00117	0.00071
Dissolved Cadmium (by saltwater extrac	0.00002							
Iron	0.01 to 0.03	0.08	0.076	0.034	0.014	0.011	<0.01	<0.01
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00099	0.00149	0.00124	0.00151	0.00215	0.00241	0.0021
Magnesium	0.1	90.9	109	118	131	141	144	147
Manganese	5E-005 to 0.0015	0.0786	0.0395	0.0333	0.0118	0.0219	0.0212	0.0153
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00375	0.00304	0.00347	0.00317	0.00379	0.00413	0.00437
Nickel	0.0005 to 0.005	0.00137	0.00135	0.00141	0.0012	0.00134	0.00125	0.00126
Phosphorus	0.05 to 0.3	1.39	1.69	1.51	0.544	0.527	0.321	0.328
Potassium	0.05 to 2	29.3	32.8	41.2	40.5	50.1	45.9	51.2
Selenium	0.0001 to 0.006	0.00021	0.00022	0.00022	0.00023	0.00027	0.00027	0.00027
Silicon	0.05	4.45	1.25	0.16	0.525	0.448	1.65	2.99
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	88.6	102	115	116	134	161	162
Strontium	0.0001 to 0.005	1.04	1.02	1.4	1.32	1.53	1.59	1.65
Sulphur	0.5	199	220	267	285	309	319	349
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.000473	0.000402	0.00052	0.000525	0.000675	0.000719	0.000711
Vanadium	0.001 to 0.03	0.0028	0.0021	0.0023	0.0025	0.003	0.0033	0.0024
Zinc	0.001 to 0.006	0.001	0.0026	<0.001	<0.001	<0.001	0.0011	0.0013
Total Metals								
Aluminum	0.003 to 0.025	0.0579	0.021	0.0108	0.0046	0.0089	0.0148	0.0628
Antimony	0.0001 to 0.0025	0.00031	0.00034	0.00029	0.00028	0.00031	0.00035	0.00037
Arsenic	0.0001 to 0.0025	0.00298	0.00298	0.00305	0.003	0.00347	0.00364	0.00325
Barium	5E-005 to 0.02	0.0204	0.0209	0.0221	0.0181	0.0168	0.00892	0.00369
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.067	0.087	0.098	0.083	0.068	0.074	0.067
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	76.2	89	98.7	104	104	119	109
Chromium	0.0001 to 0.005	0.00028	0.00026	0.00021	0.00013	0.00013	0.00013	0.00022
Cobalt	0.0001 to 0.0015	0.00029	0.00025	0.00022	0.0002	0.00019	0.00022	0.00019
Copper	0.0005 to 0.007	0.00241	0.00147	0.00112	0.001	0.00101	0.00142	0.00117
Iron	0.01 to 0.03	0.161	0.111	0.048	0.022	0.019	0.026	0.078
Lead	5E-005 to 0.0025	0.000066	0.000091	<0.00005	<0.00005	<0.00005	<0.00005	0.000051
Lithium	0.0005 to 0.025	0.00115	0.00152	0.00128	0.00145	0.00184	0.00242	0.00208
Magnesium	0.1	91.8	105	116	127	130	146	140
Manganese	5E-005 to 0.0015	0.0906	0.046	0.044	0.0184	0.0287	0.032	0.02
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00407	0.0037	0.00361	0.00324	0.00364	0.00462	0.00439
Nickel	0.0005 to 0.005	0.00151	0.00147	0.00144	0.00132	0.00138	0.00135	0.00138
Phosphorus	0.05 to 0.3	1.54	1.69	1.52	0.653	0.553	0.41	0.36
Potassium	0.05 to 2	29.1	31.7	38.4	39.2	43.7	45.9	48.6
Selenium	0.0001 to 0.006	0.00024	0.00023	0.00025	0.00021	0.00025	0.00029	0.00027
Silicon	0.05	4.62	1.32	0.198	0.551	0.421	1.74	3.05
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	91.7	105	116	113	129	163	156
Strontium	0.0001 to 0.005	1.08	1.12	1.39	1.29	1.44	1.64	1.61
Sulphur	0.5	199	222	264	282	283	330	333
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002							
Uranium	1E-005 to 0.001	0.000501	0.000474	0.000548	0.000554	0.000658	0.000807	0.000742
Vanadium	0.001 to 0.03	0.0029	0.0023	0.0025	0.0026	0.0031	0.0034	0.0025
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics								
Carbon Organic (Dissolved)	0.5 to 5	14.8	16.3	21.3	18.4	20.8	22.3	21.9
Carbon Organic (Total)	0.5 to 5	15.7	16.2	19.9	17.9	20.9	22.7	22.3
Nitrogen Organic (Dissolved)	0.05 to 0.26							
Nitrogen Organic (Total)	0.05 to 0.3							
ALS LAB ID		**L1466704**	**L1473820**	**L1481825**	**L1488139**	**L1494516**	**L1502299**	**L1511699**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C1.26 - NSP
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Site ID		NSP	NSP	NSP	NSP	NSP	NSP	NSP	NSP	NSP	NSP	NSP	NSP	NSP	NSP
Analytes	MDL	31-Aug-10	28-Sep-11	25-Apr-12	2-May-12	10-Jul-12	7-Aug-12	12-Oct-12	6-Nov-12	5-Jun-13	3-Jul-13	7-Aug-13	5-Sep-13	9-Oct-13	7-Nov-13
In Situ Parameters															
Conductivity µS/cm	...	4343		4458	3914		5200	4123	618	5210	5496	5732		4.36	2375
Oxygen Dissolved %	...	96		94.9	73.3			77.6						66	60
Oxygen Dissolved	...	9.77		8.71	7.51			8.77						7.42	8.07
pH (unitless)	...	8.97	9.21	8.84	9.03		9.22	9.36	9.43	9.16	9.3	9.3	9.15	9.23	9.16
Redox Potential mV	...	-6.4	-112	142	146		58.9	-276	-94.1	94.2	39.7	130	64	-67.5	126
Salinity ppt	...	0.00301		2.73	2.71		2.35	3.22	0.48	3.09	3.14	3.26	3.53	2.33	2.18
Specific Conductivity µS/cm	...	5533	4082	5065	5021		5297	5906	974	5687	5780	5989	6441	3.04	4165
Temperature °C	...	13.7	14.8	18.6	13.4		24	9.2	6.2	20.7	22.4	22.8	18.4	9.8	2.49
Total Dissolved Solids	...	3597		3292	3262		3443	3839	628	3697	3758	3893	4186	2835	2708
Turbidity NTU	...		2.4	23.5	3.5		1.6	6.8	8.4	2.9	0	0.3		9.8	3.7
Physical Tests															
Acidity to pH 8.3 (as CaCO3)	1		<1					<1	<1				<1		
Alkalinity (Total as CaCO3)	1 to 2	1310	1240	1080	1110	1210	1220	1260	1300	1210	1210	1210	1400	1390	1310
Bicarbonate Alkalinity	1 to 2		775	727	777	749	617	642	714	661	617	603	723	890	864
Carbonate Alkalinity	1 to 2		465	357	330	456	601	615	588	550	591	610	676	503	447
Color TCU	5	47.7	36.8	50.1	47.4	35.8	34.6	35.4	35.6	35.2	31.2	29.6	29.1	33.9	
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	2550	2480	2350	2310	2540	2490	2790	2710	2580	2590	2720	3000	3030	2970
Hydroxide Alkalinity	1 to 2		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1	8.93	9.11	9.01	8.94	9.11	9.28	9.22	9.2	9.16	9.28	9.29	9.28	9.09	8.94
Specific Conductivity µS/cm	2	5280	5430	4920	4970	5130	5160	5640	5770	5630	5600	5770	6160	6510	6320
Total Dissolved Solids	1 to 2	4760	4460	4570	4740	4990	4860	5160	5590	5250	5180	5330	6090	5890	5970
Total Suspended Solids	3	24.5	6.7	19.3	7.7	6.2	8.5	4.8	91	18.9	9	11	12.6	15.3	4.7
Turbidity NTU	0.1	8.81		3.71	1.28	1.07	1.35	1.84	21.7	3.53	0.78	0.67	0.99	6.1	2.88
Dissolved Anions															
Bromide	0.05 to 2.495	<2.5	<2.5	<1	<1	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	1.5	<2.5	<2.5
Chloride	0.5 to 1	43	48	49	50	49	49	54	55	50	59	54	72	61	61
Fluoride	0.02 to 0.4	<1	<1	<0.4	<0.4	<1	<1	<1	<1	1.2	<1	<1	<0.4	1	<1
Sulphate	0.5 to 1	2530	2700	2460	2490	2640	2690	3010	3060	2970	2910	3200	3310	3500	3280
Nutrients															
Ammonia (Total)	0.005 to 0.05	0.084	0.178	0.348	0.75	0.0849	0.0734	0.136	0.049	0.12	0.0883	0.101	0.114	0.843	2.17
Nitrate (as N)	0.005 to 0.1	<0.25	<0.25	0.12	<0.1	<0.25	<0.25	<0.25	0.33	<0.25	<0.25	<0.25	0.12	<0.25	<0.25
Nitrite (as N)	0.001 to 0.02	<0.05	<0.05	<0.02	0.034	<0.05	<0.05	<0.05	0.052	<0.05	<0.05	<0.05	0.036	<0.05	0.06
Nitrogen (Dissolved)	0.05 to 0.1		4.82	4.55	4.84	5.07	6.04	5.25	4.25			4.78			
Nitrogen (Total)	0.0025 to 0.11	4.97	4.92	5.63	5.47	4.28	4.39	5.26	6.56	4.82	0.95	4.92	20.8	7.05	7.57
Nitrogen Kjeldahl (Total)	0.05 to 0.2	4.67	4.92	5.51	5.43	4.28	4.39	5.26	6.18	1.01	0.947	5.27	5.36	7.13	8.98
Orthophosphate (Dissolved)	0.001 to 0.01	0.904	0.305	0.49				0.0376	0.0148	0.322	0.183		0.0952	0.381	0.551
Phosphorus - Dissolved	0.002 to 0.02	0.975	0.438	0.611	0.689	0.827	0.551	0.141	0.13	0.515	0.317	0.276	0.276	0.572	0.716
Phosphorus - Total	0.002 to 0.02	1.1	0.441	0.662	0.911	0.838	0.572	0.175	0.319	0.502	0.345	0.298	0.273	0.606	0.732
Cyanide															
Cyanide (Free)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005
Cyanide (Total)	0.005	0.014	0.0174	<0.005	0.012	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005
Cyanide (WAD)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005
Dissolved Metals															
Aluminum	0.001 to 0.025	<0.05	<0.05	<0.015	<0.015	<0.005	<0.005	<0.005	<0.005	0.0069	<0.005	<0.005	<0.005	<0.005	<0.005
Antimony	0.0001 to 0.0025	<0.005	<0.005	<0.0005	<0.0005	0.00057	0.00084	0.00073	0.00074	0.0008	0.00085	0.00124	0.00136	0.00136	0.00125
Arsenic	0.0001 to 0.0025	0.0103	0.0106	0.00775	0.00798	0.0087	0.0109	0.0113	0.0125	0.0115	0.0126	0.0156	0.016	0.0186	0.0161
Barium	5E-005 to 0.02	0.208	0.098	0.0503	0.0574	0.0282	0.0183	0.0138	0.019	0.0404	0.0181	0.0272	0.0203	0.0325	0.0334
Beryllium	0.0001 to 0.005	<0.01	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Bismuth	0.0005 to 0.2		<0.2	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Boron	0.01 to 0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Cadmium	1E-005 to 8.5E-005	<0.00017	0.00036	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Calcium	0.05 to 0.1	54.1	26.6	22.2	23.5	33.3	31.1	21.4	19.1	24.4	28.3	25.6	24.5	25.4	24.7
Chromium	0.0001 to 0.018	<0.01	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Cobalt	0.0001 to 0.0015	<0.003	<0.003	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Copper	0.0002 to 0.006	<0.01	<0.01	<0.0025	<0.0025	0.001	<0.001	<0.001	<0.001	0.0013	<0.001	0.001	<0.001	<0.001	<0.001
Dissolved Cadmium (by saltwater extrac	0.00002														
Iron	0.01 to 0.03	<0.03	<0.03	<0.03	0.031	<0.05	<0.05	<0.05	0.014	0.014	<0.01	<0.02	<0.02	0.024	0.019
Lead	5E-005 to 0.0025	<0.005	<0.005	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025
Lithium	0.0005 to 0.025	<0.05	<0.05	<0.0025	0.003	0.0032	0.0028	0.004	0.003	0.0036	<0.0025	0.0026	0.0038	0.004	0.0027
Magnesium	0.1	586	586	557	546	596	586	664	648	611	613	646	715	719	707
Manganese	5E-005 to 0.0015	0.0654	0.0665	0.138	0.165	0.0113	0.0446	0.0879	0.0935	0.0872	0.0101	0.0299	0.0627	0.0878	0.0896
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.021	0.025	0.022	0.022	0.0239	0.0226	0.0233	0.0223	0.017	0.0179	0.0175	0.0166	0.0209	0.0195
Nickel	0.0005 to 0.005	<0.01	<0.01	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Phosphorus	0.05 to 0.3		0.4	0.63	0.69	0.71	0.57	<0.3	0.153	0.481	0.325	0.3	0.24	0.511	0.677
Potassium	0.05 to 2	105	106	92.1	89.3	101	113	121	122	115	110	117	131	137	127
Selenium	0.0001 to 0.006	<0.01	<0.01	0.00089	0.00088	0.00083	0.00095	0.00057	0.0009	0.00106	0.0009	0.001	0.00086	0.00106	0.00099
Silicon	0.05		0.383	2.3	2.74	0.556	1.06	2.57	3.06	4.42	5.16	4.77	4.94	6.3	6.36
Silver	1E-005 to 0.0001	<0.0002	<0.0002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Sodium	0.05 to 2	578	630	549	530	586	635	696	747	613	631	754	744	752	689
Strontium	0.0001 to 0.005		3.63	3.07	3.06	3.41	3.76	3.93	3.69	3.54	3.45	3.92	3.99	4.23	4.03
Sulphur	0.5								0.913	844	839	982	1050	1030	961
Thallium	1E-005 to 0.001	<0.002	<0.002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Tin	0.0001 to 0.0025	<0.005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Uranium	1E-005 to 0.001	0.0068	0.0067	0.00582	0.00579	0.00606	0.00576	0.00568	0.00533	0.00512	0.005	0.00509	0.00496	0.00561	0.00573
Vanadium	0.001 to 0.03	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Zinc	0.001 to 0.006	<0.005	<0.005	<0.015	<0.015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Metals															
Aluminum	0.003 to 0.025	0.067	<0.05	0.078	0.066	0.016	0.022	0.068	0.115	0.08	<0.015	0.133	<0.015	0.218	0.075
Antimony	0.0001 to 0.0025	<0.005	<0.005	<0.0005	<0.0005	0.00058	0.00107	0.00081	0.00076	0.00084	0.00101	0.00132	0.00141	0.00142	0.0012
Arsenic	0.0001 to 0.0025	0.0107	0.0103	0.00801	0.00796	0.00869	0.011	0.0112	0.0124	0.0118	0.0138	0.016	0.0159	0.0175	0.0161
Barium	5E-005 to 0.02	0.184	0.088	0.0535	0.0617	0.028	0.0196	0.0154	0.0215	0.0421	0.0194	0.0291	0.0238	0.0355	0.0353
Beryllium	0.0001 to 0.005	<0.01	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Bismuth	0.0005 to 0.2		<0.2	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Boron	0.01 to 0.1	<0.1	<0.1	<0.05	0.057	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Cadmium	1E-005 to 8.5E-005	<0.00017	0.0003	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Calcium	0.05 to 0.1	55.3	26.4	22.5	23.3	33.6	30.9	22	19.3	24.3	28.6	27.5	25.6	24.8	24.2
Chromium	0.0001 to 0.005	<0.01	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Cobalt	0.0001 to 0.0015	<0.003	<0.003	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Copper	0.0005 to 0.007	<0.01	<0.01	<0.0025	<0.0025	<0.0025	<0.0025	0.0036	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Iron	0.01 to 0.03	0.063	<0.03	0.089	0.082	<0.05	<0.05	0.078	0.095	0.077	0.014	0.103	<0.02	0.212	0.081
Lead	5E-005 to 0.0025	<0.005	<0.005	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025
Lithium	0.0005 to 0.025	<0.05	<0.05	<0.0025	0.0029	0.0035	0.0028	0.004	0.0032	0.0044	0.0027	0.0028	0.0046	0.0041	0.0028
Magnesium	0.1	590	580	561	528	590	584	668	654	604	624	675	741	694	669
Manganese	5E-005 to 0.0015	0.0914	0.0689	0.146	0.179	0.0203	0.0516	0.096	0.105	0.0984	0.0158	0.0372	0.0683	0.105	0.0987
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.022	0.025	0.0229	0.0232	0.0234	0.0228	0.0244	0.0267	0.0177	0.019	0.0181	0.0172	0.0212	0.0196
Nickel	0.0005 to 0.005	<0.01	<0.01	<0.0025	<0.0025	<0.0025	<0.0025	0.0026	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Phosphorus	0.05 to 0.3		0.41	0.65	0.72	0.7	0.57	<0.3	0.208	0.479	0.34	0.35	0.26	0.527	0.672
Potassium	0.05 to 2	105	105	92.9	90.9	98.4	110	120	120	109	110	126	135	128	120
Selenium	0.0001 to 0.006	<0.01	<0.01	0.00099	0.00092	0.0008	0.00095	0.00068	0.00098	0.001	0.0009	0.00098	0.00086	0.00097	0.00108
Silicon	0.05		0.417	2.57	2.78	0.572	1.1	2.81	3.37	4.67	5.36	5.43	5.24	6.64	6.4
Silver	1E-005 to 0.0001	<0.0002	<0.0002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Sodium	0.05 to 2	580	624	555	540	583	645	689	760	617	691	761	782	759	688
Strontium	0.0001 to 0.005		3.59	3.19	3.18	3.36	3.83	4.05	3.83	3.58	3.87	4.16	4.09	4.37	4.07
Sulphur	0.5								941	873	885	1050	1120	1050	982
Thallium	1E-005 to 0.001	<0.002	<0.002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Tin	0.0001 to 0.0025	<0.005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Total Cadmium (by saltwater extraction)	0.00002														
Uranium	1E-005 to 0.001	0.0071	0.0067	0.00612	0.00612	0.00573	0.0058	0.00587	0.00588	0.00531	0.00529	0.00523	0.00523	0.00593	0.00574
Vanadium	0.001 to 0.03	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Zinc	0.003 to 0.006	<0.005	0.0062	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Organics															
Carbon Organic (Dissolved)	0.5 to 5	57.4	12.2	53.4	54.4	54.6	54.9	64	59.9	64.8	64.8	27.2	62.8	48.7	65.8
Carbon Organic (Total)	0.5 to 5		12.1	53.1	54.7	53.8	55	65	59.8	62.1	64.5	28.1	63.7	55	67.9
Nitrogen Organic (Dissolved)	0.05 to 0.26		4.64	4.08	4.06	4.99	5.97	5.11	3.82						
Nitrogen Organic (Total)	0.05 to 0.3		4.74	5.16	4.69	4.19	4.32	5.13	6.13						
ALS LAB ID		**L927439**	**L1066047**	**L1140194**	**L1142492**	**L1176520**	**L1190914**	**L1223406**	**I1234688**	**L1312719**	**L1327102**	**L1344180**	**L1358626**	**L1375698**	**L1389979**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

NSP 5-Dec-13	NSP 8-Jan-14	NSP 4-Feb-14	NSP 10-Apr-14	NSP 8-May-14	NSP 5-Jun-14	NSP 2-Jul-14	NSP 28-Jul-14	NSP 2-Sep-14
3785	3969	4485	2058	2932	3693	4504	4654	
6.62	8	18.4		27.6	86.4	8.92	107	
47.1	1.07	2.63		2.83	8.28	7.72	9.29	
9.1	9.05	8.98	9.42	9.48	9.5	9.43	9.3	9.16
100	-195	-47.6	-42.2	83.4	55.6	57.9	125	
3.83	4.09	3.67	1.5	2.01	2.36	2.57	2.69	
7192	7629	6904	2878	3785	400	4796	5008	
0.21	-0.1	-0.44	10.9	13.2	16.6	21.8	21.3	16.9
4666	4956	4481	1871	2457	2860	3117	3255	
	3.7							
	1510	1520	546	708	883	989	1060	1120
	1040	1210	322	353	444	518	578	721
	477	306	224	355	439	471	483	398
	35.4							
	3480	3610	1230	1590	1910	2130	2220	2210
	<1	<1	<1	<1	<1	<1	<1	<1
	8.85	8.87	9.32	9.21	9.25	9.27	9.22	8.99
	7170	7400	2830	3740	4190	4610	5060	5150
	7200	7290	2540	3390	3940	4160	4590	4750
	<3	8.7	17	9.1	3.4	9	9.2	10.5
	2.78	24.8	7.45	1.22	0.68	3.1	1.18	4.2
	<2.5	<2.5	<1	<1	1.1	1.2	1.6	<2.5
	89	95	30	34	38	41	50	47
	<1	<1	<0.4	<0.4	0.056	0.058	0.065	0.07
	3970	4010	1360	1870	2160	2390	2680	2710
	2.72	3.68	0.0382	0.0913	0.0985	0.0814	0.0994	0.064
	<0.25	0.34	<0.1	<0.1	<0.1	<0.1	4.32	<0.25
	<0.05	<0.05	<0.02	<0.02	<0.02	<0.02	0.027	<0.05
	8.95	12.5	15.3	3.25	3.5	4.25	4.3	5.15
	0.701	0.751	0.24	0.257	0.218	0.208	0.301	0.382
	0.827	1	0.331	0.401	0.332	0.332	0.408	0.602
	0.883	1.06	0.613	0.43	0.347	0.35	0.422	0.602
	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	<0.005	<0.005	0.0172	<0.002	<0.002	0.0023	<0.002	0.0034
	0.001	0.00117	0.00048	0.00064	0.0008	0.00102	0.00124	0.00133
	0.0168	0.0169	0.00697	0.00966	0.0108	0.013	0.0164	0.0151
	0.0399	0.0422	0.0271	0.037	0.0398	0.0438	0.0521	0.0563
	<0.0005	<0.0005	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
	<0.0025	<0.0025	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001
	<0.05	<0.05	0.029	0.032	0.021	0.021	0.021	0.048
	<0.00005	<0.00005	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
	29.8	31.1	23.5	32.5	33.8	34	34.7	35.3
	<0.0005	<0.0005	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
	<0.0005	<0.0005	0.00016	0.00021	0.00023	0.00025	<0.0002	<0.0002
	<0.001	<0.001	0.00226	0.00278	0.00208	0.00153	0.00109	0.00074
				<0.00002	<0.00002	<0.00002	<0.00002	
	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	<0.00025	<0.00025	<0.00005	<0.0001	<0.0001	<0.0001	<0.0001	0.0001
	0.0059	0.0041	0.00246	0.0024	0.0028	0.0037	0.0029	0.0033
	827	858	284	366	442	498	517	514
	0.112	0.113	0.0452	0.0365	0.00885	0.0247	0.0416	0.106
	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
	0.0177	0.0156	0.00973	0.0126	0.0131	0.014	0.0143	0.0122
	<0.0025	<0.0025	0.0009	<0.001	0.0011	0.0011	0.001	<0.001
	0.79	0.84	0.337	0.452	0.343	0.341	0.435	0.453
	143	147	52.4	68.3	79.6	90.8	96.4	97.1
	0.00077	0.00163	0.00144	0.0019	0.00154	0.00147	0.00186	0.00135
	7.25	7.5	4.48	4.66	4.1	3.33	5.53	7.01
	<0.00005	<0.00005	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
	846	876	295	395	445	527	588	1030
	4.86	5.1	1.82	2.36	2.72	3.02	3.43	3.29
	1220	1370	443	553	658	723	751	799
	<0.00005	<0.00005	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
	<0.0005	<0.0005	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
	<0.05	<0.05	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02
	0.00629	0.00662	0.00264	0.0035	0.00398	0.00431	0.00437	0.00379
	<0.005	<0.005	0.0031	0.0036	0.0036	0.0035	0.0024	<0.002
	<0.005	<0.005	0.0012	<0.002	<0.002	<0.002	<0.002	<0.002
	<0.015	<0.015	0.0534	0.0247	0.02	0.0476	0.0202	0.0163
	0.00109	0.00131	0.00047	0.00066	0.00085	0.00108	0.00127	0.00135
	0.0172	0.0181	0.00684	0.00889	0.0109	0.0128	0.0142	0.0164
	0.0402	0.0414	0.0273	0.0369	0.0418	0.0443	0.0499	0.059
	<0.0005	<0.0005	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
	<0.0025	<0.0025	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001
	<0.05	0.055	0.033	0.035	0.024	0.026	0.021	0.05
	<0.00005	<0.00005	0.000012	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
	30.8	32.4	22.5	32.5	34.1	34	34.7	38
	<0.0005	<0.0005	0.00023	<0.0002	<0.0002	0.00021	<0.0002	<0.0002
	<0.0005	<0.0005	0.00025	0.00024	0.00026	0.00026	<0.0002	<0.0002
	<0.0025	<0.0025	0.0034	0.003	0.0026	0.0021	0.0015	<0.001
	0.031	0.041	0.062	0.023	0.043	0.046	0.024	0.016
	<0.00025	<0.00025	<0.00005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
	0.0048	0.0045	0.00236	0.0026	0.0027	0.0039	0.0027	0.0042
	866	883	259	367	445	500	518	553
	0.114	0.119	0.0722	0.0408	0.0156	0.0289	0.0443	0.119
	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
	0.0178	0.0186	0.00915	0.0131	0.0139	0.0145	0.0137	0.0131
	<0.0025	<0.0025	0.00113	0.001	0.0011	0.0011	0.0011	<0.001
	0.86	0.9	0.502	0.417	0.343	0.326	0.42	0.56
	148	155	49.5	67.6	79.8	86.4	94.7	103
	0.00091	0.00077	0.00153	0.0017	0.00162	0.00164	0.00168	0.00164
	7.5	7.88	4.43	4.67	4.15	3.5	5.59	7.62
	<0.00005	<0.00005	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
	857	905	285	393	473	524	541	586
	4.75	5.51	1.73	2.4	2.86	3.08	3.22	3.75
	1280	1340	412	560	665	767	796	858
	<0.00005	<0.00005	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
	<0.0005	<0.0005	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
	<0.05	<0.05	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02
				<0.00002	<0.00002	<0.00002	<0.00002	
	0.00647	0.00699	0.00214	0.00354	0.00432	0.00438	0.00429	0.0042
	<0.005	<0.005	0.0035	0.0037	0.0039	0.0036	0.0023	<0.002
	<0.015	<0.015	<0.003	<0.006	<0.006	<0.006	<0.006	<0.006
	74.5	85.4	31.8	38.6	47.2	47.5	54	55.4
	75.2	79.9	32.8	42.9	48.2	47.6	53.3	54.7
	L1410216	**L1418933**	**L1442672**	**L1453031**	**L1466627**	**L1481215**	**L1494516**	**L1511703**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C1.27 - PC02
PAGE 1 OF 5

Site ID		PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02
Analytes	MDL	28-Apr-08	7-Jul-08	6-Sep-08	29-Mar-11	14-Apr-11	21-Apr-11	28-Apr-11	5-May-11	12-May-11	30-May-11	28-Jun-11	28-Jul-11	30-Aug-11	28-Sep-11
In Situ Parameters															
Conductivity µS/cm	...	1376	1118	969	968	1095	1226	1192	1316	1089	961	916	990	792	
Oxygen Dissolved %	...	92.4	90.7	85.5	77.2	70.5	73.2	64.7	74.3	85.7	63.6	81.7	77.1		67.7
Oxygen Dissolved	...	10.7	9.52	9.41	10	9.45	10.3	8.45	8.91	10.1	6.77	8.3	8.09		7.37
pH (unitless)	...		8.08	7.79	7.89	7.34	7.67	7.57	7.58	7.69	7.14	7.88	7.91	8.05	7.64
Redox Potential mV	...		-102	-70.3	122	154	65.8	106	128	62.8	326	183	104	138	25.9
Salinity ppt	...						1.15	1.01	1.02	0.82	0.64	0.57	0.65	0.52	
Specific Conductivity µS/cm	...	1993	1451	1326	1608	1896	2276	2000	1997	1618	1266	1146	1284	1041	1913
Temperature °C	...	8.79	13	10.9	4.14	2.89	1.07	3.84	7.14	7.87	12.4	14.5	13	12.5	11.3
Total Dissolved Solids	...				1050	1230	1476	1300	1298	1050	823	745	835	678	
Turbidity NTU	...										37.9	45	15.1		4.9
Physical Tests															
Acidity to pH 8.3 (as CaCO3)	1												4		4.5
Alkalinity (Total as CaCO3)	1 to 2	421	413	446	395	448	448	437	430	394	327	333	370	328	449
Bicarbonate Alkalinity	1 to 2						448								449
Carbonate Alkalinity	1 to 2						<2								<2
Color TCU	5	7.7	22	8.3	15.1	8.7	8.1	6.6	6.3	22.3	23.2	31.7	26.3	36.8	10
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	931	654	780	753	866	880	914	917	1040	540	486	537	439	803
Hydroxide Alkalinity	1 to 2						<2								<2
pH (unitless)	0.01 to 0.1	8.12	8.33	8.3	8.12	8.2	8.11	8.1	8.22		8.18	8.33	8.21	8.4	8.19
Specific Conductivity µS/cm	2	1990	1450	1850	1580	1880	1880	1880	1920	2230	1230	1070	1240	1020	1850
Total Dissolved Solids	1 to 2	1420	999	1320	1120	1370	1410	1380	1370	1710	782	714	832	644	1280
Total Suspended Solids	3	19.3	15.3	4.7	<3	3.2	4.7	<3	3.3	7	99.5	14.4	38.1	62.7	8.7
Turbidity NTU	0.1	0.71	5.64	2.29	1.19	1.08	2.07	0.75	1.2	2.81		5.65	14.7	15.4	
Dissolved Anions															
Bromide	0.05 to 2.495	<0.5	0.067	0.077	<2.1	<2.5	<1	<1	<1	<1	<1	<0.5	<0.5	<0.5	<1
Chloride	0.5 to 1	125	80.1	113	86.5	132	133	130	142	129	78	65.1	78.1	62.7	129
Fluoride	0.02 to 0.4	0.24	0.243	0.244	<0.2	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	0.33	0.42	0.23	<0.4
Sulphate	0.5 to 1	582	324	476	422	499	523	485	507	775	256	192	232	138	444
Nutrients															
Ammonia (Total)	0.005 to 0.05	0.021	0.021	0.041	0.0248	0.0197	0.0196	0.0233	0.0178	0.0163	0.0344	0.0269	0.0207	0.0184	0.028
Nitrate (as N)	0.005 to 0.1	0.442	0.0931	0.167	0.408	0.47	0.36	0.37	0.37	0.36	<0.1	<0.05	0.116	<0.05	<0.1
Nitrite (as N)	0.001 to 0.02	0.019	0.0011	0.0036	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.02
Nitrogen (Dissolved)	0.05 to 0.1							0.81	0.58	1.25	0.79	0.97	0.75	1.15	0.55
Nitrogen (Total)	0.0025 to 0.11				0.916	0.797	0.46	0.751	0.69	1.34	0.79	1.01	0.85	1.14	0.55
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.563	0.637	0.365	0.508	0.331	<0.1	0.382	0.359	0.856	0.79	1.01	0.734	0.917	0.55
Orthophosphate (Dissolved)	0.001 to 0.01	0.0277	0.073		0.0646						0.0548	0.0896	0.105		
Phosphorus - Dissolved	0.002 to 0.02					0.0323	0.0353	0.0376	0.03	0.125	0.0628	0.092	0.105	0.0915	0.0463
Phosphorus - Total	0.002 to 0.02	0.0326	0.08		0.0794	0.0369	0.0415	0.0354	0.0365	0.141	0.217	0.117	0.151	0.144	0.0724
Cyanide															
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005
Cyanide (Total)	0.005	<0.005	0.0071		<0.005		<0.005	<0.005	<0.005	<0.005	0.0086	0.0081	0.0081		<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	0.0073		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005
Dissolved Metals															
Aluminum	0.001 to 0.025	<0.025	<0.01	<0.025	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01
Antimony	0.0001 to 0.0025	<0.0025	<0.001	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.001
Arsenic	0.0001 to 0.0025	<0.0025	0.0025	<0.0025	0.0019	0.0017	0.0018	<0.002	0.0017	0.0027	0.0019	0.00287	0.00261	0.00242	0.0016
Barium	5E-005 to 0.02	0.065	0.056	0.056	0.053	0.057	0.058	0.057	0.059	0.074	0.053	0.056	0.048	0.047	0.063
Beryllium	0.0001 to 0.005	<0.005	<0.002	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.002
Bismuth	0.0005 to 0.2				<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	1E-005 to 8.5E-005	<0.000085	0.000052	<0.000085	0.000201	0.000039	0.000064	<0.000034	<0.000034	0.000045	0.000045	<0.00003	<0.000017	<0.000017	<0.000034
Calcium	0.05 to 0.1	147	102	132	116	142	141	149	147	148	86.1	78.9	88.7	73.2	129
Chromium	0.0001 to 0.018	<0.005	<0.002	<0.005	<0.002	<0.002	<0.003	<0.018	<0.002	<0.002	<0.002	<0.003	<0.001	<0.001	<0.002
Cobalt	0.0001 to 0.0015	<0.0015	<0.0006	<0.0015	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0003	<0.0003	<0.0003	<0.0006
Copper	0.0002 to 0.006	<0.005	0.0028	<0.005	0.0027	0.0021	<0.006	0.002	0.002	<0.006	0.0028	0.0024	0.0017	0.0027	<0.002
Dissolved Cadmium (by saltwater extrac	0.00002														
Iron	0.01 to 0.03	0.031	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.038	<0.03	<0.03	0.036	0.039	0.033	0.035
Lead	5E-005 to 0.0025	<0.0025	<0.001	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.001
Lithium	0.0005 to 0.025	<0.025	<0.01	<0.025	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0073	0.0086	0.0072	0.01
Magnesium	0.1	137	96.7	110	112	124	128	132	133	163	78.9	70.2	76.6	62.1	116
Manganese	5E-005 to 0.0015	0.0589	0.0432	0.117	0.0444	0.107	0.112	0.0984	0.102	0.021	0.189	0.0628	0.0805	0.0519	0.165
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.011	0.0147	0.0121	0.011	0.0092	0.0086	0.0081	0.0084	0.0138	0.0126	0.0105	0.0103	0.0137	0.0104
Nickel	0.0005 to 0.005	<0.005	0.0029	0.0054	0.0029	0.0044	0.0036	0.0036	0.0039	0.0022	0.0021	0.0029	0.0021	0.0025	0.0043
Phosphorus	0.05 to 0.3				<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	20.4	19	20.4	17.7	20.1	20	20.6	20.7	24.8	16.8	16.1	17.3	17	22.2
Selenium	0.0001 to 0.006	<0.005	<0.002	<0.005	<0.002	0.0024	0.0029	<0.006	<0.002	<0.002	<0.002	0.0011	<0.001	<0.001	<0.002
Silicon	0.05				7.89	8.36	8.15	8.71	8.59	8.22	5.94	6.79	8.39	8.02	10.4
Silver	1E-005 to 0.0001	<0.0001	<0.00004	<0.0001	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00002	<0.00002	<0.00002	<0.00004
Sodium	0.05 to 2	109	83.7	101	86.5	108	108	111	114	154	73	66	74.3	56.1	114
Strontium	0.0001 to 0.005				1.08	1.24	1.3	1.3	1.34	1.47	0.766	0.712	0.786	0.646	1.2
Sulphur	0.5														
Thallium	1E-005 to 0.001	<0.001	<0.0004	<0.001	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002	<0.0004
Tin	0.0001 to 0.0025	<0.0025	<0.001	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.001
Titanium	0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.0038	0.00234	0.0035	0.00271	0.00325	0.00308	0.00311	0.00329	0.00439	0.00219	0.00158	0.00143	0.00137	0.0035
Vanadium	0.001 to 0.03	<0.005	0.0037	<0.005	0.0031	0.0039	0.0035	<0.006	0.0034	0.0038	0.0033	0.003	0.0027	0.0036	0.0029
Zinc	0.001 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Metals															
Aluminum	0.003 to 0.025	<0.025	0.174	0.043	0.044	0.042	0.072	0.02	0.02	0.146	2.04	0.277	0.576	1.05	0.081
Antimony	0.0001 to 0.0025	<0.0025	<0.001	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.001
Arsenic	0.0001 to 0.0025	<0.0025	0.0026	<0.0025	0.0017	0.0016	0.0016	<0.0018	0.0016	0.0026	0.0025	0.00246	0.00248	0.00251	0.0018
Barium	5E-005 to 0.02	0.065	0.054	0.057	0.053	0.059	0.06	0.059	0.062	0.075	0.081	0.055	0.055	0.062	0.065
Beryllium	0.0001 to 0.005	<0.005	<0.002	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.002
Bismuth	0.0005 to 0.2				<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1
Cadmium	1E-005 to 8.5E-005	<0.000085	0.000058	<0.000085	0.000183	0.000047	0.000072	<0.000034	0.000037	0.000053	0.000071	<0.00004	<0.000017	<0.000017	0.000046
Calcium	0.05 to 0.1	146	100	132	114	140	141	146	150	144	85.2	79.6	87.5	73.1	132
Chromium	0.0001 to 0.005	<0.005	<0.002	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.0055	0.0015	0.0021	0.003	<0.002
Cobalt	0.0001 to 0.0015	<0.0015	<0.0006	<0.0015	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	0.00187	0.00046	0.00054	0.00093	<0.0006
Copper	0.0005 to 0.007	<0.005	0.0045	<0.005	0.0036	0.003	<0.006	0.0027	0.0027	<0.007	0.0119	0.0042	0.0047	0.0072	0.0031
Iron	0.01 to 0.03	0.05	0.249	0.099	0.1	0.089	0.131	0.066	0.079	0.211	2.67	0.43	0.855	1.32	0.212
Lead	5E-005 to 0.0025	<0.0025	<0.001	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.001
Lithium	0.0005 to 0.025	<0.025	<0.01	<0.025	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0065	0.0069	0.0077	0.011
Magnesium	0.1	137	94.1	112	110	128	132	133	137	160	79.1	71.4	76	62.9	119
Manganese	5E-005 to 0.0015	0.0603	0.0702	0.123	0.0488	0.121	0.127	0.109	0.114	0.0353	0.375	0.0997	0.114	0.119	0.181
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.011	0.0147	0.0119	0.0116	0.0096	0.0093	0.0086	0.0092	0.0144	0.0129	0.0113	0.0108	0.0149	0.0107
Nickel	0.0005 to 0.005	<0.005	0.0043	0.0056	0.003	0.0047	0.0043	0.004	0.0041	0.0026	0.0102	0.0045	0.0044	0.0066	0.0049
Phosphorus	0.05 to 0.3				<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	20.5	18.9	20.6	17.3	20.7	20.3	21.1	21.7	24.6	17.3	16.2	17.2	17.5	22.6
Selenium	0.0001 to 0.006	<0.005	<0.002	<0.005	<0.002	0.0021	0.0026	<0.006	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.002
Silicon	0.05				7.8	8.5	8.41	8.77	8.89	8.46	11.6	7.8	9.94	11.1	10.8
Silver	1E-005 to 0.0001	<0.0001	<0.00004	<0.0001	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00002	<0.00002	<0.00002	<0.00004
Sodium	0.05 to 2	109	82.6	104	84.9	111	110	113	118	152	73.7	66.8	73.1	56.7	117
Strontium	0.0001 to 0.005				1.06	1.28	1.32	1.34	1.39	1.46	0.795	0.723	0.789	0.659	1.23
Sulphur	0.5														
Thallium	1E-005 to 0.001	<0.001	<0.0004	<0.001	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002	<0.0004
Tin	0.0001 to 0.0025	<0.0025	<0.001	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.001
Titanium	0.01	<0.01	0.012	0.012	<0.01	<0.01	0.01	0.011	0.012	0.015	0.098	0.021	0.035	0.055	<0.01
Total Cadmium (by saltwater extraction)	0.00002														
Uranium	1E-005 to 0.001	0.0038	0.00237	0.0034	0.00279	0.00349	0.0034	0.00334	0.00352	0.00459	0.00235	0.00172	0.0016	0.0015	0.00356
Vanadium	0.001 to 0.03	<0.005	0.0044	<0.005	0.0033	0.0044	0.004	<0.006	0.0036	0.0043	0.0088	0.004	0.0045	0.0061	0.0034
Zinc	0.003 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0095	<0.005	<0.005	<0.005	<0.005
Organics															
Carbon Organic (Dissolved)	0.5 to 5	6.93	11.2	6.44	9.05	6.52	6.61	5.87	6.83	15.7	13.4	15.7	13.2	15.9	9.42
Carbon Organic (Total)	0.5 to 5					6.52	6.7	5.89	6.62	15.4	13.7	15.9	14.3	17.6	9.23
Nitrogen Organic (Dissolved)	0.05 to 0.26							0.42	0.19	0.877	0.756	0.943	0.613	1.13	0.522
Nitrogen Organic (Total)	0.05 to 0.3					0.311		0.359	0.3	0.839	0.756	0.983	0.713	1.12	0.522
ALS LAB ID		**L623545**	**L652819**	**L679672**	**L990459**	**L995583**	**L997645**	**L999654**	**L1002049**	**L1005044**	**L1011001**	**L1025075**	**L1038168**	**L1052387**	**L1066047**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02
Analytes	**25-Oct-11**	**5-Dec-11**	**9-Jan-12**	**13-Feb-12**	**6-Mar-12**	**10-Apr-12**	**25-Apr-12**	**2-May-12**	**9-May-12**	**16-May-12**	**24-May-12**	**10-Jul-12**	**7-Aug-12**	**5-Sep-12**	**11-Oct-12**
In Situ Parameters															
Conductivity µS/cm	1225	1124	1017	1055	559	1042	1138	704	1187	994	1006	972	820	1211	1163
Oxygen Dissolved %	48.7	64.5	65.8	70.8	73.9	77	85.9	83	82.9	82.1	77.6	78	85.5	83.1	65.1
Oxygen Dissolved	5.66	8.59	8.43	9.42	10.3	9.54	10.1	10.1	9.83	9.02	8.98	7.59	8.15	8.86	7.35
pH (unitless)	7.31	7.57	7.54	7.31	8.05	7.6	7.47	7.78	7.81	8.24	7.93	8.06	8.05	7.79	7.55
Redox Potential mV	76.5	48.2	8.2	69.9	96.9	140	118	145	135	191	83.2	201	81.7	49.2	-243
Salinity ppt	0.91	0.97	0.84	0.91	0.5	0.83	0.85	0.54	0.94	0.68	0.74		0.47	0.81	0.83
Specific Conductivity µS/cm	1786	1925	1665	1816	1030	1637	1679	1085	1850	1357	1459	1161	956	1601	1643
Temperature °C	8.54	3.22	4.66	3.05	1.05	5.98	8.15	6.59	6.24	11	8.72	16.5	17.5	12.3	9.71
Total Dissolved Solids	1163	1251	1081	1181	670	1064	1091	705	1203	882	949		622	1041	1068
Turbidity NTU		3.3	0.7	0.1	4.8		0.6	8	1.7	73.7	4.8	7.1	12.7	4	2.6
Physical Tests															
Acidity to pH 8.3 (as CaCO3)	7.2													<1	
Alkalinity (Total as CaCO3)	468	458	444	447	254	414	409	410	418	429	413	363	346	441	463
Bicarbonate Alkalinity	468		444	447	254	395	409	410	418	429	401	360	336	441	463
Carbonate Alkalinity	<2		<2	<2	<2	18.9	<2	<1	<2	<1	12.4	3.4	10.5	<1	<2
Color TCU	9.6	9	7	6.7	63.6	7.5	7	12	12.1	43.7	17.6	27.5	36.1	9.8	9
Hardness as CaCO3 (Dissolved)	821	816	774	785	423	757	762	803	853	662	666	517	434	690	748
Hydroxide Alkalinity	<2		<2	<2	<2	<1	<2	<1	<2	<1	<1	<1	<1	<1	<2
pH (unitless)	8.12	8.32	8.16	8.14	7.94	8.41	8.26	8.2	8.29	8.4	8.32	8.49	8.35	8.39	8.1
Specific Conductivity µS/cm	1900	1800	1820	1730	956	1640	1630	1670	1820	1400	1430	1090	956	1560	1570
Total Dissolved Solids	1240	1240	1320	1240	646	1160	1150	1230	1360	990	1030	784	636	1100	1140
Total Suspended Solids	7.1	<3	6.7	6	8	<3	<3	<3	3.8	245	11.8	16.2	53.5	4.1	<3
Turbidity NTU	2.42	2.76	2.31	0.98	5.52	0.59	1.03	1.34	1.01	75.7	4	5.71	14.5	2.01	1.2
Dissolved Anions															
Bromide	<1	<1	<1	<1	<0.5	<1	<0.5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Chloride	122	125	130	126	54.2	113	123	101	110	76.2	80.1	67.5	59.8	106	112
Fluoride	<0.4	<0.4	<0.4	<0.4	<0.2	<0.4	0.24	<0.4	<0.4	<0.2	0.23	0.24	0.26	0.25	<0.4
Sulphate	433	427	438	412	203	380	406	469	535	315	353	187	133	347	361
Nutrients															
Ammonia (Total)	0.0199	0.019	0.022	<0.05	0.0577	0.0213	0.0157	0.0087	0.0179	0.0227	0.0141	0.0165	0.0164	0.0283	0.0168
Nitrate (as N)	0.15	0.18	0.43	0.6	0.34	0.63	0.483	0.73	0.38	0.138	0.155	0.091	0.062	0.104	<0.1
Nitrite (as N)	0.028	<0.02	<0.02	<0.02	<0.01	<0.02	0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	0.012	0.029
Nitrogen (Dissolved)	0.34		0.68	1.05	1.26	0.94	0.73	0.95	0.83	1.09	0.61	0.83	0.82	0.5	0.45
Nitrogen (Total)	0.595	0.49	0.91	0.956	1.52	0.951	0.888	1.2	0.87	1.81	0.708	0.815	0.883		0.45
Nitrogen Kjeldahl (Total)	0.42	0.434	0.483	0.35	1.18	0.318	0.394	0.467	0.49	1.67	0.553	0.724	0.821	0.411	0.42
Orthophosphate (Dissolved)															0.0432
Phosphorus - Dissolved	0.0374	0.0427	0.0328	0.0307	0.348	0.0344	0.0303	0.081	0.0802	0.124	0.0745	0.114	0.121	0.0524	0.046
Phosphorus - Total	0.0627	0.0562	0.0516	0.041	0.436	0.0404	0.0372	0.0897	0.0847	0.648	0.091	0.139	0.195	0.0613	0.0539
Cyanide															
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	0.015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.0078	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals															
Aluminum	<0.003	<0.003	<0.003	<0.003	0.0032	<0.006	<0.003	<0.006	0.0136	<0.003	0.001	0.0019	0.0018	0.0013	<0.001
Antimony	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	0.00012	0.00015	0.00012	0.00011	<0.0001	<0.0001	<0.0001
Arsenic	0.00145	0.00154	0.00124	0.00122	0.00184	0.0014	0.00152	0.00211	0.00218	0.00271	0.00226	0.00259	0.00275	0.00197	0.0015
Barium	0.0638	0.0625	0.0545	0.0554	0.0362	0.0541	0.0522	0.0601	0.0653	0.0529	0.0509	0.0434	0.0436	0.0552	0.054
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.077	0.079	0.074	0.065	0.037	0.065	0.063	0.052	0.059	0.035	0.044	0.05	0.046	0.09	0.095
Cadmium	<0.00001	<0.00001	0.000011	0.000016	0.00001	0.00002	0.000014	<0.00002	0.000012	0.000014	<0.00001	0.000019	<0.00001	0.000012	<0.00001
Calcium	134	129	122	124	67.4	114	120	118	126	102	102	83.9	70.4	112	119
Chromium	0.00011	<0.0001	0.00011	<0.0001	0.00014	<0.0002	0.00018	<0.0002	0.00029	0.00015	0.00016	<0.0001	0.00013	0.00016	0.00012
Cobalt	0.00024	0.00028	0.00024	0.00027	0.00028	<0.0002	0.00018	<0.0002	0.00012	0.00027	0.00015	0.00016	0.00016	0.00021	0.00019
Copper	0.00165	0.00119	0.0015	0.00173	0.00397	0.0021	0.0021	0.0027	0.00278	0.00275	0.00236	0.0022	0.00199	0.00134	0.00176
Dissolved Cadmium (by saltwater extrac															
Iron	0.061	0.043	0.04	0.049	0.107	0.033	<0.03	<0.03	<0.03	0.035	0.016	0.02	0.038	0.025	0.029
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.00867	0.0108	0.00931	0.00892	0.00461	0.0088	0.00877	0.009	0.0107	0.00786	0.0065	0.00753	0.00679	0.0104	0.00977
Magnesium	118	120	114	115	62	115	112	124	130	98.6	99.7	74.6	62.8	99.8	110
Manganese	0.174	0.229	0.106	0.0932	0.102	0.0908	0.087	0.0327	0.0345	0.138	0.0475	0.0414	0.0394	0.168	0.14
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0091	0.00865	0.00832	0.00863	0.00995	0.00984	0.00862	0.0123	0.0125	0.0119	0.0137	0.011	0.00923	0.0121	0.0102
Nickel	0.00425	0.00398	0.00378	0.00424	0.00297	0.0038	0.00389	0.0027	0.00273	0.00305	0.00273	0.00272	0.00272	0.00428	0.00438
Phosphorus	<0.3	<0.3	<0.3	<0.3	0.38	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.059	<0.3
Potassium	22.1	25.3	20.7	20.1	16.8	18.3	19.3	19.4	19.8	19.5	17.2	15.3	15.1	21.9	20.5
Selenium	0.00021	0.00022	0.00041	0.00063	0.0005	0.00162	0.00229	0.00159	0.00148	0.00042	0.00083	0.00028	0.00023	0.00026	0.0002
Silicon	10.3	9.76	8.93	8.92	6.01	8.59	8.21	7.84	7.94	7.53	7.47	7.33	7.8	9.85	10.2
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	108	122	109	101	46.3	92	101	95.1	117	77.7	80.9	60.5	53.1	104	102
Strontium	1.17	1.35	1.16	1.14	0.577	1.07	0.967	1.11	1.16	0.928	0.915	0.706	0.627	1.01	1.04
Sulphur															
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	0.013	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.00306	0.00293	0.00292	0.00311	0.00158	0.00318	0.00268	0.00344	0.00345	0.00204	0.00231	0.00132	0.000839	0.00271	0.00262
Vanadium	0.0026	0.0024	0.0023	0.0028	0.0029	0.0036	0.0034	0.0035	0.0037	0.0042	0.0031	0.0026	0.0023	0.0033	0.0026
Zinc	<0.003	0.0033	<0.003	<0.003	<0.003	<0.006	<0.003	<0.006	0.0037	<0.003	0.0032	0.001	0.0028	0.0019	<0.001
Total Metals															
Aluminum	0.0395	0.0777	0.0562	0.0258	0.288	0.0171	0.01	0.0786	0.0787	3.45	0.196	0.302	0.534	0.102	0.0517
Antimony	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	0.00013	<0.0002	0.00018	0.00024	0.00014	0.00012	0.00011	0.00011	<0.0001
Arsenic	0.00141	0.00149	0.00131	0.00131	0.00198	0.00156	0.0016	0.00216	0.00228	0.004	0.0023	0.00263	0.00285	0.00202	0.0015
Barium	0.065	0.0606	0.0566	0.0604	0.039	0.0557	0.0533	0.0592	0.0673	0.106	0.0516	0.0459	0.0487	0.0567	0.0549
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.089	0.08	0.081	0.074	0.044	0.071	0.079	0.057	0.058	0.046	0.05	0.055	0.048	0.095	0.104
Cadmium	0.000013	<0.00001	0.000011	0.00002	0.000015	0.000022	0.000017	<0.00002	<0.00001	0.000059	0.000012	0.000016	0.000019	0.000017	0.000014
Calcium	139	124	127	124	67.7	117	120	115	129	101	104	83.3	68	110	114
Chromium	0.00039	0.00034	0.00035	0.00032	0.00088	0.00024	0.00029	0.00068	0.00056	0.011	0.00083	0.00118	0.00169	0.00058	0.0003
Cobalt	0.00029	0.00033	0.00031	0.0003	0.00045	<0.0002	0.00018	<0.0002	0.00018	0.00335	0.00031	0.0004	0.00062	0.00031	0.00023
Copper	0.00269	0.00207	0.00238	0.00248	0.00579	0.0029	0.00291	0.0038	0.00349	0.0204	0.00359	0.00406	0.00496	0.0032	0.00274
Iron	0.16	0.165	0.185	0.114	0.404	0.078	0.072	0.128	0.127	4.88	0.294	0.412	0.739	0.192	0.129
Lead	<0.00005	<0.00005	<0.00005	0.000066	0.00009	<0.0001	<0.00005	<0.0001	<0.00005	0.00128	0.000086	0.00011	0.000196	0.000066	<0.00005
Lithium	0.00964	0.0106	0.00923	0.00884	0.00467	0.0088	0.00957	0.0091	0.00952	0.0101	0.00686	0.0074	0.0068	0.0105	0.00977
Magnesium	122	119	125	119	62.9	117	114	120	134	99.6	96.8	73	59.9	99.6	107
Manganese	0.178	0.23	0.131	0.102	0.116	0.0944	0.0905	0.0366	0.0419	0.62	0.0648	0.086	0.103	0.187	0.143
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.00962	0.00881	0.00911	0.00901	0.0111	0.0104	0.0102	0.0122	0.0133	0.0131	0.0144	0.0111	0.00917	0.0127	0.0103
Nickel	0.00468	0.00422	0.00435	0.00464	0.00411	0.0039	0.00406	0.003	0.00307	0.0197	0.00365	0.00411	0.00508	0.00496	0.0045
Phosphorus	<0.3	<0.3	<0.3	<0.3	0.44	<0.3	<0.3	<0.3	<0.3	0.38	<0.3	<0.3	<0.3	0.071	<0.3
Potassium	22.8	24.4	21.6	21.1	17.6	18.8	19.5	19.1	20.2	19.4	16.9	14.7	14.5	22	20.1
Selenium	0.0002	0.00021	0.00037	0.00068	0.00049	0.0016	0.00219	0.0015	0.00145	0.00059	0.00076	0.00028	0.00024	0.00021	0.00025
Silicon	10.7	9.77	9.81	9.15	6.66	8.84	8.35	7.89	8.34	16.1	8.1	7.99	9	10.1	10.1
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00002	<0.00001	0.000045	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	113	118	115	107	48.3	94.7	102	94.8	110	76.2	80.6	59.5	52	107	97.7
Strontium	1.22	1.34	1.23	1.16	0.59	1.09	1.12	1.11	1.19	1.01	0.917	0.696	0.607	1.06	1.01
Sulphur															
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00002	<0.00001	0.000023	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	0.015	0.015	<0.01	0.014	<0.01	<0.01	0.013	<0.01	0.14	0.013	0.019	0.031	<0.01	<0.01
Total Cadmium (by saltwater extraction)															
Uranium	0.00323	0.00292	0.00314	0.00315	0.00167	0.00324	0.00311	0.00337	0.00366	0.0024	0.00243	0.00134	0.000839	0.00269	0.00268
Vanadium	0.0029	0.0026	0.0027	0.0031	0.0036	0.0037	0.0036	0.0038	0.004	0.0134	0.0039	0.0035	0.0038	0.0041	0.0028
Zinc	<0.003	<0.003	<0.003	0.004	0.0048	<0.006	<0.003	<0.006	<0.003	0.0182	<0.003	0.0036	0.0038	0.0035	<0.003
Organics															
Carbon Organic (Dissolved)	8.96	8.3	7.09	7.29	16.7	6.96	6.44	8.3	8.82	16.9	10.2	11.9	14.2	7.94	8.15
Carbon Organic (Total)	9.78	8.34	6.99	7.36	19.6	6.66	6.21	8.28	8.91	24.7	10.8	12.4	14.7	8.15	8.36
Nitrogen Organic (Dissolved)	0.145		0.23	0.42	0.862	0.28	0.22	0.21	0.43	0.929	0.44	0.723	0.741	0.356	0.404
Nitrogen Organic (Total)	0.165	0.288	0.461	0.35	1.12	0.296	0.379	0.459	0.472	1.65	0.539	0.707	0.805	0.383	0.403
ALS LAB ID	**L1076994**	**L1092368**	**L1102695**	**L1114029**	**L1122039**	**L1133342**	**L1140194**	**L1142492**	**L1145681**	**L1148880**	**L1152500**	**L1176520**	**L1190914**	**L1205273**	**L1222966**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02
Analytes	5-Nov-12	4-Dec-12	8-Jan-13	5-Feb-13	6-Mar-13	2-Apr-13	7-May-13	5-Jun-13	2-Jul-13	7-Aug-13	4-Sep-13	9-Oct-13	6-Nov-13	4-Dec-13	8-Jan-14
In Situ Parameters															
Conductivity µS/cm	1136	714	921	0.532	916	1166	801	725	856	794		1.69	1029	972	986
Oxygen Dissolved %	65.5	60.5	73.8	73	88		84.7	77.5	87.2	68.5	67.8	77.5	55	68.1	75.2
Oxygen Dissolved	7.51	7.6	9.89	9.42	12.4		8.8	7.84	7.61	6.73	7.15	9.27	6.86	9.43	1.15
pH (unitless)	7.53	7.66	8.21	7.8	7.79	7.72	8.26	8.22	8.25	8.15	7.6	7.58	7.66	7.75	7.69
Redox Potential mV	-0.2	21.1	73.8	47.4	17.4	43.3	115	70.3	104	286	177	46.7	30.8	-7.2	4.5
Salinity ppt	0.83	0.57	0.8	0.43	0.76	0.88	0.51	0.45	0.45	0.47	0.85	0.85	0.82	0.87	0.86
Specific Conductivity µS/cm	1634	1138	1592	875	1525	1724	1025	902	908	955	1678	1.12	1633	1747	1725
Temperature °C	9.03	5.5	2.94	4.49	4.08	8.03	13.5	14.7	22.1	16.2	12.7	7.38	5.65	1.75	2.55
Total Dissolved Solids	1062	740	1035	569	991	1121	666	586	590	621	1091	1096	1061	1134	1121
Turbidity NTU	1.4	0	4.5	1.5	0.5	0.4	12.1	7.8	7	6.4		2.5	0.6	3.8	2.2
Physical Tests															
Acidity to pH 8.3 (as CaCO3)													3		
Alkalinity (Total as CaCO3)	468	467	481	446	451	433	317	283	287	322	432	475	459	466	448
Bicarbonate Alkalinity	468	467	481	446	451	433	311	279	272	317	432	475	459	466	448
Carbonate Alkalinity	<2	<2	<2	<2	<1	<1	5.9	4	15.3	5.1	<2	<2	<2	<2	<2
Color TCU	9.8	8	6.2	6.8	6.1	6.5	27.6	27	35.6	33.5	9.7	8.6	9.3	7.9	7.3
Hardness as CaCO3 (Dissolved)	706	742	711	718	730	745	433	393	410	435	712	759	715	740	746
Hydroxide Alkalinity	<2	<2	<2	<2	<1	<1	<1	<1	<1	<1	<2	<2	<2	<2	<2
pH (unitless)	8.26	8.19	8.14	8.14	8.32	8.13	8.49	8.42	8.43	8.37	8.14	8.18	8.17	7.97	8.12
Specific Conductivity µS/cm	1610	1600	1560	1590	1650	1680	963	877	912	937	1610	1660	1670	1630	1650
Total Dissolved Solids	1130	1120	1070	1240	1100	1150	628	553	599	603	1100	1100	1130	1110	1130
Total Suspended Solids	<3	<3	8.3	<3	4.3	3.3	20	12.9	23.5	11.5	16.7	9.3	<3	7	9.8
Turbidity NTU	0.82	0.59	3.23	1.34	0.45	1.03	13.3	7.8	3.5	2.05	9.36	6.09	1	4.15	4.68
Dissolved Anions															
Bromide	<1	<1	<1	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1
Chloride	110	112	114	118	124	125	63.9	57.4	57.9	61	113	117	120	129	133
Fluoride	0.51	<0.4	0.4	<0.4	<0.4	0.45	0.31	0.35	0.24	0.4	0.44	0.67	<0.4	<0.4	<0.4
Sulphate	359	361	345	341	351	392	157	121	126	132	337	357	373	376	378
Nutrients															
Ammonia (Total)	0.0152	0.0276	0.0209	0.0159	0.0174	0.0146	0.0119	0.01	0.0177	0.0189	0.0328	0.0207	0.013	0.0244	0.0221
Nitrate (as N)	0.13	0.31	0.76	1.17	1.14	0.96	<0.05	<0.05	<0.05	0.069	<0.1	0.11	<0.1	0.31	0.76
Nitrite (as N)	<0.02	0.028	<0.02	<0.02	<0.02	0.031	<0.01	<0.01	<0.01	<0.01	0.021	<0.02	0.035	<0.02	<0.02
Nitrogen (Dissolved)	0.44	0.678	1.13	1.34	1.19	1.3				0.773	0.92				
Nitrogen (Total)	0.5	0.76	1.06	1.34	1.29	1.39	0.953	0.815	0.907	0.826	0.597	0.487	0.429		
Nitrogen Kjeldahl (Total)	0.373	0.424	0.482	0.423	0.475	0.4	0.815	0.699	0.907	0.964	0.572	0.44	0.417	0.382	0.417
Orthophosphate (Dissolved)												0.0385	0.0327	0.0296	0.0273
Phosphorus - Dissolved	0.0504	0.0422	0.0586	0.0282	0.0256	0.0329	0.0724	0.062	0.122	0.123	0.0899	0.0427	0.0347	0.0314	0.0293
Phosphorus - Total	0.0568	0.0488		0.0346	0.0295	0.0318	0.124	0.0895	0.0909	0.146		0.0614	0.0432	0.0489	0.0475
Cyanide															
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals															
Aluminum	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0015	0.0018	0.0044	0.002	0.0013	0.001	<0.001	<0.001	0.0011
Antimony	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	0.00013	<0.0001	0.00012	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001
Arsenic	0.00154	0.00119	0.00124	0.00121	0.0012	0.00165	0.00188	0.00166	0.0023	0.00273	0.00185	0.00167	0.00139	0.00115	0.00121
Barium	0.0607	0.0537	0.0499	0.0494	0.0495	0.0548	0.0437	0.0424	0.0486	0.0456	0.061	0.0565	0.0585	0.0552	0.0536
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.092	0.078	0.075	0.074	0.071	0.072	0.036	0.032	0.038	0.043	0.082	0.098	0.086	0.073	0.079
Cadmium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000011
Calcium	115	114	111	112	117	120	71.3	68.3	70.5	70.6	111	119	108	114	119
Chromium	<0.0001	0.00012	<0.0001	0.00014	0.00012	0.00013	0.00014	0.0001	0.00012	0.00013	<0.0001	0.00012	0.00012	<0.0001	<0.0001
Cobalt	0.00022	0.00023	0.00023	0.00019	0.00019	0.00016	0.00011	0.00011	0.00015	0.00014	0.00024	0.00027	0.00023	0.00026	0.00024
Copper	0.00181	0.0014	0.00159	0.00178	0.00195	0.00228	0.00254	0.00227	0.00487	0.0021	0.00152	0.00128	0.00129	0.001	0.00119
Dissolved Cadmium (by saltwater extrac															
Iron	0.037	0.04	0.033	0.032	0.029	0.022	0.019	0.021	0.024	0.029	0.018	0.037	0.046	0.047	0.034
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.00917	0.00842	0.00887	0.00853	0.0083	0.00896	0.00675	0.00568	0.00603	0.00649	0.0094	0.0111	0.0102	0.00861	0.00963
Magnesium	101	111	106	106	106	108	62	54	56.8	62.8	105	112	108	111	109
Manganese	0.148	0.123	0.0836	0.0719	0.0615	0.0645	0.0226	0.0305	0.0337	0.0266	0.251	0.195	0.135	0.166	0.112
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.00886	0.00849	0.00907	0.0089	0.00858	0.0107	0.0137	0.007	0.00827	0.00922	0.0114	0.0101	0.00822	0.00791	0.0089
Nickel	0.00436	0.0039	0.00406	0.00395	0.00404	0.00397	0.00184	0.00174	0.00209	0.00254	0.00417	0.00577	0.00411	0.00388	0.00413
Phosphorus	<0.3	<0.05	<0.05	<0.05	<0.05	<0.05	0.063	0.059	0.083	0.123	0.056	<0.05	<0.05	<0.05	<0.05
Potassium	22.7	20.9	20.3	19.8	19.9	20.6	15	14	14.7	15.2	23.4	22.2	21.9	21.4	19.4
Selenium	0.00022	0.0003	0.00073	0.00103	0.00119	0.00267	0.00039	0.00046	0.0003	0.00028	0.00032	0.00027	0.00028	0.00044	0.00097
Silicon	10.1	9.72	8.95	8.96	8.72	8.5	5.53	4.06	6.05	8.95	10.5	10.4	10.2	9.45	9.1
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	105	104	102	96.9	92.6	97.2	49.7	42.4	46.2	51.3	99.8	98.8	104	95.8	103
Strontium	1.06	1.01	1.1	1.03	0.979	1.08	0.641	0.511	0.58	0.605	1.05	1.1	1.07	1.02	1.09
Sulphur		112	110	106	113	117	50.6	38.7	40.4	42.7	106	114	122	116	116
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000025
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.00249	0.00249	0.00275	0.00272	0.00272	0.00334	0.00154	0.00108	0.00117	0.000906	0.00258	0.0025	0.00233	0.00235	0.00265
Vanadium	0.0021	0.0021	0.0025	0.0025	0.0027	0.0047	0.0031	0.0022	0.0028	0.0024	0.0036	0.0027	0.0022	0.0021	0.0024
Zinc	<0.001	<0.001	<0.001	0.005	<0.001	0.0013	0.0022	0.001	0.0037	0.0012	<0.001	<0.001	<0.001	<0.001	<0.001
Total Metals															
Aluminum	0.0234	0.0139	0.0474	0.0214	0.058	0.0269	0.684	0.335	0.501	0.289	0.605	0.544	0.0459	0.177	0.0787
Antimony	<0.0001	<0.0001	<0.0001	<0.0001	0.00015	0.00013	0.00015	0.00011	0.00013	0.00015	0.00011	0.0001	0.00013	<0.0001	<0.0001
Arsenic	0.00145	0.00123	0.00131	0.00133	0.00133	0.00161	0.00196	0.00178	0.00241	0.00278	0.00205	0.0017	0.00152	0.00129	0.00132
Barium	0.0532	0.0515	0.0497	0.0515	0.0523	0.0558	0.0506	0.0457	0.0531	0.0508	0.0671	0.0616	0.0617	0.0575	0.0542
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.105	0.081	0.084	0.08	0.082	0.078	0.039	0.033	0.04	0.048	0.088	0.095	0.093	0.082	0.085
Cadmium	<0.00001	<0.00001	<0.00001	0.000012	0.000013	0.000011	0.000012	<0.00001	0.000012	0.000012	0.000012	0.000012	<0.00001	<0.00001	0.000011
Calcium	110	110	112	113	121	117	69.4	64.2	65.3	73.8	115	119	107	115	125
Chromium	0.00018	0.00021	0.00028	0.00033	0.00032	0.00028	0.0021	0.00108	0.00153	0.00101	0.00211	0.00182	0.00035	0.00068	0.00041
Cobalt	0.00021	0.00022	0.00025	0.00022	0.00025	0.00019	0.00071	0.00042	0.00058	0.00037	0.00066	0.00065	0.00028	0.00037	0.00029
Copper	0.00229	0.00418	0.00321	0.00268	0.00278	0.00288	0.00647	0.00412	0.00501	0.00374	0.00702	0.00527	0.00222	0.00257	0.00252
Iron	0.087	0.078	0.121	0.086	0.133	0.065	0.934	0.483	0.651	0.412	0.9	0.717	0.123	0.294	0.172
Lead	<0.00005	<0.00005	0.000069	<0.00005	<0.00005	<0.00005	0.000241	0.000131	0.000178	0.000128	0.000203	0.000165	<0.00005	0.000064	<0.00005
Lithium	0.00945	0.00853	0.00971	0.00864	0.00927	0.00922	0.00707	0.00562	0.00587	0.00698	0.00983	0.0105	0.0102	0.00944	0.00964
Magnesium	98.7	106	109	107	107	105	59.1	51.6	54	64.4	105	113	105	109	112
Manganese	0.14	0.12	0.0872	0.0726	0.0705	0.0675	0.127	0.0907	0.119	0.0795	0.28	0.221	0.168	0.176	0.116
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0097	0.00833	0.00983	0.00896	0.00976	0.0113	0.0141	0.00683	0.00798	0.0101	0.012	0.0107	0.00932	0.00916	0.00934
Nickel	0.00401	0.00381	0.00432	0.00405	0.00443	0.00418	0.00478	0.00332	0.00406	0.00391	0.00687	0.00682	0.00436	0.00481	0.0044
Phosphorus	<0.3	0.056	<0.05	<0.05	<0.05	<0.05	0.109	0.091	0.119	0.153	0.088	0.085	<0.05	<0.05	<0.05
Potassium	20.4	19.6	21	19.7	20.6	21.5	14.5	13.4	14.1	16	23.9	22	22.9	22.4	20.4
Selenium	0.00027	0.00027	0.00068	0.00102	0.0012	0.00246	0.00041	0.00044	0.00033	0.00028	0.00038	0.00026	0.00025	0.00041	0.00092
Silicon	9.77	9.35	9.4	9.06	9.16	8.53	7.17	4.68	6.95	10.1	13.3	11.9	10.4	10.3	9.77
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000028	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	98.2	97.2	103	100	96.8	103	48.6	42.2	45.2	54.4	100	103	106	100	105
Strontium	1.03	0.992	1.16	1.05	1.09	1.07	0.634	0.491	0.549	0.628	1.09	1.19	1.14	1.09	1.13
Sulphur		111	117	112	119	119	50.1	37.7	38.9	46.3	114	121	127	125	122
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.028	0.015	0.02	0.012	0.029	0.026	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)															
Uranium	0.00259	0.00247	0.00286	0.00284	0.00304	0.00332	0.00161	0.00105	0.00114	0.001	0.00264	0.00262	0.00251	0.00258	0.0028
Vanadium	0.0021	0.0023	0.0029	0.003	0.0032	0.0049	0.0049	0.0031	0.0042	0.0033	0.0051	0.0043	0.003	0.0027	0.0029
Zinc	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0046	0.003	0.0042	0.0032	0.0031	<0.003	<0.003	<0.003	<0.003
Organics															
Carbon Organic (Dissolved)	7.82	7.36	7.58	7.23	7.11	7.35	12	7.26	16.5	14.5	8.69	7.8	8.29	7.6	7.19
Carbon Organic (Total)	7.93	7.4	7.12	7.05	6.97	7.03	12.2	14.3	16.8	15	10	8.18	8.33	7.77	7.61
Nitrogen Organic (Dissolved)	0.294	0.31			<0.24	0.29					0.87				
Nitrogen Organic (Total)	0.357	0.397	0.461	0.407	<0.26	0.385					0.539				
ALS LAB ID	**L1233797**	**L1245799**	**L1256678**	**I1265809**	**L1276517**	**L1285503**	**L1298960**	**L1312719**	**L1326032**	**L1344180**	**L1358222**	**L1375698**	**L1388680**	**L1399806**	**L1410216**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C1.27 - PC02
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Site ID	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02
Analytes	4-Feb-14	12-Mar-14	19-Mar-14	26-Mar-14	2-Apr-14	9-Apr-14	23-Apr-14	6-May-14	21-May-14	3-Jun-14	18-Jun-14	3-Jul-14	16-Jul-14	30-Jul-14	12-Aug-14
In Situ Parameters															
Conductivity µS/cm	908	356	719	852	964	929	1302	1067	873	888	807	975	873	821	966
Oxygen Dissolved %	73.5	78.8	82.6	70.4	79.4	80.2	86.1	107	93.3	86.8	84	86.4	80.3	72.2	84.7
Oxygen Dissolved	10.6	11.2	11.1	9.22	9.96	9.9	10.6	12.3	9.38	8.52	8.85	8.42	7.54	7.44	8.12
pH (unitless)	7.3	7.96	7.98	7.83	7.98	7.84	8.12	8.33	8.35	8.31	8.33	8.27	8.53	8.19	8.33
Redox Potential mV	-61.3	14.4	4	8.5	38.9	-1.1	88.1	195	60.1	166	85.1	84.8	126	126	78.9
Salinity ppt	0.85	0.32	0.62	0.71	0.77	0.73	1.04	0.78	0.54	0.53	0.52	0.58	0.5	0.52	0.57
Specific Conductivity µS/cm	1714	658	1243	1429	1533	1454	2031	1540	1079	1070	1049	1666	1001	1043	1135
Temperature °C	0.39	0.95	2.92	3.85	5.57	6.08	6.21	8.9	15	16.1	12.9	16.4	18.3	13.8	17.2
Total Dissolved Solids	1114	428	808	929	996	945	1320	1001	702	695	682	758	651	679	738
Turbidity NTU															
Physical Tests															
Acidity to pH 8.3 (as CaCO3)															
Alkalinity (Total as CaCO3)	455	160	319	381	388	367	375	390	286	304	326	428	401	381	388
Bicarbonate Alkalinity	455	160	319	381	388	367	375	390	286	299	312	408	375	381	360
Carbonate Alkalinity	<2	<2	<2	<2	<2	<2	<1	<2	<1	4.6	13.6	19.4	25.2	<2	28.1
Color TCU															
Hardness as CaCO3 (Dissolved)	760	282	567	691	674	690	911	760	485	478	482	551	507	591	535
Hydroxide Alkalinity	<2	<2	<2	<2	<2	<2	<1	<2	<1	<1	<1	<1	<1	<2	<1
pH (unitless)	8.17	7.93	8.19	8.17	8.18	8.14	8.32	8.25	8.36	8.46	8.4	8.54	8.48	8.25	8.45
Specific Conductivity µS/cm	1710	625	1220	1450	1400	1470	2030	1500	1040	1050	1040	1130	1080	1360	1130
Total Dissolved Solids	1000	421	818	1010	1000	1050	1510	1030	697	699	689	732	716	633	781
Total Suspended Solids	<3	61.4	<3	4.5	<3	<3	4.9	9.8	33.1	14.4	9.9	13.3	11.2	7.8	32.3
Turbidity NTU	0.67	29	1.35	0.95	0.67	0.43	2.38	20.4	7.97	4.5	1.23	3.06	2.55	1.88	10
Dissolved Anions															
Bromide	<1	0.051	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	137	27.8	67.3	88.9	85	96.6	107	63.3	64.4	62.8	62.3	56.1	60.3	84	65.4
Fluoride	<0.4	0.105	<0.2	<0.2	0.2	0.21	<0.4	0.23	0.21	0.23	0.257	0.42	0.27	0.265	0.313
Sulphate	380	141	295	362	363	375	734	442	218	199	183	179	146	280	186
Nutrients															
Ammonia (Total)	0.0201	0.268	0.1	0.0359	0.0199	0.0155	0.0156	0.0131	0.0118	0.0137	0.0173	0.0242	0.019	0.0363	0.0291
Nitrate (as N)	1.18	0.381	0.677	0.893	0.697	0.633	0.44	0.067	<0.05	<0.05	<0.05	0.06	0.09	0.149	<0.05
Nitrite (as N)	0.025	0.0097	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.015	<0.01
Nitrogen (Dissolved)															
Nitrogen (Total)									0.779						
Nitrogen Kjeldahl (Total)	0.375	1.64	0.695	0.514	0.461	0.387	0.989	1.07	0.803	0.76	0.751	1.01	0.905	0.618	1.32
Orthophosphate (Dissolved)	0.0212	0.432	0.0953	0.0648	0.0553	0.0415	0.178	0.0751	0.0696	0.0736	0.0877	0.106	0.133	0.0933	0.152
Phosphorus - Dissolved	0.0246	0.502	0.115	0.0746	0.0646	0.0503	0.198	0.0855	0.0836	0.0828	0.0914	0.127	0.154	0.0981	0.174
Phosphorus - Total	0.0292	0.671	0.117	0.0868	0.0708	0.0452	0.22	0.252	0.128	0.104	0.122	0.143	0.172	0.112	0.223
Cyanide															
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals															
Aluminum	<0.001	0.004	0.0021	0.0011	0.0153	<0.001	<0.001	0.0017	0.0016	0.0015	0.0016	0.0015	0.0026	0.0013	0.0019
Antimony	<0.0001	<0.0001	0.00011	<0.0001	0.00012	0.00012	0.00016	0.00014	0.00013	0.00012	<0.0001	0.00013	0.0001	<0.0001	0.00014
Arsenic	0.00122	0.00175	0.00174	0.0017	0.00187	0.00171	0.00303	0.00211	0.00215	0.00226	0.00242	0.00295	0.00304	0.00262	0.00322
Barium	0.0562	0.0256	0.0475	0.0527	0.0545	0.0533	0.0567	0.0638	0.0509	0.0507	0.0435	0.0501	0.0479	0.0516	0.0557
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.078	0.029	0.039	0.05	0.054	0.057	0.043	0.035	0.042	0.036	0.037	0.045	0.047	0.057	0.045
Cadmium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	117	44.9	89.2	104	107	108	111	121	78.1	78.7	77.7	86.7	80.8	91.1	88.6
Chromium	<0.0001	0.00012	0.00015	0.00017	0.00021	0.00022	0.00021	0.00011	0.00014	0.00012	0.00013	0.00013	0.00014	0.00012	0.00015
Cobalt	0.00024	0.00025	0.00018	0.00016	0.00015	0.00013	0.00017	0.00015	0.00012	0.00012	0.00013	0.00018	0.00016	0.00017	0.00021
Copper	0.0015	0.00374	0.00257	0.0023	0.00242	0.00218	0.00259	0.00221	0.00269	0.00261	0.00209	0.00295	0.00235	0.00196	0.00224
Dissolved Cadmium (by saltwater extrac															
Iron	0.039	0.073	0.036	0.028	0.061	0.024	0.022	0.018	0.015	0.02	0.019	0.02	0.025	0.023	0.038
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.00879	0.00307	0.00615	0.00711	0.00801	0.00812	0.00979	0.00701	0.00726	0.0062	0.00588	0.00853	0.00763	0.0087	0.00825
Magnesium	114	41.2	83.6	105	98.9	102	154	111	70.4	68.4	70	81.1	74.2	88.2	76.2
Manganese	0.0853	0.108	0.0793	0.084	0.0796	0.0782	0.0371	0.0689	0.0309	0.0316	0.0298	0.0291	0.0276	0.108	0.0483
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.00881	0.00835	0.0152	0.0138	0.0137	0.0121	0.0122	0.0147	0.014	0.0116	0.0104	0.0128	0.0116	0.0125	0.0152
Nickel	0.00421	0.00218	0.00254	0.00265	0.00263	0.00297	0.00225	0.00233	0.0018	0.00205	0.00228	0.00266	0.00284	0.0032	0.00281
Phosphorus	<0.05	0.528	0.111	0.079	0.075	0.053	0.19	0.093	0.085	0.085	0.096	0.118	0.151	0.106	0.18
Potassium	19.8	13.1	16.2	17.8	16.1	17.4	26.6	18.2	15.1	14.7	14.4	18.7	16.8	20.1	16.8
Selenium	0.00139	0.00058	0.00101	0.0015	0.00166	0.00211	0.00113	0.00058	0.00041	0.00036	0.00027	0.00031	0.00029	0.00029	0.00029
Silicon	9.34	4.5	7.3	8.18	7.53	7.37	7.4	6.89	5.04	5.46	5.93	6.38	7.41	8.67	10.8
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	103	29.3	62.3	76.3	78.3	85.9	127	74.2	58.8	52.1	53.3	61.2	58.9	79.9	61.3
Strontium	1.04	0.372	0.798	0.889	0.939	1.02	1.24	0.99	0.672	0.675	0.619	0.749	0.715	0.847	0.77
Sulphur	123	46.9	95.2	112	113	119	236	136	74.3	68.8	56.5	58.6	47.7	89.7	59.7
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.00302	0.000916	0.00221	0.00269	0.00246	0.00259	0.00379	0.00237	0.00177	0.00156	0.00132	0.00187	0.00139	0.00195	0.00133
Vanadium	0.0027	0.0026	0.0031	0.0035	0.0037	0.004	0.0033	0.0029	0.0033	0.0028	0.0024	0.003	0.0027	0.0029	0.0035
Zinc	<0.001	0.0017	0.0033	0.0028	0.0014	0.0018	0.0019	0.0011	0.0014	0.0018	0.0014	0.0012	<0.001	<0.001	0.0012
Total Metals															
Aluminum	0.0234	1.36	0.0608	0.0443	<0.003	0.0266	0.215	1.63	0.493	0.262	0.203	0.108	0.216	0.0993	0.673
Antimony	0.0001	0.00013	0.00012	<0.0001	0.00013	0.00011	0.00018	0.0002	0.00016	0.00014	<0.0001	0.00013	0.00014	0.00011	0.00018
Arsenic	0.00129	0.0022	0.00176	0.00185	0.00174	0.00171	0.00308	0.00264	0.00215	0.00234	0.00237	0.00286	0.0032	0.00247	0.00355
Barium	0.0555	0.0416	0.0465	0.0528	0.0547	0.0551	0.0594	0.0802	0.0536	0.0524	0.0449	0.0535	0.0513	0.053	0.0652
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.084	0.031	0.04	0.051	0.058	0.059	0.046	0.037	0.042	0.04	0.043	0.044	0.051	0.06	0.055
Cadmium	0.000012	0.000025	<0.00001	<0.00001	<0.00001	<0.00001	0.000012	0.000027	0.000014	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	0.00001
Calcium	117	44.3	87.3	103	103	103	114	115	74.5	75.5	75.7	83	80.6	90.4	89.7
Chromium	0.00027	0.00367	0.00041	0.00029	0.00022	0.00034	0.00084	0.00476	0.00152	0.00088	0.00073	0.00049	0.00074	0.00052	0.00194
Cobalt	0.00025	0.00137	0.00021	0.00019	0.00014	0.00016	0.00034	0.00159	0.00054	0.00038	0.00029	0.00034	0.00036	0.00024	0.0008
Copper	0.00241	0.0111	0.00328	0.00287	0.00221	0.00276	0.0039	0.00992	0.00511	0.00414	0.00323	0.0041	0.00369	0.00292	0.00556
Iron	0.088	1.87	0.126	0.1	0.02	0.065	0.313	2.24	0.616	0.4	0.28	0.184	0.322	0.158	0.871
Lead	<0.00005	0.000483	<0.00005	<0.00005	<0.00005	<0.00005	0.000084	0.000611	0.000182	0.000116	0.00007	0.000107	0.000085	<0.00005	0.00025
Lithium	0.00924	0.0036	0.00602	0.00728	0.00786	0.00788	0.00995	0.00752	0.00717	0.00612	0.0067	0.00767	0.00781	0.00866	0.00851
Magnesium	113	40.5	79.5	101	95.6	97.9	157	106	67.3	66	65.6	79.5	75.1	88.5	77.6
Manganese	0.0866	0.237	0.082	0.089	0.0786	0.0793	0.0563	0.361	0.0977	0.0802	0.0662	0.0872	0.0781	0.123	0.211
Mercury	<0.00001	<0.00001	<0.00001	0.000025	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.00948	0.0087	0.0162	0.0148	0.0143	0.012	0.0132	0.0142	0.0141	0.0117	0.0111	0.0127	0.0127	0.013	0.0161
Nickel	0.00454	0.00815	0.00284	0.00303	0.00264	0.00307	0.00336	0.00955	0.00382	0.00329	0.00311	0.0036	0.00384	0.00361	0.00577
Phosphorus	<0.05	0.661	0.129	0.083	0.054	0.056	0.237	0.227	0.113	0.096	0.114	0.145	0.169	0.102	0.247
Potassium	19.6	12.7	15.5	17.2	15.5	16.5	27.7	16.9	14.8	14.1	13.6	17.8	17	20.3	17.4
Selenium	0.0013	0.00064	0.00093	0.00148	0.00162	0.00197	0.00109	0.0006	0.00038	0.00037	0.00026	0.0003	0.00031	0.00025	0.00034
Silicon	9.54	7.78	7.18	8.23	7.32	7.12	8.24	10.7	6.07	5.98	6.23	6.53	7.97	8.95	12.4
Silver	<0.00001	0.000018	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000014	0.000033	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	103	28.7	59.7	78.8	81.6	83.5	130	71.5	55.5	52.2	52.1	61.3	61.3	80.3	62.7
Strontium	1.07	0.381	0.801	0.929	0.902	0.989	1.26	0.979	0.654	0.646	0.634	0.774	0.728	0.878	0.802
Sulphur	127	45.5	96.6	117	111	117	242	140	70.9	67.1	56.1	59.8	49.3	92	62.2
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	0.051	<0.01	<0.01	<0.01	<0.01	<0.01	0.067	0.02	0.011	<0.01	<0.01	<0.01	<0.01	0.026
Total Cadmium (by saltwater extraction)															
Uranium	0.003	0.00101	0.00223	0.00287	0.00258	0.00262	0.00399	0.0024	0.00179	0.00162	0.00133	0.00189	0.00155	0.00205	0.00147
Vanadium	0.003	0.0061	0.0033	0.0038	0.0036	0.004	0.004	0.0073	0.0049	0.0036	0.0034	0.0035	0.0033	0.0034	0.0054
Zinc	<0.003	0.0074	<0.003	<0.003	<0.003	<0.003	<0.003	0.0077	0.0035	<0.003	<0.003	<0.003	<0.003	<0.003	0.0051
Organics															
Carbon Organic (Dissolved)	7	13.3	8.56	7.61	7.65	7.21	14.6	11.5	12.7	12.7	11.9	14.9	15.3	11.1	18.1
Carbon Organic (Total)	6.93	15.3	9.03	7.71	7.53	6.84	17.3	13.9	13.4	12.9	12.2	15	15.6	12.9	19
Nitrogen Organic (Dissolved)															
Nitrogen Organic (Total)															
ALS LAB ID	**L1418933**	**L1432163**	**L1434695**	**L1437439**	**L1439467**	**L1441961**	**L1446462**	**L1451608**	**L1458340**	**L1465108**	**L1473827**	**L1481215**	**L1488886**	**L1495443**	**L1502292**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID	PC02	PC02
Analytes	**4-Sep-14**	**17-Sep-14**
In Situ Parameters		
Conductivity µS/cm		1154
Oxygen Dissolved %		72.5
Oxygen Dissolved		7.88
pH (unitless)	7.95	7.71
Redox Potential mV		78.4
Salinity ppt		0.079
Specific Conductivity µS/cm		1558
Temperature °C	11.4	11.4
Total Dissolved Solids		1013
Turbidity NTU		
Physical Tests		
Acidity to pH 8.3 (as CaCO3)		
Alkalinity (Total as CaCO3)	396	439
Bicarbonate Alkalinity	390	439
Carbonate Alkalinity	5.7	<1
Color TCU		
Hardness as CaCO3 (Dissolved)	580	702
Hydroxide Alkalinity	<1	<1
pH (unitless)	8.31	8.27
Specific Conductivity µS/cm	1320	1610
Total Dissolved Solids	876	1200
Total Suspended Solids	7	6.7
Turbidity NTU	2.47	2.17
Dissolved Anions		
Bromide	<0.5	<0.5
Chloride	83	109
Fluoride	0.253	0.23
Sulphate	255	369
Nutrients		
Ammonia (Total)	0.026	0.0248
Nitrate (as N)	0.099	0.113
Nitrite (as N)	0.012	0.013
Nitrogen (Dissolved)		
Nitrogen (Total)		
Nitrogen Kjeldahl (Total)	0.571	0.457
Orthophosphate (Dissolved)	0.084	0.0448
Phosphorus - Dissolved	0.0917	0.0509
Phosphorus - Total	0.0763	0.0529
Cyanide		
Cyanide (Free)	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005
Dissolved Metals		
Aluminum	0.0011	0.0012
Antimony	<0.0001	<0.0001
Arsenic	0.00236	0.00176
Barium	0.0505	0.0569
Beryllium	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005
Boron	0.067	0.085
Cadmium	<0.00001	<0.00001
Calcium	92.6	112
Chromium	0.00011	0.00012
Cobalt	0.00017	0.00019
Copper	0.00181	0.00193
Dissolved Cadmium (by saltwater extrac		
Iron	0.031	0.022
Lead	<0.00005	<0.00005
Lithium	0.00849	0.0105
Magnesium	84.6	103
Manganese	0.103	0.196
Mercury	<0.00001	<0.00001
Molybdenum	0.0119	0.0119
Nickel	0.00329	0.0041
Phosphorus	0.099	0.062
Potassium	18.6	21.1
Selenium	0.00023	0.00023
Silicon	9.79	9.98
Silver	<0.00001	<0.00001
Sodium	79.6	103
Strontium	0.807	1.06
Sulphur	82.8	116
Thallium	<0.00001	<0.00001
Tin	<0.0001	<0.0001
Titanium	<0.01	<0.01
Uranium	0.00187	0.00268
Vanadium	0.0028	0.0034
Zinc	<0.001	0.0013
Total Metals		
Aluminum	0.198	0.0715
Antimony	0.00013	<0.0001
Arsenic	0.00236	0.00185
Barium	0.0528	0.058
Beryllium	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005
Boron	0.068	0.092
Cadmium	<0.00001	0.000011
Calcium	91.6	112
Chromium	0.00067	0.00049
Cobalt	0.00034	0.00025
Copper	0.00326	0.00331
Iron	0.271	0.138
Lead	0.000087	<0.00005
Lithium	0.00815	0.0107
Magnesium	84.4	104
Manganese	0.133	0.212
Mercury	<0.00001	<0.00001
Molybdenum	0.0125	0.013
Nickel	0.00414	0.00444
Phosphorus	0.112	0.056
Potassium	18.6	21.3
Selenium	0.00022	0.00028
Silicon	10.2	10.3
Silver	<0.00001	<0.00001
Sodium	81.1	106
Strontium	0.83	1.13
Sulphur	84.2	121
Thallium	<0.00001	<0.00001
Tin	<0.0001	<0.0001
Titanium	<0.01	<0.01
Total Cadmium (by saltwater extraction)		
Uranium	0.00197	0.00287
Vanadium	0.0033	0.0041
Zinc	<0.003	<0.003
Organics		
Carbon Organic (Dissolved)	11.6	8.79
Carbon Organic (Total)	11.3	8.9
Nitrogen Organic (Dissolved)		
Nitrogen Organic (Total)		
ALS LAB ID	**L1513418**	**L1519657**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		PC02WH
Analytes	**MDL**	**12-Aug-14**
In Situ Parameters		
Conductivity µS/cm	...	
Oxygen Dissolved %	...	
Oxygen Dissolved	...	
pH (unitless)	...	
Redox Potential mV	...	
Salinity ppt	...	
Specific Conductivity µS/cm	...	
Temperature °C	...	
Total Dissolved Solids	...	
Turbidity NTU	...	
Physical Tests		
Acidity to pH 8.3 (as CaCO3)	1	
Alkalinity (Total as CaCO3)	1 to 2	383
Bicarbonate Alkalinity	1 to 2	383
Carbonate Alkalinity	1 to 2	<2
Color TCU	5	
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	738
Hydroxide Alkalinity	1 to 2	<2
pH (unitless)	0.01 to 0.1	7.94
Specific Conductivity µS/cm	2	1670
Total Dissolved Solids	1 to 2	1240
Total Suspended Solids	3	90
Turbidity NTU	0.1	83
Dissolved Anions		
Bromide	0.05 to 2.495	<0.5
Chloride	0.5 to 1	127
Fluoride	0.02 to 0.4	0.273
Sulphate	0.5 to 1	418
Nutrients		
Ammonia (Total)	0.005 to 0.05	0.0153
Nitrate (as N)	0.005 to 0.1	0.172
Nitrite (as N)	0.001 to 0.02	<0.01
Nitrogen (Dissolved)	0.05 to 0.1	
Nitrogen (Total)	0.0025 to 0.11	
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.449
Orthophosphate (Dissolved)	0.001 to 0.01	0.0012
Phosphorus - Dissolved	0.002 to 0.02	0.0045
Phosphorus - Total	0.002 to 0.02	0.0325
Cyanide		
Cyanide (Free)	0.005	<0.005
Cyanide (Total)	0.005	<0.005
Cyanide (WAD)	0.005	<0.005
Dissolved Metals		
Aluminum	0.001 to 0.025	0.004
Antimony	0.0001 to 0.0025	0.00014
Arsenic	0.0001 to 0.0025	0.00174
Barium	5E-005 to 0.02	0.0429
Beryllium	0.0001 to 0.005	<0.0001
Bismuth	0.0005 to 0.2	<0.0005
Boron	0.01 to 0.1	0.091
Cadmium	1E-005 to 8.5E-005	0.000016
Calcium	0.05 to 0.1	125
Chromium	0.0001 to 0.018	<0.0001
Cobalt	0.0001 to 0.0015	0.00033
Copper	0.0002 to 0.006	0.00239
Dissolved Cadmium (by saltwater extrac	0.00002	
Iron	0.01 to 0.03	0.069
Lead	5E-005 to 0.0025	<0.00005
Lithium	0.0005 to 0.025	0.0106
Magnesium	0.1	103
Manganese	5E-005 to 0.0015	0.00952
Mercury	1E-005 to 5E-005	<0.00001
Molybdenum	5E-005 to 0.005	0.00976
Nickel	0.0005 to 0.005	0.00512
Phosphorus	0.05 to 0.3	<0.05
Potassium	0.05 to 2	19.9
Selenium	0.0001 to 0.006	0.00091
Silicon	0.05	10
Silver	1E-005 to 0.0001	<0.00001
Sodium	0.05 to 2	104
Strontium	0.0001 to 0.005	0.984
Sulphur	0.5	127
Thallium	1E-005 to 0.001	<0.00001
Tin	0.0001 to 0.0025	<0.0001
Titanium	0.01	<0.01
Uranium	1E-005 to 0.001	0.00247
Vanadium	0.001 to 0.03	0.0097
Zinc	0.001 to 0.006	0.0034
Total Metals		
Aluminum	0.003 to 0.025	0.0645
Antimony	0.0001 to 0.0025	0.00023
Arsenic	0.0001 to 0.0025	0.00278
Barium	5E-005 to 0.02	0.0449
Beryllium	0.0001 to 0.005	<0.0001
Bismuth	0.0005 to 0.2	<0.0005
Boron	0.01 to 0.1	0.101
Cadmium	1E-005 to 8.5E-005	0.000061
Calcium	0.05 to 0.1	122
Chromium	0.0001 to 0.005	0.00043
Cobalt	0.0001 to 0.0015	0.00106
Copper	0.0005 to 0.007	0.00917
Iron	0.01 to 0.03	2.69
Lead	5E-005 to 0.0025	0.000737
Lithium	0.0005 to 0.025	0.0108
Magnesium	0.1	103
Manganese	5E-005 to 0.0015	0.0117
Mercury	1E-005 to 5E-005	<0.00001
Molybdenum	5E-005 to 0.005	0.015
Nickel	0.0005 to 0.005	0.013
Phosphorus	0.05 to 0.3	0.066
Potassium	0.05 to 2	19.6
Selenium	0.0001 to 0.006	0.00085
Silicon	0.05	9.98
Silver	1E-005 to 0.0001	<0.00001
Sodium	0.05 to 2	102
Strontium	0.0001 to 0.005	1.04
Sulphur	0.5	132
Thallium	1E-005 to 0.001	0.000014
Tin	0.0001 to 0.0025	<0.0001
Titanium	0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002	
Uranium	1E-005 to 0.001	0.00313
Vanadium	0.001 to 0.03	0.041
Zinc	0.003 to 0.006	0.0123
Organics		
Carbon Organic (Dissolved)	0.5 to 5	7.15
Carbon Organic (Total)	0.5 to 5	7.13
Nitrogen Organic (Dissolved)	0.05 to 0.26	
Nitrogen Organic (Total)	0.05 to 0.3	
ALS LAB ID		**L1502292**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C1.29 - PC02.3
PAGE 1 OF 1

Site ID		PC02.3	PC02.3	PC02.3	PC02.3	PC02.3	PC02.3	PC02.3	PC02.3
Analytes	**MDL**	**4-Jun-14**	**18-Jun-14**	**3-Jul-14**	**16-Jul-14**	**30-Jul-14**	**12-Aug-14**	**4-Sep-14**	**17-Sep-14**
In Situ Parameters									
Conductivity µS/cm	...	695	709	933	774	783	739		751
Oxygen Dissolved %	...	88.7	89.4	96.3	89.3	79.6	87.5		97.9
Oxygen Dissolved	...	8.62	8.96	9.24	8.26	7.74	8.21		10.9
pH (unitless)	...	8.41	8.48	8.34	8.61	8.74	8.24	8.5	8.38
Redox Potential mV	...	154	96	87.3	134	121	45.4		84.5
Salinity ppt	...	0.41	0.43	0.55	0.43	0.46	0.42		0.52
Specific Conductivity µS/cm	...	827	875	1096	875	933	848		1044
Temperature °C	...	16.7	15.1	17.2	19	16.6	18.3	12.3	10.3
Total Dissolved Solids	...	537	568	713	569	607	551		678
Turbidity NTU	...								
Physical Tests									
Acidity to pH 8.3 (as CaCO3)	1								
Alkalinity (Total as CaCO3)	1 to 2	279	301	449	395	404	282	390	404
Bicarbonate Alkalinity	1 to 2	270	286	428	368	377	265	364	374
Carbonate Alkalinity	1 to 2	8.3	15.7	20.6	27	27.3	16.3	25.4	30.1
Color TCU	5								
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	369	402	527	445	459	375	465	497
Hydroxide Alkalinity	1 to 2	<1	<1	<1	<1	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1	8.48	8.44	8.55	8.54	8.5	8.41	8.5	8.54
Specific Conductivity µS/cm	2	799	855	1060	945	1020	845	1020	1080
Total Dissolved Solids	1 to 2	498	553	641	617	911	580	665	732
Total Suspended Solids	3	7.8	8.6	11.7	11.8	5.5	17.8	3	4.1
Turbidity NTU	0.1	4.7	2.91	2.86	3.29	1.27	5.53	1.38	0.76
Dissolved Anions									
Bromide	0.05 to 2.495	<0.25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	0.5 to 1	54.4	52.4	49	52.1	54.6	59.9	57	57.5
Fluoride	0.02 to 0.4	0.22	0.235	0.44	0.274	0.277	0.274	0.269	0.25
Sulphate	0.5 to 1	87.4	109	130	80.7	118	108	127	160
Nutrients									
Ammonia (Total)	0.005 to 0.05	0.0099	0.021	0.0219	0.0177	0.0279	0.0191	0.0202	0.014
Nitrate (as N)	0.005 to 0.1	<0.025	<0.05	<0.05	<0.05	0.137	<0.05	0.177	0.137
Nitrite (as N)	0.001 to 0.02	<0.005	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	<0.01
Nitrogen (Dissolved)	0.05 to 0.1								
Nitrogen (Total)	0.0025 to 0.11								
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.784	0.856	1.09	1.04	0.956	1.16	0.778	0.617
Orthophosphate (Dissolved)	0.001 to 0.01	0.0385	0.0317	0.0824	0.0999	0.108	0.0831	0.105	0.104
Phosphorus - Dissolved	0.002 to 0.02	0.0505	0.0432	0.0975	0.124	0.119	0.105	0.148	0.123
Phosphorus - Total	0.002 to 0.02	0.0734	0.0567	0.13	0.137	0.127	0.141	0.161	0.0945
Cyanide									
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals									
Aluminum	0.001 to 0.025	0.0018	0.0069	0.0017	0.0026	0.0016	0.003	0.002	0.0015
Antimony	0.0001 to 0.0025	0.00011	<0.0001	0.00014	0.00012	<0.0001	0.00014	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00175	0.00158	0.00224	0.00226	0.0025	0.00207	0.00203	0.00213
Barium	5E-005 to 0.02	0.0519	0.0493	0.0596	0.0527	0.05	0.0535	0.0526	0.0517
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.03	0.029	0.033	0.036	0.033	0.04	0.032	0.035
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	65.2	69.1	83.7	72.3	74.6	67.9	78.2	82.3
Chromium	0.0001 to 0.018	<0.0001	0.00013	0.00012	0.00012	0.00011	0.00013	0.00013	0.00012
Cobalt	0.0001 to 0.0015	0.0001	0.0001	0.00014	0.00013	0.00014	0.00012	0.00014	<0.0001
Copper	0.0002 to 0.006	0.00234	0.00218	0.00332	0.00241	0.00252	0.00221	0.00207	0.00249
Dissolved Cadmium (by saltwater extrac	0.00002								
Iron	0.01 to 0.03	0.016	0.018	0.025	0.026	0.012	0.026	0.022	0.017
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00561	0.00532	0.00845	0.00668	0.00728	0.00677	0.00664	0.00772
Magnesium	0.1	50	55.7	77.2	64.1	66.3	49.8	65.6	70.8
Manganese	5E-005 to 0.0015	0.00792	0.00799	0.0113	0.00896	0.00903	0.018	0.0293	0.0335
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00992	0.00923	0.0123	0.0098	0.0147	0.0192	0.0149	0.0184
Nickel	0.0005 to 0.005	0.00168	0.00175	0.00212	0.0021	0.0025	0.00186	0.0023	0.00218
Phosphorus	0.05 to 0.3	0.053	<0.05	0.107	0.118	0.126	0.096	0.115	0.109
Potassium	0.05 to 2	12.7	12.2	18.7	15.3	17.5	12.7	16	16.3
Selenium	0.0001 to 0.006	0.00022	0.0002	0.00038	0.00031	0.00027	0.0002	0.00018	0.00018
Silicon	0.05	4.94	4.33	7.09	8.15	8.07	8.79	10.8	9.64
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	39.2	42.1	54.7	50.3	54	44	53.5	56.8
Strontium	0.0001 to 0.005	0.472	0.49	0.669	0.591	0.627	0.526	0.612	0.71
Sulphur	0.5	30.9	34.8	43.2	27	38.2	34.8	41.4	51.6
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00108	0.00106	0.00176	0.00115	0.00132	0.00116	0.00112	0.00127
Vanadium	0.001 to 0.03	0.0027	0.0025	0.0028	0.002	0.003	0.0029	0.0024	0.0026
Zinc	0.001 to 0.006	<0.001	<0.001	<0.001	<0.001	0.0013	<0.001	<0.001	<0.001
Total Metals									
Aluminum	0.003 to 0.025	0.307	0.193	0.131	0.225	0.0823	0.329	0.0612	0.041
Antimony	0.0001 to 0.0025	0.00014	0.00011	0.00014	0.00014	0.00012	0.00017	0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00172	0.00166	0.0023	0.00219	0.00232	0.00217	0.00204	0.00217
Barium	5E-005 to 0.02	0.0513	0.0494	0.0615	0.0539	0.0499	0.0565	0.0549	0.0527
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.031	0.033	0.036	0.038	0.036	0.047	0.036	0.04
Cadmium	1E-005 to 8.5E-005	<0.00001	0.000012	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	62.1	65	79.8	70.1	73.4	67.4	78.2	82.7
Chromium	0.0001 to 0.005	0.00071	0.00053	0.00041	0.00059	0.0003	0.0008	0.00042	0.0003
Cobalt	0.0001 to 0.0015	0.00032	0.00025	0.00028	0.00033	0.00021	0.0004	0.0002	0.00013
Copper	0.0005 to 0.007	0.00434	0.00376	0.00473	0.00401	0.00329	0.00585	0.0027	0.00311
Iron	0.01 to 0.03	0.403	0.279	0.218	0.366	0.13	0.477	0.113	0.074
Lead	5E-005 to 0.0025	0.000097	0.000053	0.000057	0.000066	<0.00005	0.000102	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.0054	0.00579	0.00741	0.0066	0.00722	0.00695	0.00646	0.00785
Magnesium	0.1	47.7	51.7	75.2	62.8	66.1	49.2	66	71.5
Manganese	5E-005 to 0.0015	0.0384	0.0277	0.036	0.0479	0.0223	0.0701	0.0458	0.0413
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00969	0.00955	0.0123	0.0102	0.0153	0.0188	0.0158	0.0204
Nickel	0.0005 to 0.005	0.00236	0.00224	0.00272	0.00265	0.0027	0.00277	0.00269	0.00252
Phosphorus	0.05 to 0.3	0.081	0.068	0.105	0.14	0.128	0.121	0.131	0.111
Potassium	0.05 to 2	11.8	11.5	17.4	14.7	17.7	12.7	15.9	16.3
Selenium	0.0001 to 0.006	0.00024	0.00022	0.00037	0.00026	0.00024	0.00023	0.00018	0.00018
Silicon	0.05	5.39	4.58	7.22	8.4	8.17	9.5	10.9	9.73
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	39.2	40.9	57.3	49.3	52.4	43.6	54.2	59.5
Strontium	0.0001 to 0.005	0.448	0.493	0.657	0.589	0.626	0.518	0.636	0.738
Sulphur	0.5	30.2	33.9	43.6	27.1	39	35	42.4	53.8
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	0.013	0.011	<0.01	<0.01	<0.01	0.013	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002								
Uranium	1E-005 to 0.001	0.00111	0.00107	0.00173	0.00123	0.00136	0.0012	0.00123	0.00138
Vanadium	0.001 to 0.03	0.0035	0.0032	0.0034	0.0026	0.0034	0.004	0.0028	0.0032
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics									
Carbon Organic (Dissolved)	0.5 to 5	12.9	13.2	17.1	17.2	15.6	16.9	14.3	11.9
Carbon Organic (Total)	0.5 to 5	13.6	13.2	16.7	17	15.8	17.1	14.3	12.1
Nitrogen Organic (Dissolved)	0.05 to 0.26								
Nitrogen Organic (Total)	0.05 to 0.3								
ALS LAB ID		**L1465478**	**L1473827**	**L1481215**	**L1488886**	**L1495443**	**L1502292**	**L1513418**	**L1519657**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C1.30 - PC02.5
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Site ID		PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5
Analytes	**MDL**	**14-Apr-11**	**28-Jun-11**	**30-Aug-11**	**28-Sep-11**	**25-Oct-11**	**5-Dec-11**	**9-Jan-12**	**6-Mar-12**	**10-Apr-12**	**25-Apr-12**	**2-May-12**	**9-May-12**	**16-May-12**	**24-May-12**
In Situ Parameters															
Conductivity µS/cm	...	718	679	659		756	783	698	205	512	801	786	456	1111	811
Oxygen Dissolved %	...	66.4	74.7	70.8	57.5	46	66.8	64.3	79.9	65.4	65.5	69.3	65.8	76.2	75
Oxygen Dissolved	...	8.97	7.27	7.39	6.48	5.95	9.66	9.24	11.7	9.03	7.07	8.09	7.56	8.17	7.97
pH (unitless)	...	7.58	7.82	7.75	7.78	7.77	7.8	7.76	7.71	7.69	7.66	7.99	7.57	8.08	8.13
Redox Potential mV	...	117	155	146	30.2	154	47.1	30.3	76.4	110	109	133	123	136	51
Salinity ppt	...		0.4			0.62	0.73	0.65	0.19	0.45	0.85	0.58	0.32	0.75	0.53
Specific Conductivity µS/cm	...	1252	809	848	1166	1247	1472	316	394	914	1074	1153	653	1479	1066
Temperature °C	...	2.66	16.6	13.3	9.86	4.37	0.49	0.41	0.05	1.99	11.7	8.34	9.2	12	12.5
Total Dissolved Solids	...	814	526			811	957	857	256	594	698	749	424	961	
Turbidity NTU	...		-0.7	3.2	10.2	12.6	5.8	5.5	13.6		9.5	3.8	6	3.1	1.8
Physical Tests															
Acidity to pH 8.3 (as CaCO3)	1				2.2	1.4									
Alkalinity (Total as CaCO3)	1 to 2	409	277	289	444	489	550	530	131	319	381	413	444	428	365
Bicarbonate Alkalinity	1 to 2				444	489		530	131	312	381	413	444	428	347
Carbonate Alkalinity	1 to 2				<2	<2		<1	<2	7.5	<1	<1	<1	<1	18
Color TCU	5	31.4	37.9	43.1	42.6	38.1	32.2	23.7	100	21.4	32.9	35.3	36.5	48.5	35.7
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	579	340	347	495	574	644	613	157	422	509	541	578	691	482
Hydroxide Alkalinity	1 to 2				<2	<2		<1	<2	<1	<1	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1	8.31	8.27	8.31	8.24	8.27	8.39	8.23	8	8.41	8.32	8.23	8.34	8.38	8.37
Specific Conductivity µS/cm	2	1220	758	832	1140	1280	1370	1360	393	908	1060	1130	1220	1440	1040
Total Dissolved Solids	1 to 2	831	475	508	704	788	868	823	272	588	693	761	804	1050	682
Total Suspended Solids	3	3.2	6.4	7.3	27.3	34.4	5	6.7	14.7	5.3	15.3	49.7	7.8	8.8	3.8
Turbidity NTU	0.1	2.51	1.51	2.25		13.1	4.18	7.22	12.2	3.66	5.41	12.1	5.16	2.71	2.41
Dissolved Anions															
Bromide	0.05 to 2.495	<1.2	<0.25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	0.5 to 1	52.9	49.4	55.3	66.7	73	77.2	73.1	15.6	40.4	53.7	57	61.4	57.3	58.4
Fluoride	0.02 to 0.4	<0.2	0.27	0.22	0.26	0.28	0.24	0.23	<0.1	<0.2	0.24	0.22	0.23	0.24	0.23
Sulphate	0.5 to 1	241	70.7	77.9	109	139	154	152	51.8	147	176	178	188	371	176
Nutrients															
Ammonia (Total)	0.005 to 0.05	0.0581	0.0204	0.0252	0.0429	0.0243	0.164	0.151	0.108	0.142	0.0455	0.0346	0.0356	0.0198	0.0179
Nitrate (as N)	0.005 to 0.1	0.051	<0.025	<0.05	<0.05	0.062	0.06	<0.05	0.139	<0.05	0.108	0.063	<0.05	0.064	<0.05
Nitrite (as N)	0.001 to 0.02	<0.01	<0.005	<0.01	<0.01	<0.01	0.013	0.012	0.0104	<0.01	0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen (Dissolved)	0.05 to 0.1		1.03	1.21	0.97	0.7		0.66	1.58	0.64	0.84	0.83	0.82	1.11	0.73
Nitrogen (Total)	0.0025 to 0.11	0.802	1.05	1.24	1.02	1.09	0.93	0.834	1.99	0.849	1.21	0.806	0.873	1.15	0.833
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.751	1.05	0.999	1.02	1.02	1.05	0.822	1.84	0.849	1.09	0.743	0.873	1.09	0.833
Orthophosphate (Dissolved)	0.001 to 0.01		0.035												
Phosphorus - Dissolved	0.002 to 0.02	0.118	0.0529	0.0805	0.237	0.237	0.248	0.166	0.77	0.0779	0.111	0.122	0.135	0.0856	0.0715
Phosphorus - Total	0.002 to 0.02	0.138	0.0661	0.0953	0.289	0.323	0.291	0.234	0.965	0.116	0.152	0.22	0.171	0.094	0.0851
Cyanide															
Cyanide (Free)	0.005		<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005		0.0085		0.0144	0.0111	0.0071	0.0066	0.019	0.0082	<0.005	0.0056	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005		<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals															
Aluminum	0.001 to 0.025	<0.005	<0.005	<0.005	<0.005	<0.003	<0.003	<0.003	0.0092	<0.003	<0.003	<0.003	<0.003	<0.003	0.0016
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	0.0001	0.00011	0.00012	<0.0001
Arsenic	0.0001 to 0.0025	0.00161	0.00159	0.00172	0.00251	0.00235	0.00203	0.00166	0.00136	0.00123	0.00209	0.00213	0.00228	0.00153	0.0014
Barium	5E-005 to 0.02	0.055	0.051	0.05	0.066	0.0632	0.0723	0.0715	0.0233	0.0539	0.0692	0.0642	0.0692	0.0706	0.048
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.2	<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	0.031	0.029	0.029	0.026	0.023	0.031	0.031	0.034	0.036	0.03
Cadmium	1E-005 to 8.5E-005	0.000033	0.000025	<0.000017	<0.000017	<0.00001	<0.00001	<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	0.000017	<0.00001
Calcium	0.05 to 0.1	94.9	60.4	58.3	81.3	94.9	101	98.2	25.9	65.4	82.7	86.1	95.3	102	77.2
Chromium	0.0001 to 0.018	<0.0015	<0.002	<0.001	<0.001	0.00017	0.00016	0.00014	0.00014	0.0001	<0.0001	0.00012	0.00016	0.00014	0.00013
Cobalt	0.0001 to 0.0015	<0.0003	<0.0003	<0.0003	<0.0003	0.00033	0.00037	0.00031	0.0003	0.00022	0.00019	0.00017	0.0002	0.00018	0.00014
Copper	0.0002 to 0.006	0.0016	0.0021	0.0015	0.0013	0.00116	0.00091	0.00083	0.00489	0.00091	0.00154	0.00186	0.00164	0.00187	0.00195
Dissolved Cadmium (by saltwater extrac	0.00002														
Iron	0.01 to 0.03	0.063	0.042	0.043	0.089	0.119	0.129	0.101	0.137	0.105	0.061	0.068	0.07	0.052	0.032
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	<0.005	0.0061	0.0061	0.0072	0.00624	0.00828	0.00684	0.00173	0.00474	0.00549	0.00633	0.0073	0.00821	0.00508
Magnesium	0.1	83	46	48.9	71	81.9	94.9	89.4	22.4	62.9	73.4	79.2	82.5	106	70.2
Manganese	5E-005 to 0.0015	0.149	0.0266	0.0416	0.384	0.616	0.826	0.721	0.162	0.423	0.177	0.129	0.178	0.0598	0.0444
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0087	0.0058	0.0085	0.0051	0.00459	0.00372	0.00469	0.00994	0.0103	0.0104	0.00775	0.0069	0.0218	0.0119
Nickel	0.0005 to 0.005	0.0024	0.0021	0.0015	0.0024	0.00239	0.00221	0.00209	0.00253	0.00168	0.00234	0.00235	0.00248	0.00197	0.00184
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.83	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	14.9	12.7	14.8	16.8	16.3	20.8	16.4	15.6	11.8	15.6	16.4	16.6	20.2	14.6
Selenium	0.0001 to 0.006	<0.001	<0.001	<0.001	<0.001	0.00019	0.00017	0.00015	0.00018	0.00012	0.00016	0.00017	0.00017	0.00024	0.00019
Silicon	0.05	8.97	3.87	7.29	13	14.1	12.8	12	4.35	6.7	7.78	8.06	8.8	7.6	4.77
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	63.8	44.4	43	62.1	63.4	81.2	70.2	15.2	42.6	55	60.3	68.4	78.2	55.2
Strontium	0.0001 to 0.005	0.75	0.473	0.491	0.696	0.745	0.955	0.818	0.208	0.537	0.647	0.702	0.748	0.925	0.613
Sulphur	0.5														
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.012	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00132	0.00069	0.00077	0.00086	0.001	0.000842	0.000812	0.000405	0.00124	0.00142	0.00127	0.00122	0.00207	0.00103
Vanadium	0.001 to 0.03	0.0024	0.0014	0.0016	0.0022	0.002	0.0016	0.0013	0.0026	0.002	0.0031	0.0027	0.0029	0.0027	0.0021
Zinc	0.001 to 0.006	<0.005	<0.005	<0.005	<0.005	0.0073	<0.003	<0.003	<0.003	<0.003	0.0035	<0.003	<0.003	<0.003	0.0037
Total Metals															
Aluminum	0.003 to 0.025	0.0672	0.059	0.107	0.512	0.5	0.117	0.169	0.512	0.149	0.303	0.126	0.209	0.128	0.0754
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	0.00013	0.00013	0.00014	0.00013	0.00012
Arsenic	0.0001 to 0.0025	0.0014	0.0015	0.00163	0.00253	0.00253	0.00188	0.0016	0.0014	0.00132	0.00213	0.00213	0.00221	0.00158	0.0014
Barium	5E-005 to 0.02	0.057	0.049	0.053	0.067	0.0684	0.0734	0.0717	0.0276	0.0558	0.0715	0.0633	0.0686	0.0721	0.0476
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.2	<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	0.037	0.031	0.031	0.032	0.028	0.036	0.036	0.037	0.04	0.035
Cadmium	1E-005 to 8.5E-005	<0.000017	0.000026	<0.000017	<0.000017	0.000012	<0.00001	<0.00001	<0.00001	0.000014	<0.00001	<0.00001	0.00001	0.000021	<0.00001
Calcium	0.05 to 0.1	93.8	59.9	57.9	80.3	96.6	96.4	93.5	25.9	66.6	81.6	84.7	89.4	101	73.7
Chromium	0.0001 to 0.005	<0.001	<0.001	<0.001	0.0014	0.00121	0.00037	0.00056	0.0012	0.00048	0.00087	0.00047	0.0007	0.00056	0.00038
Cobalt	0.0001 to 0.0015	<0.0003	<0.0003	<0.0003	0.00064	0.00073	0.00048	0.00044	0.00065	0.00033	0.00044	0.00028	0.00036	0.00029	0.00021
Copper	0.0005 to 0.007	0.0022	0.0027	0.0023	0.0047	0.00468	0.00186	0.0019	0.0084	0.00209	0.00382	0.00364	0.00315	0.00328	0.00264
Iron	0.01 to 0.03	0.183	0.131	0.189	0.841	0.858	0.342	0.375	0.736	0.36	0.527	0.275	0.395	0.227	0.147
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	0.000151	<0.00005	0.00006	0.00015	<0.00005	0.000086	<0.00005	0.000076	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.005	0.0059	0.0062	0.0072	0.00727	0.00749	0.00616	0.00183	0.00449	0.00532	0.00638	0.00682	0.00782	0.00506
Magnesium	0.1	82.7	46.3	49.3	70.2	83.9	93.4	87.6	22.7	63.8	72.7	76.7	77	105	67.1
Manganese	5E-005 to 0.0015	0.168	0.0472	0.0561	0.488	0.797	0.849	0.742	0.182	0.445	0.236	0.161	0.208	0.0893	0.0766
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.01	0.0067	0.0093	0.0054	0.00485	0.00403	0.00459	0.0109	0.0109	0.0111	0.00793	0.0068	0.0213	0.0124
Nickel	0.0005 to 0.005	0.0028	0.0029	0.0018	0.0035	0.00356	0.00246	0.00245	0.00407	0.00212	0.00294	0.00273	0.00295	0.00238	0.00205
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	0.37	0.3	<0.3	0.91	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	14.9	12.5	15.4	16.8	16.5	20.1	16.1	15.5	11.9	15.3	16	15.9	20.2	14.1
Selenium	0.0001 to 0.006	<0.001	<0.001	<0.001	<0.001	0.00021	0.00017	0.00016	0.00023	0.00015	0.00018	0.00019	0.00018	0.0003	0.00018
Silicon	0.05	9.09	4.01	7.59	14.1	15.6	12.8	12.1	5.86	7.13	8.5	8.22	8.78	7.71	4.75
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	63.6	42.8	45.7	61	64.5	80.5	69.1	15	43	53.5	59.5	65.6	78.3	54.4
Strontium	0.0001 to 0.005	0.754	0.468	0.497	0.694	0.771	0.941	0.771	0.212	0.55	0.649	0.695	0.714	0.88	0.611
Sulphur	0.5														
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	0.01	<0.01	0.01	0.023	0.025	0.016	0.018	0.027	0.012	0.016	0.013	0.012	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002														
Uranium	1E-005 to 0.001	0.00144	0.00076	0.00083	0.0009	0.00105	0.000857	0.000783	0.000444	0.00128	0.00153	0.00129	0.00123	0.0021	0.0011
Vanadium	0.001 to 0.03	0.0027	0.0018	0.0018	0.0035	0.0035	0.0019	0.0018	0.0038	0.0024	0.0039	0.0032	0.0034	0.0031	0.0025
Zinc	0.003 to 0.006	<0.005	<0.005	0.0056	<0.005	0.0055	0.0065	<0.003	0.0049	<0.003	<0.003	0.0032	0.0032	0.0033	0.0039
Organics															
Carbon Organic (Dissolved)	0.5 to 5	12.2	16.6	18.3	17.5	16.9	15	12	25.4	10.3	12.8	14.1	14.6	17.6	15.3
Carbon Organic (Total)	0.5 to 5	12.4	17.1	18.6	18.3	17.2	16	12.8	28.8	10.8	13.8	14.5	15.1	21.2	15.4
Nitrogen Organic (Dissolved)	0.05 to 0.26		1.01	1.18	0.927	0.613		0.497	1.32	0.498	0.677	0.732	0.784	1.03	0.712
Nitrogen Organic (Total)	0.05 to 0.3	0.693	1.03	1.21	0.977	0.583	0.693	0.672	1.73	0.707	1.05	0.709	0.838	1.07	0.816
ALS LAB ID		**L995583**	**L1025075**	**L1052387**	**L1066047**	**L1076994**	**L1092368**	**L1102695**	**L1122039**	**L1133342**	**L1140194**	**L1142492**	**L1145681**	**L1148880**	**L1152500**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

PC02.5 10-Jul-12	PC02.5 7-Aug-12	PC02.5 5-Sep-12	PC02.5 4-Dec-12	PC02.5 8-Jan-13	PC02.5 5-Feb-13	PC02.5 6-Mar-13	PC02.5 2-Apr-13	PC02.5 7-May-13	PC02.5 5-Jun-13	PC02.5 2-Jul-13	PC02.5 7-Aug-13	PC02.5 4-Sep-13	PC02.5 9-Oct-13	PC02.5 6-Nov-13	PC02.5 4-Dec-13	PC02.5 13-Mar-14	PC02.5 21-Mar-14
793	726	749	643	644	0.649	572	797	696	629	813	679		671	662	489	257	564
69	58.5	66.9	68.6	66.3	63	79.1		75.4	68.4	100	48.2	61.4	62.6	72.7	72.4	76.6	66.8
6.17	5.31	6.98	9.72	9.66	9.1	11.4		7.7	6.78	8.32	4.52	6.11	7.98	10.1	10.6	11.1	9.6
8.01	7.74	7.92	7.93	8.25	7.84	7.88	8.1	8.01	7.82	8.13	7.73	7.87	7.89	8.06	7.89	7.76	7.74
171	138	61.8	10.2	45.3	93.7	65.4	103	101	121	110	287	199	76.5	60	64.9	50.1	180
	0.39	0.48	0.58	0.6	0.6	0.53	0.6	0.43	0.38	0.4	0.38	0.59	0.33	0.59	0.45	0.23	0.52
867	803	966	1188	1235	1228	1080	1194	876	764	821	780	1185	415	1194	934	491	1060
20.6	20	13.3	0.99	0	0.29	0.4	7.6	14.3	15.7	24.6	18.2	15.4	5.03	1.68	0.02	0.088	0.51
	522	628	772	802	799	702	776	570	497	535	507	770	437	776	609	319	589
1.6	2	4.4	1.3	2.1	1.8	3.2	3.2	1.1	1.2	0	2.3		6	6	1.9		
		<1												<1			
313	305	389	452	430	483	434	386	273	251	278	310	442	475	442	606	130	321
313	305	389	452	430	483	434	386	273	251	265	310	442	475	442	606	130	321
<2	<1	<1	<1	<20	<1	<1	<1	<1	<1	13	<2	<1	<1	<1	<20	<2	<2
41.7	44.6	42	24.7	20.6	19.6	26.5	19.8	27.3	27.9	35.8	38.7	40.9	32.6	25.9	21.7		
381	353	422	527	554	588	549	550	358	323	346	334	521	573	544	615	209	504
<2	<1	<1	<1	<20	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<20	<2	<2
8.26	8.25	8.44	8.32	8.21	8.16	8.35	8.18	8.4	8.3	8.41	8.22	8.28	8.31	8.32	8.09	7.93	8.18
813	786	945	1130	1130	1210	1140	1130	817	736	778	737	1130	1190	1200	1260	469	1080
532	516	597	717	714	745	673	756	295	445	504	462	727	770	786	833	306	715
4.9	4.9	6.1	<3	4.3	18.6	<3	6.7	<3	<3	3.7	3.9	18.5	16	6.6	5.1	20.3	3.2
1.84	1.65	3.37	2.3	2.62	3.64	1.67	3.64	2.46	1.25	0.71	1.11	11.8	10.4	6.29	2.18	12.7	1.55
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5
53.4	52.5	59.9	67.8	65.4	65.9	60.1	52.6	57.4	52.5	51.7	52.6	59.3	66.5	65.5	70.5	16.1	41
0.23	0.24	0.28	0.23	0.37	<0.2	0.34	0.31	0.27	0.36	0.23	0.28	0.37	0.36	0.26	0.27	0.087	<0.2
76.7	69.5	65.2	119	122	138	150	208	97.8	63.8	81	55.5	142	151	166	187	94	235
0.019	0.0253	0.0528	0.0846	0.203	0.185	0.122	0.0415	0.0158	0.01	0.0208	0.0447	0.0893	0.1	0.0598	0.155	0.255	0.298
<0.05	<0.05	0.073	0.1	0.1	0.099	0.095	0.065	<0.05	<0.05	<0.05	<0.05	0.12	0.08	0.078	0.116	0.186	0.142
<0.01	<0.01	<0.01	0.025	0.018	<0.01	<0.01	0.012	<0.01	<0.01	<0.01	<0.01	0.018	<0.01	0.014	<0.01	0.0102	<0.01
1.08	0.89	0.94	0.902	0.836	0.89	0.74	0.65				0.936	2.39					
0.897	0.947		1	0.95	0.853	0.805	0.827	0.872	0.727	0.861	0.995	1.42	1.61	1.19			
0.897	0.947	1.03	0.875	0.863	0.807	0.855	0.749	0.893	0.734	0.861	1.16	1.39	1.64	1.08	0.92	1.67	1.17
													0.126	0.119	0.104	0.418	0.0935
0.0746	0.0799	0.112	0.081	0.177	0.134	0.102	0.0646	0.0511	0.0325	0.0665	0.121	0.242	0.189	0.164	0.117	0.511	0.113
0.0909	0.097	0.129	0.11		0.183	0.125	0.0801	0.0653	0.0389	0.0566	0.144		0.27	0.223	0.143	0.638	0.146
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
0.0018	0.0018	0.0024	0.002	0.0018	0.0017	0.0013	0.0016	0.0016	0.0013	0.0019	0.0026	0.0026	0.0025	0.0018	0.0119	0.0043	0.0015
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	0.0001	<0.0001	0.00012	<0.0001	0.00013	0.0001	<0.0001	<0.0001	0.00011	0.00013
0.00155	0.0016	0.00194	0.00129	0.00139	0.00125	0.00115	0.00113	0.00129	0.00129	0.00191	0.00196	0.00275	0.00255	0.00197	0.00168	0.00146	0.00147
0.0492	0.0489	0.0462	0.061	0.0617	0.0658	0.0584	0.061	0.0497	0.0428	0.0502	0.0517	0.0715	0.0712	0.0672	0.0751	0.0274	0.0626
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
0.032	0.034	0.027	0.026	0.025	0.025	0.023	0.025	0.033	0.026	0.03	0.034	0.025	0.029	0.027	0.029	0.025	0.031
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
64.4	57.7	67.8	86.6	87.8	93.6	85	90.8	61	60.1	62.4	57.6	82	90.7	81.1	97.8	36.4	79.7
<0.0001	<0.0001	0.00018	0.00015	0.00016	0.00016	0.00011	<0.0001	<0.0001	0.00011	0.0001	0.00013	0.00014	0.00014	0.00016	0.00019	<0.0001	0.00013
0.00012	0.00011	0.00017	0.00016	0.00019	0.0002	0.00018	0.0001	<0.0001	<0.0001	0.0001	0.00014	0.0002	0.00022	0.0002	0.00015	0.00021	0.00022
0.00141	0.00104	0.00066	0.00124	0.00089	0.00082	0.00131	0.00131	0.0019	0.00183	0.00195	0.00111	0.00101	0.00082	0.00098	0.00149	0.00539	0.00236
0.03	0.037	0.054	0.099	0.095	0.078	0.081	0.036	0.024	0.021	0.021	0.043	0.05	0.089	0.083	0.095	0.069	0.057
<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
0.00619	0.00597	0.0073	0.00667	0.00637	0.00696	0.00585	0.00533	0.00634	0.00515	0.00554	0.00581	0.00756	0.0072	0.00723	0.00699	0.00202	0.00544
53.4	50.8	61.5	75.4	81.4	86.1	81.8	78.4	50	41.9	46.1	46.3	76.8	84	82.9	90.1	28.6	74
0.0409	0.039	0.142	0.228	0.408	0.387	0.172	0.0752	0.0355	0.0151	0.0104	0.142	0.255	0.368	0.295	0.258	0.0809	0.121
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
0.00495	0.00416	0.0055	0.00648	0.00527	0.00495	0.00648	0.0144	0.0108	0.00477	0.00574	0.00521	0.00806	0.00844	0.0069	0.0122	0.0142	0.0304
0.00156	0.00151	0.00201	0.00172	0.00192	0.00194	0.00173	0.00163	0.00124	0.0013	0.0015	0.00152	0.00238	0.00222	0.0019	0.0024	0.00189	0.0021
<0.3	<0.3	0.129	0.122	0.168	0.148	0.115	0.06	0.054	<0.05	0.059	0.122	0.182	0.184	0.167	0.121	0.527	0.127
12.8	13.2	16.7	16.2	15.6	15.2	17.1	15.9	13.3	12.5	13	13.3	19.2	17.5	16.3	17.2	12.2	15.6
0.0002	0.00021	0.0002	0.00013	0.00013	0.00013	0.00015	0.00014	0.00016	0.00017	0.0003	0.00023	0.00023	0.0002	0.00018	0.00023	0.00033	0.00039
2.71	5.82	8.15	11.5	11.5	12	10.5	7.34	4.34	2.69	5.16	9	13.9	14.5	12.9	11.4	4.34	7.61
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
43.2	42.2	56.4	60.8	59.6	68.3	53.4	53.5	42.5	36.1	39.9	39.7	61.1	60.1	61.2	64	18.9	48.2
0.49	0.478	0.552	0.676	0.762	0.8	0.662	0.691	0.501	0.398	0.462	0.425	0.735	0.747	0.768	0.798	0.258	0.644
			39.5	40.4	43.9	49.6	65.1	32.9	20.5	25.5	18.8	46.4	49.1	54.2	57.9	31.2	76.3
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0.000445	0.000295	0.000459	0.000721	0.000654	0.00071	0.000821	0.00158	0.00115	0.000821	0.000826	0.000466	0.000827	0.00103	0.00105	0.00147	0.000865	0.0031
0.0012	<0.001	0.0014	0.0016	0.0013	0.0013	0.0019	0.0026	0.0023	0.0017	0.002	0.0011	0.003	0.0027	0.0021	0.0021	0.0027	0.0035
0.0095	0.0031	0.0016	0.0011	0.0015	0.0063	0.0019	0.001	0.0019	0.0019	0.002	0.0017	<0.001	<0.001	<0.001	<0.001	0.0022	0.0024
0.0637	0.0661	0.151	0.07	0.0421	0.0398	0.0665	0.114	0.0901	0.0409	0.0762	0.0858	0.466	0.396	0.11	0.0574	0.465	0.0653
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	0.00011	<0.0001	0.00015	0.00013	0.00015	0.00012	0.00012	<0.0001	0.00012	0.00015
0.00157	0.0017	0.00176	0.00138	0.00137	0.00134	0.00122	0.00119	0.00125	0.00126	0.00192	0.00205	0.00297	0.00248	0.00223	0.00162	0.00161	0.00148
0.0499	0.0499	0.049	0.0611	0.0631	0.0676	0.0615	0.0617	0.0475	0.043	0.0532	0.0564	0.0816	0.0769	0.0671	0.0788	0.0331	0.0624
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
0.037	0.04	0.032	0.028	0.028	0.031	0.026	0.028	0.034	0.028	0.033	0.038	0.029	0.03	0.031	0.033	0.028	0.031
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00014	<0.00001
63	58.2	65.9	83.4	86.2	95.4	87.3	85.7	59.3	58.6	63.2	60.2	82.8	89.7	84.6	101	35.5	78.2
0.0004	0.00038	0.0006	0.00038	0.00029	0.0003	0.00028	0.00039	0.00031	0.00025	0.00026	0.00036	0.00128	0.00098	0.00052	0.00033	0.00115	0.00028
0.00018	0.00017	0.00029	0.00021	0.00023	0.00024	0.00025	0.00021	0.00016	0.00011	0.00017	0.00021	0.00057	0.00052	0.00029	0.00019	0.00057	0.00027
0.00216	0.00173	0.00229	0.00392	0.00187	0.00183	0.00201	0.00259	0.00295	0.00246	0.0026	0.00201	0.00437	0.00359	0.00196	0.002	0.0106	0.00331
0.121	0.128	0.264	0.245	0.204	0.19	0.235	0.223	0.15	0.083	0.123	0.174	0.78	0.736	0.304	0.173	0.633	0.171
<0.00005	<0.00005	0.000058	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000141	0.000116	0.000052	<0.00005	0.000133	<0.00005
0.00581	0.00638	0.0072	0.00672	0.00661	0.00722	0.00622	0.00532	0.00621	0.00502	0.00576	0.00606	0.00818	0.00741	0.00596	0.00771	0.00227	0.00519
52.7	49.6	59.9	72.4	81.5	86.3	81.1	73.9	48.4	41.1	46.9	47.8	75.2	84.2	82.3	88.6	28.4	70.1
0.0642	0.0731	0.215	0.252	0.455	0.424	0.207	0.103	0.0486	0.0229	0.0242	0.176	0.36	0.453	0.34	0.283	0.107	0.124
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
0.00503	0.00462	0.00587	0.00651	0.00562	0.00534	0.00713	0.0146	0.0111	0.00484	0.0066	0.00583	0.00883	0.00956	0.00797	0.0132	0.0152	0.0318
0.00181	0.00175	0.0023	0.00186	0.00217	0.0021	0.00201	0.00196	0.00149	0.00144	0.00169	0.00188	0.00369	0.00327	0.00236	0.00262	0.00374	0.00227
<0.3	<0.3	0.145	0.148	0.182	0.173	0.14	0.074	0.056	<0.05	0.079	0.152	0.216	0.274	0.219	0.146	0.617	0.149
12.6	13.3	15.9	15.5	15.3	15.3	17.2	15.8	12.8	12.4	13.5	14.8	19.4	17.1	17.6	18.3	11.8	15.1
0.00019	0.00021	0.00017	0.00013	0.00014	0.00015	0.00014	0.00014	0.00016	0.00018	0.00028	0.00023	0.00028	0.00021	0.0002	0.00018	0.00035	0.00038
2.8	5.99	8.31	11.1	11.5	12.2	10.8	7.48	4.43	2.77	5.47	9.64	15.6	15.8	13.6	12	5.42	7.49
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000094	<0.00001	<0.00001	0.000057	<0.00001	0.000013	<0.00001	0.000015	<0.00001
42.2	44.2	57.6	58.6	61.2	69.2	53	53.8	41.9	36.1	39.1	41.9	63.7	61.7	64.8	65.2	18.4	47.6
0.475	0.475	0.561	0.66	0.799	0.84	0.679	0.696	0.493	0.39	0.514	0.459	0.761	0.803	0.768	0.837	0.27	0.641
			39.7	42	46.8	52.1	65.2	32.8	20.8	26.7	20.4	49.2	52	58.9	63	31.2	78.2
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.021	0.017	<0.01	<0.01	0.017	<0.01
0.000452	0.000331	0.000476	0.000725	0.000666	0.000715	0.000887	0.0016	0.00117	0.000816	0.000949	0.000498	0.000911	0.00116	0.00113	0.00153	0.000917	0.00311
0.0016	0.0013	0.0021	0.002	0.0016	0.0016	0.0023	0.0029	0.0026	0.0019	0.0022	0.0014	0.0045	0.004	0.0026	0.0024	0.004	0.0037
<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
15.8	17	17.1	11.9	11.2	11.9	11.2	10.4	12.7	14.5	16.2	18.1	17.2	16	14.5	13.3	13.3	11.1
15.8	16.5	17.2	13.5	12.3	11.7	11.6	10.9	12.8	14.6	16.5	19.1	18.6	18.6	15.3	14	14	11.4
1.06	0.865	0.815	0.693			0.523	0.531					2.17					
0.878	0.921	0.975	0.791	0.66	0.622	0.588	0.708					1.31					
L1176520	**L1190914**	**L1205273**	**L1245799**	**L1256678**	**I1265809**	**L1276517**	**L1285503**	**L1298960**	**L1312719**	**L1326032**	**L1344180**	**L1358222**	**L1375698**	**L1388680**	**L1399806**	**L1432163**	**L1434695**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

PC02.5 26-Mar-14	PC02.5 2-Apr-14	PC02.5 9-Apr-14	PC02.5 23-Apr-14	PC02.5 6-May-14	PC02.5 21-May-14	PC02.5 04/Jun/2014	PC02.5 18-Jun-14	PC02.5 3-Jul-14	PC02.5 16-Jul-14	PC02.5 30-Jul-14	PC02.5 12-Aug-14	PC02.5 4-Sep-14	PC02.5 17-Sep-14
667	774	866	849	1110	688	689	702	958	566	816	734		740
69.2	79.6	80.9	87.4	110	98.9	89.5	74.2	99.5	90.6	67.1	70.3		61.6
9.88	10.3	9.57	10.4	12.3	9.48	8.64	7.41	9.4	8.32	6.26	6.55		6.92
7.87	8.03	8.08	8.1	8.25	8.25	8.19	8.14	8.1	8.32	8.26	7.92	8.05	7.9
59.9	47.2	-31.6	97.1	203	75.6	158	104	81	140	127	75.3		96
0.61	0.64	0.65	0.64	0.8	0.4	0.4	0.56	0.55	0.777	0.46	0.41		0.51
1249	1277	1288	1269	1573	808	814	861	1107	871	931	835		1033
0.61	4.35	7.86	7.66	10.3	17.2	16.9	15.3	17.9	19.4	18.5	18.7	12.1	10.1
812	830	837	825	825	525	529	702	720	430	605	542		672
397	387	413	387	413	263	272	301	458	385	420	272	401	450
397	387	413	366	413	263	272	293	436	363	407	266	389	433
<2	<2	<2	20.2	<2	<1	<1	8.5	21.9	22.8	13.5	6.5	12.6	17
625	606	641	609	775	358	360	389	524	442	454	367	452	483
<2	<2	<2	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1
8.21	8.22	8.23	8.36	8.23	8.33	8.41	8.35	8.49	8.49	8.3	8.32	8.39	8.42
1260	1160	1240	1290	1530	781	781	842	1070	934	1010	827	988	1070
850	821	895	875	1080	496	427	533	692	531	626	569	610	735
5.6	<3	3.4	<3	5.9	<3	<3	4.8	5.1	6.2	5.6	4.8	5	13.3
1.16	1.47	1.28	1.99	2.13	0.89	1.61	0.8	0.65	1.35	2.25	2.32	3.08	4.38
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
48.4	46.2	50.6	48.1	55.7	55.3	53.6	52	48.2	52.4	53.6	59.5	55.4	55.7
<0.2	<0.2	0.21	0.2	0.22	0.21	0.22	0.232	0.42	0.273	0.284	0.273	0.278	0.3
274	270	285	307	442	90.7	80.4	101	127	77.2	94.6	104	94	106
0.128	0.0523	0.0576	0.0182	0.0139	0.0094	0.0144	0.0167	0.0255	0.0193	0.0862	0.0318	0.189	0.168
0.097	<0.05	0.058	0.056	<0.05	<0.05	<0.025	<0.05	<0.05	<0.05	0.092	<0.05	0.138	0.211
<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	0.012	<0.01	0.043	0.063
					0.713								
0.851	0.768	0.765	0.753	1.1	0.776	0.83	0.824	1.11	1.05	1.15	1.23	1.11	1.17
0.0545	0.035	0.0427	0.0399	0.0495	0.0265	0.0343	0.0283	0.0779	0.0892	0.131	0.0836	0.122	0.172
0.0739	0.0538	0.0754	0.0538	0.0696	0.0401	0.0467	0.041	0.117	0.111	0.149	0.11	0.183	0.197
0.0926	0.0792	0.0609	0.0732	0.122	0.0493	0.0554	0.0488	0.121	0.127	0.167	0.13	0.194	0.248
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
0.0011	0.0012	0.0019	0.001	0.0022	0.0012	0.0017	<0.001	0.0016	0.0021	0.0016	0.0017	0.0015	0.0022
<0.0001	0.00014	0.00015	0.00013	0.00017	<0.0001	0.00011	<0.0001	0.00014	0.00012	0.00011	0.00014	<0.0001	<0.0001
0.00133	0.00141	0.00152	0.0015	0.00181	0.00151	0.00174	0.00158	0.00212	0.00217	0.00249	0.00198	0.00205	0.00212
0.0691	0.0654	0.0719	0.0601	0.0756	0.0527	0.0523	0.0496	0.0574	0.053	0.052	0.0547	0.0621	0.0646
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
0.031	0.032	0.031	0.026	0.036	0.027	0.031	0.029	0.036	0.036	0.033	0.037	0.03	0.03
<0.00001	<0.00002	0.000013	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
94.4	93	103	97.4	123	65	64.3	67.8	81.5	71.6	74.3	67	76.1	79.6
0.00011	0.00012	0.00012	0.0001	0.00017	0.0001	0.00012	0.00012	0.00013	0.00016	0.00013	0.00011	0.00015	0.00017
0.0002	0.00017	0.00016	0.00016	0.00017	<0.0001	0.00011	<0.0001	0.00016	0.00015	0.00021	0.00012	0.00018	0.0002
0.00189	0.00179	0.00185	0.002	0.00266	0.00223	0.00227	0.00191	0.00315	0.00209	0.00177	0.00195	0.0012	0.00129
				<0.00002									
0.046	0.045	0.038	0.034	0.039	0.017	0.023	0.023	0.029	0.029	0.03	0.036	0.035	0.042
<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
0.00582	0.00626	0.0062	0.00649	0.00745	0.00525	0.00564	0.00559	0.00681	0.00695	0.00721	0.00642	0.00626	0.0072
94.5	90.9	93	88.8	113	47.5	48.3	53.3	77.9	63.8	65.1	48.5	63.6	69.1
0.108	0.0828	0.0705	0.0791	0.0696	0.0134	0.0235	0.0202	0.0343	0.0341	0.241	0.0486	0.191	0.335
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
0.0305	0.03	0.0246	0.0196	0.0468	0.0109	0.00937	0.00873	0.0116	0.00967	0.0118	0.0185	0.0117	0.0148
0.00224	0.00219	0.00225	0.00216	0.0023	0.00133	0.00157	0.00168	0.00209	0.00201	0.00252	0.00174	0.00231	0.00298
0.071	<0.05	0.074	<0.05	0.061	<0.05	<0.05	<0.05	0.102	0.115	0.165	0.096	0.151	0.181
16.5	15.7	16.8	16.6	20.9	11.8	12.1	12.8	18.5	15	17.6	12.5	15.7	16.5
0.0003	0.00036	0.00025	0.00032	0.00054	0.0002	0.0002	0.0002	0.00037	0.00028	0.00032	0.0002	0.00018	0.00021
8.81	7.62	7.41	6.56	6.56	3.6	4.61	4.07	6.84	7.69	8.38	8.69	11.9	11.5
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
57.6	58.7	57.8	55.7	76.9	41.3	40.8	41.4	57.8	49.6	52	42.4	52.4	58
0.737	0.754	0.841	0.787	0.919	0.375	0.461	0.484	0.675	0.587	0.607	0.497	0.605	0.672
86.6	85.8	91.6	99	144	32.3	28.7	32.1	41.7	26	30.5	34	31.5	34.7
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000012	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0.00316	0.00291	0.00283	0.00264	0.00349	0.00109	0.00108	0.00101	0.00181	0.00113	0.00113	0.00113	0.00112	0.00133
0.003	0.0032	0.0034	0.0029	0.0038	0.003	0.0026	0.0022	0.0027	0.0018	0.0026	0.0027	0.0026	0.0028
<0.001	0.0011	0.0014	0.0015	0.0011	<0.001	<0.001	<0.001	0.0011	0.0012	<0.001	<0.001	<0.001	0.0028
0.0308	0.0497	0.0841	0.102	0.188	0.0762	0.0724	0.0578	0.0195	0.0762	0.106	0.0901	0.101	0.274
0.0001	0.00016	0.00016	0.00013	0.00021	0.00011	0.00012	<0.0001	0.00016	0.00014	0.00012	0.00016	<0.0001	0.00014
0.00144	0.00139	0.00151	0.00152	0.00168	0.00155	0.00174	0.00163	0.00218	0.00212	0.00216	0.00206	0.00193	0.00229
0.0713	0.065	0.0703	0.0612	0.0741	0.0536	0.0524	0.0511	0.0582	0.0531	0.051	0.0557	0.0633	0.073
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
0.034	0.034	0.035	0.027	0.039	0.041	0.032	0.034	0.036	0.037	0.034	0.044	0.03	0.036
<0.00001	<0.00002	0.000011	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
94.9	89.8	98.1	98.8	117	63.5	61.5	67	80	69.1	69.2	67.1	74.9	82.7
0.0002	0.00023	0.00083	0.00036	0.00056	0.00032	0.00031	0.00032	0.00019	0.0003	0.0004	0.00032	0.00039	0.00087
0.00023	0.00022	0.00023	0.00028	0.00033	0.00015	0.00017	0.00015	0.00017	0.00023	0.0003	0.00021	0.00025	0.0004
0.00269	0.00243	0.00273	0.00331	0.00411	0.00322	0.003	0.00258	0.00354	0.00277	0.00268	0.00315	0.00218	0.00371
0.138	0.149	0.189	0.193	0.305	0.115	0.116	0.103	0.062	0.15	0.188	0.162	0.187	0.457
<0.00005	<0.00005	<0.00005	<0.00005	0.000062	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000087
0.00642	0.00625	0.00641	0.00625	0.00777	0.00622	0.00557	0.00588	0.00762	0.0068	0.00686	0.0068	0.00572	0.00767
91.2	86.9	87.9	89.2	107	45.6	45.9	51.8	76.8	62.1	61.6	48.6	63.7	72.2
0.113	0.0858	0.091	0.0951	0.0906	0.0231	0.0368	0.0341	0.0456	0.061	0.274	0.0725	0.23	0.456
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
0.0339	0.0325	0.0256	0.0199	0.0484	0.0145	0.00948	0.00932	0.013	0.01	0.0119	0.0197	0.0105	0.0169
0.00244	0.00229	0.00248	0.00266	0.00274	0.0016	0.00187	0.0019	0.00224	0.00221	0.00283	0.00206	0.00261	0.00398
0.082	0.08	0.082	0.076	0.11	0.054	0.051	0.061	0.114	0.123	0.165	0.126	0.158	0.226
16.4	15.1	15.7	16.8	19.7	11.7	11.3	12.4	17.9	14.4	16.2	12.7	15.7	17.2
0.00034	0.00028	0.00022	0.00031	0.00052	0.00017	0.00022	0.00022	0.00041	0.00028	0.00024	0.00022	0.00022	0.00022
8.91	7.64	7.28	6.96	6.86	3.73	4.57	4.18	6.91	7.59	8.11	8.95	12.2	12.7
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
59.2	56.6	56	55.5	75.3	41.2	40.1	41.7	53.8	48.5	51	44.1	50.9	60.4
0.777	0.764	0.832	0.767	0.948	0.48	0.458	0.495	0.69	0.594	0.567	0.52	0.504	0.715
90.9	90.2	88.9	102	142	31.7	27.8	32.6	44.1	25.9	29.3	34.5	32.3	37.6
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01
				<0.00002									
0.00337	0.0031	0.00287	0.0027	0.00345	0.00148	0.00113	0.0011	0.00194	0.00118	0.00117	0.00123	0.000975	0.00149
0.0034	0.0035	0.0037	0.0035	0.0044	0.0038	0.0029	0.0029	0.0029	0.0021	0.0029	0.0032	0.003	0.0038
<0.003	<0.003	0.0033	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
11.6	11.2	11.2	12.9	14.5	13.1	13.3	13.6	17.4	17.3	18.1	16.5	15.7	7.48
10.8	10.9	11.4	12.5	16.6	12.8	13.5	13.6	17.5	17.2	18.7	16.7	15.9	7.85
L1437439	**L1439467**	**L1441961**	**L1446462**	**L1451608**	**L1458340**	**L1465478**	**L1473827**	**L1481215**	**L1488886**	**L1495443**	**L1502292**	**L1513418**	**L1519657**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C1.31 - PC03
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Site ID		PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03
Analytes	**MDL**	**2-May-07**	**18-Jul-07**	**28-Apr-08**	**7-Jul-08**	**4-Sep-08**	**4-Jun-10**	**29-Mar-11**	**14-Apr-11**	**21-Apr-11**	**28-Apr-11**	**5-May-11**	**12-May-11**	**30-May-11**	**28-Jun-11**
In Situ Parameters															
Conductivity µS/cm	...	652	824	1295	823	599	661	645	451	765	783	878	876	624	630
Oxygen Dissolved %	...			87.5		60.9	80.2	44	66.1	76.2	54.8	48.1	65.6	91.5	86.9
Oxygen Dissolved	...	7.87	4.37	9.61		6.22	8.59	6.2	8.57	10.7	6.65	5.43	7.03	8.9	8.29
pH (unitless)	...	8.09	7.59	8.32	8.11	7.8	8.27	7.71	7.79	8.09	7.92	7.79	7.77	8.07	8.17
Redox Potential mV	...	-60.8			-106	-71.4	-68.3	112	164	44.8	86.5	118	88.5	407	157
Salinity ppt	...									0.7	0.6	0.62	0.59	0.37	0.36
Specific Conductivity µS/cm	...	929	933	1780	909	782	872	1183	744	1443	1200	1238	1169	744	735
Temperature °C	...	9.4	18.9	10.7	20	12.8	12.2	1.18	4.35	0.33	6.79	9.79	11.9	16.6	17.5
Total Dissolved Solids	...							770	484		780	805	760	484	478
Turbidity NTU	...													0.7	
Physical Tests															
Acidity to pH 8.3 (as CaCO3)	1														
Alkalinity (Total as CaCO3)	1 to 2	253	276	471	339	326	241	366	314	340	385	380	374	247	245
Bicarbonate Alkalinity	1 to 2						241			340					
Carbonate Alkalinity	1 to 2						<1			<2					
Color TCU	5	21.3	35.2	27.1	44.2	37.3	30.8	25.6	22.2	22.7	27.5	32.2	35.1	22.5	34.7
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	425	371	880	391	364	385	532	459	510	537	570	582	313	305
Hydroxide Alkalinity	1 to 2						<1			<2					
pH (unitless)	0.01 to 0.1	8.25	8.29	8.34	8.37	8.28	8.42	7.94	8.22	8.27	8.23	8.26		8.2	8.34
Specific Conductivity µS/cm	2	877	855	1790	896	867	863	1120	972	1080	1140	1180	1220	704	685
Total Dissolved Solids	1 to 2	572	544	1320	565	528	547	764	664	714	773	791	812	427	433
Total Suspended Solids	3	<3	4.6	3.3	4.5	3.3	<3	<3	<3	13.3	5.9	<3	105	<3	5.7
Turbidity NTU	0.1			1.43	0.9	3.54	0.75	1.82	1.9	5.74	3.54	1.06	1.16		1.53
Dissolved Anions															
Bromide	0.05 to 2.495	<0.05	<0.05	<2.5	<0.05	<0.05	<0.5	<1.3	<1.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05
Chloride	0.5 to 1	60.3	61.6	57	55.8	61.5	55.7	36.3	36.3	39.9	42.1	43.7	43.5	52.9	48.8
Fluoride	0.02 to 0.4	0.206		1.1	0.236	0.224	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.199
Sulphate	0.5 to 1	145	92.9	568	99.3	70.6	138	266	213	237	249	245	262	69.6	67.3
Nutrients															
Ammonia (Total)	0.005 to 0.05	0.152	0.037	0.025	0.033	0.035	0.015	0.18	0.0668	0.065	0.16	0.326	0.207	0.0209	0.0152
Nitrate (as N)	0.005 to 0.1	<0.005	<0.005	0.76	<0.005	0.0546	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.005
Nitrite (as N)	0.001 to 0.02	<0.001	<0.001	0.157	<0.001	0.0293	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001
Nitrogen (Dissolved)	0.05 to 0.1										1.12	0.91	1.12	0.78	1
Nitrogen (Total)	0.0025 to 0.11						0.88	0.877	0.734	0.37	0.983	0.88	1.21	0.76	1.09
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.852	1.1	0.836	1.01	0.746	0.878	0.877	0.734	0.37	0.983	0.88	0.908	0.76	1.09
Orthophosphate (Dissolved)	0.001 to 0.01	0.0067	0.0557	0.0117	0.0353	0.121	0.0069	0.0439						0.0052	0.0066
Phosphorus - Dissolved	0.002 to 0.02								0.032	0.034	0.0875	0.154	0.095	0.0179	0.0254
Phosphorus - Total	0.002 to 0.02	0.0337	0.0847	0.045	0.0701	0.128	0.0282	0.0917	0.0522	0.0617	0.0855	0.186	0.118	0.0259	0.0387
Cyanide															
Cyanide (Free)	0.005			<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	0.0067	0.0109	0.0081	0.0101		0.0082	<0.005		0.0059	0.0083	0.0079	0.0078	0.0071	0.0078
Cyanide (WAD)	0.005			<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals															
Aluminum	0.001 to 0.025	<0.005	<0.01	<0.025	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Antimony	0.0001 to 0.0025	<0.0005	<0.001	<0.0025	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic	0.0001 to 0.0025	0.00136	0.002	<0.0025	0.0021	0.0022	0.00133	0.00093	0.00104	0.00116	0.00147	0.00203	0.00176	0.0012	0.0015
Barium	5E-005 to 0.02	0.045	0.04	0.096	0.059	0.062	0.028	0.06	0.056	0.063	0.065	0.075	0.075	0.048	0.05
Beryllium	0.0001 to 0.005	<0.001	<0.002	<0.005	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth	0.0005 to 0.2							<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	1E-005 to 8.5E-005	0.000023	0.000039	0.000143	0.00004	<0.000034	<0.000017	<0.000017	<0.000017	<0.00007	<0.00006	<0.000017	<0.000017	0.000024	0.000025
Calcium	0.05 to 0.1	69.2	59.7	126	62.6	58.7	57.2	77.7	73.1	79.4	83.7	87.9	88.7	56.2	53.4
Chromium	0.0001 to 0.018	<0.003	<0.002	<0.005	<0.002	<0.002	<0.001	<0.001	<0.0015	<0.002	<0.002	<0.0015	<0.001	<0.001	<0.001
Cobalt	0.0001 to 0.0015	<0.0003	<0.0006	<0.0015	<0.0006	<0.0006	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.00039	<0.0003	<0.0003	<0.0003
Copper	0.0002 to 0.006	0.0022	<0.002	<0.005	<0.002	<0.002	0.0016	<0.001	<0.001	0.001	0.001	<0.001	<0.002	0.0015	0.0015
Dissolved Cadmium (by saltwater extrac	0.00002														
Iron	0.01 to 0.03	<0.03	0.068	0.037	0.058	0.035	<0.03	0.1	0.045	0.039	0.079	0.168	0.146	<0.03	0.034
Lead	5E-005 to 0.0025	<0.0005	<0.001	<0.0025	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Lithium	0.0005 to 0.025	0.0077	<0.01	<0.025	<0.01	<0.01	0.0052	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	<0.005
Magnesium	0.1	61.3	53.9	137	57	52.7	58.8	82	67.1	75.6	79.7	85.1	87.5	42	41.7
Manganese	5E-005 to 0.0015	0.00817	0.062	0.115	0.0676	0.0991	0.008	0.21	0.106	0.107	0.294	0.518	0.401	0.0075	0.0326
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.023	0.0095	0.0438	0.0119	0.0111	0.0129	0.0278	0.0214	0.021	0.0184	0.0137	0.0115	0.0058	0.0054
Nickel	0.0005 to 0.005	0.0014	<0.002	<0.005	<0.002	<0.002	0.0011	0.0017	0.0016	0.0015	0.0019	0.0021	0.0018	<0.001	0.0012
Phosphorus	0.05 to 0.3							<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	13.1	12.2	19.8	16	15.2	15.7	14.3	13.4	14.9	15.7	17.2	17.8	11.9	11.4
Selenium	0.0001 to 0.006	<0.001	<0.002	<0.005	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon	0.05							7.35	4.98	5.23	5.64	6.73	5.9	1.37	2.77
Silver	1E-005 to 0.0001	<0.00002	<0.00004	<0.0001	<0.00004	<0.00004	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	0.05 to 2	52.4	48.5	97.4	50.3	48.8	50	57.1	47.9	55.5	58.5	66	66.5	39.7	39.3
Strontium	0.0001 to 0.005							0.705	0.59	0.676	0.695	0.77	0.801	0.408	0.407
Sulphur	0.5														
Thallium	1E-005 to 0.001	<0.0002	<0.0004	<0.001	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin	0.0001 to 0.0025	<0.0005	<0.001	<0.0025	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00179	0.00085	0.0031	0.00063	0.00105	0.00126	0.00141	0.0016	0.00164	0.00152	0.00124	0.00114	0.00115	0.00077
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.005	<0.002	0.0026	0.0016	0.0014	0.0022	0.0027	0.0029	0.0021	0.0023	0.002	0.0015
Zinc	0.001 to 0.006	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Metals															
Aluminum	0.003 to 0.025	0.014	0.012	<0.025	0.012	0.072	0.0102	0.034	0.0449	0.161	0.209	0.126	0.0278	0.0232	0.0873
Antimony	0.0001 to 0.0025	<0.0005	<0.001	<0.0025	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic	0.0001 to 0.0025	0.00101	0.0017	<0.0025	0.002	0.002	0.00103	0.00091	0.0009	0.001	0.00125	0.00151	0.00158	0.00117	0.00143
Barium	5E-005 to 0.02	0.042	0.039	0.095	0.062	0.062	0.028	0.061	0.061	0.066	0.07	0.079	0.076	0.05	0.055
Beryllium	0.0001 to 0.005	<0.001	<0.002	<0.005	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth	0.0005 to 0.2							<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	1E-005 to 8.5E-005	<0.000017	0.000035	0.000137	0.000034	0.000053	<0.000017	0.000021	<0.000017	<0.00007	<0.00012	<0.000017	<0.000017	0.000029	0.000029
Calcium	0.05 to 0.1	66.9	58.6	128	62.7	55.6	56.9	77.6	72.1	75.7	83.6	86.2	86.6	55.7	53.1
Chromium	0.0001 to 0.005	<0.001	<0.002	<0.005	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	0.0001 to 0.0015	<0.0003	<0.0006	<0.0015	<0.0006	<0.0006	<0.0003	<0.0003	<0.0003	<0.0003	0.00044	0.00048	0.00031	<0.0003	<0.0003
Copper	0.0005 to 0.007	0.0025	<0.002	<0.005	<0.002	0.0022	0.0018	0.0016	0.0013	0.0026	0.0029	0.0023	<0.003	0.002	0.0025
Iron	0.01 to 0.03	0.049	0.086	0.081	0.091	0.125	0.039	0.216	0.117	0.274	0.399	0.353	0.2	0.042	0.162
Lead	5E-005 to 0.0025	<0.0005	<0.001	<0.0025	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Lithium	0.0005 to 0.025	0.0068	<0.01	<0.025	<0.01	<0.01	0.0061	<0.005	<0.005	0.0052	<0.005	0.006	0.0055	0.0055	<0.005
Magnesium	0.1	58.7	52.3	137	56.3	50.4	58.2	81.4	67.6	73.5	79.9	84.4	87.8	42.1	41.6
Manganese	5E-005 to 0.0015	0.0153	0.0675	0.123	0.0715	0.109	0.00965	0.244	0.117	0.121	0.316	0.531	0.414	0.0103	0.0829
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0215	0.0094	0.0435	0.0114	0.011	0.0138	0.0303	0.0239	0.0227	0.0197	0.0146	0.0128	0.0069	0.0061
Nickel	0.0005 to 0.005	0.0015	<0.002	<0.005	<0.002	0.0026	0.0014	0.0021	0.002	0.0025	0.003	0.0026	0.0021	0.0012	0.0017
Phosphorus	0.05 to 0.3							<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	12.5	11.8	19.9	15.8	15	15.2	14.2	13.6	14.4	15.9	17.2	17.7	12.1	11.8
Selenium	0.0001 to 0.006	<0.001	<0.002	<0.005	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon	0.05							7.36	5.12	5.48	6.36	7.03	5.96	1.45	3.04
Silver	1E-005 to 0.0001	<0.00002	<0.00004	<0.0001	<0.00004	<0.00004	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	0.05 to 2	51.2	47	96.6	49.6	46.7	48.1	57	49	54.1	59.3	65.7	65.8	39.5	40.4
Strontium	0.0001 to 0.005							0.709	0.602	0.665	0.708	0.773	0.803	0.413	0.419
Sulphur	0.5														
Thallium	1E-005 to 0.001	<0.0002	<0.0004	<0.001	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin	0.0001 to 0.0025	<0.0005	<0.001	<0.0025	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	0.016	0.013	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002														
Uranium	1E-005 to 0.001	0.00166	0.00083	0.0031	0.00061	0.00106	0.00135	0.00155	0.00183	0.00181	0.00161	0.00137	0.00128	0.00137	0.0009
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.005	<0.002	0.0027	0.0018	0.0017	0.0025	0.0032	0.0036	0.0025	0.0025	0.0023	0.0019
Zinc	0.003 to 0.006	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Organics															
Carbon Organic (Dissolved)	0.5 to 5		17	13.5	17.6	17.8	14.4	11.4	9.5	10.4	10.6	13.6	14.5	15	17.1
Carbon Organic (Total)	0.5 to 5	14.8							9.85	10.4	10.5	13.9	15.3	15	16.5
Nitrogen Organic (Dissolved)	0.05 to 0.26										0.96	0.58	0.913	0.759	0.985
Nitrogen Organic (Total)	0.05 to 0.3								0.667		0.823	0.55	0.701	0.739	1.07
ALS LAB ID		**L501627**	**L532402**	**L623545**	**L652819**	**L678833**	**L894162**	**L990459**	**L995583**	**L997645**	**L999654**	**L1002049**	**L1005044**	**L1011001**	**L1025075**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

PC03 28-Jul-11	PC03 30-Aug-11	PC03 28-Sep-11	PC03 25-Oct-11	PC03 5-Dec-11	PC03 6-Mar-12	PC03 10-Apr-12	PC03 25-Apr-12	PC03 2-May-12	PC03 11-May-12	PC03 16-May-12	PC03 24-May-12	PC03 10-Jul-12	PC03 7-Aug-12	PC03 4-Dec-12	PC03 8-Jan-13	PC03 5-Feb-13	PC03 6-Mar-13
669	598		403	772	1007	606	315	540	135	754	747	767	689	580	633	0.703	730
40.8	79.9		85.6	23.4	60.7		94.5	88.9	93.7	76	90.3			73.9	17	6.9	41.1
3.96	8.13		10.9	3.28	8.82	13	9.85	10.2	11.2	7.92	9.27			10.4	2.46	1	5.99
7.77	7.84	7.97	8.45	7.57	7.66	8.14	8.18	8.32	8.7	8.1	8.15	8.71	8.16	7.83	7.94	7.56	7.57
107	153	-112	-21.7	-21.4	107	18.3	98.3	117	-9.8	107	62.8	144	128		4.6	-73.6	29.7
0.36			0.32	0.71	0.96	0.45	0.2	0.38	0.1	0.48	0.47		0.34	0.52	0.59	0.66	0.69
796	749	895	653	1428	1926	902	413	772	202	969	945	756	708	1056	1216	1349	1396
16.5	14.4	12.6	4.95	0.96	0	7.85	13.4	9.27	7.6	13.4	14	25.7	23.6	1.52	-0.08	-0.07	0.01
518			424	928	1252	586	263	502	131	630	614		460	688	790	877	908
0.8	1.3	2.4		12.2	65.7		0.9	0.6	0.9	2.4	1.3	0.9	1.2	2.2	13.7	25	48.9
4.6		<1	<1														
270	248	323	345	512	676	291	320	364	383	290	314	263	255	417	468	488	700
		323	334		676	276	314	345	333	290	298	244	245	417	468	488	700
		<2	10.9		<1	15	6.7	19	49.8	<1	16.2	19.5	10.1	<2	<20	<1	<20
37.4	28.4	36.9	31.5	30.3	57.7	19.2	27.1	28.2	29.8	28.3	26.4	35.4	33	26.5	27.7	27.9	23.1
323	301	361	392	625	976	432	481	554	602	419	416	325	303	482	571	633	748
		<2	<1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<2	<20	<1	<20
8.16	8.21	8.3	8.46	8.1	7.96	8.48	8.5	8.39	8.54	8.38	8.36	8.57	8.36	8.23	8.01	8	8.25
764	711	872	947	1370	1940	913	989	1140	1270	947	923	707	688	993	1190	1270	1490
459	439	545	556	829	1420	597	657	767	850	626	601	444	436	633	824	810	1000
<3	<3	8.7	3.1	12.3	5.3	<3	<3	3.1	<3	4.2	<3	<3	<3	<3	<3	3.1	6.3
0.97	0.89		1.79	4.39	15.3	1.42	0.66	0.68	0.69	1.09	0.91	1.06	0.98	2.7	4.64	6.17	13.6
<0.5	<0.25	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.25	<0.25	<0.5	<0.5	<0.5	<0.5
51.6	51.3	60.1	62.9	66	79	30.2	39.4	43.4	48.1	56.6	57.2	50.4	51.7	61.7	61.3	62.8	60.2
0.39	0.2	0.22	0.23	0.22	<0.4	<0.2	<0.2	<0.2	<0.2	0.2	0.21	0.2	0.22	<0.2	0.33	<0.2	0.34
76	63.8	67.5	84.8	169	435	193	216	264	303	173	148	69.3	61.6	92	159	176	312
0.0567	0.0177	0.0891	0.093	0.349	2.26	0.0786	0.0259	0.0205	0.0128	0.0243	0.0157	0.0139	0.0225	0.221	1	1.62	1.21
<0.05	0.028	<0.05	0.067	<0.05	<0.1	<0.05	<0.05	<0.05	0.062	<0.05	<0.05	<0.025	<0.025	0.073	<0.05	<0.05	<0.05
<0.01	<0.005	<0.01	<0.01	0.011	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.005	<0.005	<0.01	0.01	<0.01	<0.01
1.01	1.13	1.18	0.93		3.27	0.68	0.68	0.72	0.84	1.06	0.81	1.03	0.89	1.15	1.91	2.1	1.89
1.03	1.19	1.19	1.15	1.55	3.37	0.895	0.934	0.783	0.609	0.959	0.908	0.898	0.902	1.32	2.12	2.46	1.98
1.03	0.996	1.19	1.09	1.42	3.37	0.895	0.934	0.783	0.547	0.959	0.908	0.898	0.902	1.24	2.1	2.43	2.09
0.028																	
0.0489	0.0331	0.0703	0.0411	0.0585	0.561	0.0615	0.0424	0.0434	0.0325	0.0336	0.027	0.0344	0.0502	0.0763	0.326	0.35	0.148
0.0582	0.0421	0.0838	0.0562	0.096	0.647	0.0937	0.0532	0.0528	0.0381	0.0514	0.0396	0.0455	0.06	0.0954		0.405	0.215
<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
0.0083		0.0069	0.0087	0.01	0.011	0.0055	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.005	<0.005	<0.005	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0018	0.0019	0.0013	0.0013	0.0022	0.0018	0.001
<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	0.00011	0.0001	<0.0001	<0.0001	0.00011	0.00015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
0.00143	0.00147	0.00169	0.00122	0.00136	0.00265	0.00093	0.00139	0.00147	0.00148	0.00129	0.00126	0.00154	0.00158	0.00091	0.00141	0.00128	0.00128
0.061	0.058	0.066	0.0617	0.112	0.139	0.0618	0.0675	0.079	0.0721	0.053	0.0531	0.0463	0.049	0.0657	0.114	0.111	0.103
<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
<0.1	<0.1	<0.1	0.028	0.034	0.046	0.028	0.035	0.039	0.04	0.036	0.033	0.03	0.028	0.029	0.027	0.031	0.033
<0.000017	<0.000017	<0.000017	<0.00001	<0.00001	<0.00001	0.000023	<0.00001	<0.00001	<0.00001	0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
55	51.8	57	60.1	95.9	143	64	72	84.1	83.5	62.8	66.2	54.7	49.6	73.7	88.6	98.1	115
<0.001	<0.001	<0.001	0.00016	0.00016	0.00023	0.00011	<0.0001	0.00015	0.00013	<0.0001	0.00012	<0.0001	<0.0001	0.00019	0.00024	0.00025	0.00016
<0.0003	<0.0003	<0.0003	<0.0001	0.00018	0.0005	0.00013	0.00017	0.00014	0.00016	0.00011	0.00011	0.00011	<0.0001	0.00013	0.00024	0.00018	0.00021
<0.001	<0.001	<0.001	0.00132	<0.0005	0.00145	0.00079	0.00104	0.00101	0.00105	0.0014	0.00123	0.00114	0.00066	0.00063	<0.0002	<0.0002	0.0003
0.034	<0.03	0.051	<0.03	0.085	0.119	0.044	0.031	<0.03	<0.03	<0.03	0.039	0.03	0.023	0.043	0.243	0.192	0.128
<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
0.0058	0.0055	0.0066	0.00561	0.00755	0.00887	0.00411	0.00472	0.00562	0.00542	0.00672	0.0051	0.00601	0.0053	0.00545	0.00565	0.00616	0.00639
45.1	41.6	53	58.8	93.7	150	66.1	73.1	83.6	95.5	63.6	60.9	45.7	43.4	72.2	84.9	94.2	112
0.0491	0.0236	0.087	0.0503	1.67	1.11	0.107	0.0823	0.0553	0.0523	0.0359	0.0514	0.0227	0.0437	0.317	1.98	1.45	0.867
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
0.0044	0.0062	0.0088	0.0113	0.00384	0.00974	0.017	0.0153	0.0132	0.0131	0.0249	0.0149	0.00585	0.00416	0.00384	0.00166	0.00102	0.0106
<0.001	0.0011	0.0018	0.00175	0.00153	0.00252	0.00105	0.00153	0.00159	0.00169	0.00127	0.00138	0.00125	0.00106	0.00158	0.0014	0.0013	0.0015
<0.3	<0.3	<0.3	<0.3	<0.3	0.6	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.081	0.317	0.391	0.173
12.4	12.6	15.5	15	21.4	27.5	11.6	14.5	16.3	16.9	14.4	13.4	11.2	11.8	16.7	16.7	16.8	18.3
<0.001	<0.001	<0.001	0.00017	0.00024	0.00028	0.00014	0.00014	0.00015	0.00017	0.00021	0.00021	0.00021	0.0002	0.00015	0.00017	0.00017	0.00019
2.76	5.61	5.74	5.24	12.6	13.6	3.9	2.91	3.71	0.998	3.32	2.58	1.79	4.04	10.3	11.9	13.4	11.3
<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
40.7	38.2	48.4	51.6	77.8	100	41.7	51.6	58.3	63.7	50.8	48.1	38.6	35.8	52.5	57.3	67.8	67.5
0.442	0.417	0.487	0.487	0.94	1.19	0.573	0.619	0.757	0.763	0.541	0.52	0.41	0.389	0.636	0.824	0.874	0.916
														30.2	50.1	56.2	98.9
<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0.00043	0.00077	0.00095	0.00113	0.000645	0.00118	0.00105	0.0012	0.00116	0.00127	0.00173	0.00123	0.000576	0.000412	0.000561	0.000368	0.000286	0.00106
0.0011	0.0018	0.0028	0.003	0.0012	0.0019	0.0017	0.0026	0.0023	0.0023	0.0028	0.0023	0.0014	0.0012	0.0015	<0.001	<0.001	0.0012
<0.005	<0.005	<0.005	0.0083	0.0067	<0.003	<0.003	<0.003	0.0049	0.0034	<0.003	0.0044	0.0022	0.0011	<0.001	0.005	0.0046	<0.001
0.0184	0.0199	0.0279	0.0678	0.515	0.0784	0.01	0.005	0.0035	0.0075	0.0169	0.0164	0.0147	0.0366	0.0853	0.0406	0.0358	0.03
<0.0005	<0.0005	<0.0005	0.0001	<0.0001	0.00012	<0.0001	<0.0001	0.00011	0.00013	0.00015	0.00013	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
0.00141	0.00136	0.00156	0.00123	0.00153	0.00262	0.00092	0.00137	0.00137	0.0015	0.00132	0.00125	0.00156	0.00164	0.00095	0.00153	0.00133	0.00144
0.064	0.057	0.064	0.0625	0.121	0.143	0.0627	0.0658	0.0757	0.0714	0.0533	0.0508	0.0447	0.0519	0.0664	0.118	0.109	0.104
<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
<0.1	<0.1	<0.1	0.035	0.038	0.051	0.033	0.04	0.045	0.046	0.045	0.037	0.034	0.034	0.027	0.03	0.035	0.037
0.000018	<0.000017	<0.000017	<0.00001	0.000015	0.000014	0.000018	<0.00001	<0.00001	<0.00001	0.000018	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
55.7	49.5	55.2	60.3	96	146	64.2	71.4	82.9	85.5	62.5	63.4	53.4	49.5	70.8	88.5	97.4	118
<0.001	<0.001	<0.001	0.00043	0.00156	0.00065	0.00019	0.00032	0.00019	<0.0003	0.00025	0.00022	0.00027	0.00028	0.00046	0.00042	0.00039	0.00027
<0.0003	<0.0003	<0.0003	0.00016	0.00064	0.00058	0.00014	0.00017	0.00014	0.00017	0.00014	0.00013	0.00012	0.00012	0.00022	0.0003	0.00021	0.00028
0.0011	0.0012	0.0013	0.00194	0.00525	0.00255	0.00085	0.00121	0.00191	0.00143	0.00227	0.00151	0.00165	0.00126	0.0038	0.00181	0.00079	0.00094
0.065	0.046	0.084	0.112	0.797	0.355	0.099	0.043	0.035	<0.03	0.055	0.064	0.055	0.069	0.179	0.345	0.272	0.258
<0.0005	<0.0005	<0.0005	<0.00005	0.000168	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
0.006	0.0054	0.0065	0.00647	0.00722	0.00876	0.00389	0.00456	0.00568	0.00557	0.00721	0.00502	0.00573	0.00567	0.00488	0.00601	0.00614	0.0069
45.9	40.3	51.6	58.3	91.5	151	66.5	73.7	82.2	97.6	63.2	57.5	44.6	42.9	69.1	86.3	92.2	112
0.0665	0.0302	0.0879	0.0677	1.92	1.11	0.108	0.0911	0.0598	0.0564	0.0382	0.0528	0.0294	0.0531	0.317	2.04	1.49	0.905
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
0.005	0.0066	0.0095	0.0117	0.00417	0.0116	0.0173	0.0169	0.0137	0.0141	0.0276	0.0153	0.00592	0.00457	0.00378	0.00197	0.00127	0.0131
<0.001	0.0012	0.0019	0.00211	0.00385	0.00325	0.00116	0.00157	0.00165	0.00175	0.00132	0.00149	0.00134	0.00126	0.00225	0.00177	0.00148	0.00163
<0.3	<0.3	<0.3	<0.3	<0.3	0.67	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.109	0.346	0.408	0.226
12.7	12.5	15.1	15.2	20.9	27.5	11.4	14	16	16.8	14.5	12.9	10.9	12	16.2	16.9	16.3	18.8
<0.001	<0.001	<0.001	0.00018	0.00024	0.00028	0.00015	0.00015	0.00016	0.00017	0.00022	0.0002	0.00022	0.00021	0.00015	0.00017	0.00016	0.00023
2.81	5.49	5.61	5.37	13.5	14.2	3.88	2.94	3.66	1.08	3.36	2.49	1.81	4.18	10.2	12.1	13.3	11.8
<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
42.7	38.3	47	52.6	74.7	99.4	41	50.3	58.4	64.4	52	46.5	37	37	50.6	59.7	69.5	68.4
0.463	0.41	0.478	0.492	0.931	1.22	0.568	0.63	0.744	0.79	0.577	0.517	0.397	0.408	0.607	0.854	0.922	0.961
														29.5	52.9	57.1	105
<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00298	<0.0001	<0.0001
<0.01	<0.01	<0.01	<0.01	0.022	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0.00054	0.00085	0.001	0.00117	0.000672	0.00125	0.0011	0.00134	0.00122	0.00137	0.00193	0.0013	0.000607	0.000459	0.000585	0.0004	0.000267	0.00113
0.0013	0.0018	0.0029	0.0032	0.0029	0.0021	0.0018	0.0026	0.0023	0.0024	0.003	0.0025	0.0016	0.0016	0.0021	0.0012	<0.001	0.0015
<0.005	<0.005	<0.005	0.0036	0.0222	0.003	<0.003	<0.003	0.0034	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0044	0.0038	<0.003
15.5	17.3	17.7	17.5	17	24.5	10	11.5	13.4	13.4	15.8	15	15.2	15.6	12.6	14.2	13.6	12.4
16.5	17.7	18.8	18.1	17.9	25.4	10.1	11.4	13.3	13.8	16.1	15.1	15.5	15.9	14.1	13.9	14.5	12.9
0.953	1.08	1.09	0.77		1.01	0.601	0.654	0.7	0.766	1.04	0.794	1.02	0.868	0.853			3.47
0.973	1.14	1.1	0.8	1.19	1.1	0.816	0.908	0.762	0.534	0.935	0.893	0.884	0.88	1.02	1.1	0.81	0.77
L1038168	**L1052387**	**L1066047**	**L1076994**	**L1092368**	**L1122039**	**L1133342**	**L1140194**	**L1142492**	**L1146570**	**L1148880**	**L1152500**	**L1176520**	**L1190914**	**L1245799**	**L1256678**	**I1265809**	**L1276517**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C1.31 - PC03
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PC03 2-Apr-13	PC03 7-May-13	PC03 5-Jun-13	PC03 2-Jul-13	PC03 7-Aug-13	PC03 9-Oct-13	PC03 6-Nov-13	PC03 13-Mar-14	PC03 21-Mar-14	PC03 27-Mar-14	PC03 3-Apr-14	PC03 10-Apr-14	PC03 23-Apr-14	PC03 6-May-14	PC03 21-May-14	PC03 3-Jun-14	PC03 18-Jun-14	PC03 3-Jul-14
777	663	564	667	653	1.32	826	453	806	438	891	513	1174	673	655	831	660	782
	81.9	89.9		69.8	80		81.4	53.9	95.7	89.5		108			55.4		
	8.3	8.83		5.74	10.3		11.8	7.71	12.9	11.3		12.2			5.38		
8.2	8.21	8.42	8.54	7.98	8.35	8.28	7.93	7.68	7.9	8.13	8.1	8.07	8.29	8.55	7.81	8.48	8.74
-27.6	89.4	155	79.1	281	135	87.7	67.4	58.3	77.5	27.9	-48.2	119	195	77.5	39.6	103	79.5
0.51	0.39	0.33	0.33	0.34	0.66	0.73	0.42	0.74	0.37	0.72	0.38	0.84	0.44	0.37	0.49	0.38	0.38
1032	789	678	677	703	798	1467	867	1503	757	1435	764	1654	884	744	992	775	780
12.1	14.7	16.2	25.8	21.2	4.44	2.13	0.02	0.7	2.89	5.17	7.78	9.82	12.5	18.7	16.5	17.2	25.1
670	513	441	440	457	865	954	563	977	492	932	497	1175	572	484	645	504	507
1.3	2.8	1.7	0	1.4	0	0.9											
						2											
325	250	243	226	264	401	447	230	445	459	375	410	370	271	232	247	267	278
325	247	243	208	264	386	447	230	445	459	367	410	351	271	225	231	255	251
<1	2.5	<1	18.3	<2	14.2	<2	<2	<2	<2	8.1	<2	19.3	<2	6.3	16.2	12.1	27
19	20.1	23.6	<5	31.1	34.9	23.2											
494	326	307	276	294	645	725	395	762	799	720	722	785	385	327	312	341	348
<1	<1	<1	<1	<2	<1	<2	<2	<2	<2	<1	<2	<1	<2	<1	<1	<1	<1
8.24	8.46	8.39	8.55	8.24	8.41	8.22	7.99	8.26	8.22	8.33	8.23	8.32	8.27	8.37	8.57	8.42	8.72
1060	737	699	643	662	1310	1480	832	1500	1570	1330	1440	1650	862	725	720	758	753
707	455	428	384	394	906	1080	547	982	1020	969	1070	1200	532	450	444	470	441
9.3	<3	<3	<3	4.4	3.5	<3	9.5	3.4	5.1	6.6	5.4	3.5	5.9	3.7	3	5.4	8.9
3.07	0.56	0.85	0.69	0.9	0.94	0.9	4.79	2.11	1.74	2.64	2.92	1.34	1.76	1.11	1.34	1.58	2.05
<0.5	<0.25	<0.5	<0.05	<0.25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.25	<0.05	<0.5	<0.25
39.2	56.9	51.8	49.4	50	58.8	60.8	25.9	49.1	49.4	42.2	46	53	58.7	48.5	52.1	52.9	52.3
0.28	0.23	0.33	0.226	0.25	0.33	0.23	0.34	<0.2	0.2	0.2	0.22	<0.4	0.2	0.17	0.228	0.214	0.31
247	78.5	58.3	48.9	48	305	399	209	421	441	374	424	548	132	67.8	68.2	77	78.8
0.031	0.0093	0.0115	0.0217	0.043	0.0681	0.0609	0.404	0.464	0.179	0.149	0.195	0.121	0.0228	0.0098	0.0121	0.0245	0.0231
<0.05	<0.025	<0.05	0.0097	0.027	0.125	0.139	0.153	0.131	0.054	0.058	0.065	0.14	<0.05	<0.025	<0.005	0.064	<0.025
<0.01	<0.005	<0.01	0.0013	0.0093	0.033	0.024	0.013	0.011	<0.01	<0.01	0.011	<0.02	<0.01	<0.005	<0.001	0.018	<0.005
0.597				0.954													
0.804	0.806	0.819	0.945	1.02	1.25	0.918								0.693			
0.804	0.794	0.799	0.934	1.07	1.18	0.817	1.82	1.32	1.16	1.16	1.29	1.01	1.11	0.763	0.854	0.999	1.12
					0.0277	0.0183	0.171	0.0469	0.0214	0.0111	0.0213	0.016	0.0116	0.0073	0.0093	0.0117	0.0265
0.0245	0.0235	0.0212	0.0422	0.0659	0.0504	0.0283	0.251	0.0702	0.0399	0.0939	0.0434	0.0337	0.0288	0.0239	0.0256	0.0275	0.0487
0.107	0.0295	0.029	0.0321	0.0755	0.0609	0.0359	0.294	0.15	0.0936	0.0333	0.092	0.0622	0.0538	0.0301	0.0419	0.0455	0.0495
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
0.0016	0.0014	0.0017	0.0019	0.0013	0.0041	0.0012	0.0036	0.0019	0.0013	0.0012	0.0015	<0.001	0.0018	0.0015	0.0019	0.0016	0.0034
0.00011	0.0001	<0.0001	0.0001	0.00011	0.00034	0.00011	0.00011	0.00017	0.00011	0.00015	0.00015	0.00015	0.00019	0.00011	0.00011	<0.0001	0.00012
0.00094	0.00124	0.00123	0.0017	0.00168	0.00228	0.00127	0.00144	0.00156	0.0013	0.00118	0.00141	0.0013	0.00145	0.00143	0.00165	0.00152	0.00204
0.0633	0.0484	0.0437	0.0428	0.056	0.0812	0.093	0.0508	0.0772	0.0694	0.0655	0.0792	0.0729	0.0508	0.0563	0.0508	0.0461	0.0367
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
0.035	0.025	0.024	0.024	0.034	0.049	0.034	0.035	0.051	0.051	0.041	0.043	0.044	0.032	0.034	0.026	0.027	0.034
0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00003	<0.00002	<0.00001	<0.00004	<0.00002	<0.00003	<0.00003	<0.00003	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
74.3	57.8	58.2	51.1	51.3	110	108	64.4	112	111	105	107	115	65.9	61.5	58.9	62.3	59.4
<0.0001	<0.0001	<0.0001	<0.0001	0.00011	0.00025	0.00022	0.00016	0.00012	0.00013	0.00013	<0.0001	0.00011	<0.0001	0.0001	<0.0001	0.00011	0.00016
0.00012	<0.0001	<0.0001	0.00013	0.0001	0.00019	0.00017	0.00036	0.00036	0.00029	0.00024	0.00023	0.00023	0.00013	<0.0001	0.00013	0.00014	0.00018
0.00086	0.0013	0.00147	0.00161	0.00078	0.00306	0.00126	0.00437	0.00184	0.0016	0.00124	0.00125	0.00172	0.00187	0.00186	0.00181	0.00131	0.00172
									<0.00002	<0.00002	<0.00002	<0.00002					
0.036	0.015	0.018	0.017	0.027	0.026	0.026	0.109	0.065	0.061	0.056	0.046	0.053	0.024	0.016	0.03	0.035	0.04
<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
0.00437	0.00601	0.00478	0.00472	0.00549	0.00782	0.00796	0.00432	0.00732	0.00785	0.0058	0.00667	0.00779	0.00572	0.00593	0.00532	0.00521	0.00565
74.9	44.2	39.2	36	40.2	90.1	110	56.8	117	127	111	110	121	53.6	42.1	39.9	45	48.3
0.122	0.0226	0.016	0.0153	0.0439	0.047	0.0868	0.252	0.314	0.18	0.175	0.172	0.153	0.0376	0.0103	0.0241	0.0518	0.0753
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
0.0301	0.00822	0.00423	0.00469	0.00581	0.103	0.0308	0.0273	0.0805	0.0771	0.0687	0.065	0.0705	0.0265	0.0117	0.00825	0.00741	0.00975
0.00134	0.00093	0.00101	0.00093	0.00118	0.00205	0.00161	0.00156	0.00211	0.00181	0.00167	0.0018	0.0018	0.00119	0.00104	0.00109	0.00116	0.00148
<0.05	<0.05	<0.05	<0.05	0.071	<0.05	<0.05	0.225	0.073	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.053
14.3	12.1	11.9	11.1	11.7	21.7	19.2	15.1	19.2	18.3	16.3	16.3	19.2	12.5	10.9	10.4	11	12.9
0.00019	0.00017	0.00018	0.00019	0.00022	0.00048	0.00023	0.00042	0.00106	0.00079	0.00061	0.0007	0.0006	0.00042	0.00023	0.00023	0.00025	0.00027
4.55	3.18	2.15	3.91	7.84	9.11	9.01	5.88	9.41	9.4	7.54	7.09	5.92	4.76	3.19	4.2	4.6	5.61
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
49	37.8	33.9	33	35.4	67.1	72.3	36	72.6	76.3	62.9	69.4	77	42.6	37.8	34.8	36.5	39.7
0.636	0.434	0.364	0.369	0.379	0.878	0.925	0.53	0.919	0.975	0.809	0.944	1	0.479	0.414	0.413	0.429	0.439
77.2	26.5	19	16.1	16.2	96.7	132	67.2	130	132	125	142	171	42	26.6	24.2	24.4	26.6
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0.00173	0.00121	0.000919	0.000958	0.000758	0.00564	0.0036	0.00188	0.00494	0.0049	0.00445	0.0039	0.00393	0.00255	0.00132	0.00121	0.00112	0.000994
0.0027	0.0023	0.0019	0.003	0.0021	0.0066	0.003	0.0036	0.0044	0.0039	0.0034	0.0038	0.0036	0.005	0.0034	0.0036	0.0031	0.0046
0.0035	0.0013	0.0024	0.0013	<0.001	0.001	<0.001	0.0021	0.0013	<0.001	<0.001	<0.001	<0.001	<0.001	0.0012	<0.001	<0.001	<0.001
0.0375	0.013	0.0283	0.0164	0.0564	0.0141	0.0126	0.243	0.0487	0.0216	0.0451	0.0515	0.0371	0.0806	0.0488	0.0471	0.106	0.0657
0.00012	0.00011	0.0001	0.00014	0.00014	0.00034	0.00014	0.00013	0.00018	0.00011	0.00019	0.00016	0.00015	0.00021	0.00011	0.00011	0.00013	0.00012
0.00091	0.00123	0.00134	0.00172	0.00177	0.00211	0.00133	0.00145	0.00142	0.00135	0.00134	0.00139	0.0013	0.00136	0.00139	0.00164	0.00152	0.00206
0.0633	0.0488	0.0463	0.0435	0.0582	0.0808	0.0985	0.0535	0.0761	0.0693	0.0666	0.0831	0.0752	0.0499	0.055	0.051	0.0445	0.0399
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
0.037	0.027	0.026	0.026	0.039	0.053	0.031	0.038	0.053	0.052	0.045	0.047	0.047	0.033	0.036	0.026	0.03	0.037
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00003	<0.00002	0.000012	<0.00004	<0.00002	<0.00003	<0.00003	<0.00003	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
71.7	57.8	59.4	51.3	53	106	110	64.8	107	106	97.5	110	115	62.5	59.6	56.5	58.7	58.6
0.00024	0.00016	0.00023	0.00016	0.00031	0.00042	0.00028	0.0007	0.00036	0.00022	0.00027	0.00029	0.00027	0.00033	0.00028	0.00026	0.00046	0.00034
0.00015	<0.0001	0.00012	0.00015	0.00017	0.00022	0.0002	0.00058	0.00039	0.00031	0.0003	0.00029	0.00027	0.00019	0.00014	0.00016	0.00022	0.00023
0.00146	0.00175	0.0021	0.00207	0.00156	0.00341	0.00162	0.0087	0.00335	0.00246	0.00242	0.00185	0.00269	0.003	0.00261	0.00249	0.00251	0.00265
0.105	0.033	0.068	0.041	0.106	0.043	0.058	0.395	0.192	0.146	0.227	0.17	0.138	0.135	0.077	0.095	0.184	0.137
<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000063	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
0.00432	0.00609	0.005	0.00494	0.00579	0.00861	0.00697	0.00436	0.00722	0.00764	0.00642	0.00683	0.00775	0.00551	0.00577	0.00478	0.00518	0.00556
72.5	43.8	39.2	36.7	40.8	90.3	108	57.1	111	117	103	112	123	47.7	40.5	38.3	41.6	47.8
0.122	0.0247	0.0227	0.0213	0.0546	0.0502	0.0916	0.267	0.301	0.181	0.189	0.177	0.158	0.0417	0.0131	0.0272	0.0584	0.0849
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
0.0299	0.00897	0.00442	0.00494	0.00653	0.111	0.0285	0.0294	0.0823	0.0763	0.0747	0.0718	0.0742	0.0255	0.0124	0.0078	0.00727	0.0105
0.00144	0.00101	0.00117	0.00107	0.00151	0.00218	0.00182	0.00336	0.00226	0.00189	0.00195	0.00199	0.00208	0.00153	0.00125	0.00128	0.00149	0.0018
0.059	<0.05	<0.05	<0.05	0.088	0.058	<0.05	0.303	0.112	0.071	0.095	0.094	0.063	0.055	<0.05	<0.05	<0.05	0.061
14.4	12.1	12.1	11.6	12.4	21.1	19.1	15.2	18.1	17.2	15.3	17.1	18.9	11.7	10.6	10.2	10.2	12.9
0.00021	0.00018	0.00018	0.00019	0.00023	0.00041	0.00024	0.00044	0.00092	0.00075	0.00061	0.0006	0.00057	0.00037	0.0002	0.00022	0.00028	0.00027
4.53	3.23	2.25	4.04	8.21	9.21	9.01	6.61	9.14	9.09	7.45	7.69	5.96	4.72	3.24	4.2	4.58	5.78
<0.00001	<0.00001	0.000015	<0.00001	<0.00001	<0.00001	0.000033	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
47.4	37.9	36.7	33.9	38.1	69.3	74.8	36.8	71.8	73.5	64.7	71.9	77.6	40.4	37.5	34.3	34.3	39.8
0.62	0.446	0.377	0.385	0.397	0.919	0.813	0.532	0.924	0.95	0.83	1.01	1.02	0.456	0.418	0.393	0.42	0.45
76	27.1	19.6	16.6	17.7	101	138	69.1	132	136	124	148	177	41	25.9	23	23.8	27.3
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
									<0.00002	<0.00002	<0.00002	<0.00002					
0.00175	0.00129	0.000987	0.00103	0.000833	0.00608	0.00337	0.00197	0.00517	0.00498	0.00459	0.00405	0.00403	0.00253	0.00145	0.00117	0.00112	0.00105
0.0029	0.0025	0.0022	0.0031	0.0025	0.0071	0.004	0.0045	0.0047	0.0041	0.0042	0.0041	0.0039	0.0053	0.004	0.0038	0.0036	0.005
<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
10	12.1	14.7	15.1	17.3	18.1	14.4	14.4	12.7	12.4	12.4	12.1	13.5	13.5	12.5	13.3	13.6	15
10.7	12.2	14.9	15.8	17.9	18.9	14.5	16.6	13.2	12.9	13.6	12.6	13.7	13.9	12.6	13.6	12.9	16.4
0.566																	
0.773																	
L1285503	L1298960	L1312719	L1326032	L1344180	L1375698	L1388680	L1432661	L1435186	L1437439	L1439655	L1442672	L1446462	L1451608	L1458340	L1465108	L1473827	L1481215

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

PC03 16-Jul-14	PC03 30-Jul-14	PC03 12-Aug-14	PC03 4-Sep-14
782	923	637	
		82.9	
		7.59	
8.74	9.18	8.13	8.52
79.5	126	79.5	
0.38	0.42	0.35	
780	863	710	
25.1	28.7	19.6	18.4
507	561	461	
247	343	242	387
233	299	234	360
14.5	44	8.2	26.7
309	414	311	500
<1	<1	<1	<1
8.5	8.78	8.37	8.51
691	930	707	1060
440	598	470	695
<3	8.9	<3	7.5
1.63	3.95	1.14	3.79
<0.25	<0.5	<0.25	<0.5
54.1	56.8	56.3	54.6
0.213	0.231	0.233	0.232
51.9	122	64.6	163
0.0167	0.194	0.014	0.0408
<0.025	<0.05	<0.025	0.065
<0.005	0.021	<0.005	0.012
0.95	1.62	1.04	1.02
0.0226	0.153	0.012	0.0339
0.0442	0.191	0.0273	0.0548
0.059	0.208	0.034	0.0476
<0.005	<0.005	<0.005	<0.005
<0.005	<0.005	<0.005	<0.005
<0.005	<0.005	<0.005	<0.005
0.003	0.0035	0.0019	0.0029
0.00011	0.00014	0.00013	<0.0001
0.00173	0.00338	0.00176	0.00184
0.049	0.0578	0.0528	0.0486
<0.0001	<0.0001	<0.0001	<0.0001
<0.0005	<0.0005	<0.0005	<0.0005
0.028	0.037	0.028	0.037
<0.00001	<0.00001	<0.00001	<0.00001
56.1	65.6	58.9	83.6
<0.0001	0.00022	<0.0001	0.00018
0.00013	0.00029	0.00012	0.00019
0.00143	0.00144	0.00174	0.00131
0.033	0.035	0.029	0.032
<0.00005	<0.00005	<0.00005	<0.00005
0.00517	0.00668	0.00582	0.00599
41	60.8	39.8	70.7
0.0456	0.282	0.0184	0.0824
<0.00001	<0.00001	<0.00001	<0.00001
0.00534	0.0129	0.0133	0.0142
0.00119	0.00208	0.00103	0.00155
<0.05	0.19	<0.05	0.056
11	16.3	10.6	14.1
0.00022	0.00046	0.0002	0.00029
7.26	12.9	7.25	12.3
<0.00001	<0.00001	<0.00001	<0.00001
35.8	51.8	36.1	53.5
0.391	0.533	0.395	0.649
17.7	39.2	21.2	54.1
<0.00001	<0.00001	<0.00001	<0.00001
<0.0001	<0.0001	<0.0001	<0.0001
<0.01	<0.01	<0.01	<0.01
0.000842	0.00125	0.00127	0.00131
0.0032	0.0067	0.0036	0.0053
0.0023	<0.001	<0.001	0.0027
0.0268	0.109	0.0319	0.157
0.00019	0.00016	0.00014	0.00012
0.00186	0.0031	0.0017	0.00199
0.0509	0.0595	0.0523	0.0563
<0.0001	<0.0001	<0.0001	<0.0001
<0.0005	<0.0005	<0.0005	<0.0005
0.03	0.038	0.035	0.042
<0.00001	<0.00001	<0.00001	<0.00001
56.5	61	59	83.3
0.00023	0.00051	0.00021	0.00066
0.00017	0.00036	0.00014	0.00032
0.00198	0.00254	0.00241	0.00293
0.081	0.195	0.073	0.238
0.000074	<0.00005	<0.00005	0.000053
0.00512	0.00645	0.00517	0.00615
40.2	56.6	39.8	70.8
0.0506	0.325	0.0201	0.0995
<0.00001	<0.00001	<0.00001	<0.00001
0.00566	0.013	0.0134	0.0156
0.00137	0.00238	0.00124	0.00224
0.063	0.187	<0.05	0.073
11.1	15.1	10.6	14
0.00024	0.00041	0.0002	0.00034
7.46	12.4	7.36	12.8
<0.00001	<0.00001	<0.00001	<0.00001
36.8	47.9	34.9	54.6
0.401	0.513	0.382	0.665
17.9	36.7	21.6	54.9
0.000052	<0.00001	<0.00001	<0.00001
<0.0001	<0.0001	<0.0001	<0.0001
<0.01	<0.01	<0.01	<0.01
0.000939	0.00128	0.00131	0.00144
0.0033	0.0067	0.0038	0.0062
<0.003	<0.003	<0.003	<0.003
14.7	20	14.5	16.2
15	20.9	14.6	16.7
L1488886	**L1495443**	**L1502292**	**L1513418**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C1.32 - PC08
PAGE 1 OF 4

Site ID			PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08
Analytes		MDL	2-May-07	17-Jul-07	14-Sep-07	28-Apr-08	7-Jul-08	4-Sep-08	1-Jun-10	1-Sep-10	22-Nov-10	29-Mar-11	14-Apr-11	21-Apr-11	28-Apr-11	5-May-11
In Situ Parameters																
Conductivity µS/cm	...		518		621	626	595	610	565	907	542	598	515	608	571	624
Oxygen Dissolved %	...					94.2	85.1	80.2		48.5	53.2	55.8	36.5	94.4	72.5	79.9
Oxygen Dissolved	...		11	9.4	8.02	10.1	7.84	8.44		5.16	6.39	6.85	4.76	10.9	8.6	8.66
pH (unitless)	...		8.6	8.44	7.05	8.26	8.34	8	8.97	6.81	6.82	7.86	7.14	7.81	7.59	7.67
Redox Potential mV	...		-88.4				-119	-75.2	-354	15.8	300	101	132	24.9	89.7	113
Salinity ppt	...									0.45				0.43	0.42	0.41
Specific Conductivity µS/cm	...		969	755	847	826	674	793	687	688	842	928	858	876	854	840
Temperature °C	...		8.01	23.2	11.1	12.3	19.3	12.9	15.7	12.4	6.44	6.38	4.1	8.94	7.65	11.5
Total Dissolved Solids	...									590	547	603	558	570	555	545
Turbidity NTU	...															
Physical Tests																
Acidity to pH 8.3 (as CaCO3)	1															
Alkalinity (Total as CaCO3)	1 to 2		231	238	315	295	220	314		308	308	317	309	292	300	296
Bicarbonate Alkalinity	1 to 2										308			292		
Carbonate Alkalinity	1 to 2										<2			<2		
Color TCU	5		14	16.1	21.7	14.5	20.2	23.7	19.2	24.6	22.4	15.9	15.4	14.4	14.8	14.8
Hardness as CaCO3 (Dissolved)	0.5 to 1.1		342	319	344	370	296	335	286	380	357	393	369	360	388	369
Hydroxide Alkalinity	1 to 2										<2			<2		
pH (unitless)	0.01 to 0.1		8.38	8.45	8.16	8.1	8.43	8.12	8.79	7.73	8.07	7.86	8.1	8.16	8.08	8.2
Specific Conductivity µS/cm	2		725	756	845	845	672	802	668	822	820	866	801	799	801	798
Total Dissolved Solids	1 to 2		455	441	502	515	416	478	432	506	497	531	498	498	496	484
Total Suspended Solids	3		7.5	7.6	18.7	6.8	4	10.8	3	3.4	3.7	3.5	40.9	10.5	4.9	4.5
Turbidity NTU	0.1					6.59	6.63	3.38	1	3.5	8.42	4.84	29.6	10.2	7.59	7.22
Dissolved Anions																
Bromide	0.05 to 2.495		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.25	<0.5	<0.5	<0.5	<0.25	<0.5
Chloride	0.5 to 1		60.7	61	61.2	60.5	52.8	58.7	55.3	59.2	57.6	62.5	58.9	58.7	58.3	58.8
Fluoride	0.02 to 0.4		0.192		0.274	0.237	0.194	0.264	0.174	0.24	0.22	<0.2	<0.2	0.21	0.2	<0.2
Sulphate	0.5 to 1		85	83	54.5	80.2	64.9	51.3	73.2	55.4	58	68.2	64.8	64.1	64.6	61.7
Nutrients																
Ammonia (Total)	0.005 to 0.05		0.029	0.081	0.024	0.02	0.197	0.36	0.08	0.198	0.488	0.0102	0.029	0.0591	0.0385	0.0193
Nitrate (as N)	0.005 to 0.1		<0.005	0.005	<0.005	<0.005	0.0146	<0.005	<0.005	<0.05	<0.025	<0.05	<0.05	<0.05	<0.025	<0.05
Nitrite (as N)	0.001 to 0.02		<0.001	0.0024	<0.001	<0.001	0.0012	0.0014	<0.001	<0.01	<0.005	<0.01	<0.01	<0.01	<0.005	<0.01
Nitrogen (Dissolved)	0.05 to 0.1														0.72	0.48
Nitrogen (Total)	0.0025 to 0.11								0.762	1.36	0.89	0.921	1.06	0.33	0.669	0.46
Nitrogen Kjeldahl (Total)	0.05 to 0.2		1	1.03	0.836	0.842	1.56	1.48	0.762	1.36	0.89	0.921	1.06	0.33	0.669	0.46
Orthophosphate (Dissolved)	0.001 to 0.01		0.0026	0.0027	0.0056	0.0024	<0.001	0.01	<0.001	0.0064	0.0037	<0.001				
Phosphorus - Dissolved	0.002 to 0.02				0.0158					0.0513			0.0059	0.0066	0.0508	0.0069
Phosphorus - Total	0.002 to 0.02		0.0433	0.0302	0.082	0.0435	0.031	0.0598	0.0197	0.0511	0.0629	0.056	0.097	0.0422	0.0462	0.0498
Cyanide																
Cyanide (Free)	0.005					<0.005	<0.005		<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005
Cyanide (Total)	0.005		0.0057	0.006	0.0078	0.0065	0.0077		0.0066	0.0062	0.0059	0.0051		0.006	0.0054	0.0055
Cyanide (WAD)	0.005					<0.005	<0.005		<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005
Dissolved Metals																
Aluminum	0.001 to 0.025		<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Antimony	0.0001 to 0.0025		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic	0.0001 to 0.0025		0.00105	0.00127	0.00158	0.0009	0.00133	0.0018	0.00166	0.00138	0.00118	0.00086	0.00111	0.00077	0.00092	0.00106
Barium	5E-005 to 0.02		0.05	0.043	0.044	0.072	0.048	0.062	<0.02	0.073	0.074	0.079	0.084	0.071	0.075	0.071
Beryllium	0.0001 to 0.005		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth	0.0005 to 0.2											<0.2	<0.2	<0.2	<0.2	<0.2
Boron	0.01 to 0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	1E-005 to 8.5E-005		<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000034	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
Calcium	0.05 to 0.1		61.4	53.1	67.4	72.7	51.5	64.7	46.2	73.8	69.5	76.8	74.4	72.4	76.8	73.6
Chromium	0.0001 to 0.018		<0.001	<0.001	<0.001	0.0012	<0.001	<0.002	<0.002	<0.003	<0.001	<0.001	<0.0015	<0.001	<0.002	<0.0015
Cobalt	0.0001 to 0.0015		<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0006	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Copper	0.0002 to 0.006		<0.001	<0.001	<0.001	0.0013	<0.001	<0.002	0.0011	<0.001	<0.001	0.0012	<0.001	<0.001	<0.001	<0.001
Dissolved Cadmium (by saltwater extrac	0.00002															
Iron	0.01 to 0.03		<0.03	<0.03	0.082	0.073	0.032	0.176	<0.03	0.046	0.751	0.081	0.071	<0.03	<0.03	<0.03
Lead	5E-005 to 0.0025		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Lithium	0.0005 to 0.025		0.0059	0.0076	0.0063	<0.005	0.0053	<0.01	0.0057	0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Magnesium	0.1		46	45.3	42.7	45.7	40.6	42.2	41.5	47.6	44.5	48.9	44.4	43.5	47.7	45
Manganese	5E-005 to 0.0015		0.00482	0.00425	0.183	0.185	0.0082	0.0955	0.00296	0.141	0.146	0.117	0.23	0.21	0.18	0.157
Mercury	1E-005 to 5E-005		<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005		0.0026	0.0029	0.003	0.0021	0.0024	0.0032	0.0032	0.0036	0.0028	0.0019	0.002	0.0021	0.002	0.002
Nickel	0.0005 to 0.005		<0.001	<0.001	0.0025	0.0017	<0.001	0.0022	<0.001	0.0024	0.0019	0.0019	0.0017	0.0015	0.0016	0.0016
Phosphorus	0.05 to 0.3											<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2		11.1	10.5	12.1	10.3	12	12.4	11.5	13.6	11.5	10.9	10.2	9.7	11	10.4
Selenium	0.0001 to 0.006		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon	0.05											8.04	8.13	8	8.7	8.28
Silver	1E-005 to 0.0001		<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00004	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	0.05 to 2		43.5	40.2	45.9	39	35.7	40.1	37.8	46.4	41.4	42.3	38.8	38.4	42.1	39.6
Strontium	0.0001 to 0.005											0.497	0.467	0.454	0.503	0.47
Sulphur	0.5															
Thallium	1E-005 to 0.001		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin	0.0001 to 0.0025		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001		0.00122	0.0013	0.0004	0.00056	0.00107	0.00062	0.00137	0.00044	0.00048	0.0007	0.00058	0.00058	0.00059	0.00054
Vanadium	0.001 to 0.03		<0.03	<0.03	<0.03	<0.001	0.0018	<0.002	0.003	0.0012	0.0024	<0.001	0.0014	<0.001	<0.001	<0.001
Zinc	0.001 to 0.006		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Metals																
Aluminum	0.003 to 0.025		0.111	0.0169	0.193	0.0559	0.0354	0.262	0.0233	0.0114	0.0137	0.0087	1.28	0.0806	0.0755	0.12
Antimony	0.0001 to 0.0025		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic	0.0001 to 0.0025		0.00108	0.00125	0.00191	0.0012	0.00154	0.002	0.00139	0.00136	0.00099	0.00097	0.00164	0.00097	0.00101	0.00114
Barium	5E-005 to 0.02		0.049	0.043	0.057	0.077	0.05	0.071	<0.02	0.074	0.07	0.091	0.103	0.077	0.074	0.078
Beryllium	0.0001 to 0.005		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth	0.0005 to 0.2											<0.2	<0.2	<0.2	<0.2	<0.2
Boron	0.01 to 0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	1E-005 to 8.5E-005		<0.000017	<0.000017	0.000018	<0.000017	<0.000017	<0.000034	<0.000017	<0.000017	<0.000017	0.00002	0.000023	<0.000017	<0.000017	<0.000017
Calcium	0.05 to 0.1		59.8	53.6	64.4	73.8	44.1	65.2	45.3	72.9	68	75.2	72.7	72.5	73.4	71.9
Chromium	0.0001 to 0.005		<0.001	<0.001	<0.001	0.0015	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	0.0031	<0.001	<0.001	<0.001
Cobalt	0.0001 to 0.0015		<0.0003	<0.0003	0.00037	<0.0003	<0.0003	<0.0006	<0.0003	<0.0003	<0.0003	<0.0003	0.00115	0.00033	<0.0003	0.00033
Copper	0.0005 to 0.007		0.0015	<0.001	0.0028	0.0024	0.0015	0.0048	0.0014	<0.001	0.0013	0.0018	0.0093	0.0021	0.0019	0.002
Iron	0.01 to 0.03		0.153	0.04	1.37	1.23	0.078	1.04	0.037	0.867	1.32	0.837	3.38	1.12	0.978	1.11
Lead	5E-005 to 0.0025		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Lithium	0.0005 to 0.025		0.0057	0.0071	0.0059	<0.005	0.0065	<0.01	0.0067	0.0063	0.0054	0.0055	<0.005	<0.005	<0.005	<0.005
Magnesium	0.1		44.4	46.8	41.3	46	40	42.2	40.9	47.2	44.4	48.2	43.1	44.1	45.2	44.4
Manganese	5E-005 to 0.0015		0.0121	0.00632	0.215	0.188	0.0159	0.102	0.00451	0.171	0.134	0.129	0.271	0.227	0.178	0.168
Mercury	1E-005 to 5E-005		<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005		0.0026	0.0026	0.0029	0.0021	0.0028	0.0031	0.0032	0.0038	0.0027	0.0021	0.0022	0.0024	0.0023	0.0022
Nickel	0.0005 to 0.005		0.0011	<0.001	0.0034	0.0018	<0.001	0.0031	<0.001	0.0025	0.0018	0.0024	0.0044	0.002	0.002	0.0027
Phosphorus	0.05 to 0.3											<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2		10.9	10.6	11.6	10.2	12.8	12.9	11.3	13.3	11.5	10.8	9.7	9.8	10.1	10.3
Selenium	0.0001 to 0.006		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon	0.05											7.95	11.3	8.37	8.39	8.49
Silver	1E-005 to 0.0001		<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00004	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	0.000032
Sodium	0.05 to 2		42	40.4	44.3	39.1	38.9	38.7	37.2	45.5	41.7	41.9	36.4	39	38.3	39.1
Strontium	0.0001 to 0.005											0.496	0.457	0.459	0.467	0.472
Sulphur	0.5															
Thallium	1E-005 to 0.001		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin	0.0001 to 0.0025		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium	0.01		<0.01	<0.01	0.013	<0.01	<0.01	0.017	<0.01	<0.01	<0.01	<0.01	0.061	<0.01	0.011	0.013
Total Cadmium (by saltwater extraction)	0.00002															
Uranium	1E-005 to 0.001		0.00125	0.00114	0.00036	0.00055	0.00126	0.00064	0.00155	0.00047	0.0005	0.0008	0.00067	0.00064	0.00065	0.00061
Vanadium	0.001 to 0.03		<0.03	<0.03	<0.03	0.002	0.0023	0.0032	0.0032	0.0019	0.0027	0.0015	0.0074	0.0023	0.0019	0.002
Zinc	0.003 to 0.006		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Organics																
Carbon Organic (Dissolved)	0.5 to 5			14.8	13.2	11.7	15.9	14.7	13.6	11.6	12.6	12.7	10.8	10.7	9.65	11.4
Carbon Organic (Total)	0.5 to 5		14.9										14.4	10.8	9.68	11.7
Nitrogen Organic (Dissolved)	0.05 to 0.26														0.681	0.461
Nitrogen Organic (Total)	0.05 to 0.3												1.03		0.63	0.441
ALS LAB ID			**L501627**	**L532007**	**L554763**	**L623545**	**L652819**	**L678833**	**L892818**	**L927896**	**L956921**	**L990459**	**L995583**	**L997645**	**L999654**	**L1002049**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

PC08 12-May-11	PC08 30-May-11	PC08 28-Jun-11	PC08 28-Jul-11	PC08 30-Aug-11	PC08 28-Sep-11	PC08 25-Oct-11	PC08 5-Dec-11	PC08 9-Jan-12	PC08 10-Apr-12	PC08 25-Apr-12	PC08 2-May-12	PC08 11-May-12	PC08 16-May-12	PC08 24-May-12	PC08 10-Jul-12	PC08 7-Aug-12	PC08 4-Dec-12
595	563	530	712	558		532	481	453	411	686	313	527	536	534	659	600	416
89.4	91		71.8	68.1		105	49.8	60.7	52.9			69.6	110		106		82.9
9.47	9.13		6.66	6.7		13.1	6.89	8.13	6.25	13.7	14	8.27	11.4	10.6	9.1		11.2
7.69	8.04	8.86	7.49	8.04	8.27	7.87	7.42	7.36	7.32	7.96	7.92	7.72	8.71	8.7	8.59	8.58	7.9
67.3	427	183	140	152	86.7	169	46.4	82.3	37.2	110	117	22.9	131	72.4	184	122	71.4
0.38	0.34	0.3	0.39	0.33		0.41	0.42	0.38	0.3	0.39	0.21	0.39	0.33	0.34		0.3	0.35
780	694	622	803	675	812	840	863	786	607	798	426	801	682	683	691	624	721
12.6	15.1	17.3	19	16	13.5	5.82	1.83	2.87	8.11	17.6	11.1	7.14	13.8	13.6	22.7	22.9	2.82
507	451	404	522	438		546	561	511	394	518	277	520	443	444		406	468
	2.3	18.4	9.1		7.4	2.3	13.1	15.9		23.3	9.9	12.1	4.3	1.3	1	4	8.4
			7		<1	2.4											
283	231	223	295	223	314	328	357	306	314	320	313	305	239	250	238	221	312
					305	328		306	302	320	313	305	215	219	220	202	312
					9	<2		<2	12.2	<1	<1	<2	24.5	31	18	19	<2
15.5	20.2	25.9	18.4	20.4	18.6	19.9	19	21.3	23	21.9	17.8	16.9	18.8	17.8	18.8	17.7	22.5
350	291	268	325	268	333	344	362	332	359	370	358	357	288	296	294	270	333
					<1	<2		<2	<1	<1	<1	<2	<1	<1	<1	<1	<2
	8.54	8.61	8.04	8.33	8.37	8.23	8.08	8	8.45	8.4	8.16	8.28	8.56	8.54	8.6	8.55	8.29
777	664	612	770	638	782	809	837	784	787	785	787	802	673	667	631	610	743
471	392	389	460	395	466	457	474	442	486	489	479	470	413	414	412	407	463
33.8	4.6	11.1	4.8	3.3	6.7	21.7	22	4	4.7	14.7	23.7	13.3	4.8	3.2	<3	5.7	<3
19.2		12.4	7.96	2.5		10.8	21.8	9.93	4.8	10.4	11.7	11.9	4.32	1.4	1.36	3.28	10.1
<0.5	<0.25	<0.05	<0.5	<0.05	<0.25	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.25	<0.05	<0.05	<0.05	<0.5
58.2	52.6	47.4	55.1	50.4	53.7	56	56.9	55.6	58.8	57.2	57.3	58.3	52.8	52.7	49.4	49.7	56.8
<0.2	0.13	0.201	0.43	0.216	0.31	0.29	0.27	0.25	0.26	0.312	0.25	0.24	0.18	0.209	0.212	0.212	0.27
69.4	57.7	48.7	46.4	51.3	32.2	35	39.8	40	49.7	47	48.4	50.2	58.7	58.9	51.7	51.6	37.6
0.06	0.0295	0.0464	0.347	0.162	0.194	0.181	0.389	0.239	0.0177	0.0093	<0.005	0.0129	0.0175	0.0212	0.0235	0.0277	0.165
<0.05	<0.025	<0.005	0.06	0.0398	0.066	0.122	<0.05	<0.05	<0.05	<0.005	<0.05	0.062	<0.025	<0.005	<0.005	<0.005	0.05
<0.01	<0.005	<0.001	<0.01	0.0241	0.015	0.014	0.011	<0.01	0.018	<0.001	<0.01	<0.01	<0.005	<0.001	0.001	<0.001	0.014
0.82	0.77	1.24	1.26	1.39	0.96	0.78		0.73	0.53	0.65	0.49	0.54	0.88	0.77	0.93	0.92	0.881
0.86	0.8	1.87	1.2	1.52	0.9	3.68	1.03	0.886	0.538	0.878	0.391	1.04	1.07	0.893	0.833	0.943	0.916
1.03	0.8	1.87	1.14	1.17	0.819	3.55	1.1	0.886	0.521	0.878	0.391	0.975	1.07	0.893	0.832	0.943	0.852
	0.0039	<0.001	0.0042														
0.0117	0.0256	0.0141	0.0119	0.0177	0.0123	0.0056	0.0068	0.0146	0.0149	0.014	0.0125	0.0182	0.0192	0.0185	0.0119	0.0128	0.0109
0.0973	0.0321	0.0502	0.0585	0.0279	0.0316	0.0896	0.09	0.0999	0.047	0.0794	0.219	0.106	0.0384	0.0349	0.022	0.0263	0.0603
<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
0.0064	0.0074	0.007	0.0066		0.0076	0.0065	0.0064	0.0062	<0.005	<0.005	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0022	0.0016	0.0019	0.0011
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
0.00094	0.00121	0.00128	0.00122	0.00135	0.00125	0.00093	0.00107	0.0009	0.00085	0.00137	0.00104	0.00116	0.00116	0.00117	0.0012	0.00126	0.00088
0.067	0.05	0.059	0.078	0.061	0.063	0.0648	0.0677	0.0517	0.023	0.0259	0.0399	0.0579	0.0548	0.0535	0.0434	0.0488	0.0488
<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.028	0.027	0.023	0.022	0.025	0.024	0.024	0.017	0.016	0.018	0.02	0.03
<0.000017	<0.000017	<0.000017	0.000149	<0.000017	<0.000017	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
66.7	54	51.3	64.7	49.3	65.7	68.9	70.5	65.9	68	72.8	70.7	68.8	52.4	54.9	56.4	48.2	67.6
<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00042	0.00045	0.00045	0.00043	0.00034	0.00033	0.00028	<0.0001	<0.0001	<0.0001	<0.0001	0.00053
<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.00024	0.00038	0.00026	<0.0001	0.00015	0.00016	0.00025	<0.0001	<0.0001	<0.0001	<0.0001	0.00012
0.0011	0.0012	0.0013	<0.001	<0.001	<0.001	0.00054	<0.0005	0.00071	0.00109	0.00085	0.00089	0.00061	0.00102	0.00093	0.00096	0.00067	0.00074
0.039	<0.03	<0.03	0.101	<0.03	<0.03	0.078	0.216	0.19	0.241	0.122	0.086	0.17	<0.03	0.015	0.016	0.014	0.142
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
0.0054	<0.005	<0.005	<0.005	0.0051	0.0061	0.00536	0.00591	0.00462	0.00525	0.00481	0.00493	0.00468	0.00562	0.00479	0.00563	0.00509	0.00542
44.5	38	34.1	39.7	35.2	41.1	41.8	45.1	40.8	46	45.8	43.9	44.9	38	38.6	37.1	36.3	39.7
0.105	0.0052	0.00867	0.172	0.00417	0.0942	0.124	0.263	0.213	0.127	0.202	0.163	0.284	0.00399	0.00374	0.0128	0.00412	0.16
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
0.0024	0.0023	0.0021	0.0019	0.0025	0.0035	0.00308	0.00253	0.00197	0.00217	0.0023	0.00196	0.00187	0.00216	0.00225	0.00221	0.00213	0.00261
0.0011	<0.001	<0.001	<0.001	<0.001	0.0022	0.00234	0.00237	0.00184	0.00186	0.00185	0.00178	0.00177	0.00066	0.00073	0.00079	0.00061	0.00154
<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.05
11.5	11.2	10.1	11.3	11	11.4	11	11.4	9.82	9.7	10	9.95	9.72	10.9	10.6	10.5	10.2	10.7
<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0001	0.00011	0.00011	0.00011	0.00012	0.00013	0.00011	0.00014	0.00015	0.00013	0.00014	0.0001
5.54	2.45	3.67	8.37	4.32	10.1	9.42	10.2	8.78	9.32	9.49	8.93	8.7	1.79	1.33	1.31	1.58	9.45
<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
40.8	36.1	33	38.8	34.2	40.5	38.5	43.5	36.1	36.1	37.4	37.4	35.5	34.4	34.3	32.9	31.5	37.6
0.444	0.369	0.337	0.432	0.353	0.441	0.433	0.516	0.412	0.466	0.434	0.444	0.436	0.353	0.348	0.358	0.324	0.425
																	13
<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0.00084	0.00114	0.00102	0.00047	0.00103	0.00056	0.000455	0.000459	0.000433	0.000542	0.00049	0.000488	0.000496	0.00103	0.00113	0.000998	0.000912	0.000369
0.0012	0.0022	0.0021	<0.001	0.0024	0.0018	0.0012	0.0013	<0.001	0.0012	0.0016	<0.001	<0.001	0.0022	0.0023	0.002	0.0019	0.0014
<0.005	<0.005	<0.005	0.0073	<0.005	<0.005	0.0098	<0.003	<0.003	<0.003	<0.003	0.004	<0.003	0.0042	0.0014	0.0032	0.0013	<0.001
0.191	0.055	0.122	0.145	0.0319	0.109	0.13	0.715	0.0432	0.0158	0.342	0.0615	0.558	0.0532	0.0191	0.0232	0.0677	0.126
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	0.0001	0.00011	0.00012	<0.0001	0.00011	<0.0001
0.00117	0.00119	0.00124	0.00163	0.00133	0.00138	0.00107	0.00171	0.0012	0.00107	0.00194	0.00134	0.00164	0.00126	0.00117	0.00116	0.00133	0.00114
0.075	0.051	0.06	0.089	0.062	0.069	0.0661	0.079	0.0566	0.0245	0.0386	0.0451	0.073	0.0572	0.0517	0.0414	0.0507	0.0534
<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.033	0.029	0.027	0.026	0.031	0.03	0.026	0.022	0.02	0.02	0.025	0.032
<0.000017	<0.000017	0.000018	0.000025	<0.000017	<0.000017	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000035
68.6	53.9	51.8	67.9	47.9	67	68.4	70.2	65.8	67.3	73	70.7	68.5	53.5	54.3	53.4	48.1	66.7
<0.001	<0.001	<0.001	<0.001	<0.001	0.0013	0.00099	0.00223	0.00076	0.00069	0.00114	0.00065	0.00167	0.00033	0.00018	0.00027	0.00034	0.00112
<0.0003	<0.0003	<0.0003	0.00044	<0.0003	0.00033	0.00035	0.00094	0.00029	0.00011	0.00043	0.00022	0.00071	0.00013	<0.0001	<0.0001	0.00013	0.00022
0.0026	0.0017	0.0021	0.0019	<0.001	0.0013	0.00143	0.00556	0.00141	0.00151	0.00337	0.00255	0.00527	0.00193	0.00112	0.00134	0.00133	0.00443
1.03	0.078	0.184	1.27	0.051	0.513	0.767	2.71	1.77	1.18	1.8	1.31	2.5	0.084	0.043	0.041	0.115	1.43
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	0.000138	<0.00005	<0.00005	0.000072	<0.00005	0.000103	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
0.0062	0.0053	<0.005	0.0065	0.005	0.0063	0.00596	0.00582	0.0044	0.00477	0.00486	0.00491	0.00415	0.00547	0.00469	0.00472	0.00546	0.00529
45.7	37.9	33.4	41.2	34.9	42	42.1	44	41.2	45.2	46.1	43.5	44.1	38.9	36.7	35.4	36	38.4
0.127	0.00751	0.0162	0.248	0.00664	0.106	0.133	0.283	0.226	0.13	0.223	0.168	0.281	0.00657	0.00535	0.00689	0.00946	0.16
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
0.0029	0.0028	0.0025	0.0021	0.0028	0.004	0.00323	0.00258	0.0021	0.00227	0.00394	0.00206	0.00176	0.00229	0.00254	0.00196	0.00224	0.00256
0.0017	0.0011	0.0013	0.0014	<0.001	0.0026	0.00277	0.00419	0.00206	0.0019	0.00259	0.00192	0.00326	0.00091	0.00077	0.00077	0.00081	0.00198
<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.062
11.6	11.3	10.3	12	11.4	11.6	11.1	11.1	10	9.49	9.99	9.69	9.37	11.2	10.2	9.89	10.8	10.5
<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00012	0.00012	0.0001	0.00013	0.00013	0.00014	0.00012	0.00017	0.00015	0.00013	0.00015	0.00011
6.61	2.57	3.96	9.01	4.42	10.5	9.79	11.7	9.02	9.3	10.6	9.07	9.81	1.98	1.35	1.07	1.79	9.72
<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
41.8	36.4	33.6	40.3	34.5	41.4	39	42.5	37.4	35.5	37.3	36.8	34.2	36.1	33.8	31.1	32.8	36.7
0.462	0.372	0.344	0.461	0.353	0.452	0.435	0.512	0.424	0.454	0.451	0.452	0.401	0.347	0.352	0.303	0.332	0.426
																	13.2
<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
0.014	<0.01	<0.01	0.013	<0.01	<0.01	0.018	0.033	0.01	<0.01	0.023	<0.01	0.027	<0.01	<0.01	<0.01	<0.01	<0.01
0.001	0.00139	0.00115	0.00057	0.00116	0.0006	0.000487	0.000484	0.000452	0.000535	0.000537	0.0005	0.000474	0.00121	0.00126	0.000934	0.00105	0.000367
0.0026	0.0026	0.0026	0.0022	0.0024	0.0027	0.0025	0.0056	0.0023	0.0021	0.0041	0.0023	0.0041	0.0026	0.0025	0.0021	0.0025	0.0034
<0.005	<0.005	<0.005	<0.005	<0.005	0.0085	<0.003	0.0057	<0.003	<0.003	0.0039	0.0034	0.0042	<0.003	<0.003	<0.003	<0.003	<0.003
13.6	14.8	17.4	12.6	16.6	12.5	12.9	12.6	11.8	13.5	14.2	12.9	11.3	14.3	14.5	13.6	15.5	10.7
13.6	15.2	19.4	12.6	16.9	12.9	13.7	13.2	12.5	14.1	15.9	13.7	12.9	14.6	14.6	14.1	16.7	10.7
0.76	0.74	1.19	0.854	1.16	0.685	0.46		0.491	0.495	0.641	0.485	0.465	0.863	0.749	0.906	0.892	0.652
0.973	0.77	1.82	0.79	1.29	0.625	0.59	0.63	0.647	0.503	0.869	0.391	0.962	1.05	0.872	0.809	0.915	0.687
L1005044	**L1011001**	**L1025075**	**L1038168**	**L1052387**	**L1066047**	**L1076994**	**L1092368**	**L1102695**	**L1133342**	**L1140194**	**L1142492**	**L1146570**	**L1148880**	**L1152500**	**L1176520**	**L1190914**	**L1245799**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

PC08 9-Jan-13	PC08 6-Feb-13	PC08 2-Apr-13	PC08 7-May-13	PC08 5-Jun-13	PC08 2-Jul-13	PC08 7-Aug-13	PC08 4-Sep-13	PC08 9-Oct-13	PC08 7-Nov-13	PC08 8-Jan-14	PC08 4-Feb-14	PC08 13-Mar-14	PC08 21-Mar-14	PC08 27-Mar-14	PC08 3-Apr-14	PC08 10-Apr-14	PC08 24-Apr-14
475	0.449	666	568	564	622	603		779	509	290	362	383	481	438	538	513	529
11.3	77			89.9		54		75.6	93.6	26.6	45.5	60.7	91.8	95.7	87.9		73.3
1.6	10.6			8.83		4.7		9.07	12.3	3.78	6.3	8.18	11.5	12.9	10.5		8.42
7.45	7.49	8.05	8.56	8.42	8.94	8.27	7.82	7.78	7.91	7.41	8.01	7.38	7.75	7.9	7.8	8.1	7.33
97.4	72	98.5	170	155	100	265	-64.4	96.1	123	18.8	-48	21.9	15.3	77.5	116	-48.2	150
0.43	0.39	0.43	0.35	0.33	0.31	0.31	0.38	0.38	0.42	0.26	0.31	0.32	0.38	0.37	0.4	0.38	0.37
883	801	866	711	678	633	637	769	415	850	535	690	664	767	757	812	764	757
0.86	2.02	12.9	14.5	16.2	24.1	22.2	18	7.25	3.97	1	0.22	2.95	5.51	2.89	7.37	7.78	9.21
573	520	563	462	441	412	414	500	506	553	347	445	431	500	492	527	497	492
47.1	8.9	9.8	2	1.7	20.6	2.9		9.9	28.9	9.1							
308	311	318	242	236	212	218	301	351	329	324	349	259	314	311	316	310	285
308	311	318	232	228	191	214	301	351	329	324	349	259	314	311	316	310	285
<2	<2	<1	9.8	7.7	20.4	3.4	<1	<2	<2	<2	<2	<2	<1	<2	<2	<2	<2
20.4	20.7	19	16	21.9	21.1	21.4	23.2	20.5		19.4							
341	344	357	295	289	266	263	318	351	348	357	381	295	369	353	344	339	334
<2	<2	<1	<1	<1	<1	<1	<1	<2	<2	<2	<2	<2	<1	<2	<2	<2	<2
7.95	7.94	8.19	8.54	8.5	8.6	8.39	8.38	8.24	8.25	7.87	8.03	7.86	8.34	8.24	8.26	8.24	8.25
755	743	799	672	656	606	601	716	772	781	771	848	632	792	780	754	729	714
468	474	496	401	410	378	371	406	450	461	477	510	371	489	458	466	449	458
11.7	5	15.3	3.3	3.5	25.5	6.3	8.5	7.5	6.8	10.1	12.3	18.1	10.1	13.7	42.4	10	6.5
27.3	10.5	11.6	1.35	1.62	22.6	1.36	7.48	11.5	10.4	8.9	13	10.5	9.97	10.3	19.1	12.7	4.28
<0.5	<0.5	<0.5	<0.25	<0.25	<0.05	<0.05	<0.25	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.25	<0.25
57.1	56	60.8	55.5	50.6	48.8	49.7	51.8	54	54.3	61.9	65.1	45.8	59.1	56.4	56.6	54.9	57.2
0.37	0.21	0.4	0.24	0.27	0.204	0.216	0.28	0.43	0.28	0.27	0.28	0.242	0.25	0.26	0.27	0.28	0.25
35.9	40.4	49.3	55.4	46.9	43.2	41.8	22.6	23.4	25.7	30.8	37.8	33.9	45.9	44.2	43.7	42.6	49.1
0.516	0.23	0.0102	0.0244	0.0357	0.0233	0.146	0.0774	0.137	0.229	0.36	0.384	0.126	0.0264	0.0315	0.0104	0.007	0.0057
<0.05	<0.05	<0.05	0.029	<0.025	<0.005	0.0131	<0.025	<0.05	0.067	<0.05	<0.05	0.0168	<0.05	<0.05	<0.05	<0.025	<0.025
0.011	<0.01	<0.01	<0.005	<0.005	<0.001	0.0116	0.0135	<0.01	0.013	0.016	<0.01	0.0016	<0.01	<0.01	<0.01	<0.005	<0.005
1.17	0.825	0.535				1.12	1.75										
1.45	0.825	0.735	1.05	0.876	1.69	1.2	0.865	0.909	0.931								
1.45	0.983	0.735	0.88	0.833	1.69	1.19	0.931	0.937	1.01	0.926	0.999	1.27	0.687	0.609	0.737	0.451	0.481
								0.0059	0.0064	0.0061	0.0023	0.022	0.0025	0.005	0.0033	0.0017	0.0029
0.0275	0.0132	0.0111	0.0366	0.0429	0.052	0.0316	0.0714	0.014	0.0104	0.0101	0.0087	0.0377	0.0105	0.0094	0.136	0.0066	0.0394
0.266	0.0696	0.0744	0.0448	0.0526	0.0143	0.0493		0.061	0.0487	0.0943	0.0759	0.192	0.0587	0.0501	0.008	0.0461	0.0069
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
0.0019	0.0018	0.0017	0.0012	0.0027	0.0013	0.0024	0.0023	0.0019	<0.001	<0.001	0.0013	0.0019	<0.001	0.0016	0.0018	0.002	<0.001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
0.00105	0.00074	0.00106	0.00116	0.0013	0.00131	0.00145	0.00151	0.00105	0.00085	0.00089	0.00089	0.00099	0.00083	0.00069	0.00083	0.00075	0.00068
0.077	0.0459	0.046	0.046	0.04	0.0445	0.0644	0.0694	0.0561	0.0601	0.0661	0.0692	0.0549	0.0421	0.0351	0.036	0.0222	0.0521
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
0.023	0.023	0.025	0.019	0.017	0.02	0.026	0.029	0.032	0.029	0.029	0.03	0.023	0.025	0.024	0.022	0.023	0.021
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
66.8	66.3	71	56	58.2	50.8	46.3	59.7	67.8	66.3	70.5	73.2	58.6	72.3	65.3	66.7	65.7	65.9
0.00053	0.00045	0.0003	0.0001	<0.0001	<0.0001	<0.0001	0.00033	0.00036	0.00047	0.00053	0.00056	0.00032	0.00036	0.00033	0.00033	0.00032	0.00023
0.00022	0.00013	0.00017	<0.0001	0.0001	<0.0001	<0.0001	0.00016	0.00018	0.00023	0.00027	0.00021	0.00052	0.00028	0.0002	0.00016	0.00014	0.00017
0.00032	0.00056	0.00122	0.00085	0.00132	0.00115	0.00083	0.0005	0.00044	0.00067	0.00047	0.00042	0.00164	0.00099	0.00085	0.00103	0.00118	0.00109
0.632	0.15	0.16	0.011	0.025	<0.01	0.018	0.079	0.097	0.086	0.343	0.305	0.358	0.066	0.169	0.159	0.229	0.092
<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
0.00445	0.00455	0.00432	0.00544	0.00425	0.00472	0.00513	0.00553	0.00567	0.00513	0.0051	0.00527	0.00447	0.00476	0.00483	0.00442	0.00444	0.00494
42.2	43.2	43.7	37.6	34.8	33.8	35.7	41	44.1	44.4	44	48.1	36.1	45.7	46.2	43.2	42.5	41.2
0.25	0.145	0.138	0.00489	0.0112	0.00599	0.00781	0.0739	0.0839	0.132	0.223	0.193	0.215	0.178	0.151	0.131	0.11	0.122
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
0.00197	0.00217	0.0021	0.00228	0.00203	0.0023	0.00221	0.00287	0.00342	0.00298	0.00215	0.00254	0.00246	0.00253	0.00253	0.00277	0.00236	0.00244
0.00155	0.00147	0.00194	0.00066	0.00084	0.00069	0.00065	0.00169	0.00198	0.00199	0.0017	0.00165	0.00195	0.00202	0.00179	0.00187	0.0018	0.00181
0.068	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.058	<0.05	<0.05	<0.05	<0.05	<0.05
11	10.1	11.6	11	11.3	10.5	11.1	11.9	11.6	11.9	10.9	11.1	11.1	10.8	10.1	9.63	9.77	9.98
0.00013	0.00011	0.00017	0.00013	0.00016	0.00016	0.00017	0.00013	0.00013	0.00012	0.00011	0.00012	0.00013	0.00015	0.0001	<0.0001	0.00011	0.00014
9.39	9.08	9.02	3.63	4.32	4.05	6.12	10.1	9.93	9.87	9.53	10.5	7.52	8.93	8.75	8.25	8.6	8
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
34.1	30.5	36	34.5	30.8	31.2	32	39.3	37.2	35.3	36	39.1	27.9	36	35.1	35.5	34.8	35.3
0.411	0.4	0.444	0.36	0.319	0.337	0.317	0.417	0.456	0.439	0.455	0.486	0.378	0.454	0.447	0.427	0.426	0.457
12.6	14	16.2	18.7	15.4	14.1	14.1	8.16	8.39	9.04	11	13.7	11.4	15.6	14.8	15.2	15	17
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0.000346	0.000445	0.000569	0.00111	0.000985	0.000992	0.000892	0.000435	0.00052	0.000489	0.000474	0.000519	0.000515	0.000609	0.000615	0.000611	0.000542	0.000594
0.0014	0.0012	0.0013	0.0022	0.0023	0.0024	0.0027	0.0017	0.0014	0.0014	0.0013	0.0015	0.0014	0.0011	0.0012	0.0014	0.0013	0.001
<0.001	0.0018	0.0013	0.0017	0.0014	0.0014	0.0018	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
0.43	0.0834	0.161	0.0694	0.0334	0.0347	0.0755	0.293	0.345	0.232	0.123	0.26	0.571	0.177	0.194	0.565	0.235	0.0421
<0.0001	<0.0001	<0.0001	0.0001	0.00011	0.00014	0.00015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00012	<0.0001	<0.0001	0.00013	<0.0001	<0.0001
0.0014	0.00118	0.0013	0.00112	0.00135	0.00134	0.00149	0.00185	0.00131	0.00115	0.00116	0.00125	0.00151	0.00112	0.00105	0.00144	0.00109	0.00077
0.0962	0.0612	0.0491	0.0449	0.0392	0.0452	0.0677	0.0668	0.0613	0.0644	0.0702	0.0809	0.0642	0.0463	0.0416	0.047	0.0267	0.0529
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
0.024	0.024	0.028	0.019	0.021	0.023	0.03	0.032	0.033	0.03	0.03	0.031	0.026	0.028	0.024	0.025	0.027	0.021
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
67.1	66.4	68.1	55.3	56.4	51.4	48.6	58	66.2	64.5	68.7	71	59.6	69.4	66.3	67.7	65.1	64.1
0.00166	0.00087	0.0008	0.00034	0.0002	0.0002	0.00032	0.00098	0.00131	0.00146	0.00104	0.00127	0.00147	0.0008	0.00091	0.00174	0.00095	0.00036
0.00061	0.00022	0.00031	0.00013	0.00013	0.00012	0.00016	0.00039	0.00048	0.00043	0.00039	0.00042	0.00103	0.00045	0.0004	0.00064	0.00033	0.00021
0.00363	0.00181	0.00301	0.00193	0.00165	0.00179	0.00154	0.00288	0.0034	0.00349	0.0017	0.00285	0.00704	0.00299	0.00264	0.00548	0.00327	0.00209
2.45	1.43	1.09	0.122	0.077	0.064	0.133	0.869	1.24	1.11	1.84	1.76	1.79	1.24	1.51	2.1	1.55	0.76
0.000095	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000058	0.000078	0.000065	<0.00005	0.000054	0.000104	<0.00005	<0.00005	0.000117	0.000054	<0.00005
0.00476	0.00475	0.00451	0.00551	0.00465	0.00479	0.00532	0.00563	0.00613	0.00498	0.0047	0.0049	0.00471	0.00491	0.00477	0.00471	0.00446	0.00482
41.9	43.5	42.2	36.3	34	33.4	36.1	39.6	42	41.2	43.3	46.1	37	43.1	44.2	44	41.7	40.6
0.27	0.173	0.138	0.00746	0.0154	0.00999	0.0114	0.0648	0.1	0.14	0.226	0.214	0.237	0.184	0.168	0.159	0.128	0.113
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
0.00209	0.00221	0.00218	0.00246	0.00225	0.00264	0.00243	0.00301	0.00417	0.00301	0.0022	0.00254	0.00274	0.0031	0.00301	0.00324	0.00256	0.00249
0.00276	0.002	0.00234	0.00097	0.00097	0.00098	0.00087	0.00234	0.00292	0.00272	0.00209	0.00238	0.00348	0.00267	0.00247	0.00341	0.00233	0.00174
0.192	0.07	0.052	0.066	0.055	0.064	0.056	0.072	<0.05	0.052	0.111	0.06	0.182	0.061	<0.05	0.076	<0.05	<0.05
11.1	10.2	11.6	10.8	11.2	10.7	11.7	12.3	11.1	11.8	10.5	10.5	11.2	10.3	9.99	9.8	9.57	9.71
0.00012	0.0001	0.00017	0.00015	0.00016	0.00018	0.00017	0.00016	0.00012	0.00017	0.0001	0.00014	0.00016	0.00011	0.00011	0.00012	0.00012	0.00013
10.6	9.26	9.24	3.7	4.35	4.15	6.53	11	10.6	10.1	9.77	10.8	9.2	9.01	9.26	10.1	9.28	8
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000013	<0.00001	<0.00001	<0.00001	<0.00001	0.000031	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
36.9	36	35.4	32.9	32.8	30.9	34.3	38.6	36.2	33	35.9	40.4	29.2	36	35.8	35.4	34.1	33.2
0.429	0.411	0.448	0.381	0.34	0.367	0.336	0.404	0.479	0.42	0.443	0.466	0.421	0.485	0.442	0.438	0.441	0.46
12.8	14.7	16	18.6	15.4	14.2	15	8.61	8.68	9	11.2	13.7	11.9	15.6	15.3	15.9	15.1	17.1
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	0.018	0.01	<0.01	0.012	0.024	<0.01	<0.01	0.026	0.011	<0.01
0.000398	0.000455	0.000583	0.0012	0.00102	0.00111	0.00103	0.000463	0.000555	0.000484	0.000485	0.000516	0.00056	0.000655	0.000643	0.000688	0.000576	0.000622
0.0044	0.0028	0.0029	0.0025	0.0025	0.0024	0.0032	0.0033	0.0038	0.0039	0.0031	0.004	0.0042	0.0031	0.0033	0.0055	0.0033	0.0018
<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
12.3	12.4	13.6	11.3	15.1	15.1	17.4	13.6	12.6	12.2	12.2	13.1	12.7	11.7	11.9	12.1	12.3	10.9
13.8	12.3	14.4	11.5	15.1	18.1	18.1	13.7	13.3	11.9	13.3	13.5	14.9	12.2	11.6	13.5	13	11.4
		0.525					1.66										
0.932	0.752	0.724					0.853										
L1256679	L1265999	L1285503	L1298960	L1312719	L1326032	L1344180	L1358222	L1375698	L1389979	L1410216	L1418933	L1432661	L1435186	L1437439	L1439655	L1442672	L1447300

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

PC08 6-May-14	PC08 21-May-14	PC08 4-Jun-14	PC08 18-Jun-14	PC08 3-Jul-14	PC08 16-Jul-14	PC08 30-Jul-14	PC08 12-Aug-14
567	549	591	595	633	560	577	610
103	106	88.8	89.1	105	108		93.1
10.9	10.4	8.82	8.26	9.07	9.08		8.15
8.26	8.6	7.94	8.74	8.59	8.91	8.71	8.65
173	101	160	93.1	74.5	110	119	79.4
0.36	0.32	0.35	0.33	0.32	0.28	0.3	0.32
739	662	720	673	664	572	618	649
12.8	16.1	15.6	18.9	22.5	23.9	21.5	21.8
481	430	467	437	432	372	402	422
251	230	240	239	236	233	254	231
242	222	230	224	222	218	244	215
8.7	7.8	9.9	15.1	13.6	14.8	10.2	16.1
310	291	301	289	290	290	290	283
<1	<1	<1	<1	<1	<1	<1	<1
8.43	8.47	8.51	8.51	8.61	8.54	8.42	8.58
701	654	662	662	640	647	676	645
406	393	408	409	290	422	311	416
13.8	12	4.3	<3	5.1	4.6	4.5	<3
4.68	3.06	5.66	1.76	2.06	2.48	2.87	1.79
<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05
55.7	52.4	52.5	52.9	52.3	53.7	54.3	54.9
0.229	0.213	0.22	0.215	0.231	0.227	0.228	0.237
54.3	46.4	45.5	45.6	44.5	45.2	41.1	46.1
0.0144	0.0276	0.0195	0.0562	0.0875	0.0578	0.0414	0.0352
<0.005	<0.005	<0.005	0.0166	0.0646	0.0265	<0.025	0.0087
<0.001	<0.001	0.001	0.0057	0.0242	0.0078	0.0078	0.002
	0.763						
0.963	0.83	0.855	1.1	1.03	1	0.798	1.03
0.0058	0.0096	<0.001	0.0016	0.0045	0.0016	0.01	<0.001
0.021	0.0255	0.013	0.0156	0.0202	0.0176	0.021	0.0175
0.0569	0.0504	0.0331	0.0308	0.0363	0.04	0.0422	0.024
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
0.0069	0.0015	0.0021	0.0021	0.0019	0.0021	0.0017	0.0023
0.0001	<0.0001	<0.0001	<0.0001	0.00011	0.0001	<0.0001	0.00011
0.0012	0.00132	0.00123	0.00129	0.00131	0.00136	0.00129	0.00136
0.0649	0.0586	0.0531	0.0538	0.054	0.0538	0.059	0.0425
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
0.02	0.018	0.019	0.019	0.022	0.02	0.021	0.021
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
59.4	60.6	60	57.9	57.2	55.8	54.2	54.3
<0.0001	<0.0001	0.00012	<0.0001	<0.0001	<0.0001	0.00014	<0.0001
<0.0001	<0.0001	<0.0001	<0.0001	0.00011	<0.0001	0.00015	<0.0001
0.00099	0.00112	0.00134	0.00112	0.00117	0.00092	0.00083	0.00085
0.045	0.014	0.051	0.015	0.023	0.019	0.13	<0.01
<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
0.00489	0.00494	0.00481	0.00453	0.00556	0.00495	0.00539	0.00544
39.2	33.8	36.8	35	35.8	36.6	37.5	35.8
0.0321	0.00635	0.0289	0.00723	0.0106	0.00857	0.0242	0.00258
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
0.00253	0.0021	0.00246	0.00241	0.0025	0.00246	0.00271	0.00258
0.00091	0.00073	0.00107	0.00077	0.00074	0.00068	0.00131	0.00065
<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10.5	10.1	10.2	10	10.8	10.3	11.8	10.4
0.00016	0.00017	0.00015	0.00016	0.00016	0.00016	0.00014	0.00016
4.92	5.01	5.59	5.18	5.71	6.27	6.53	6.65
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
35.2	33.5	32.8	29.9	31.2	32.7	33.5	33.7
0.351	0.305	0.353	0.337	0.348	0.354	0.368	0.348
18.1	15.6	15.8	14.6	15.1	15.2	13.8	15.5
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0.00112	0.000965	0.00103	0.0011	0.000989	0.001	0.000786	0.00106
0.0023	0.0027	0.0025	0.0026	0.0028	0.0029	0.0024	0.003
<0.001	<0.001	<0.001	0.0016	<0.001	<0.001	<0.001	<0.001
0.198	0.142	0.0408	0.0342	0.0393	0.0972	0.0566	0.0317
0.00015	<0.0001	0.00012	0.0001	0.0001	0.00011	<0.0001	0.00011
0.00122	0.00131	0.0013	0.00135	0.00129	0.00149	0.00137	0.00141
0.0662	0.0582	0.0568	0.0535	0.0544	0.0538	0.0603	0.0425
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
0.022	0.018	0.023	0.023	0.022	0.022	0.024	0.026
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
58.1	59.2	60.2	57.7	54.8	55.1	52.2	52.3
0.00064	0.00058	0.00026	0.00023	0.00023	0.0004	0.00029	0.00015
0.00025	0.00019	0.00015	0.00012	0.00014	0.00019	0.00019	0.00011
0.00273	0.00223	0.0017	0.00141	0.00151	0.00161	0.00145	0.00112
0.536	0.208	0.261	0.074	0.103	0.171	0.415	0.049
<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
0.00521	0.00484	0.00513	0.00487	0.00458	0.00498	0.00523	0.00549
35.8	33.6	37	34	34.2	35.6	36.7	34.9
0.0376	0.0108	0.0476	0.0107	0.0112	0.016	0.0275	0.00497
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
0.00257	0.00219	0.0026	0.00255	0.00254	0.00261	0.00288	0.00265
0.00145	0.00131	0.00117	0.00087	0.00094	0.00107	0.00151	0.00077
<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
10.1	10.1	10.5	9.92	10.7	10.2	11.5	10
0.00017	0.00014	0.00015	0.00016	0.00015	0.00016	0.00016	0.00015
5.18	5.29	6.09	5.31	5.69	6.43	6.51	6.48
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
33.3	33	33.9	30.4	31.8	32.9	33.2	34.6
0.375	0.299	0.372	0.354	0.343	0.359	0.368	0.351
18	15.5	16.3	14.9	14.9	15.2	13.8	15.3
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
0.00116	0.00101	0.00109	0.00118	0.00103	0.00108	0.000826	0.00115
0.0033	0.0036	0.0027	0.0031	0.0031	0.0033	0.0033	0.0033
<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
12.7	12.5	12.8	13.4	13.3	14.1	12.8	14
13.5	13.3	12.8	13.8	13.6	13.9	13.5	14.4
L1451608	**L1458340**	**L1465478**	**L1473827**	**L1481215**	**L1488886**	**L1495443**	**L1502292**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C1.33 - PC10
PAGE 1 OF 1

Site ID		PC10	PC10	PC10	PC10	PC10	PC10	PC10	PC10	PC10	PC10	PC10	PC10	PC10	PC10
Analytes	**MDL**	**5-Feb-14**	**13-Mar-14**	**21-Mar-14**	**28-Mar-14**	**3-Apr-14**	**9-Apr-14**	**24-Apr-14**	**7-May-14**	**23-May-14**	**4-Jun-14**	**18-Jun-14**	**3-Jul-14**	**16-Jul-14**	**30-Jul-14**
In Situ Parameters															
Conductivity µS/cm	...		439	499	524	557	540	491	446	413	310	451	527	495	486
Oxygen Dissolved %	...		60.1	63.4	59.6	61.6	90.2	79.9	88.2	104	76.3	78	74	62.5	79.5
Oxygen Dissolved	...		8.66	8.8	7.91	8.33	11.5	9.52	9.39	11.8	8.46	8.32	7.51	6.2	8.16
pH (unitless)	...		7.83	7.77	7.73	7.85	8.14	8.07	8.17	8.27	8.06	8.13	7.81	8.18	8.36
Redox Potential mV	...		30.3	71.5	1.2	-17.7	-48.7	105	59.9	63.4	171	93.1	88.4	145	118
Salinity ppt	...		0.4	0.4	0.44	0.48	0.43	0.36	0.29	0.29	0.21	0.29	0.32	0.29	0.3
Specific Conductivity µS/cm	...		827	897	890	971	880	733	585	577	427	596	657	601	606
Temperature °C	...		0.42	1.75	3.44	2.7	4.8	7.72	12.5	10.2	10.7	12.3	14.7	15.8	14.6
Total Dissolved Solids	...		537	583	579	631	572	479	380	375	278	387	427	391	394
Turbidity NTU	...														
Physical Tests															
Acidity to pH 8.3 (as CaCO3)	1														
Alkalinity (Total as CaCO3)	1 to 2		286	338	344	342	287	215	206	243	254	259	285	286	286
Bicarbonate Alkalinity	1 to 2		286	338	344	342	287	213	206	243	254	250	278	278	277
Carbonate Alkalinity	1 to 2		<2	<1	<2	<2	<2	1.9	<2	<2	<1	8.8	6.2	7.6	9.5
Color TCU	5								30.7						
Hardness as CaCO3 (Dissolved)	0.5 to 1.1		359	429	426	429	401	314	231	262	293	274	306	310	302
Hydroxide Alkalinity	1 to 2		<2	<1	<2	<2	<2	<1	<2	<2	<1	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1		8	8.34	8.14	8.26	8.19	8.35	8.29	8.26	8.37	8.37	8.43	8.36	8.34
Specific Conductivity µS/cm	2		809	906	901	890	833	720	556	567	609	587	640	651	659
Total Dissolved Solids	1 to 2		519	577	538	587	571	470	372	381	331	381	364	413	388
Total Suspended Solids	3		4.5	<3	<3	3.4	5.4	19.1	13.3	17.6	17.7	13.9	<3	7.8	4.8
Turbidity NTU	0.1		1.54	0.98	1	0.66	3.04	7.42	6.83	7.26	8.64	5.85	1.34	3.62	1.76
Dissolved Anions															
Bromide	0.05 to 2.495		<0.5	<0.5	<0.5	<0.5	<0.5	<0.25	<0.05	<0.05	<0.05	<0.05	<0.05	0.051	<0.05
Chloride	0.5 to 1		51.6	70.9	64	69	84.5	79.1	47.2	36.9	38.2	33	38.6	36.6	40.7
Fluoride	0.02 to 0.4		0.31	<0.2	<0.2	<0.2	<0.2	0.14	0.191	0.235	0.216	0.24	0.251	0.268	0.242
Sulphate	0.5 to 1		84.7	75	80	80.5	66.7	48.5	30.2	27.2	27.6	20.2	25.9	26.5	27.7
Nutrients															
Ammonia (Total)	0.005 to 0.05		0.44	0.0963	0.0436	0.033	0.0313	0.0127	0.0073	0.0186	0.0209	0.0166	0.0116	0.0235	0.0129
Nitrate (as N)	0.005 to 0.1		0.254	0.258	0.174	0.173	0.184	0.051	0.03	0.0332	0.0334	0.038	0.0586	0.0671	0.0665
Nitrite (as N)	0.001 to 0.02		0.014	<0.01	<0.01	<0.01	<0.01	<0.005	<0.001	<0.001	0.0011	0.0013	0.0014	0.0028	0.0017
Nitrogen (Dissolved)	0.05 to 0.1														
Nitrogen (Total)	0.0025 to 0.11														
Nitrogen Kjeldahl (Total)	0.05 to 0.2		1.77	0.603	0.504	0.508	0.417	0.572	0.463	0.792	0.767	0.629	0.451	0.613	0.496
Orthophosphate (Dissolved)	0.001 to 0.01		0.309	0.0779	0.0666	0.0592	0.0608	0.0436	0.0342	0.135	0.155	0.0948	0.0903	0.0974	0.104
Phosphorus - Dissolved	0.002 to 0.02		0.413	0.0991	0.0804	0.0763	0.0829	0.0884	0.0455	0.161	0.165	0.113	0.0972	0.116	0.119
Phosphorus - Total	0.002 to 0.02		0.451	0.138	0.086	0.0697	0.0676	0.0519	0.0691	0.178	0.212	0.146	0.113	0.146	0.127
Cyanide															
Cyanide (Free)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals															
Aluminum	0.001 to 0.025		0.0023	<0.001	<0.001	0.0016	0.0016	0.0015	0.0029	0.0036	0.0095	0.0018	0.0017	0.0029	0.0023
Antimony	0.0001 to 0.0025		0.00015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025		0.00203	0.00149	0.00135	0.00129	0.0011	0.00097	0.00103	0.00179	0.00168	0.00165	0.00171	0.00177	0.00172
Barium	5E-005 to 0.02		0.064	0.0781	0.0814	0.0765	0.0791	0.0711	0.058	0.0616	0.0662	0.061	0.0643	0.0631	0.0638
Beryllium	0.0001 to 0.005		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1		0.022	0.013	0.012	0.012	0.01	<0.01	<0.01	0.015	0.015	0.012	0.016	0.017	0.015
Cadmium	1E-005 to 8.5E-005		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1		73.5	99.2	96.3	98.7	97.8	81.2	58.6	60.5	64.8	60.9	71.2	70.3	67.9
Chromium	0.0001 to 0.018		0.00012	0.00011	<0.0001	0.00011	0.00011	<0.0001	0.00011	0.00014	0.00015	0.00012	0.0001	<0.0001	0.00261
Cobalt	0.0001 to 0.0015		0.00027	0.00017	0.00015	0.00015	0.00011	0.0001	<0.0001	0.00017	0.00021	0.00014	0.00012	0.00011	0.00011
Copper	0.0002 to 0.006		0.00591	0.00274	0.0027	0.00244	0.0018	0.0022	0.00294	0.00358	0.00324	0.00241	0.0023	0.00216	0.00216
Dissolved Cadmium (by saltwater extrac	0.00002														
Iron	0.01 to 0.03		0.07	0.027	0.026	0.032	0.017	0.02	0.022	0.042	0.056	0.045	0.037	0.036	0.044
Lead	5E-005 to 0.0025		0.00009	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025		0.00469	0.00449	0.00445	0.0048	0.00476	0.00421	0.00312	0.00303	0.00343	0.00327	0.00446	0.00418	0.00408
Magnesium	0.1		42.6	44	45.1	44.3	38.1	27	20.7	27	31.8	29.6	31.2	32.7	32.2
Manganese	5E-005 to 0.0015		0.0403	0.0322	0.0263	0.0249	0.023	0.0132	0.0107	0.0212	0.055	0.0281	0.0198	0.0169	0.011
Mercury	1E-005 to 5E-005		<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005		0.00358	0.0027	0.00261	0.00274	0.00233	0.00216	0.00201	0.00302	0.00268	0.00224	0.00218	0.00263	0.00241
Nickel	0.0005 to 0.005		0.0015	0.00129	0.00123	0.00122	0.00108	0.00089	0.00081	0.00133	0.00131	0.00113	0.00116	0.00126	0.00223
Phosphorus	0.05 to 0.3		0.364	0.093	0.075	0.069	0.08	<0.05	<0.05	0.15	0.176	0.106	0.099	0.132	0.125
Potassium	0.05 to 2		16.8	10.7	11	10.1	9.03	8.01	6.06	7.81	9.16	7.27	9.15	9.34	9.97
Selenium	0.0001 to 0.006		0.00142	0.00042	0.00028	0.00029	0.00035	0.00038	0.00032	0.00025	0.0002	0.00017	0.00016	0.00016	0.00018
Silicon	0.05		8.2	9.43	9.5	9.02	8.38	7.72	7.29	10.4	10.1	9.49	10.3	11	10
Silver	1E-005 to 0.0001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2		34.6	36.5	36.1	38.2	35.8	33.1	24.7	24.1	26.6	23.7	29	29.8	29
Strontium	0.0001 to 0.005		0.477	0.471	0.482	0.486	0.461	0.357	0.273	0.321	0.344	0.298	0.319	0.379	0.345
Sulphur	0.5		28.5	24.2	26.9	26.9	22.3	17	10.6	9.72	9.98	6.65	8.87	8.96	9.29
Thallium	1E-005 to 0.001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001		0.00201	0.0019	0.00188	0.00195	0.00172	0.00138	0.000897	0.000884	0.000884	0.000831	0.000785	0.000757	0.00081
Vanadium	0.001 to 0.03		0.0039	0.0027	0.0026	0.0024	0.0026	0.0025	0.003	0.0034	0.0028	0.0029	0.003	0.0029	0.0033
Zinc	0.001 to 0.006		0.0021	<0.001	0.002	<0.001	0.001	<0.001	<0.001	0.0011	0.0012	<0.001	<0.001	<0.001	0.0014
Total Metals															
Aluminum	0.003 to 0.025		0.103	0.0651	0.0065	0.0088	0.129	0.379	0.256	0.352	0.699	0.399	0.0284	0.252	0.105
Antimony	0.0001 to 0.0025		0.00015	<0.0001	<0.0001	0.00011	<0.0001	<0.0001	<0.0001	0.00013	0.00012	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025		0.00197	0.00142	0.00135	0.00128	0.00114	0.00103	0.00101	0.00188	0.00183	0.00172	0.00166	0.00182	0.00168
Barium	5E-005 to 0.02		0.0645	0.0771	0.0804	0.0774	0.0806	0.0754	0.0565	0.0633	0.077	0.0654	0.0641	0.0649	0.0623
Beryllium	0.0001 to 0.005		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1		0.022	0.015	0.013	0.012	0.013	<0.01	<0.01	0.016	0.017	0.016	0.014	0.019	0.016
Cadmium	1E-005 to 8.5E-005		0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1		71	95.6	94.6	94.2	95.9	78.6	58.4	58.1	62.9	59.2	66.4	68	64.9
Chromium	0.0001 to 0.005		0.00037	0.00032	0.00013	0.00016	0.00043	0.00096	0.00071	0.00102	0.00186	0.00117	0.00019	0.00074	0.00049
Cobalt	0.0001 to 0.0015		0.00037	0.00022	0.00015	0.00016	0.00021	0.00037	0.00025	0.00044	0.00077	0.00043	0.00014	0.0003	0.00017
Copper	0.0005 to 0.007		0.00691	0.0036	0.00308	0.00277	0.00277	0.00489	0.00434	0.00572	0.00765	0.0049	0.00257	0.00404	0.00293
Iron	0.01 to 0.03		0.226	0.139	0.042	0.045	0.215	0.59	0.393	0.572	1.14	0.656	0.082	0.451	0.199
Lead	5E-005 to 0.0025		<0.00005	<0.00005	0.000543	<0.00005	<0.00005	0.000087	<0.00005	0.000097	0.000155	0.000081	<0.00005	0.000073	<0.00005
Lithium	0.0005 to 0.025		0.0045	0.00424	0.0046	0.00486	0.00469	0.00397	0.0031	0.00293	0.00368	0.00337	0.00364	0.00422	0.00405
Magnesium	0.1		38.4	41.8	43.2	43.6	37.2	26.7	20.9	26.2	30.3	28.4	29.3	31.9	31.1
Manganese	5E-005 to 0.0015		0.0465	0.0397	0.0263	0.0258	0.0311	0.0356	0.0226	0.0444	0.11	0.0589	0.0224	0.0335	0.0179
Mercury	1E-005 to 5E-005		<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005		0.0038	0.00287	0.0029	0.00283	0.00249	0.00223	0.0019	0.00306	0.0028	0.00228	0.00209	0.00266	0.00242
Nickel	0.0005 to 0.005		0.00175	0.00146	0.00127	0.00131	0.00144	0.00171	0.00123	0.00204	0.00332	0.00201	0.00124	0.00177	0.00142
Phosphorus	0.05 to 0.3		0.387	0.108	0.077	0.082	0.097	0.076	0.058	0.174	0.236	0.143	0.105	0.148	0.133
Potassium	0.05 to 2		15.9	10.3	10.9	9.57	8.8	7.88	6.11	7.77	8.93	6.99	8.62	9.19	9.48
Selenium	0.0001 to 0.006		0.00128	0.00038	0.00031	0.00032	0.00037	0.00039	0.0003	0.00026	0.00024	0.00021	0.00016	0.00017	0.00017
Silicon	0.05		7.89	9.21	9.34	8.66	8.68	8.33	7.77	11	11.5	10.1	9.78	11.5	9.88
Silver	1E-005 to 0.0001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2		34.5	35.9	36.9	39	35.8	33.7	23.1	23	26.5	24.4	27.4	29.1	28.4
Strontium	0.0001 to 0.005		0.465	0.446	0.512	0.478	0.463	0.34	0.236	0.317	0.35	0.31	0.301	0.385	0.335
Sulphur	0.5		27.4	24.5	27.5	27.3	22.5	16.9	10.7	9.48	9.71	6.71	8.64	8.91	9.13
Thallium	1E-005 to 0.001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	0.015	<0.01	0.015	0.025	0.014	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002														
Uranium	1E-005 to 0.001		0.00199	0.00198	0.002	0.00203	0.00176	0.00145	0.000823	0.000919	0.000905	0.000875	0.000719	0.000858	0.000827
Vanadium	0.001 to 0.03		0.0044	0.003	0.0027	0.0027	0.0031	0.0037	0.0037	0.0044	0.0049	0.0044	0.0031	0.0038	0.0037
Zinc	0.003 to 0.006		<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0041	<0.003	<0.003	<0.003	<0.003
Organics															
Carbon Organic (Dissolved)	0.5 to 5		16.4	9.01	9.02	10.3	7.96	10.5	11.4	13.2	12.9	11.3	10	10.8	11.2
Carbon Organic (Total)	0.5 to 5		17.1	8.87	9.1	10.1	7.99	10.8	11.8	14	13.7	12.2	10.1	10.8	11.7
Nitrogen Organic (Dissolved)	0.05 to 0.26														
Nitrogen Organic (Total)	0.05 to 0.3														
ALS LAB ID			**L1435532**	**L1435186**	**L1437642**	**L1439655**	**L1441961**	**L1447300**	**L1452368**	**L1459728**	**L1465478**	**L1473827**	**L1481215**	**L1488886**	**L1495443**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		PC-EF-04	PC-EF-04	PC-EF-04	PC-EF-04
Analytes	MDL	5-Jun-10	2-Sep-10	30-Aug-11	25-Oct-11
In Situ Parameters					
Conductivity µS/cm	...		1917	987	1268
Oxygen Dissolved %	...		67.2		164
Oxygen Dissolved	...		7.39		20.2
pH (unitless)	...		8.1	8.42	8.27
Redox Potential mV	...		7.8	117	56.8
Salinity ppt	...		0.98		1.01
Specific Conductivity µS/cm	...		1399	1309	1992
Temperature °C	...		10.9	12.1	6.02
Total Dissolved Solids	...				1295
Turbidity NTU	...				
Physical Tests					
Acidity to pH 8.3 (as CaCO3)	1	<1			<1
Alkalinity (Total as CaCO3)	1 to 2	<1	398	363	409
Bicarbonate Alkalinity	1 to 2	<1			397
Carbonate Alkalinity	1 to 2	<1			11.8
Color TCU	5	32.6	15.4	34.9	12.9
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	658	825	567	868
Hydroxide Alkalinity	1 to 2	<1			<1
pH (unitless)	0.01 to 0.1	8.54	8.3	8.57	8.37
Specific Conductivity µS/cm	2	1400	1860	1310	1970
Total Dissolved Solids	1 to 2	1000	1270	837	1350
Total Suspended Solids	3	11.5	<5	40	4.4
Turbidity NTU	0.1	2.71	0.43	18.7	0.97
Dissolved Anions					
Bromide	0.05 to 2.495	<0.5	<0.5	<0.5	<1
Chloride	0.5 to 1	97.1	142	88.3	157
Fluoride	0.02 to 0.4	<0.2	<0.2	0.24	<0.4
Sulphate	0.5 to 1	338	456	247	508
Nutrients					
Ammonia (Total)	0.005 to 0.05	0.015	<0.005	0.0138	0.0112
Nitrate (as N)	0.005 to 0.1	0.141	0.425	0.266	0.85
Nitrite (as N)	0.001 to 0.02	<0.01	<0.01	<0.01	0.028
Nitrogen (Dissolved)	0.05 to 0.1			1.35	1.06
Nitrogen (Total)	0.0025 to 0.11	0.8	1.12	1.7	1.37
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.656	0.691	0.796	0.497
Orthophosphate (Dissolved)	0.001 to 0.01	0.0554	0.0673		
Phosphorus - Dissolved	0.002 to 0.02	0.0837	0.0694	0.105	0.0693
Phosphorus - Total	0.002 to 0.02		0.0695	0.174	0.0739
Cyanide					
Cyanide (Free)	0.005	<0.005	<0.005		<0.005
Cyanide (Total)	0.005	0.0213	<0.005		0.0053
Cyanide (WAD)	0.005	<0.005	<0.005		<0.005
Dissolved Metals					
Aluminum	0.001 to 0.025	<0.01	<0.01	<0.005	<0.003
Antimony	0.0001 to 0.0025	<0.001	<0.001	<0.0005	0.00014
Arsenic	0.0001 to 0.0025	0.0022	<0.004	0.00322	0.00296
Barium	5E-005 to 0.02	0.052	0.076	0.048	0.0692
Beryllium	0.0001 to 0.005	<0.002	<0.002	<0.001	<0.0001
Bismuth	0.0005 to 0.2			<0.2	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	0.066
Cadmium	1E-005 to 8.5E-005	0.000049	0.000045	<0.000017	<0.00001
Calcium	0.05 to 0.1	100	120	91.3	132
Chromium	0.0001 to 0.018	<0.002	<0.006	<0.001	0.00023
Cobalt	0.0001 to 0.0015	<0.0006	<0.0006	<0.0003	0.0001
Copper	0.0002 to 0.006	0.0032	0.0023	0.0037	0.00227
Dissolved Cadmium (by saltwater extract	0.00002				
Iron	0.01 to 0.03	<0.03	<0.03	<0.03	<0.03
Lead	5E-005 to 0.0025	<0.001	<0.001	<0.0005	<0.00005
Lithium	0.0005 to 0.025	<0.01	0.013	0.0089	0.0106
Magnesium	0.1	99	128	82.4	131
Manganese	5E-005 to 0.0015	0.00517	0.0394	0.0121	0.0247
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0183	0.0122	0.0149	0.0126
Nickel	0.0005 to 0.005	0.0032	0.003	0.0034	0.00262
Phosphorus	0.05 to 0.3			<0.3	<0.3
Potassium	0.05 to 2	21.6	22.8	20.3	21.8
Selenium	0.0001 to 0.006	<0.002	<0.005	<0.001	0.00218
Silicon	0.05			8.73	8.38
Silver	1E-005 to 0.0001	<0.00004	<0.00004	<0.00002	<0.00001
Sodium	0.05 to 2	86.2	112	77.9	111
Strontium	0.0001 to 0.005			0.88	1.37
Sulphur	0.5				
Thallium	1E-005 to 0.001	<0.0004	<0.0004	<0.0002	<0.00001
Tin	0.0001 to 0.0025	<0.001	<0.001	<0.0005	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00261	0.00337	0.00214	0.00387
Vanadium	0.001 to 0.03	0.0042	0.0038	0.0046	0.0031
Zinc	0.001 to 0.006	<0.005	<0.005	0.0051	0.0037
Total Metals					
Aluminum	0.003 to 0.025	0.191	0.014	0.903	0.0154
Antimony	0.0001 to 0.0025	<0.001	<0.001	<0.0005	0.00013
Arsenic	0.0001 to 0.0025	0.0023	<0.004	0.00342	0.00272
Barium	5E-005 to 0.02	0.054	0.068	0.06	0.0682
Beryllium	0.0001 to 0.005	<0.002	<0.002	<0.001	<0.0001
Bismuth	0.0005 to 0.2			<0.2	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	0.075
Cadmium	1E-005 to 8.5E-005	0.000056	0.000045	0.000019	<0.00001
Calcium	0.05 to 0.1	99.4	123	89.9	132
Chromium	0.0001 to 0.005	<0.002	<0.002	0.0033	0.00057
Cobalt	0.0001 to 0.0015	<0.0006	<0.0006	0.001	0.00012
Copper	0.0005 to 0.007	0.0043	0.0024	0.0074	0.00234
Iron	0.01 to 0.03	0.27	0.037	1.32	0.038
Lead	5E-005 to 0.0025	<0.001	<0.001	<0.0005	<0.00005
Lithium	0.0005 to 0.025	<0.01	0.014	0.0092	0.012
Magnesium	0.1	97.8	130	81.7	130
Manganese	5E-005 to 0.0015	0.0199	0.0452	0.0896	0.0254
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0191	0.0136	0.0158	0.0131
Nickel	0.0005 to 0.005	0.0045	0.0034	0.0073	0.00265
Phosphorus	0.05 to 0.3			<0.3	<0.3
Potassium	0.05 to 2	20.6	23.3	20.5	22.1
Selenium	0.0001 to 0.006	<0.002	<0.005	<0.001	0.00194
Silicon	0.05			11.3	8.38
Silver	1E-005 to 0.0001	<0.00004	<0.00004	<0.00002	<0.00001
Sodium	0.05 to 2	82.8	114	77.2	114
Strontium	0.0001 to 0.005			0.885	1.39
Sulphur	0.5				
Thallium	1E-005 to 0.001	<0.0004	<0.0004	<0.0002	<0.00001
Tin	0.0001 to 0.0025	<0.001	<0.001	<0.0005	<0.0001
Titanium	0.01	<0.01	<0.01	0.053	<0.01
Total Cadmium (by saltwater extraction)	0.00002				
Uranium	1E-005 to 0.001	0.00276	0.00371	0.00222	0.00408
Vanadium	0.001 to 0.03	0.0049	0.004	0.0075	0.0032
Zinc	0.003 to 0.006	<0.005	<0.005	0.0061	<0.003
Organics					
Carbon Organic (Dissolved)	0.5 to 5	12.3	7.78	16.6	8.66
Carbon Organic (Total)	0.5 to 5			16.7	8.69
Nitrogen Organic (Dissolved)	0.05 to 0.26			1.07	<0.21
Nitrogen Organic (Total)	0.05 to 0.3			1.42	<0.21
ALS LAB ID		**L894378**	**L927930**	**L1052387**	**L1076994**

SBEB SO4 early lifestages present	429	Site specific test	429	Site specific testing required		
	0.79	#VALUE!	0.58	#VALUE!		
SBEB SO4 early lifestages absent	703	703	703	703		
	0.48	0.65	0.35	0.72		

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C1.35 - PP01
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Site ID		PP01	PP01	PP01	PP01	PP01	PP01
Analytes	MDL	2-May-07	18-Jul-07	17-Sep-07	29-Apr-08	7-Jul-08	6-Sep-08
In Situ Parameters							
Conductivity µS/cm	...	14466		23104		16536	27240
Oxygen Dissolved %	...				94.4		107
Oxygen Dissolved	...	8.68		6.89	9.47		9.23
pH (unitless)	...	8.42		8.43	7.82	8.58	8.63
Redox Potential mV	...					-133	-115
Salinity ppt	...						
Specific Conductivity µS/cm	...	19018		27261	24329	17411	32588
Temperature °C	...	12.4		17.1	11	22.4	16.4
Total Dissolved Solids	...						
Turbidity NTU	...						
Physical Tests							
Acidity to pH 8.3 (as CaCO3)	1				7.7		
Alkalinity (Total as CaCO3)	1 to 2	274	295	391	415	475	283
Bicarbonate Alkalinity	1 to 2				415		
Carbonate Alkalinity	1 to 2				<2		
Color TCU	5	9.5	9.9	16.1	8.4	10.4	11.2
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	9510	14500	17300	14100	16800	19400
Hydroxide Alkalinity	1 to 2				<2		
pH (unitless)	0.01 to 0.1	8.2	8.36	8.39	8.23	8.65	8.53
Specific Conductivity µS/cm	2	17800	26000	28000	25100	29300	33000
Total Dissolved Solids	1 to 2	23300	30300	37100	33300	40900	42400
Total Suspended Solids	3	22	10.8	19.6	51.6	32.7	41.3
Turbidity NTU	0.1				3.81	1.41	3.09
Dissolved Anions							
Bromide	0.05 to 2.495	<5	<25	<25	<5	<5	<25
Chloride	0.5 to 1	1500	2040	2300	1970	2450	2850
Fluoride	0.02 to 0.4	6.5		<10	2.1	<2	15
Sulphate	0.5 to 1	13000	18500	21800	17900	22700	27200
Nutrients							
Ammonia (Total)	0.005 to 0.05	0.063	0.026	0.009	0.063	<0.02	0.025
Nitrate (as N)	0.005 to 0.1	1.81	3	<2.5	<0.5	<0.5	<2.5
Nitrite (as N)	0.001 to 0.02	<0.1	1.33	<0.5	0.4	<0.1	1.17
Nitrogen (Dissolved)	0.05 to 0.1						
Nitrogen (Total)	0.0025 to 0.11						
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.902	2.83	2.73	1.58	1.84	2.8
Orthophosphate (Dissolved)	0.001 to 0.01	<0.001	<0.001	0.0014	<0.001	<0.001	
Phosphorus - Dissolved	0.002 to 0.02						
Phosphorus - Total	0.002 to 0.02	0.0553	0.065	0.065	0.0707	0.0515	
Cyanide							
Cyanide (Free)	0.005				<0.005	<0.005	<0.005
Cyanide (Total)	0.005	0.0055	0.0102	0.0123	0.0088	0.0077	
Cyanide (WAD)	0.005				<0.005	<0.005	<0.005
Dissolved Metals							
Aluminum	0.001 to 0.025	<0.25	<0.25	<0.5	<0.5	<0.5	<0.5
Antimony	0.0001 to 0.0025	<0.025	<0.025	<0.05	<0.05	<0.05	<0.05
Arsenic	0.0001 to 0.0025	<0.025	<0.025	<0.05	<0.05	<0.05	<0.05
Barium	5E-005 to 0.02	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2
Beryllium	0.0001 to 0.005	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Bismuth	0.0005 to 0.2						
Boron	0.01 to 0.1	1.43	2.2	2.5	2.1	2.7	3
Cadmium	1E-005 to 8.5E-005	<0.00085	<0.00085	<0.0017	<0.0017	<0.0017	<0.0017
Calcium	0.05 to 0.1	469	568	613	513	583	638
Chromium	0.0001 to 0.018	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Cobalt	0.0001 to 0.0015	<0.015	<0.015	<0.03	<0.03	<0.03	<0.03
Copper	0.0002 to 0.006	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Dissolved Cadmium (by saltwater extrac	0.00002						
Iron	0.01 to 0.03	<0.15	<0.3	<0.3	<0.3	<0.3	<0.3
Lead	5E-005 to 0.0025	<0.025	<0.025	<0.05	<0.05	<0.05	<0.05
Lithium	0.0005 to 0.025	<0.25	<0.25	<0.5	<0.5	<0.5	<0.5
Magnesium	0.1	2020	3170	3830	3110	3710	4310
Manganese	5E-005 to 0.0015	0.051	0.015	0.045	0.089	<0.03	<0.03
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Molybdenum	5E-005 to 0.005	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Nickel	0.0005 to 0.005	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Phosphorus	0.05 to 0.3						
Potassium	0.05 to 2	196	310	340	283	342	394
Selenium	0.0001 to 0.006	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Silicon	0.05						
Silver	1E-005 to 0.0001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002
Sodium	0.05 to 2	2700	4280	4880	4200	5000	5850
Strontium	0.0001 to 0.005						
Sulphur	0.5						
Thallium	1E-005 to 0.001	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02
Tin	0.0001 to 0.0025	<0.025	<0.025	<0.05	<0.05	<0.05	<0.05
Titanium	0.01	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1
Uranium	1E-005 to 0.001	0.01	0.012	<0.02	<0.02	<0.02	<0.02
Vanadium	0.001 to 0.03	<0.15	<0.3	<0.3	<0.1	<0.1	<0.1
Zinc	0.001 to 0.006	<0.25	<0.25	<0.5	<0.05	<0.05	<0.1
Total Metals							
Aluminum	0.003 to 0.025	<0.25	<0.25	<0.5	<0.5	0.7	<0.5
Antimony	0.0001 to 0.0025	<0.025	<0.025	<0.05	<0.05	<0.05	<0.05
Arsenic	0.0001 to 0.0025	<0.025	<0.025	<0.05	<0.05	<0.05	<0.05
Barium	5E-005 to 0.02	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2
Beryllium	0.0001 to 0.005	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Bismuth	0.0005 to 0.2						
Boron	0.01 to 0.1	1.46	2.1	2.5	2.1	2.7	2.9
Cadmium	1E-005 to 8.5E-005	<0.00085	<0.00085	<0.0017	<0.0017	<0.0017	<0.0017
Calcium	0.05 to 0.1	464	574	626	494	609	628
Chromium	0.0001 to 0.005	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Cobalt	0.0001 to 0.0015	<0.015	<0.015	<0.03	<0.03	<0.03	<0.03
Copper	0.0005 to 0.007	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Iron	0.01 to 0.03	<0.15	<0.3	<0.3	<0.3	<0.3	<0.3
Lead	5E-005 to 0.0025	<0.025	<0.025	<0.05	<0.05	<0.05	<0.05
Lithium	0.0005 to 0.025	<0.25	<0.25	<0.5	<0.5	<0.5	<0.5
Magnesium	0.1	1970	3220	3900	3000	3660	4170
Manganese	5E-005 to 0.0015	0.094	0.054	0.083	0.087	<0.03	0.043
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Molybdenum	5E-005 to 0.005	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Nickel	0.0005 to 0.005	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Phosphorus	0.05 to 0.3						
Potassium	0.05 to 2	191	309	344	274	341	383
Selenium	0.0001 to 0.006	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Silicon	0.05						
Silver	1E-005 to 0.0001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002
Sodium	0.05 to 2	2620	4260	4910	3980	4960	5680
Strontium	0.0001 to 0.005						
Sulphur	0.5						
Thallium	1E-005 to 0.001	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02
Tin	0.0001 to 0.0025	<0.025	<0.025	<0.05	<0.05	<0.05	<0.05
Titanium	0.01	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1
Total Cadmium (by saltwater extraction)	0.00002						
Uranium	1E-005 to 0.001	0.01	0.012	<0.02	<0.02	<0.02	<0.02
Vanadium	0.001 to 0.03	<0.15	<0.3	<0.3	<0.1	<0.1	<0.1
Zinc	0.003 to 0.006	<0.25	<0.25	<0.5	<0.05	<0.05	<0.1
Organics							
Carbon Organic (Dissolved)	0.5 to 5		30.1	30.3	26	33.2	35.8
Carbon Organic (Total)	0.5 to 5	21.5					
Nitrogen Organic (Dissolved)	0.05 to 0.26						
Nitrogen Organic (Total)	0.05 to 0.3						
ALS LAB ID		**L501627**	**L532402**	**L555226**	**L624228**	**L652819**	**L679672**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		S. CATCHMEN	S. CATCHMEN	S. CATCHMEN	S. CATCHMEN
Analytes	MDL	10-Oct-13	14-Apr-14	2-Jul-14	2-Sep-14
In Situ Parameters					
Conductivity µS/cm	...		1756	3114	
Oxygen Dissolved %	...				
Oxygen Dissolved	...				
pH (unitless)	...		9.12	9.69	8.89
Redox Potential mV	...		12.3	52.6	
Salinity ppt	...		1.33	1.72	
Specific Conductivity µS/cm	...		2559	3282	
Temperature °C	...		8.56	22.4	17.5
Total Dissolved Solids	...		1662	2136	
Turbidity NTU	...		4.9		
Physical Tests					
Acidity to pH 8.3 (as CaCO3)	1				
Alkalinity (Total as CaCO3)	1 to 2	1180	812	1080	1080
Bicarbonate Alkalinity	1 to 2	823	543	536	672
Carbonate Alkalinity	1 to 2	354	268	546	404
Color TCU	5	16.7			
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	1860	1350	1750	1740
Hydroxide Alkalinity	1 to 2	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1	9.01	9.02	9.34	9.05
Specific Conductivity µS/cm	2	3470	2490	3130	3290
Total Dissolved Solids	1 to 2	3120	2150	2760	2810
Total Suspended Solids	3	8	12.5	45.7	23.9
Turbidity NTU	0.1	2.12	2.83	47.1	6.97
Dissolved Anions					
Bromide	0.05 to 2.495	<1	<1	<1	<1
Chloride	0.5 to 1	27	25	34	26
Fluoride	0.02 to 0.4	<0.4	<0.4	0.088	0.088
Sulphate	0.5 to 1	1400	1010	1320	1380
Nutrients					
Ammonia (Total)	0.005 to 0.05	0.262	0.0244	0.0428	0.115
Nitrate (as N)	0.005 to 0.1	<0.1	<0.1	<0.1	<0.1
Nitrite (as N)	0.001 to 0.02	<0.02	<0.02	<0.02	<0.02
Nitrogen (Dissolved)	0.05 to 0.1				
Nitrogen (Total)	0.0025 to 0.11	3.1			
Nitrogen Kjeldahl (Total)	0.05 to 0.2	3.1	2.73	3.38	2.42
Orthophosphate (Dissolved)	0.001 to 0.01	0.0098	<0.001	0.0013	0.0021
Phosphorus - Dissolved	0.002 to 0.02	0.0499	0.104	0.0369	0.0334
Phosphorus - Total	0.002 to 0.02	0.0645	0.0381	0.127	0.073
Cyanide					
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals					
Aluminum	0.001 to 0.025	0.003	<0.002	0.0024	<0.002
Antimony	0.0001 to 0.0025	0.00095	0.00048	0.00066	0.00079
Arsenic	0.0001 to 0.0025	0.0148	0.00951	0.0118	0.0149
Barium	5E-005 to 0.02	0.0109	0.012	0.00402	0.00891
Beryllium	0.0001 to 0.005	<0.0002	<0.0002	<0.0002	<0.0002
Bismuth	0.0005 to 0.2	<0.001	<0.001	<0.001	<0.001
Boron	0.01 to 0.1	0.594	0.368	0.482	0.557
Cadmium	1E-005 to 8.5E-005	<0.00002	<0.00003	<0.00005	<0.00002
Calcium	0.05 to 0.1	12	15.8	11.1	9.76
Chromium	0.0001 to 0.018	<0.0002	<0.0002	<0.0002	<0.0002
Cobalt	0.0001 to 0.0015	<0.0002	<0.0002	<0.0002	<0.0002
Copper	0.0002 to 0.006	<0.0004	0.00051	0.001	<0.0004
Dissolved Cadmium (by saltwater extrac	0.00002		<0.00002	<0.00002	
Iron	0.01 to 0.03	0.021	0.016	<0.01	0.018
Lead	5E-005 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001
Lithium	0.0005 to 0.025	0.0095	0.0069	0.0091	0.0097
Magnesium	0.1	445	319	418	417
Manganese	5E-005 to 0.0015	0.0121	0.00997	0.00295	0.015
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0777	0.0517	0.0593	0.0597
Nickel	0.0005 to 0.005	0.0014	0.0012	0.0014	0.0011
Phosphorus	0.05 to 0.3	<0.05	<0.05	<0.05	0.053
Potassium	0.05 to 2	81.2	56.4	78.3	75
Selenium	0.0001 to 0.006	0.00087	0.00059	0.0008	0.00066
Silicon	0.05	5.89	4.68	2.38	4.6
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	0.05 to 2	300	189	274	275
Strontium	0.0001 to 0.005	0.159	0.25	0.121	0.113
Sulphur	0.5	435	302	427	410
Thallium	1E-005 to 0.001	<0.00002	<0.00002	<0.00002	<0.00002
Tin	0.0001 to 0.0025	<0.0002	<0.0002	<0.0002	<0.0002
Titanium	0.01	<0.02	<0.02	<0.02	<0.02
Uranium	1E-005 to 0.001	0.00437	0.00272	0.00331	0.00346
Vanadium	0.001 to 0.03	0.005	0.0033	0.0048	0.0041
Zinc	0.001 to 0.006	<0.002	0.003	<0.002	<0.002
Total Metals					
Aluminum	0.003 to 0.025	0.0315	0.0797	1.21	0.349
Antimony	0.0001 to 0.0025	0.00101	0.00046	0.0008	0.00081
Arsenic	0.0001 to 0.0025	0.0151	0.00865	0.0264	0.0135
Barium	5E-005 to 0.02	0.0121	0.0141	0.046	0.0115
Beryllium	0.0001 to 0.005	<0.0002	<0.0002	<0.0002	<0.0002
Bismuth	0.0005 to 0.2	<0.001	<0.001	<0.001	<0.001
Boron	0.01 to 0.1	0.6	0.354	0.505	0.557
Cadmium	1E-005 to 8.5E-005	<0.00002	<0.00003	<0.00005	<0.00002
Calcium	0.05 to 0.1	11.9	15.7	22.8	9.99
Chromium	0.0001 to 0.005	0.00026	0.00031	0.00255	0.00075
Cobalt	0.0001 to 0.0015	<0.0002	<0.0002	0.00087	0.00025
Copper	0.0005 to 0.007	<0.001	0.0013	0.0053	0.0015
Iron	0.01 to 0.03	0.048	0.099	1.32	0.317
Lead	5E-005 to 0.0025	<0.0001	<0.0001	0.00039	<0.0001
Lithium	0.0005 to 0.025	0.009	0.0065	0.0107	0.0103
Magnesium	0.1	438	296	407	412
Manganese	5E-005 to 0.0015	0.0143	0.0213	0.0866	0.0242
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0842	0.0533	0.0818	0.0607
Nickel	0.0005 to 0.005	0.0015	0.0016	0.004	0.0017
Phosphorus	0.05 to 0.3	0.062	0.096	0.426	0.054
Potassium	0.05 to 2	77.4	53.9	77	73
Selenium	0.0001 to 0.006	0.00083	0.00058	0.0011	0.00065
Silicon	0.05	6.01	4.65	6.17	5.3
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	0.05 to 2	312	187	238	261
Strontium	0.0001 to 0.005	0.177	0.255	0.489	0.125
Sulphur	0.5	448	304	427	425
Thallium	1E-005 to 0.001	<0.00002	<0.00002	<0.00002	<0.00002
Tin	0.0001 to 0.0025	<0.0002	<0.0002	<0.0002	<0.0002
Titanium	0.01	<0.02	<0.02	0.044	<0.02
Total Cadmium (by saltwater extraction)	0.00002		<0.00002	<0.00002	
Uranium	1E-005 to 0.001	0.00469	0.00291	0.00416	0.00357
Vanadium	0.001 to 0.03	0.0055	0.0041	0.0065	0.0046
Zinc	0.003 to 0.006	<0.006	<0.006	<0.006	<0.006
Organics					
Carbon Organic (Dissolved)	0.5 to 5	32.9	25.2	32.7	33.3
Carbon Organic (Total)	0.5 to 5	32.2	26.9	36.1	33.9
Nitrogen Organic (Dissolved)	0.05 to 0.26				
Nitrogen Organic (Total)	0.05 to 0.3				
ALS LAB ID		**L1376790**	**L1443519**	**L1481215**	**L1511703**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C1.37 - WALL
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Site ID		WALL	WALL	WALL	WALL
Analytes	MDL	5-Jun-10	2-Sep-10	5-Jun-13	7-Nov-13
In Situ Parameters					
Conductivity µS/cm	...	25765	44890	71500	
Oxygen Dissolved %	...			68.2	
Oxygen Dissolved	...			4.05	
pH (unitless)	...	8.92	9.34	8.94	
Redox Potential mV	...	-50.4	78.6	-175	
Salinity ppt	...		34.1	44.3	
Specific Conductivity µS/cm	...	37682	51800	65390	
Temperature °C	...	8.42	17.9	29.8	
Total Dissolved Solids	...	2450	33660	42570	
Turbidity NTU	...		14.2	31.6	
Physical Tests					
Acidity to pH 8.3 (as CaCO3)	1				
Alkalinity (Total as CaCO3)	1 to 2	555	1420	832	171
Bicarbonate Alkalinity	1 to 2			501	171
Carbonate Alkalinity	1 to 2			331	<2
Color TCU	5	36	42.1	52.8	
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	14800	21400	27700	3380
Hydroxide Alkalinity	1 to 2			<1	<2
pH (unitless)	0.01 to 0.1	9.24	8.91	8.79	7.92
Specific Conductivity µS/cm	2	35800	49400	63000	12300
Total Dissolved Solids	1 to 2	47900	74200	111000	11500
Total Suspended Solids	3	57.9	30.7	203	46.2
Turbidity NTU	0.1	15.5	8.37	72.7	13.2
Dissolved Anions					
Bromide	0.05 to 2.495	<150	<5	5.7	<2.5
Chloride	0.5 to 1	1850	2490	2900	725
Fluoride	0.02 to 0.4	0.061	<0.3	<0.3	<1
Sulphate	0.5 to 1	30500	45300	63600	6950
Nutrients					
Ammonia (Total)	0.005 to 0.05	0.0881	0.2	0.138	1.25
Nitrate (as N)	0.005 to 0.1	<0.5	<0.5	<0.5	<0.25
Nitrite (as N)	0.001 to 0.02	<0.1	<0.1	<0.1	0.132
Nitrogen (Dissolved)	0.05 to 0.1		16.9		
Nitrogen (Total)	0.0025 to 0.11	14.7	19	23.8	5.48
Nitrogen Kjeldahl (Total)	0.05 to 0.2	14.7	19	24.6	5.5
Orthophosphate (Dissolved)	0.001 to 0.01	0.191		0.557	0.324
Phosphorus - Dissolved	0.002 to 0.02	0.733	1.16	1.92	0.411
Phosphorus - Total	0.002 to 0.02	1.54	1.66	2.65	0.509
Cyanide					
Cyanide (Free)	0.005		<0.005	<0.005	<0.005
Cyanide (Total)	0.005		<0.005	<0.005	<0.005
Cyanide (WAD)	0.005		<0.005	<0.005	<0.005
Dissolved Metals					
Aluminum	0.001 to 0.025	<0.5	<0.05	<0.1	<0.01
Antimony	0.0001 to 0.0025	<0.05	<0.005	<0.01	<0.001
Arsenic	0.0001 to 0.0025	<0.05	0.0203	0.034	0.0071
Barium	5E-005 to 0.02	<0.4	0.0161	0.0265	0.00249
Beryllium	0.0001 to 0.005	<0.1	<0.005	<0.01	<0.001
Bismuth	0.0005 to 0.2	<4	<0.025	<0.05	<0.005
Boron	0.01 to 0.1	2.5	3.73	4.7	0.54
Cadmium	1E-005 to 8.5E-005	<0.0017	<0.0005	<0.001	<0.0001
Calcium	0.05 to 0.1	374	436	375	58
Chromium	0.0001 to 0.018	<0.1	<0.005	<0.01	<0.001
Cobalt	0.0001 to 0.0015	<0.03	<0.005	<0.01	<0.001
Copper	0.0002 to 0.006	<0.15	0.017	<0.02	<0.002
Dissolved Cadmium (by saltwater extrac	0.00002				
Iron	0.01 to 0.03	<0.6	<0.2	<0.2	<0.05
Lead	5E-005 to 0.0025	<0.05	<0.0025	<0.005	<0.0005
Lithium	0.0005 to 0.025	<0.5	<0.025	<0.05	<0.005
Magnesium	0.1	3360	4930	6490	786
Manganese	5E-005 to 0.0015	0.053	0.0686	0.149	0.00791
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	<0.1	0.0672	0.027	0.00288
Nickel	0.0005 to 0.005	<0.1	<0.025	<0.05	<0.005
Phosphorus	0.05 to 0.3	<6	1.3	1.8	0.54
Potassium	0.05 to 2	436	572	744	160
Selenium	0.0001 to 0.006	<0.1	0.01	<0.01	<0.001
Silicon	0.05	<1	<1	<1	<0.25
Silver	1E-005 to 0.0001	<0.002	<0.0005	<0.001	<0.0001
Sodium	0.05 to 2	8990	13600	18500	2530
Strontium	0.0001 to 0.005	10.5	13.1	14.2	1.73
Sulphur	0.5		15200	19900	2620
Thallium	1E-005 to 0.001	<0.02	<0.0005	<0.001	<0.0001
Tin	0.0001 to 0.0025	<0.05	<0.005	<0.01	<0.001
Titanium	0.01	<0.2	<0.5	<1	<0.1
Uranium	1E-005 to 0.001	<0.02	0.0093	0.0087	0.00067
Vanadium	0.001 to 0.03	<0.1	<0.05	<0.1	<0.01
Zinc	0.001 to 0.006	<0.1	0.069	<0.1	<0.01
Total Metals					
Aluminum	0.003 to 0.025	<0.5	<0.15	<0.3	0.074
Antimony	0.0001 to 0.0025	<0.05	<0.005	<0.01	<0.001
Arsenic	0.0001 to 0.0025	<0.05	0.0211	0.034	0.0072
Barium	5E-005 to 0.02	<0.4	0.0177	0.024	0.0034
Beryllium	0.0001 to 0.005	<0.1	<0.005	<0.01	<0.001
Bismuth	0.0005 to 0.2	<4	<0.025	<0.05	<0.005
Boron	0.01 to 0.1	2.6	3.52	4.2	0.53
Cadmium	1E-005 to 8.5E-005	<0.0017	<0.0005	<0.001	<0.0001
Calcium	0.05 to 0.1	380	434	357	57.6
Chromium	0.0001 to 0.005	<0.1	<0.005	<0.01	<0.001
Cobalt	0.0001 to 0.0015	<0.03	<0.005	<0.01	<0.001
Copper	0.0005 to 0.007	<0.15	<0.025	<0.05	<0.005
Iron	0.01 to 0.03	<0.6	<0.2	0.37	0.119
Lead	5E-005 to 0.0025	<0.05	<0.0025	<0.005	<0.0005
Lithium	0.0005 to 0.025	<0.5	<0.025	<0.05	<0.005
Magnesium	0.1	3410	4930	6170	781
Manganese	5E-005 to 0.0015	0.063	0.0796	0.183	0.0157
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	<0.1	0.0767	0.0241	0.00333
Nickel	0.0005 to 0.005	<0.1	<0.025	<0.05	<0.005
Phosphorus	0.05 to 0.3	<6	1.4	2.1	0.64
Potassium	0.05 to 2	442	574	706	156
Selenium	0.0001 to 0.006	<0.1	<0.005	<0.01	<0.001
Silicon	0.05	<1	<1	<1	0.52
Silver	1E-005 to 0.0001	<0.002	<0.0005	<0.001	<0.0001
Sodium	0.05 to 2	9120	15200	16800	2420
Strontium	0.0001 to 0.005	10.9	15.6	13	1.76
Sulphur	0.5		15200	18900	2590
Thallium	1E-005 to 0.001	<0.02	<0.0005	<0.001	<0.0001
Tin	0.0001 to 0.0025	<0.05	<0.005	<0.01	<0.001
Titanium	0.01	<0.2	<0.5	<1	<0.1
Total Cadmium (by saltwater extraction)	0.00002				
Uranium	1E-005 to 0.001	<0.02	0.00958	0.0084	0.00075
Vanadium	0.001 to 0.03	<0.1	<0.05	<0.1	<0.01
Zinc	0.003 to 0.006	<0.1	<0.15	<0.3	<0.03
Organics					
Carbon Organic (Dissolved)	0.5 to 5	98.9	176	253	21.7
Carbon Organic (Total)	0.5 to 5	104	177	271	25.6
Nitrogen Organic (Dissolved)	0.05 to 0.26		16.7		
Nitrogen Organic (Total)	0.05 to 0.3	14.7	18.8		
ALS LAB ID		**L995583**	**L1286585**	**L1312719**	**L1389979**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID Analytes	MDL	WR-SEEP 28-Mar-11	WR-SEEP 10-Apr-12	WR-SEEP 25-Apr-12	WR-SEEP 24-May-12	WR-SEEP 11-Jul-12	WR-SEEP 7-Aug-12	WR-SEEP 7-May-13	WR-SEEP 5-Jun-13	WR-SEEP 3-Jul-13	WR-SEEP 7-Nov-13	WR-SEEP 10-Apr-14	WR-SEEP 8-May-14	WR-SEEP 4-Jun-14	WR-SEEP 3-Jul-14	WR-SEEP 28-Jul-14
In Situ Parameters																
Conductivity µS/cm	...	1674	1113	1480	1930		1250	2898	11220	3426		853	1180	1548	2812	3539
Oxygen Dissolved %	...	13.9	95.3	39	76.2		84.2	99.3		89.2		95.3	68.1	102	105	90.6
Oxygen Dissolved	...	1.56	10.1	3.86	7.75		7.04	9.35		7.87		9.9	7.12	9.15	7.85	7.07
pH (unitless)	...	7.26	8.38	7.6	8.24		7.73	8.16	8.83	8.36		8.4	8.46	8.52	8.52	8.64
Redox Potential mV	...	8	84.7	116	114		167	168	191	72.7		-60	58.7	85.7	79.6	89.7
Salinity ppt	...		0.74	0.92	1.26		0.63	1.77	7.18	1.96		0.54	0.77	0.84	1.33	1.75
Specific Conductivity µS/cm	...	2363	1460	1804	2420		1270	3336	12500	3709		1092	1520	1669	2603	3366
Temperature °C	...	9.73	12.6	15.6	14.3		24.2	17.2	19.6	21		13.6	13.3	21.8	29.9	27.7
Total Dissolved Solids	...	1540	949	1173	1579		825	2186	8120	2411		709	988	1085	1693	2188
Turbidity NTU	...			1.9	2.8		3.3	19.1	4.6	3.3						
Physical Tests																
Acidity to pH 8.3 (as CaCO3)	1															
Alkalinity (Total as CaCO3)	1 to 2		206	247	386	228	204	182	123	135	97.7	105	143	99.3	144	98.2
Bicarbonate Alkalinity	1 to 2		199	247	366	152	204	182	123	128	97.7	105	143	94.9	133	89.8
Carbonate Alkalinity	1 to 2		7.7	<2	20.4	76.4	<1	<2	<2	7.1	<2	<2	<2	4.4	10.6	8.4
Color TCU	5	566	29.3	32.4	30.1	36.5	27.2	12.7	11.3	17.2						
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	522	715	900	1230		609	1730	1970	2090	2400	516	705	840	1190	1560
Hydroxide Alkalinity	1 to 2		<1	<2	<1	<1	<1	<2	<2	<1	<2	<2	<2	<1	<1	<1
pH (unitless)	0.01 to 0.1	7.52	8.42	8.22	8.37	8.96	8.15	8.25	8.17	8.39	7.86	8.26	8.21	8.33	8.48	8.75
Specific Conductivity µS/cm	2	2380	1460	1760	2380	2430	1260	3410	3990	4270	3860	1090	1470	1750	2410	3310
Total Dissolved Solids	1 to 2	2100	1130	1460	2060	2160	1020	3020	3770	2960	3570	862	1220	1450	2030	2990
Total Suspended Solids	3	18.7	11.3	<3	<3	10	3.9	15.3	11.6	13.7	7.7	5.4	4.5	<3	6.1	10.2
Turbidity NTU	0.1		3.15	1.87	3.48	16	3.59	17.7	2.12	1.56	1.96	5.51	2.35	2.17	2.71	3.36
Dissolved Anions																
Bromide	0.05 to 2.495		<0.5	<0.5	<1	<1	<0.5	<1	1.2	1	<1	<0.5	<0.5	<0.5	<1	<1
Chloride	0.5 to 1		9.9	13.1	17	22	8.4	165	202	219	174	29.9	43.8	62.1	102	155
Fluoride	0.02 to 0.4		<0.2	<0.2	<0.4	<0.4	<0.2	<0.4	0.42	<0.4	<0.4	<0.2	<0.2	0.18	0.21	0.217
Sulphate	0.5 to 1		635	844	1200	1380	557	2010	2340	2390	2240	475	669	839	1280	1860
Nutrients																
Ammonia (Total)	0.005 to 0.05		0.0375	0.102	0.128	0.0735	0.0649	0.0181	0.016	0.0219	0.63	0.0083	0.0144	0.0097	0.019	0.0184
Nitrate (as N)	0.005 to 0.1		4.13	1.39	0.18	<0.1	0.394	<0.1	<0.1	<0.1	1.92	<0.05	<0.05	<0.05	<0.1	0.1
Nitrite (as N)	0.001 to 0.02		0.062	0.071	<0.02	<0.02	0.034	<0.02	<0.02	<0.02	0.091	<0.01	<0.01	<0.01	<0.02	<0.02
Nitrogen (Dissolved)	0.05 to 0.1		5.13	2.72	1.8		1.28									
Nitrogen (Total)	0.0025 to 0.11		5.27	3.07	2	2.62	1.44	1.35	1.37	1.61	5.29					
Nitrogen Kjeldahl (Total)	0.05 to 0.2		1.08	1.6	1.83	2.62	1.01	1.4	1.38	1.61	2.85	0.505	0.802	1.05	1.99	1.92
Orthophosphate (Dissolved)	0.001 to 0.01	2.47							<0.001	<0.001	0.0029	<0.001	0.0019	<0.001	<0.001	<0.001
Phosphorus - Dissolved	0.002 to 0.02		0.0187	0.0245	0.0336	0.0321	0.012	0.0177	0.0152	0.0127	0.0157	0.0091	0.0146	0.0108	0.0175	0.0144
Phosphorus - Total	0.002 to 0.02	3.16	0.0472	0.0377	0.0489	0.066	0.037	0.0644	0.0264	0.0211	0.032	0.0237	0.0193	0.017	0.0312	0.0425
Cyanide																
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	0.0215	0.0077	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																
Aluminum	0.001 to 0.025	<0.01	<0.003	0.0031	0.0035		0.0016	0.0043	0.0029	0.0024	0.057	0.0027	0.006	0.0058	0.0071	0.0032
Antimony	0.0001 to 0.0025	<0.001	0.00143	0.00147	0.00108		0.00121	0.00067	0.0006	0.00046	0.00162	0.00048	0.0006	0.00062	0.00054	0.00047
Arsenic	0.0001 to 0.0025	<0.001	0.00285	0.00369	0.00483		0.00325	0.00178	0.00172	0.00236	0.00295	0.00112	0.00127	0.00151	0.0033	0.00334
Barium	5E-005 to 0.02	0.053	0.0211	0.0256	0.0315		0.0684	0.0665	0.0488	0.0483	0.0258	0.0357	0.0425	0.0378	0.0426	0.0449
Beryllium	0.0001 to 0.005	<0.002	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.2	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.17	0.155	0.214	0.35		0.223	0.317	0.338	0.375	0.165	0.082	0.153	0.183	0.313	0.302
Cadmium	1E-005 to 8.5E-005	<0.0005	<0.0003	<0.0011	<0.00038		<0.00075	<0.00005	<0.00004	<0.00005	<0.00025	<0.00002	<0.00003	<0.00004	<0.00005	<0.00005
Calcium	0.05 to 0.1	43.8	92.8	113	134		82.9	285	290	265	331	116	148	133	173	183
Chromium	0.0001 to 0.018	<0.002	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0002	<0.0002	0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015	<0.0006	0.0001	0.00021	0.00045		0.00015	0.00021	<0.0002	<0.0002	0.00051	<0.0001	<0.0001	<0.0001	0.00011	0.00015
Copper	0.0002 to 0.006	0.0086	0.0135	0.0189	0.0127		0.0137	0.0141	0.0124	0.0175	0.0637	0.0126	0.0133	0.0126	0.0194	0.0176
Dissolved Cadmium (by saltwater extra	0.00002											<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Iron	0.01 to 0.03	0.03	<0.03	0.035	0.162		0.014	0.028	0.017	0.024	0.085	<0.01	0.013	0.023	0.027	0.016
Lead	5E-005 to 0.0025	<0.001	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	<0.01	0.00796	0.00975	0.0139		0.00734	0.0669	0.0787	0.0955	0.0779	0.0136	0.0235	0.03	0.0577	0.0903
Magnesium	0.1	100	117	150	218		97.6	248	302	347	383	54.9	81.7	123	185	268
Manganese	5E-005 to 0.0015	0.923	0.00404	0.02	0.0337		0.0145	0.076	0.0173	0.0182	0.131	0.00137	0.00518	0.00393	0.00742	0.0119
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.14	0.981	1.35	2.03		0.952	0.195	0.166	0.12	0.525	0.0554	0.102	0.13	0.131	0.114
Nickel	0.0005 to 0.005	0.0022	0.00202	0.00355	0.00696		0.00268	0.00289	0.0025	0.0029	0.0058	0.00107	0.00142	0.00161	0.0023	0.00231
Phosphorus	0.05 to 0.3	2.12	<0.3	<0.3	<0.3		<0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	0.05 to 2	86.3	24.9	31.1	41.6		21.2	56.2	58.1	69	64.6	17.1	23.4	31.8	48.9	63.5
Selenium	0.0001 to 0.006	<0.002	0.0272	0.0264	0.0149		0.0194	0.00231	0.00152	0.00145	0.0381	0.00197	0.0023	0.00158	0.0015	0.00154
Silicon	0.05	12.3	6.71	4.09	2.21		3.54	0.248	0.237	1.01	3.6	3.62	3.89	4.71	3.32	0.474
Silver	1E-005 to 0.0001	<0.00004	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	113	73.7	93.3	145		56.1	212	263	276	293	39	61.3	89.1	139	208
Strontium	0.0001 to 0.005	0.877	1.19	1.48	2.02		1.32	4.95	5.58	5.12	6.56	1.69	2.23	2.58	3.54	4.56
Sulphur	0.5							580	725	725	821	160	207	281	425	575
Thallium	1E-005 to 0.001	<0.0004	<0.00001	<0.00001	<0.00001		<0.00001	0.000014	<0.00002	<0.00002	0.000031	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00094	0.00535	0.00711	0.0111		0.00353	0.0121	0.0071	0.00511	0.0237	0.00461	0.00657	0.00582	0.00605	0.00461
Vanadium	0.001 to 0.03	<0.002	0.0035	0.0037	0.0056		0.0037	<0.001	<0.002	<0.002	<0.002	0.001	0.0011	0.0025	0.0017	0.0013
Zinc	0.001 to 0.006	<0.005	0.0144	<0.003	0.0035		0.0017	0.0016	<0.002	<0.002	<0.002	<0.001	<0.001	0.0019	<0.001	0.0011
Total Metals																
Aluminum	0.003 to 0.025	<0.01	0.121	0.0355	0.0402	0.268	0.0479	0.471	0.0408	0.0167	<0.006	0.171	0.0981	0.0458	0.0465	0.0913
Antimony	0.0001 to 0.0025	<0.001	0.00146	0.00143	0.00105	0.00145	0.00121	0.00066	0.0006	0.00048	0.00131	0.00049	0.00061	0.00061	0.00049	0.0005
Arsenic	0.0001 to 0.0025	0.001	0.00281	0.00364	0.00481	0.00813	0.0034	0.00203	0.00176	0.00223	0.00249	0.0012	0.00137	0.00157	0.0033	0.00343
Barium	5E-005 to 0.02	0.053	0.0219	0.0266	0.0308	0.0267	0.0685	0.07	0.0476	0.0483	0.023	0.0359	0.0434	0.0376	0.0413	0.0455
Beryllium	0.0001 to 0.005	<0.002	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.18	0.166	0.214	0.369	0.279	0.229	0.31	0.331	0.403	0.147	0.086	0.169	0.191	0.291	0.308
Cadmium	1E-005 to 8.5E-005	<0.0003	<0.0003	<0.0012	<0.00038	<0.0003	<0.00075	<0.00005	<0.00004	<0.00005	<0.00025	<0.00003	<0.00004	<0.00004	<0.0001	<0.00005
Calcium	0.05 to 0.1	43.4	92.5	112	130	42.8	79.9	274	291	261	302	111	146	132	160	177
Chromium	0.0001 to 0.005	<0.002	0.00066	0.00039	0.00037	0.00155	0.00031	0.00102	<0.0002	0.00022	0.00036	0.00041	0.00027	0.00016	0.00029	0.00031
Cobalt	0.0001 to 0.0015	<0.0006	0.00022	0.00024	0.00047	0.00073	0.00024	0.00056	<0.0002	<0.0002	0.00039	0.00018	0.00013	0.00011	0.00016	0.00023
Copper	0.0005 to 0.007	0.0123	0.0164	0.0209	0.0145	0.0312	0.0161	0.0202	0.0137	0.0182	0.0503	0.0152	0.0152	0.0136	0.0203	0.0195
Iron	0.01 to 0.03	0.032	0.166	0.083	0.264	0.468	0.1	0.666	0.071	0.051	<0.01	0.225	0.123	0.083	0.081	0.118
Lead	5E-005 to 0.0025	<0.001	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	0.000107	<0.0001	<0.0001	<0.0001	0.000056	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	<0.01	0.00777	0.00938	0.0145	0.0156	0.00725	0.0645	0.0798	0.1	0.0612	0.0135	0.0241	0.0305	0.0495	0.0888
Magnesium	0.1	103	117	151	205	252	95.3	246	303	349	321	52.3	81.3	123	176	265
Manganese	5E-005 to 0.0015	0.908	0.0175	0.0242	0.0346	0.0264	0.0512	0.104	0.0193	0.0303	0.12	0.00801	0.0113	0.0169	0.0236	0.0196
Mercury	1E-005 to 5E-005	0.000015	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.153	1.08	1.33	2.01	1.49	0.936	0.194	0.167	0.119	0.434	0.057	0.102	0.134	0.116	0.112
Nickel	0.0005 to 0.005	0.003	0.00255	0.00374	0.00696	0.0078	0.00287	0.00408	0.0029	0.0031	0.0045	0.0024	0.0017	0.00166	0.00237	0.00266
Phosphorus	0.05 to 0.3	2.55	<0.3	<0.3	<0.3	<0.3	<0.3	0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	0.05 to 2	90.9	24.7	31.8	39.2	38.1	21.1	53	57.7	68.1	57	15.8	23.6	30.7	45	62.7
Selenium	0.0001 to 0.006	<0.002	0.0245	0.0256	0.0146	0.0181	0.0186	0.00214	0.00153	0.00152	0.0327	0.00193	0.00192	0.00143	0.00138	0.00164
Silicon	0.05	12.7	6.89	4.13	2.2	4.25	3.55	1.29	0.32	1.04	3.03	3.84	4.05	4.76	3.29	0.636
Silver	1E-005 to 0.0001	<0.00004	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	0.000011	<0.00002	<0.00002	<0.00002	0.000012	<0.00001	0.00007	<0.00001	<0.00001
Sodium	0.05 to 2	119	72.6	96.4	138	172	55.2	206	268	282	242	37.7	63.1	92	137	214
Strontium	0.0001 to 0.005	0.882	1.29	1.46	1.98	0.704	1.32	4.97	5.49	5.02	5.85	1.69	2.21	2.64	2.99	4.48
Sulphur	0.5							606	707	727	731	155	206	279	405	571
Thallium	1E-005 to 0.001	<0.0004	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	0.000017	<0.00002	<0.00002	0.000026	<0.00001	0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	0.013	<0.01	<0.01	0.014	0.011	0.023	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction	0.00002											<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Uranium	1E-005 to 0.001	0.00102	0.00596	0.00717	0.0113	0.00477	0.00351	0.0116	0.0072	0.00513	0.0186	0.00457	0.00661	0.00593	0.00549	0.00456
Vanadium	0.001 to 0.03	<0.002	0.004	0.0041	0.0061	0.0139	0.0044	0.0028	<0.002	<0.002	<0.002	0.0017	0.0015	0.0027	0.0022	0.0019
Zinc	0.003 to 0.006	<0.005	0.0128	0.0043	0.0033	<0.006	0.0037	<0.003	<0.006	<0.006	<0.006	<0.003	<0.003	<0.003	<0.003	<0.003
Organics																
Carbon Organic (Dissolved)	0.5 to 5		10.4	13.2	18.3		9.81	16.1	17.4	26.3	14.6	10.2	10.6	13.9	23.6	27.6
Carbon Organic (Total)	0.5 to 5		11.4	13.9	17.9	24.1	10.1	16.5	17.7	27.5	22.6	10.4	10.7	14.1	23.4	28.4
Nitrogen Organic (Dissolved)	0.05 to 0.26		<1	1.15	1.49		0.79									
Nitrogen Organic (Total)	0.05 to 0.3		1.04	1.5	1.7	2.54	0.949									
ALS LAB ID		**L990458**	**L1133342**	**L1140194**	**L1152500**	**L1177597**	**L1190914**	**L1298960**	**L1312719**	**L1327102**	**L1389979**	**L1442672**	**L1453031**	**L1465478**	**L1481215**	**L1494516**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

APPENDIX C2

DRINKING WATER GUIDELINES

(Pages C2-1 to C2-72)

TABLE C2.1 -DRINKING WATER GUIDELINES

Analytes	BCWQG [2]	HC [3]
In Situ Parameters		
pH		6.5 to 8.5
Temperature °C	15	15
Total Dissolved Solids		500
Turbidity NTU		0.1
Physical Tests		
Color TCU	15	15
pH		6.5 to 8.5
Total Dissolved Solids		500
Dissolved Anions		
Bromide	0.05	
Chloride	250	
Fluoride	1.5	1.5
Sulphate	500	500
Nutrients		
Nitrate (as N)	10	10
Nitrite (as N)	1	1
Cyanide		
Cyanide		0.2
Metals		
Aluminum	*0.2*	*0.2*
Antimony		0.006
Arsenic	0.025	0.01
Barium		1
Beryllium	0.004	
Boron	5	5
Cadmium		0.005
Chromium		0.05
Copper	*0.5*	*1*
Iron		*0.3*
Lead	0.05	0.01
Manganese		*0.05*
Mercury	0.001	0.001
Molybdenum	0.25	
Selenium	0.01	0.05
Sodium		*200*
Uranium		0.02
Zinc	*5*	*5*
Organics		
Total Organic Carbon	4	

\\knightpiesold.local\VA-Prj$\1\01\00246\31\A\Report\3 - Baseline Water Quality - GW SW\Rev0\Appendix\Appendix C - SWQ Data Tables Rev0\[C2 - Drinking Water Guidelines - Rev0.xlsx]C2.1 -DRINKING

NOTES:

1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. BCWQG - BC WATER QUALITY GUIDELINES FOR RAW DRINKING WATER (WORKING AND APPROVED).
3. HC - HEALTH CANADA - GUIDELINES FOR CANADIAN DRINKING WATER QUALITY - FTP COMMITTEE ON DRINKING WATER (DECEMBER 2010).
4. THIS SHADING INDICATED THAT THE VALUE EXCEEDS THE LIMITS OF THE BCWQG.
5. THIS SHADING INDICATED THAT THE VALUE EXCEED THE LIMITS OF THE HC - DRINKING WATER GUIDELINES.
6. THIS SHADING INDICATES THAT THE VALUE EXCEEDS THE BCWQG AND HC GUIDELINES FOR DRINKING WATER QUALITY.
7. GUIDELINES IN ITALICS ARE AESTHETIC OR OPERATIONAL GUIDELINES - NOT HEALTH-BASED.

Analytes		MDL	AC02 1-May-07	AC02 18-Jul-07	AC02 17-Sep-07	AC02 29-Apr-08	AC02 7-Jul-08	AC02 4-Sep-08	AC02 31-May-11	AC02 10-May-12	AC02 16-May-12	AC02 24-May-12	AC02 12-Jul-12	AC02 8-Aug-12	AC02 8-Jan-13	AC02 5-Feb-13
In Situ Parameters																
Conductivity µS/cm		...	395		697	806	648	655	390	409	481	571	374	756	517	519
Oxygen Dissolved %	...					95.6	70.7	58.2	87.4	91.5	80.4	90	64.5	42.2	70.5	71.2
Oxygen Dissolved	...		11	5.98	9.14	10.6	6.5	6.27	9.12	10.4	8.91	9.04	6.14	3.33	10.3	10.3
pH (unitless)		...	8.24	8.02	8.1	8.65	7.91	7.82	7.35	8.3	8.21	8.17	8.22	7.94	8.48	8.09
Redox Potential mV		...	-69.3				-94.4	-72	246	47.5	91.6	107	75.9	25.5	133	171
Salinity ppt		...							0.24	0.28	0.32	0.35		0.35	0.48	0.48
Specific Conductivity µS/cm		...	551	1018	934	1114	727	876	502	581	661	704	434	726	992	986
Temperature °C		...	10.1	17.2	11.7	10.5	19.3	11.8	13.3	9.5	10.7	15.1	17.7	27.2	0.07	0.18
Total Dissolved Solids		...							326	378	430	458		472	645	642
Turbidity NTU		...							0.3	1.3	1.3	1.7	1.9	4.2	2.1	2.5
Physical Tests																
Acidity to pH 8.3 (as CaCO3)		1				<1										
Alkalinity (Total as CaCO3)		1 to 2	227	355	370	390	351	389	220	273	302	327	320	373	474	446
Bicarbonate Alkalinity		1 to 2				378				273	300	309	320	357	474	446
Carbonate Alkalinity		1 to 2				12.5				<1	2.6	17.4	<2	15.9	<2	<2
Color TCU		5	35.7	34.7	29.4	16.6	34.7	31.1	58.6	39.1	36.4	33.7	32.6	34.6	14.6	13.8
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	257	387	385	567	345	381	243	278	317	331	310	336	468	466
Hydroxide Alkalinity		1 to 2				<1				<1	<1	<1	<2	<1	<2	<2
pH (unitless)		0.01 to 0.1	8.38	8.32	8.39	8.31	8.41	8.3	8.29	8.43	8.43	8.4	8.27	8.45	8.26	8.27
Specific Conductivity µS/cm		2	522	877	933	1160	711	886	536	581	667	685	629	704	916	927
Total Dissolved Solids		1 to 2	345	594	613	752	465	573	358	378	449	455	449	453	570	584
Total Suspended Solids		3	<3	33.6	42.2	<3	3.5	92.3	<3	<3	<3	<3	5.3	6.3	3.7	19.3
Turbidity NTU		0.1				1.49	1.91	28.7	0.82	1.2	1.43	1.67	3.32	4.28	3.02	5.55
Dissolved Anions																
Bromide		0.05 to 2.495	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	<0.05	<0.05	<0.25	<0.5	<0.5
Chloride		0.5 to 1	8.92	11.5	11.2	26.7	5.87	7.6	16	7.56	10.5	9.94	6.38	10.8	9.8	10.6
Fluoride		0.02 to 0.4	0.216		0.174	0.17	0.231	0.21	0.23	0.219	0.237	0.234	0.244	0.24	0.35	<0.2
Sulphate		0.5 to 1	47.5	117	144	230	64.4	113	46.8	53.1	74.1	76.8	47.9	60.5	124	121
Nutrients																
Ammonia (Total)		0.005 to 0.05	0.021	0.045	0.064	0.025	0.039	0.052	0.0213	0.0115	0.0209	0.0281	0.0414	0.0844	0.134	0.264
Nitrate (as N)		0.005 to 0.1	0.0115	0.0491	0.1	<0.005	<0.005	0.0684	<0.025	<0.005	<0.005	0.0096	0.0088	0.067	0.106	0.131
Nitrite (as N)		0.001 to 0.02	0.0012	0.0012	0.0045	<0.001	<0.001	0.0042	0.0069	<0.001	<0.001	0.0012	0.001	0.0438	0.013	<0.01
Nitrogen (Dissolved)		0.05 to 0.1							0.79	0.51	0.57	0.52	0.24	0.76	0.662	0.99
Nitrogen (Total)		0.0025 to 0.11							0.76	0.498	0.619	0.667		0.992	0.716	0.922
Nitrogen Kjeldahl (Total)		0.05 to 0.2	0.529	1.3	1.3	0.644	0.775	1.19	0.753	0.498	0.619	0.656	0.876	0.881	0.671	0.822
Orthophosphate (Dissolved)		0.001 to 0.01	0.144	0.45	0.175	0.0639	0.21	0.13	0.157							
Phosphorus - Dissolved		0.002 to 0.02								0.147	0.168	0.155	0.194	0.208	0.168	0.141
Phosphorus - Total		0.002 to 0.02	0.164	0.63	0.235	0.0983	0.22	0.302	0.179	0.153	0.176	0.177	0.216	0.264		0.221
Cyanide																
Cyanide (Free)		0.005				<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)		0.005	0.0093	0.0188	0.0105	<0.005	0.0091		0.0099	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)		0.005	<0.005			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																
Aluminum		0.001 to 0.025	<0.005	<0.01	<0.005	<0.01	<0.005	<0.01	<0.005	<0.003	<0.003	0.0017	0.002	0.0029	0.0012	0.0013
Antimony		0.0001 to 0.0025	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	0.00012	0.00013	0.00012	0.0001	0.00013	<0.0001	<0.0001
Arsenic		0.0001 to 0.0025	0.00284	0.0043	0.00285	0.0028	0.00413	0.0034	0.0025	0.00281	0.00321	0.00354	0.00347	0.00434	0.00261	0.00231
Barium		5E-005 to 0.02	0.041	0.028	0.043	0.06	0.026	0.045	0.042	0.0432	0.048	0.0463	0.0406	0.0525	0.059	0.0583
Beryllium		0.0001 to 0.005	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2							<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.034	0.049	0.048	0.05	0.073	0.058	0.058
Cadmium		1E-005 to 8.5E-005	<0.000017	<0.000034	<0.000017	<0.000034	<0.000017	<0.000034	<0.000017	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium		0.05 to 0.1	53.6	56.8	53.8	103	64.1	55.1	49.6	55.8	62.3	64.4	61.7	53.3	81.5	83.1
Chromium		0.0001 to 0.018	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001	0.00014	<0.0001	0.00013	0.00011	0.00011	<0.0001	<0.0001
Cobalt		0.0001 to 0.0015	<0.0003	<0.0006	<0.0003	<0.0006	<0.0003	<0.0006	<0.0003	0.00011	0.00011	0.00012	0.00013	0.00016	0.00012	0.00011
Copper		0.0002 to 0.006	0.0041	<0.002	<0.001	0.0026	0.0023	<0.002	0.0042	0.00413	0.0039	0.00366	0.00204	0.00097	0.00132	0.00116
Dissolved Cadmium (by saltwater extr		0.00002														
Iron		0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	0.034	<0.03	0.064	<0.03	<0.03	0.022	0.028	0.061	0.046	0.025
Lead		5E-005 to 0.0025	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium		0.0005 to 0.025	<0.005	0.012	0.0108	<0.01	0.0095	0.011	<0.005	0.00444	0.00661	0.00538	0.00673	0.00998	0.00985	0.00994
Magnesium		0.1	29.9	59.5	60.8	75.2	44.8	59.2	29	33.7	39.2	41.4	37.8	49.3	64.1	62.8
Manganese		5E-005 to 0.0015	0.0189	0.116	0.0778	0.043	0.25	0.0816	0.0107	0.018	0.0355	0.0432	0.173	0.339	0.439	0.258
Mercury		1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.0021	<0.002	0.0019	0.0028	0.0025	<0.002	0.0019	0.0025	0.003	0.00279	0.00217	0.00251	0.00268	0.00242
Nickel		0.0005 to 0.005	0.0012	<0.002	<0.001	<0.002	0.0013	<0.002	0.0012	0.00132	0.00141	0.00146	0.0015	0.00128	0.00102	0.00107
Phosphorus		0.05 to 0.3							<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.156	0.16
Potassium		0.05 to 2	8.6	13.1	11.9	12.1	11.3	11.2	8.1	8.03	9.55	9.39	8.84	10.8	12	10.7
Selenium		0.0001 to 0.006	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001	0.00016	0.00015	0.00016	0.00015	0.00018	<0.0001	<0.0001
Silicon		0.05							10.4	11.1	11.5	11.5	11.7	8.25	11.4	11
Silver		1E-005 to 0.0001	<0.00002	<0.00004	<0.00002	<0.00004	<0.00002	<0.00004	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	25.5	58.5	64.8	57.7	38.7	51.5	27.2	23.8	31.1	33.3	30.6	41.8	46.6	51.2
Strontium		0.0001 to 0.005							0.382	0.356	0.509	0.459	0.442	0.476	0.707	0.738
Sulphur		0.5													41.1	38.7
Thallium		1E-005 to 0.001	<0.0002	<0.0004	<0.0002	<0.0004	<0.0002	<0.0004	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium		1E-005 to 0.001	0.00078	0.00071	0.00093	0.00239	0.00087	0.00077	0.00054	0.000831	0.00103	0.000899	0.000639	0.000867	0.00153	0.00155
Vanadium		0.001 to 0.03	<0.03	<0.03	<0.03	0.0057	0.0045	0.0029	0.0044	0.0055	0.0054	0.0054	0.004	0.0045	0.0027	0.0025
Zinc		0.001 to 0.006	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.003	<0.003	0.0059	0.0021	0.0028	0.0012	0.0012
Total Metals																
Aluminum		0.003 to 0.025	0.0625	0.107	0.318	0.012	0.024	0.196	0.0285	0.044	0.0536	0.0478	0.159	0.151	0.0554	0.0435
Antimony		0.0001 to 0.0025	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	0.00014	0.00015	0.00013	0.00013	0.00015	0.0001	0.00011
Arsenic		0.0001 to 0.0025	0.00291	0.0037	0.00293	0.0028	0.00411	0.0032	0.00225	0.00274	0.00342	0.00336	0.00349	0.00401	0.00271	0.0024
Barium		5E-005 to 0.02	0.042	0.036	0.073	0.06	0.028	0.06	0.04	0.0424	0.0492	0.0457	0.0431	0.0531	0.0604	0.0607
Beryllium		0.0001 to 0.005	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2							<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.039	0.058	0.051	0.057	0.073	0.064	0.065
Cadmium		1E-005 to 8.5E-005	<0.000017	<0.000034	<0.000017	<0.000034	<0.000017	<0.000034	<0.000017	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000014
Calcium		0.05 to 0.1	53.4	54.5	53	104	66.1	56.8	46.5	55.2	63.3	62.8	64.1	52.6	82.7	86.7
Chromium		0.0001 to 0.005	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001	<0.0004	0.00027	0.00025	0.00047	0.00038	0.0002	0.00025
Cobalt		0.0001 to 0.0015	<0.0003	<0.0006	0.00039	<0.0006	<0.0003	<0.0006	<0.0003	0.00013	0.00013	0.00014	0.00026	0.00025	0.00017	0.00015
Copper		0.0005 to 0.007	0.0044	<0.002	0.0032	0.003	0.0026	<0.002	0.0047	0.00459	0.00495	0.00413	0.00328	0.00236	0.00259	0.00222
Iron		0.01 to 0.03	0.108	0.179	0.572	0.034	0.069	0.311	0.089	0.082	0.086	0.088	0.252	0.273	0.117	0.105
Lead		5E-005 to 0.0025	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.00005	<0.00005	<0.00005	0.000057	<0.00005	<0.00005	<0.00005
Lithium		0.0005 to 0.025	<0.005	0.012	0.0114	<0.01	0.0093	0.012	<0.005	0.00438	0.0069	0.00518	0.00664	0.00927	0.0103	0.00995
Magnesium		0.1	29.6	56.2	60.7	75.6	45	60.2	27.2	33.1	40	38.8	38.8	48.8	63.8	63.1
Manganese		5E-005 to 0.0015	0.0254	0.743	1.03	0.0514	0.271	0.434	0.017	0.0227	0.0441	0.0555	0.236	0.377	0.469	0.271
Mercury		1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	0.000041	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.0021	<0.002	0.0021	0.0028	0.0024	<0.002	0.0022	0.00271	0.00327	0.00299	0.0025	0.00268	0.00288	0.00261
Nickel		0.0005 to 0.005	0.0013	<0.002	<0.002	<0.002	0.0015	<0.002	0.0012	0.00135	0.00155	0.00151	0.00177	0.00159	0.00115	0.00128
Phosphorus		0.05 to 0.3							<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.168	0.178
Potassium		0.05 to 2	8.6	12	11.7	12.3	11.1	12.2	7.7	7.73	9.81	9.21	8.94	11.1	12.2	11.2
Selenium		0.0001 to 0.006	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001	0.00016	0.00017	0.00017	0.0002	0.00016	<0.0001	<0.0001
Silicon		0.05							9.84	11	11.7	11.1	12.4	8.7	11.8	11.7
Silver		1E-005 to 0.0001	<0.00002	<0.00004	<0.00002	<0.00004	<0.00002	<0.00004	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	25.4	51.9	63.5	58.2	38.2	57.8	25.6	23.4	32.5	32.6	31.5	42.1	48.4	52
Strontium		0.0001 to 0.005							0.365	0.359	0.523	0.462	0.463	0.463	0.742	0.74
Sulphur		0.5													43	41.3
Thallium		1E-005 to 0.001	<0.0002	<0.0004	<0.0002	<0.0004	<0.0002	<0.0004	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	0.012	<0.01	<0.01	0.011	<0.01	<0.01	<0.01	<0.01	0.011	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extractio		0.00002														
Uranium		1E-005 to 0.001	0.00076	0.00072	0.00105	0.00221	0.00081	0.0008	0.00058	0.000862	0.00109	0.000949	0.000723	0.00094	0.0016	0.00161
Vanadium		0.001 to 0.03	<0.03	<0.03	<0.03	0.0058	0.0046	0.0039	0.0048	0.0056	0.0058	0.0054	0.0049	0.0052	0.0033	0.0029
Zinc		0.003 to 0.006	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.003	<0.003	<0.003	0.0035	<0.003	<0.003	<0.003
Organics																
Carbon Organic (Dissolved)		0.5 to 5		18.2	17.9	12.3	17.2	16.6	19.1	13.2	14.9	15.8	14.7	14.6	8.93	8.76
Carbon Organic (Total)		0.5 to 5	16.3						19.6	13.6	14.9	15.5	15.4	15.1	9.19	8.99
Nitrogen Organic (Dissolved)		0.05 to 0.26							0.762	0.499	0.549	0.481	0.189	0.565		
Nitrogen Organic (Total)		0.05 to 0.3							0.732	0.486	0.598	0.628	0.835	0.797	0.537	0.557
ALS LAB ID			**L501128**	**L532402**	**L555226**	**L624228**	**L652819**	**L678833**	**L1011500**	**L1146570**	**L1148880**	**L1152500**	**L1178283**	**L1191600**	**L1256678**	**I1265809**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes	MDL	AC02 5-Mar-13	AC02 2-Apr-13	AC02 6-May-13	AC02 4-Jun-13	AC02 2-Jul-13	AC02 7-Aug-13	AC02 3-Sep-13	AC02 8-Oct-13	AC02 6-Nov-13	AC02 4-Dec-13	AC02 15-Apr-14	AC02 10-Sep-14
In Situ Parameters													
Conductivity µS/cm	...	598	821	397	566	640	628		700	320	550		793
Oxygen Dissolved %	...	84.5		86.5	108	109	58.2	67.9	77.2	83.1	85.5		84.5
Oxygen Dissolved	...	11.6		8.64	10.5	9.56	5.7	6.33	8.85	11.2	12.4		8.84
pH (unitless)	...	8.19	8.37	8.02	8.29	8.34	8.09	8.18	8.33	8.27	8.2		8.3
Redox Potential mV	...	122	123	180	116	74.8	275	213	129	163	110		93.8
Salinity ppt	...	0.52	0.58	0.24	0.33	0.33	0.37	0.38	0.394	0.27	0.52		
Specific Conductivity µS/cm	...	1058	1165	486	676	686	753	769	489	557	1067		1023
Temperature °C	...	2.19	9.54	15.4	16.4	21.5	16.3	18.6	9.18	2.76	0.01		13.2
Total Dissolved Solids	...	688	757	316	439	445	490	500	455	362	693		510
Turbidity NTU	...	2.7	6.9	9.6	3.5	6.3	12.7		2.8	9.5	3.6		
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1									<1			
Alkalinity (Total as CaCO3)	1 to 2	394	377	217	291	308	328	359	387	416	431	385	430
Bicarbonate Alkalinity	1 to 2	367	369	217	283	290	328	349		405	431	385	407
Carbonate Alkalinity	1 to 2	27.3	7.9	<1	7.5	18	<1	9.7		10.9	<2	<2	23.2
Color TCU	5	24.1	17.6	63.8	46.8	51.3	28.9	31.8	24	21.9	14.9		
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	553	561	215	299	306	348	337	397	406	487	594	494
Hydroxide Alkalinity	1 to 2	<1	<1	<1	<1	<1	<1	<1		<1	<2	<2	<1
pH (unitless)	0.01 to 0.1	8.39	8.29	8.43	8.43	8.49	8.35	8.46	8.51	8.38	8.17	8.29	8.46
Specific Conductivity µS/cm	2	1130	1130	450	644	657	712	738	772	865	990	1210	1060
Total Dissolved Solids	1 to 2	754	778	309	415	458	458	469	482	457	686	844	704
Total Suspended Solids	3	5.3	8	3.3	4.4	6.3	5.8	16.3	14.8	9.9	5.3	8.7	3.2
Turbidity NTU	0.1	3.35	7.71	10.4	2.84	2.93	1.27	9.14	8.08	9.49	3.66	4.11	1.37
Dissolved Anions													
Bromide	0.05 to 2.495	<0.5	<0.5	<0.05	<0.25	<0.05	<0.5	<0.25	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	0.5 to 1	40.3	<5	4.85	13.4	13.7	13	12.3	24.5	10.9	37.2	56.8	53.3
Fluoride	0.02 to 0.4	0.26	<0.2	0.225	0.27	0.244	0.27	0.24	0.32	0.2	<0.2	<0.2	0.197
Sulphate	0.5 to 1	215	<5	33.1	64	46.9	61	61.5	122	81	127	299	131
Nutrients													
Ammonia (Total)	0.005 to 0.05	0.119	0.0363	0.0134	0.0175	0.0084	0.02	0.0763	0.0861	0.0656	0.19	0.0412	0.0452
Nitrate (as N)	0.005 to 0.1	0.219	<0.05	0.0057	<0.025	0.0051	<0.05	0.031	0.116	<0.05	<0.05	<0.05	<0.05
Nitrite (as N)	0.001 to 0.02	<0.01	<0.01	0.0012	<0.005	<0.001	<0.01	<0.005	0.027	0.012	<0.01	<0.01	0.023
Nitrogen (Dissolved)	0.05 to 0.1	0.871	0.619				0.609	0.897					
Nitrogen (Total)	0.0025 to 0.11	1.03	0.674	0.842	0.674	0.847	0.736	1.04	0.939	0.949			
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.883	0.674	0.86	0.745	0.842	0.673	0.958	0.952	0.97	0.699	0.96	0.923
Orthophosphate (Dissolved)	0.001 to 0.01								0.0644	0.0883	0.132	0.0849	0.0992
Phosphorus - Dissolved	0.002 to 0.02	0.163	0.0946	0.231	0.241	0.247	0.128	0.133		0.122	0.144	0.129	
Phosphorus - Total	0.002 to 0.02	0.185	0.137	0.292	0.259	0.223	0.148	0.172	0.158	0.176	0.165	0.103	0.206
Cyanide													
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	0.001 to 0.025	0.0013	0.0012	0.0047	0.0021	0.0034	0.0015	0.0026	0.0025	<0.001	0.001	0.002	0.001
Antimony	0.0001 to 0.0025	0.00012	0.00012	0.00011	0.00011	0.00012	0.00013	0.00011	0.00011	<0.0001	<0.0001	0.00012	0.00012
Arsenic	0.0001 to 0.0025	0.00278	0.00302	0.00318	0.00281	0.00326	0.00332	0.00347	0.00297	0.00308	0.00271	0.00275	0.00324
Barium	5E-005 to 0.02	0.0631	0.0714	0.0365	0.0419	0.045	0.0455	0.0362	0.0388	0.0567	0.0738	0.0761	0.0508
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.041	0.054	0.042	0.046	0.047	0.066	0.069	0.065	0.065	0.055	0.055	0.068
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	98.1	102	44.8	58.3	62.2	57.9	46.4	58.2	69.2	87.7	105	86.8
Chromium	0.0001 to 0.018	<0.0001	<0.0001	0.0001	0.00016	0.00016	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015	0.00017	0.00014	0.00014	0.00016	0.00016	0.00011	0.00015	0.00013	0.00014	<0.0001	0.00012	0.0001
Copper	0.0002 to 0.006	0.00315	0.0019	0.00572	0.00368	0.00295	0.00168	0.00115	0.0011	0.00147	0.00107	0.00173	0.00126
Dissolved Cadmium (by saltwater extr	0.00002												
Iron	0.01 to 0.03	0.038	0.012	0.076	0.064	0.069	0.019	0.024	0.018	0.024	0.018	0.018	0.016
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00876	0.00823	0.00416	0.00439	0.00498	0.00881	0.00948	0.00972	0.00985	0.01	0.0084	0.00992
Magnesium	0.1	74.7	74.3	25.1	37.2	36.5	49.5	53.7	61.1	56.5	65	80.3	67.3
Manganese	5E-005 to 0.0015	0.117	0.108	0.0255	0.0441	0.0498	0.0768	0.11	0.0283	0.128	0.371	0.131	0.0482
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00339	0.00323	0.00195	0.0018	0.00188	0.00293	0.00268	0.00327	0.00305	0.00275	0.00292	0.00347
Nickel	0.0005 to 0.005	0.00136	0.00106	0.00151	0.00165	0.00178	0.00138	0.00127	0.00134	0.00135	0.0015	0.00144	0.00159
Phosphorus	0.05 to 0.3	0.174	0.099	0.238	0.218	0.241	0.135	0.138	0.096	0.109	0.141	0.108	0.125
Potassium	0.05 to 2	14.7	12.5	9.06	8.92	10.4	11.1	12.2	11.6	12.9	11.3	12.4	12.9
Selenium	0.0001 to 0.006	0.00038	0.00016	0.00019	0.00019	0.00018	0.00015	0.00015	0.00011	0.00013	0.00012	0.00015	0.00014
Silicon	0.05	10.4	9.61	11.8	11.7	12.3	11.1	9.42	9.34	11.9	12.2	8.93	11.4
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	59.2	56.2	19.9	32.3	35.1	39.5	44.3	44.5	43.6	45.8	57.8	57
Strontium	0.0001 to 0.005	0.756	0.774	0.305	0.4	0.426	0.487	0.425	0.52	0.616	0.728	0.908	0.713
Sulphur	0.5	69.3	79.9	11.2	20.4	15.2	20.3	20.3	23	27.2	39.5	92.5	43.4
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00253	0.0019	0.000462	0.000748	0.000645	0.000968	0.000938	0.00107	0.00126	0.00132	0.00176	0.00148
Vanadium	0.001 to 0.03	0.0055	0.0059	0.0063	0.0038	0.0043	0.0033	0.0036	0.0035	0.0033	0.0029	0.0048	0.0042
Zinc	0.001 to 0.006	<0.001	<0.001	0.0016	<0.001	0.0028	0.0011	<0.001	0.0016	0.001	<0.001	0.0011	<0.001
Total Metals													
Aluminum	0.003 to 0.025	0.0683	0.268	0.536	0.172	0.142	0.121	0.429	0.255	0.275	0.149	0.149	0.151
Antimony	0.0001 to 0.0025	0.00013	0.00013	0.00013	0.00014	0.00016	0.00018	0.00014	0.00014	0.00016	<0.0001	0.00012	0.00016
Arsenic	0.0001 to 0.0025	0.00279	0.00299	0.00322	0.00285	0.00322	0.00333	0.00336	0.00292	0.00306	0.00275	0.00272	0.00316
Barium	5E-005 to 0.02	0.0661	0.0732	0.0411	0.0441	0.0475	0.0493	0.04	0.043	0.0644	0.074	0.0761	0.0532
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.044	0.057	0.043	0.051	0.05	0.071	0.074	0.076	0.075	0.056	0.057	0.072
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	98.8	102	44.3	59.4	60.2	60	46.9	59.5	72.1	89.6	105	83.6
Chromium	0.0001 to 0.005	0.00018	0.00045	0.00102	0.00047	0.00038	0.00033	0.00087	0.00048	0.00044	0.0003	0.00031	0.00031
Cobalt	0.0001 to 0.0015	0.00022	0.00028	0.0005	0.00028	0.00026	0.0002	0.00044	0.0003	0.00031	0.00018	0.00021	0.00021
Copper	0.0005 to 0.007	0.00416	0.00369	0.009	0.00491	0.00382	0.00263	0.00507	0.00253	0.00293	0.00204	0.00316	0.0022
Iron	0.01 to 0.03	0.135	0.411	0.768	0.299	0.315	0.194	0.655	0.361	0.368	0.22	0.243	0.211
Lead	5E-005 to 0.0025	<0.00005	0.000059	0.000121	0.00005	<0.00005	<0.00005	0.000114	0.000066	0.000077	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00902	0.00817	0.00439	0.0048	0.00517	0.00888	0.0111	0.00962	0.0108	0.00983	0.00823	0.00942
Magnesium	0.1	72.5	73.5	24.7	37	35.6	49.4	50.1	60.1	58.4	62.3	75.6	65.4
Manganese	5E-005 to 0.0015	0.125	0.127	0.0692	0.0704	0.0783	0.107	0.2	0.0777	0.172	0.389	0.151	0.0889
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00369	0.00327	0.002	0.0021	0.00204	0.00317	0.00305	0.0035	0.00348	0.00298	0.00296	0.00347
Nickel	0.0005 to 0.005	0.00146	0.00145	0.00215	0.00209	0.00195	0.00163	0.00191	0.00172	0.00177	0.00169	0.00153	0.0018
Phosphorus	0.05 to 0.3	0.195	0.142	0.281	0.248	0.251	0.154	0.34	0.13	0.163	0.152	0.135	0.144
Potassium	0.05 to 2	14.4	12.2	8.88	9.2	10.5	11.7	12.1	11.5	15	12	12.5	12.4
Selenium	0.0001 to 0.006	0.00037	0.00016	0.00019	0.00019	0.00018	0.00015	0.00017	0.00013	0.00012	0.0001	0.00015	0.00013
Silicon	0.05	10.6	10.7	12.8	12.6	12.6	11.7	10.2	10.5	13.3	12.9	9.2	11.4
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	0.000014	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	57.1	54	18.8	33.7	34.9	41.5	44.7	46.5	45.9	46.5	57	56.6
Strontium	0.0001 to 0.005	0.78	0.772	0.32	0.46	0.443	0.503	0.46	0.531	0.661	0.72	0.871	0.713
Sulphur	0.5	71.8	85.8	11.3	21.4	15.4	21.5	20.6	24.1	30.3	41.2	93.9	43.7
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	0.016	<0.01	<0.01	<0.01	0.011	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extractio	0.00002												
Uranium	1E-005 to 0.001	0.00269	0.00192	0.000472	0.000802	0.000691	0.00102	0.000994	0.00121	0.00143	0.00137	0.00176	0.00151
Vanadium	0.001 to 0.03	0.006	0.0067	0.0079	0.0045	0.0047	0.0038	0.0052	0.0044	0.0049	0.0035	0.0055	0.0048
Zinc	0.003 to 0.006	<0.003	<0.003	0.0032	<0.003	<0.003	<0.003	0.0034	<0.003	<0.003	<0.003	<0.003	<0.003
Organics													
Carbon Organic (Dissolved)	0.5 to 5	11.8	11	18.1	17.7	19.3	14.7	16.2	12.5	11.9	11.9	11.3	15
Carbon Organic (Total)	0.5 to 5	11.9	11.2	17.6	19.5	19.1	17.3	16.5	13.5	12.9	12.6	14	15.4
Nitrogen Organic (Dissolved)	0.05 to 0.26		0.583										
Nitrogen Organic (Total)	0.05 to 0.3	0.765	0.638										
ALS LAB ID		**L1275746**	**L1285503**	**L1298960**	**L1311741**	**L1326032**	**L1344180**	**L1357647**	**L1376311**	**L1388680**	**L1399806**	**L1443519**	**L1516193**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C2.3 - AJWE-D
PAGE 1 OF 1

Analytes	MDL	AJWE-D 3-May-07	AJWE-D 17-Jul-07	AJWE-D 18-Sep-07	AJWE-D 29-Apr-08	AJWE-D 7-Jul-08	AJWE-D 6-Sep-08	AJWE-D 9-May-12	AJWE-D 11-Jul-12	AJWE-D 6-Nov-12	AJWE-D 1-May-14	AJWE-D 24-Sep-14
In Situ Parameters												
Conductivity µS/cm	...	1871	1989	2037	1715	1820	1906	1837	2000	1939	13	2050
Oxygen Dissolved %	...				79.9	66.3	77.8	85.8	93.8		90.1	
Oxygen Dissolved	...	11.2	11.5	9.29	10.2	7.94	8.85	10.7	10.9		10.3	
pH (unitless)	...	8.01	8.05	8.25	8.19	8.19	8.11	8.51	8.38	8.37	8.01	8.42
Redox Potential mV	...		-75.8			-107		247	237	130	82.2	115
Salinity ppt	...		1.43					1.52		1.45	0.01	1.48
Specific Conductivity µS/cm	...	2669	2748	2771	2798	2763	2720	2927	2929	2779	18	2806
Temperature °C	...	9.34	10.4	11.2	4.73	7.13	9.35	5.5	8.38	9.18	9.81	10.9
Total Dissolved Solids	...		1788					1903		1806	12	1837
Turbidity NTU	...							0.1		0.2	-2.4	-0.1
Physical Tests												
Acidity to pH 8.3 (as CaCO3)	1				3.1					<1		
Alkalinity (Total as CaCO3)	1 to 2	168	165	167	177	161	152	163	163	150	166	146
Bicarbonate Alkalinity	1 to 2				177			163	163	150	166	146
Carbonate Alkalinity	1 to 2				<2			<2	<2	<1	<2	<1
Color TCU	5		<5	<5	<5	<5	<5	<5	<5	<5		
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	1280	1290	1160	1240	1190	1230	1380	1330	1340	1360	1300
Hydroxide Alkalinity	1 to 2				<2			<2	<2	<1	<2	<1
pH (unitless)	0.01 to 0.1	8.21	8.21	8.27	8.16	8.32	8.31	8.29	8.3	8.32	8.22	8.33
Specific Conductivity µS/cm	2	2620	2740	2720	2780	2730	2750	2850	2740	2790	2800	2790
Total Dissolved Solids	1 to 2	2240	2270	2260	2250	2270	2270	2510	2650	2440	2600	2420
Total Suspended Solids	3	<3	<3	<3	<3	<3	<3	<3	4	<3	5.2	5.2
Turbidity NTU	0.1				0.23	0.19	0.14	0.18	0.36	1.29	0.45	0.24
Dissolved Anions												
Bromide	0.05 to 2.495	<0.25	<5	<0.5	<2.5	<0.05	<2.5	<1	<1	<1	<1	<1
Chloride	0.5 to 1	26.6	<50	25.3	<25	24.1	34	30	31	30	31	27
Fluoride	0.02 to 0.4	0.37		0.22	1.2	0.144	<1	<0.4	<0.4	<0.4	<0.4	0.177
Sulphate	0.5 to 1	1390	1350	1400	1360	1410	1480	1590	1600	1560	1600	1580
Nutrients												
Ammonia (Total)	0.005 to 0.05	0.027	0.041	0.0073	<0.02	<0.02	<0.02	<0.005	<0.005	0.0051	<0.005	<0.005
Nitrate (as N)	0.005 to 0.1	24.4	24	23.8	22.5	20.8	22.7	22	20.6	21.1	18.8	18.5
Nitrite (as N)	0.001 to 0.02	0.0128	0.16	0.022	0.091	0.0079	0.134	0.029	0.025	0.046	0.031	0.031
Nitrogen (Dissolved)	0.05 to 0.1							28.5	31.4	23.9		
Nitrogen (Total)	0.0025 to 0.11							22.2	20.8	21.2		
Nitrogen Kjeldahl (Total)	0.05 to 0.2	<0.05	0.258	0.209	0.176	0.17	0.222	0.177	0.126	<0.5	<0.05	<0.05
Orthophosphate (Dissolved)	0.001 to 0.01	<0.001	<0.001	0.0027	0.0025	0.0014				0.0019	0.0021	0.0012
Phosphorus - Dissolved	0.002 to 0.02							<0.002	0.0034	<0.002	<0.002	<0.002
Phosphorus - Total	0.002 to 0.02	0.003	0.0032	0.0043	<0.002	0.0022		0.0021	0.0029	<0.002	0.0102	<0.002
Cyanide												
Cyanide (Free)	0.005				<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005				<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals												
Aluminum	0.001 to 0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.006	<0.002	0.0021	0.0012	<0.001
Antimony	0.0001 to 0.0025	0.0225	0.0247	0.0237	0.0209	0.0206	0.021	0.0211	0.0222	0.02	0.0194	0.0189
Arsenic	0.0001 to 0.0025	0.0793	0.0829	0.0757	0.0714	0.0691	0.0725	0.0633	0.0612	0.0572	0.0533	0.0512
Barium	5E-005 to 0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.0167	0.0162	0.0201	0.0185	0.0187
Beryllium	0.0001 to 0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2							<0.001	<0.001	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.1	0.114	0.097	0.091	0.098	0.105
Cadmium	1E-005 to 8.5E-005	0.00111	<0.003	<0.001	0.000479	0.000355	0.00059	<0.0004	<0.0022	<0.00055		<0.0001
Calcium	0.05 to 0.1	164	169	154	157	157	160	175	174	172	177	172
Chromium	0.0001 to 0.018	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015	<0.0015	0.0017	0.0016	<0.0015	<0.0015	0.0017	0.00162	0.00191	0.00119	0.00124	0.00134
Copper	0.0002 to 0.006	0.0292	0.0414	0.0365	<0.03	0.0296	0.0364	0.0249	0.03	0.0175	0.0203	0.0182
Dissolved Cadmium (by saltwater extr	0.00002										<0.00006	<0.00006
Iron	0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.02	<0.01	<0.01	<0.01
Lead	5E-005 to 0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.045	0.053	0.042	0.052	0.042	0.04	0.0462	0.0412	0.0397	0.0439	0.0457
Magnesium	0.1	212	212	188	207	194	203	229	218	222	222	211
Manganese	5E-005 to 0.0015	0.0019	0.0018	0.002	<0.0015	<0.0015	<0.0015	0.00105	0.00136	0.00118	0.000689	0.000787
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002		<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	2.25	2.24	2.17	2.18	1.95	1.99	2.35	2.34	2.19	2.67	2.2
Nickel	0.0005 to 0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0036	0.0039	0.00334	0.00415	0.00356
Phosphorus	0.05 to 0.3							<0.3	<0.3	<0.05	<0.05	<0.05
Potassium	0.05 to 2	20.1	17.8	19.9	19.2	19.7	18.2	21.3	20.4	21.9	21.6	20
Selenium	0.0001 to 0.006	0.0175	0.017	0.0164	0.0189	0.0155	0.0156	0.0195	0.0162	0.0182	0.0205	0.0184
Silicon	0.05							8.77	9.01	8.65	8.64	8.67
Silver	1E-005 to 0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	210	212	206	208	207	188	235	206	205	218	210
Strontium	0.0001 to 0.005							2.87	2.89	2.77	3.34	2.77
Sulphur	0.5									0.488	496	474
Thallium	1E-005 to 0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00002	<0.00002	0.000016	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.0102	0.0107	0.0095	0.0103	0.0098	0.0094	0.0105	0.0109	0.00979	0.00988	0.00944
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.03	0.0086	0.0081	0.0069	0.008	0.007	0.008	0.0078	0.0076
Zinc	0.001 to 0.006	<0.025	<0.025	<0.025	<0.005	<0.005	<0.005	<0.006	0.0025	<0.001	0.0015	0.0016
Total Metals												
Aluminum	0.003 to 0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.0097	0.0063	0.0699	0.0076	<0.003
Antimony	0.0001 to 0.0025	0.0217	0.0241	0.0234	0.0206	0.021	0.0199	0.0215	0.0223	0.02	0.0191	0.0203
Arsenic	0.0001 to 0.0025	0.0745	0.0811	0.0758	0.0702	0.0726	0.0693	0.064	0.0641	0.0572	0.0518	0.0525
Barium	5E-005 to 0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.0172	0.0171	0.0205	0.0184	0.0191
Beryllium	0.0001 to 0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2							<0.001	<0.001	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.13	0.105	0.095	0.104	0.126
Cadmium	1E-005 to 8.5E-005	0.000645	<0.003	<0.001	0.000472	0.000614	0.000493	<0.0004	<0.0022	<0.00057		<0.0001
Calcium	0.05 to 0.1	157	170	155	157	155	161	182	175	169	173	176
Chromium	0.0001 to 0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0002	<0.0002	0.00046	0.00013	0.00012
Cobalt	0.0001 to 0.0015	<0.0015	0.0016	0.0017	<0.0015	<0.0015	0.0015	0.00168	0.00198	0.00134	0.00129	0.00137
Copper	0.0005 to 0.007	0.0311	0.0407	0.0372	<0.03	0.0313	0.0349	0.0262	0.0327	0.023	0.0221	0.0201
Iron	0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.02	0.087	<0.01	<0.01
Lead	5E-005 to 0.0025	0.0027	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0001	<0.0001	0.000057	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.041	0.049	0.041	0.049	0.04	0.041	0.0486	0.0419	0.0398	0.0441	0.0508
Magnesium	0.1	201	215	188	207	195	191	239	222	224	217	217
Manganese	5E-005 to 0.0015	0.0024	0.0018	0.002	<0.0015	<0.0015	<0.0015	0.00122	0.00147	0.00304	0.000896	0.000848
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002		<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	2.16	2.2	2.14	2.11	2.01	1.89	2.48	2.45	2.32	2.73	2.47
Nickel	0.0005 to 0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0037	0.0039	0.00386	0.0038	0.00362
Phosphorus	0.05 to 0.3							<0.3	<0.3	<0.05	<0.05	<0.05
Potassium	0.05 to 2	19.5	17.8	20	18.6	19.3	18.3	21.9	21.2	21.8	21.1	21.1
Selenium	0.0001 to 0.006	0.0162	0.0165	0.016	0.0178	0.0176	0.0153	0.02	0.0172	0.0183	0.0191	0.0191
Silicon	0.05							9.28	9.19	8.88	8.72	8.88
Silver	1E-005 to 0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	205	215	205	202	201	189	244	213	213	216	220
Strontium	0.0001 to 0.005							3.03	3	2.89	3.36	3
Sulphur	0.5									497	499	492
Thallium	1E-005 to 0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00002	<0.00002	0.000011	<0.00001	0.00001
Tin	0.0001 to 0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extractic	0.00002										<0.00006	<0.00006
Uranium	1E-005 to 0.001	0.0098	0.0105	0.0095	0.0101	0.01	0.0092	0.0111	0.011	0.0103	0.0102	0.0103
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.03	0.0084	0.0085	0.0066	0.0083	0.0079	0.0087	0.008	0.0077
Zinc	0.003 to 0.006	<0.025	<0.025	<0.025	<0.005	<0.005	<0.005	<0.006	<0.006	<0.003	<0.003	<0.003
Organics												
Carbon Organic (Dissolved)	0.5 to 5	1.74	1.71	1.58	1.55	1.46	1.1	1.49	1.2	1.29	0.92	1.2
Carbon Organic (Total)	0.5 to 5							1.4	1.15	1.16	0.99	1.2
Nitrogen Organic (Dissolved)	0.05 to 0.26							6.5	10.8	<4.8		
Nitrogen Organic (Total)	0.05 to 0.3							0.177	0.126	<0.5		
ALS LAB ID		**L502198**	**L532007**	**L556006**	**L624576**	**L653575**	**L679672**	**L1145681**	**L1177597**	**l1234688**	**L1450350**	**L1523985**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes	MDL	AJWE-M 24-Sep-14
In Situ Parameters		
Conductivity µS/cm	...	2194
Oxygen Dissolved %	...	
Oxygen Dissolved	...	
pH (unitless)	...	8.42
Redox Potential mV	...	115
Salinity ppt	...	1.48
Specific Conductivity µS/cm	...	2250
Temperature °C	...	13.4
Total Dissolved Solids	...	1837
Turbidity NTU	...	-0.1
Physical Tests		
Acidity to pH 8.3 (as CaCO3)	1	
Alkalinity (Total as CaCO3)	1 to 2	149
Bicarbonate Alkalinity	1 to 2	149
Carbonate Alkalinity	1 to 2	<1
Color TCU	5	
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	1240
Hydroxide Alkalinity	1 to 2	<1
pH (unitless)	0.01 to 0.1	8.33
Specific Conductivity µS/cm	2	2720
Total Dissolved Solids	1 to 2	2380
Total Suspended Solids	3	5.1
Turbidity NTU	0.1	0.16
Dissolved Anions		
Bromide	0.05 to 2.495	<1
Chloride	0.5 to 1	26
Fluoride	0.02 to 0.4	0.185
Sulphate	0.5 to 1	1540
Nutrients		
Ammonia (Total)	0.005 to 0.05	0.0094
Nitrate (as N)	0.005 to 0.1	17.5
Nitrite (as N)	0.001 to 0.02	0.121
Nitrogen (Dissolved)	0.05 to 0.1	
Nitrogen (Total)	0.0025 to 0.11	
Nitrogen Kjeldahl (Total)	0.05 to 0.2	<0.05
Orthophosphate (Dissolved)	0.001 to 0.01	0.0022
Phosphorus - Dissolved	0.002 to 0.02	<0.002
Phosphorus - Total	0.002 to 0.02	<0.002
Cyanide		
Cyanide (Free)	0.005	<0.005
Cyanide (Total)	0.005	<0.005
Cyanide (WAD)	0.005	<0.005
Dissolved Metals		
Aluminum	0.001 to 0.025	<0.001
Antimony	0.0001 to 0.0025	0.0186
Arsenic	0.0001 to 0.0025	0.0468
Barium	5E-005 to 0.02	0.0187
Beryllium	0.0001 to 0.005	<0.0001
Bismuth	0.0005 to 0.2	<0.0005
Boron	0.01 to 0.1	0.103
Cadmium	1E-005 to 8.5E-005	<0.0001
Calcium	0.05 to 0.1	166
Chromium	0.0001 to 0.018	<0.0001
Cobalt	0.0001 to 0.0015	0.001
Copper	0.0002 to 0.006	0.0166
Dissolved Cadmium (by saltwater extr	0.00002	<0.00006
Iron	0.01 to 0.03	<0.01
Lead	5E-005 to 0.0025	<0.00005
Lithium	0.0005 to 0.025	0.0445
Magnesium	0.1	200
Manganese	5E-005 to 0.0015	0.000629
Mercury	1E-005 to 5E-005	<0.00001
Molybdenum	5E-005 to 0.005	2.26
Nickel	0.0005 to 0.005	0.0035
Phosphorus	0.05 to 0.3	<0.05
Potassium	0.05 to 2	19.7
Selenium	0.0001 to 0.006	0.0182
Silicon	0.05	8.5
Silver	1E-005 to 0.0001	<0.00001
Sodium	0.05 to 2	201
Strontium	0.0001 to 0.005	2.8
Sulphur	0.5	452
Thallium	1E-005 to 0.001	0.000011
Tin	0.0001 to 0.0025	<0.0001
Titanium	0.01	<0.01
Uranium	1E-005 to 0.001	0.00918
Vanadium	0.001 to 0.03	0.0081
Zinc	0.001 to 0.006	0.0013
Total Metals		
Aluminum	0.003 to 0.025	<0.006
Antimony	0.0001 to 0.0025	0.0192
Arsenic	0.0001 to 0.0025	0.0484
Barium	5E-005 to 0.02	0.0183
Beryllium	0.0001 to 0.005	<0.0001
Bismuth	0.0005 to 0.2	<0.0005
Boron	0.01 to 0.1	0.12
Cadmium	1E-005 to 8.5E-005	<0.0001
Calcium	0.05 to 0.1	169
Chromium	0.0001 to 0.005	0.00025
Cobalt	0.0001 to 0.0015	0.00105
Copper	0.0005 to 0.007	0.0179
Iron	0.01 to 0.03	<0.01
Lead	5E-005 to 0.0025	<0.00005
Lithium	0.0005 to 0.025	0.0495
Magnesium	0.1	208
Manganese	5E-005 to 0.0015	0.000781
Mercury	1E-005 to 5E-005	<0.00001
Molybdenum	5E-005 to 0.005	2.34
Nickel	0.0005 to 0.005	0.00379
Phosphorus	0.05 to 0.3	<0.05
Potassium	0.05 to 2	20.5
Selenium	0.0001 to 0.006	0.0183
Silicon	0.05	8.7
Silver	1E-005 to 0.0001	<0.00001
Sodium	0.05 to 2	208
Strontium	0.0001 to 0.005	2.86
Sulphur	0.5	467
Thallium	1E-005 to 0.001	0.000011
Tin	0.0001 to 0.0025	<0.0001
Titanium	0.01	<0.01
Total Cadmium (by saltwater extractic	0.00002	<0.00006
Uranium	1E-005 to 0.001	0.00967
Vanadium	0.001 to 0.03	0.0085
Zinc	0.003 to 0.006	<0.003
Organics		
Carbon Organic (Dissolved)	0.5 to 5	1.17
Carbon Organic (Total)	0.5 to 5	1.03
Nitrogen Organic (Dissolved)	0.05 to 0.26	
Nitrogen Organic (Total)	0.05 to 0.3	
ALS LAB ID		**L1523985**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C2.5 - AJWE-S
PAGE 1 OF 1

Analytes	MDL	AJWE-S 3-May-07	AJWE-S 17-Jul-07	AJWE-S 18-Sep-07	AJWE-S 29-Apr-08	AJWE-S 7-Jul-08	AJWE-S 6-Sep-08	AJWE-S 9-May-12	AJWE-S 11-Jul-12	AJWE-S 6-Nov-12	AJWE-S 1-May-14	AJWE-S 24-Sep-14
In Situ Parameters												
Conductivity µS/cm	...	1535	2406	2204	1692	2718	2264	1883	2553	1938	13	1000
Oxygen Dissolved %	...				92.7	81.1	106	91.3	91.5		90.4	1
Oxygen Dissolved	...	10.7	8.79	9.22	11.3	7.5	10.5	10.4	8.16		10.3	1
pH (unitless)	...	8.4	7.89	8.26	8.11	8.01	8.39	8.49	8.3	8.37	8.01	1
Redox Potential mV	...		-68.8			-99.4		218	191	90.9	82.2	1
Salinity ppt	...		1.36					1.4		1.45	0.01	1
Specific Conductivity µS/cm	...	2254	2623	2703	2620	2887	2753	2689	2826	2777	18	1000
Temperature °C	...	8.29	20.7	15.3	6.48	18.7	15.7	9.31	19.9	9.17	9.81	1
Total Dissolved Solids	...		1701					1748		1805	12	1000
Turbidity NTU	...							0.2		0.2	-2.4	1
Physical Tests												
Acidity to pH 8.3 (as CaCO3)	1				2.8					<1		
Alkalinity (Total as CaCO3)	1 to 2	170	165	162	191	157	154	144	149	146	151	149
Bicarbonate Alkalinity	1 to 2				191			144	149	146	151	149
Carbonate Alkalinity	1 to 2				<2			<1	<1	<1	<2	<1
Color TCU	5		<5	<5	<5	<5	<5	<5	<5	<5		
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	1170	1250	1130	1160	1180	1290	1250	1290	1340	1060	1270
Hydroxide Alkalinity	1 to 2				<2			<1	<1	<1	<2	<1
pH (unitless)	0.01 to 0.1	8.21	8.27	8.36	8.17	8.39	8.39	8.31	8.33	8.3	8.24	8.35
Specific Conductivity µS/cm	2	2530	2630	2680	2620	2670	2770	2650	2650	2780	2240	2720
Total Dissolved Solids	1 to 2	2210	2220	2250	2100	2200	2310	2270	2480	2260	1910	2350
Total Suspended Solids	3	<3	<3	<3	4.2	<3	<3	<3	<3	<3	<3	8.2
Turbidity NTU	0.1				0.31	0.31	0.19	0.22	0.25	0.17	0.45	0.13
Dissolved Anions												
Bromide	0.05 to 2.495	<0.25	<5	<0.5	<2.5	<0.05	<2.5	<1	<1	<1	<1	<1
Chloride	0.5 to 1	25.3	<50	24.6	<25	24.6	30	25	30	29	20	26
Fluoride	0.02 to 0.4	0.38		0.21	1.4	0.154	<1	<0.4	<0.4	<0.4	<0.4	0.184
Sulphate	0.5 to 1	1340	1300	1380	1280	1400	1500	1450	1520	1560	1200	1550
Nutrients												
Ammonia (Total)	0.005 to 0.05	0.023	0.03	<0.005	<0.02	0.039	0.023	0.0064	<0.005	0.0051	<0.005	0.0102
Nitrate (as N)	0.005 to 0.1	23.2	21.8	23.1	20.8	20.3	22.4	19.8	19.2	21.2	13.7	17.7
Nitrite (as N)	0.001 to 0.02	0.0456	0.22	0.09	0.127	0.143	0.242	0.101	0.162	0.028	0.116	0.127
Nitrogen (Dissolved)	0.05 to 0.1							25	29.7	22.6		
Nitrogen (Total)	0.0025 to 0.11							19.9	19.4	21.2		
Nitrogen Kjeldahl (Total)	0.05 to 0.2	<0.05	0.212	<0.05	0.153	0.33	0.34	<0.05	<0.05	<0.05	<0.05	<0.05
Orthophosphate (Dissolved)	0.001 to 0.01	0.0014	0.0027	0.0028	0.0028	0.0024				0.0015	0.0017	0.003
Phosphorus - Dissolved	0.002 to 0.02							0.002	<0.002	<0.002	<0.002	<0.002
Phosphorus - Total	0.002 to 0.02	0.0024	<0.002	0.0069	0.0024	0.0039		<0.002	0.0023	<0.002	<0.002	<0.002
Cyanide												
Cyanide (Free)	0.005				<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005				<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals												
Aluminum	0.001 to 0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.003	<0.002	0.0012	0.001	<0.001
Antimony	0.0001 to 0.0025	0.0209	0.0187	0.0207	0.0225	0.0183	0.0186	0.0184	0.0196	0.0194	0.0135	0.0185
Arsenic	0.0001 to 0.0025	0.0727	0.0614	0.0657	0.0763	0.0599	0.0613	0.0549	0.0547	0.0561	0.0381	0.0473
Barium	5E-005 to 0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.0158	0.0174	0.0196	0.0149	0.0192
Beryllium	0.0001 to 0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2							<0.0005	<0.001	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.11	0.108	0.095	0.088	0.076	0.101
Cadmium	1E-005 to 8.5E-005	0.000342	<0.003	<0.001	<0.0006	0.000467	0.00048	<0.0004	<0.002	<0.00053		<0.0001
Calcium	0.05 to 0.1	152	162	153	150	153	170	160	169	171	140	169
Chromium	0.0001 to 0.018	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	0.00122	0.00115	0.00116	0.00097	0.00097
Copper	0.0002 to 0.006	0.0213	0.0172	0.0163	0.0276	0.0193	0.0169	0.0197	0.0177	0.0178	0.0206	0.0162
Dissolved Cadmium (by saltwater extr	0.00002										<0.00004	<0.00006
Iron	0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.02	<0.01	<0.01	<0.01
Lead	5E-005 to 0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.00005	<0.0001	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.04	0.045	0.041	0.054	0.039	0.04	0.0426	0.04	0.038	0.0313	0.0428
Magnesium	0.1	192	205	181	191	193	211	205	212	223	173	207
Manganese	5E-005 to 0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	0.000648	0.0008	0.00116	0.000841	0.000598
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002		<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	2.21	2.03	2.26	2.47	1.93	1.99	2.16	2.33	2.17	1.98	2.2
Nickel	0.0005 to 0.005	<0.005	<0.005	<0.005	0.0051	<0.005	<0.005	0.00344	0.0038	0.00324	0.00345	0.00359
Phosphorus	0.05 to 0.3							<0.3	<0.3	<0.05	<0.05	<0.05
Potassium	0.05 to 2	19.1	17.5	19	17.6	19.7	21.6	19.3	20.1	21.8	17.3	20.5
Selenium	0.0001 to 0.006	0.0165	0.0165	0.0177	0.0221	0.0159	0.0153	0.0174	0.0163	0.0178	0.0158	0.018
Silicon	0.05							8.05	8.86	8.6	7.22	8.67
Silver	1E-005 to 0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	198	192	191	190	200	211	211	199	206	164	200
Strontium	0.0001 to 0.005							2.65	2.83	2.67	2.52	2.68
Sulphur	0.5									0.483	379	465
Thallium	1E-005 to 0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00001	<0.00002	<0.00001	<0.00001	0.00001
Tin	0.0001 to 0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.0097	0.0104	0.0101	0.0121	0.0099	0.0098	0.00962	0.0105	0.00979	0.00784	0.00916
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.03	0.0109	0.01	0.0089	0.0076	0.008	0.008	0.008	0.0081
Zinc	0.001 to 0.006	<0.025	<0.025	<0.025	<0.005	<0.005	<0.005	<0.003	0.0048	<0.001	<0.001	<0.001
Total Metals												
Aluminum	0.003 to 0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.007	<0.006	0.0033	0.0089	<0.006
Antimony	0.0001 to 0.0025	0.0204	0.0193	0.0208	0.0173	0.0179	0.0187	0.0184	0.0205	0.0198	0.0134	0.0189
Arsenic	0.0001 to 0.0025	0.0715	0.0628	0.0654	0.0597	0.0588	0.0608	0.0545	0.0517	0.0567	0.0363	0.0482
Barium	5E-005 to 0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.021	0.016	0.0173	0.0199	0.0145	0.0184
Beryllium	0.0001 to 0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2							<0.0005	<0.001	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.11	0.117	0.086	0.094	0.08	0.114
Cadmium	1E-005 to 8.5E-005	0.000135	<0.003	<0.001	<0.0005	0.000449	0.000439	<0.0004	<0.0005	<0.00056		<0.0001
Calcium	0.05 to 0.1	158	160	151	148	153	175	163	163	171	135	169
Chromium	0.0001 to 0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00012	<0.0002	<0.0001	0.00011	0.00015
Cobalt	0.0001 to 0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	0.00131	0.00111	0.00122	0.00098	0.00102
Copper	0.0005 to 0.007	0.0218	0.0187	0.0173	0.0221	0.02	0.0172	0.0206	0.0178	0.0186	0.0216	0.0169
Iron	0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.02	<0.01	<0.01	<0.01
Lead	5E-005 to 0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.00005	<0.0001	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.04	0.048	0.042	0.04	0.038	0.04	0.0433	0.043	0.0396	0.0314	0.0441
Magnesium	0.1	201	202	179	193	195	222	212	206	225	169	211
Manganese	5E-005 to 0.0015	<0.0015	<0.0015	0.0016	<0.0015	<0.0015	<0.0015	0.000913	0.00076	0.00136	0.00099	0.00064
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002		<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	2.18	2.08	2.27	1.89	1.88	1.96	2.21	2.51	2.33	2	2.48
Nickel	0.0005 to 0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00358	0.0036	0.00332	0.00347	0.00363
Phosphorus	0.05 to 0.3							<0.3	<0.3	<0.05	<0.05	<0.05
Potassium	0.05 to 2	19.1	17.3	18.7	17.8	19.8	23.9	19.5	18.6	21.9	16.6	20.8
Selenium	0.0001 to 0.006	0.0168	0.0167	0.0168	0.0165	0.0154	0.0154	0.0168	0.0149	0.018	0.0147	0.018
Silicon	0.05							8.3	8.67	8.75	7.15	8.78
Silver	1E-005 to 0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	197	193	187	192	202	229	211	192	211	165	202
Strontium	0.0001 to 0.005							2.68	3.1	2.86	2.49	3
Sulphur	0.5									501	385	471
Thallium	1E-005 to 0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00001	<0.00002	<0.00001	<0.00001	0.000011
Tin	0.0001 to 0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.012	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extractio	0.00002										<0.00004	<0.00006
Uranium	1E-005 to 0.001	0.0094	0.0101	0.0102	0.0094	0.0097	0.0097	0.00983	0.011	0.0102	0.00785	0.00979
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.03	0.0085	0.0101	0.0088	0.0079	0.008	0.0083	0.0081	0.0083
Zinc	0.003 to 0.006	<0.025	<0.025	<0.025	<0.005	<0.005	<0.005	<0.003	<0.006	<0.003	<0.003	<0.003
Organics												
Carbon Organic (Dissolved)	0.5 to 5	1.57	1.57	1.48	1.88	2.08	1.47	1.1	1.31	1.73	1.31	1.08
Carbon Organic (Total)	0.5 to 5							1.14	1.16	1.67	1.5	1.07
Nitrogen Organic (Dissolved)	0.05 to 0.26							5.1	10.3	<4.5		
Nitrogen Organic (Total)	0.05 to 0.3							<0.06	<0.06	<0.06		
ALS LAB ID		**L502198**	**L532007**	**L556006**	**L624576**	**L653575**	**L679672**	**L1145681**	**L1177597**	**l1234688**	**L1450350**	**L1523985**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes		MDL	AJWW-D 19-Jul-07	AJWW-D 18-Sep-07	AJWW-D 29-Apr-08	AJWW-D 7-Jul-08	AJWW-D 5-Sep-08	AJWW-D 1-May-14	AJWW-D 25-Sep-14
In Situ Parameters									
Conductivity µS/cm		...	2174	2202		2139	2150	2321	2445
Oxygen Dissolved %	...					12.2	17.5	65.7	20.2
Oxygen Dissolved	...		2.08	1.82		1.54	2.14	7.37	2.26
pH (unitless)		...	7.9	8.04		7.59	7.71	8	7.76
Redox Potential mV		...				-73.8	-65	110	137
Salinity ppt		...						1.71	1.81
Specific Conductivity µS/cm		...	3367	3428		3477	3406	3254	3437
Temperature °C		...	6.46	6.3		4.85	5.67	10.1	9.9
Total Dissolved Solids		...						2100	2233
Turbidity NTU		...						-3.1	0
Physical Tests									
Acidity to pH 8.3 (as CaCO3)		1	5.8		7.8				
Alkalinity (Total as CaCO3)		1 to 2	154	161	170	163	165	162	158
Bicarbonate Alkalinity		1 to 2			170		165	162	158
Carbonate Alkalinity		1 to 2			<2		<2	<2	<2
Color TCU		5	<5	<5	<5	<5	<5		
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	1770	1590	1750	1700	1710	1930	1830
Hydroxide Alkalinity		1 to 2			<2		<2	<2	<2
pH (unitless)		0.01 to 0.1	7.97	8.1	7.95	8.1	8.14	8.07	8.22
Specific Conductivity µS/cm		2	3300	3370	3450	3380	3410	3520	3530
Total Dissolved Solids		1 to 2	2970	3010	741	2930	3140	3390	3230
Total Suspended Solids		3	4.2	<3	4.1	<3	<3	6	3.6
Turbidity NTU		0.1			0.65	0.5	0.39	0.29	0.16
Dissolved Anions									
Bromide		0.05 to 2.495	<0.5	<0.5	<2.5	<0.5	<2.5	<1	<1
Chloride		0.5 to 1	35.8	38.4	33	36	39	38	32
Fluoride		0.02 to 0.4		0.24	1.3	0.38	<1	<0.4	0.206
Sulphate		0.5 to 1	1650	1800	1650	1700	1770	1980	1850
Nutrients									
Ammonia (Total)		0.005 to 0.05	0.024	0.0107	<0.02	0.045	0.028	<0.005	0.0115
Nitrate (as N)		0.005 to 0.1	72.9	79.9	74.1	74.3	79	71.4	65.4
Nitrite (as N)		0.001 to 0.02	0.138	0.187	0.074	0.049	0.138	0.036	0.149
Nitrogen (Dissolved)		0.05 to 0.1							
Nitrogen (Total)		0.0025 to 0.11							
Nitrogen Kjeldahl (Total)		0.05 to 0.2	<0.05	0.27	0.152	0.39	0.239	<0.05	<0.05
Orthophosphate (Dissolved)		0.001 to 0.01	0.0012	0.0021	0.0011	<0.001		0.0011	0.0018
Phosphorus - Dissolved		0.002 to 0.02						<0.002	<0.002
Phosphorus - Total		0.002 to 0.02	0.0032	0.0066	0.0034	0.005		<0.002	<0.002
Cyanide									
Cyanide (Free)		0.005			<0.005	<0.005		<0.005	<0.005
Cyanide (Total)		0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005
Cyanide (WAD)		0.005			<0.005	<0.005		<0.005	<0.005
Dissolved Metals									
Aluminum		0.001 to 0.025	<0.025	<0.05	<0.05	<0.05	<0.025	<0.002	<0.001
Antimony		0.0001 to 0.0025	0.0151	0.0142	0.0167	0.0143	0.0157	0.0171	0.0172
Arsenic		0.0001 to 0.0025	0.02	0.0183	0.0212	0.018	0.0193	0.0178	0.0154
Barium		5E-005 to 0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.0137	0.0155
Beryllium		0.0001 to 0.005	<0.005	<0.01	<0.01	<0.01	<0.005	<0.0002	<0.0001
Bismuth		0.0005 to 0.2						<0.001	<0.0005
Boron		0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.066	0.073
Cadmium		1E-005 to 8.5E-005	<0.005	<0.002	<0.0007	0.00066	0.000914		<0.0002
Calcium		0.05 to 0.1	228	212	221	218	225	255	243
Chromium		0.0001 to 0.018	<0.005	<0.01	<0.01	<0.01	<0.005	<0.0002	<0.0001
Cobalt		0.0001 to 0.0015	<0.0015	<0.003	<0.003	<0.003	<0.0015	0.00089	0.00097
Copper		0.0002 to 0.006	0.0281	0.028	0.034	0.031	0.0265	0.0384	0.0399
Dissolved Cadmium (by saltwater extr		0.00002						<0.00008	<0.00012
Iron		0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.01	<0.01
Lead		5E-005 to 0.0025	<0.0025	<0.005	<0.005	<0.005	<0.0025	<0.0001	<0.00005
Lithium		0.0005 to 0.025	0.047	<0.05	0.054	0.05	0.045	0.0505	0.0545
Magnesium		0.1	292	258	292	280	279	314	297
Manganese		5E-005 to 0.0015	0.0269	0.0341	0.0213	0.0234	0.0278	0.00317	0.00506
Mercury		1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	3.3	3.29	3.4	3.15	3.37	4.84	4.11
Nickel		0.0005 to 0.005	0.0118	0.012	0.015	0.014	0.0135	0.0149	0.0147
Phosphorus		0.05 to 0.3						<0.05	<0.05
Potassium		0.05 to 2	25.4	24.5	24.7	25.5	25.1	31.9	30.4
Selenium		0.0001 to 0.006	0.0291	0.028	0.035	0.028	0.0321	0.0522	0.0485
Silicon		0.05						7.19	7.33
Silver		1E-005 to 0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0001	<0.00002	<0.00001
Sodium		0.05 to 2	200	193	197	198	183	214	205
Strontium		0.0001 to 0.005						4.46	3.75
Sulphur		0.5						616	597
Thallium		1E-005 to 0.001	<0.001	<0.002	<0.002	<0.002	<0.001	<0.00002	0.00001
Tin		0.0001 to 0.0025	<0.0025	<0.005	<0.005	<0.005	<0.0025	<0.0002	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	0.01	0.012	<0.02	<0.01
Uranium		1E-005 to 0.001	0.0103	0.0111	0.0111	0.0111	0.0109	0.0109	0.0106
Vanadium		0.001 to 0.03	<0.03	<0.03	<0.01	<0.01	0.005	0.0046	0.0046
Zinc		0.001 to 0.006	<0.025	<0.05	<0.005	<0.005	<0.005	<0.002	0.0014
Total Metals									
Aluminum		0.003 to 0.025	<0.025	<0.05	<0.05	<0.05	<0.025	0.0088	<0.006
Antimony		0.0001 to 0.0025	0.0143	0.0152	0.017	0.0142	0.0156	0.017	0.0175
Arsenic		0.0001 to 0.0025	0.0192	0.0186	0.0211	0.0176	0.0196	0.0177	0.0148
Barium		5E-005 to 0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.0136	0.0146
Beryllium		0.0001 to 0.005	<0.005	<0.01	<0.01	<0.01	<0.005	<0.0002	<0.0001
Bismuth		0.0005 to 0.2						<0.001	<0.0005
Boron		0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.071	0.08
Cadmium		1E-005 to 8.5E-005	<0.005	<0.002	<0.0008	0.00057	0.000887		<0.0002
Calcium		0.05 to 0.1	230	212	222	221	222	245	237
Chromium		0.0001 to 0.005	<0.005	<0.01	<0.01	<0.01	<0.005	<0.0002	0.0002
Cobalt		0.0001 to 0.0015	<0.0015	<0.003	<0.003	<0.003	<0.0015	0.00093	0.00094
Copper		0.0005 to 0.007	0.0275	0.029	0.036	0.032	0.0274	0.0438	0.0412
Iron		0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.01	<0.01
Lead		5E-005 to 0.0025	<0.0025	<0.005	<0.005	<0.005	<0.0025	<0.0001	<0.00005
Lithium		0.0005 to 0.025	0.045	0.05	0.057	0.051	0.046	0.0516	0.0544
Magnesium		0.1	287	261	292	281	277	310	291
Manganese		5E-005 to 0.0015	0.026	0.0357	0.0225	0.0235	0.0278	0.00326	0.0052
Mercury		1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	3.16	3.43	3.54	3.15	3.4	4.97	4.11
Nickel		0.0005 to 0.005	0.0113	0.013	0.015	0.014	0.0135	0.0153	0.0147
Phosphorus		0.05 to 0.3						<0.05	<0.05
Potassium		0.05 to 2	25	24.4	24.6	25.7	24.3	30.3	30.3
Selenium		0.0001 to 0.006	0.0284	0.029	0.033	0.028	0.031	0.050	0.0477
Silicon		0.05						7.08	7.27
Silver		1E-005 to 0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0001	<0.00002	<0.00001
Sodium		0.05 to 2	198	191	195	199	183	217	199
Strontium		0.0001 to 0.005						4.49	3.84
Sulphur		0.5						624	583
Thallium		1E-005 to 0.001	<0.001	<0.002	<0.002	<0.002	<0.001	<0.00002	0.000012
Tin		0.0001 to 0.0025	<0.0025	<0.005	<0.005	<0.005	<0.0025	<0.0002	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	0.011	<0.02	<0.01
Total Cadmium (by saltwater extractio		0.00002						<0.00008	<0.00012
Uranium		1E-005 to 0.001	0.0101	0.0118	0.0115	0.0107	0.0111	0.0111	0.0104
Vanadium		0.001 to 0.03	<0.03	<0.03	<0.01	<0.01	0.0051	0.0048	0.0045
Zinc		0.003 to 0.006	<0.025	<0.05	<0.005	<0.005	<0.005	<0.006	<0.003
Organics									
Carbon Organic (Dissolved)		0.5 to 5	2.59	2.51	2.45	2.29	2.4	1.45	1.35
Carbon Organic (Total)		0.5 to 5						1.57	1.42
Nitrogen Organic (Dissolved)		0.05 to 0.26							
Nitrogen Organic (Total)		0.05 to 0.3							
ALS LAB ID			L532652	L556006	L624576	L653575	L679128	L1450350	L1523985

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes		MDL	AJWW-S 3-May-07	AJWW-S 19-Jul-07	AJWW-S 18-Sep-07	AJWW-S 29-Apr-08	AJWW-S 7-Jul-08	AJWW-S 5-Sep-08	AJWW-S 1-May-14	AJWW-S 25-Sep-14
In Situ Parameters										
Conductivity µS/cm		...	2285	2575	2579	2283	2748	2643	2321	2725
Oxygen Dissolved %	...						57.9	83.3	65.7	85.9
Oxygen Dissolved	...		9.09	4.84	8.39		5.6	8.62	7.37	8.75
pH (unitless)		...	8.28	7.9	8.3		7.28	8.08	8	8.19
Redox Potential mV		...					-57.9	-86	110	113
Salinity ppt		...							1.71	1.83
Specific Conductivity µS/cm		...	3334	3352	3399	3439	3465	3406	3254	3470
Temperature °C		...	8.5	12.9	12.4	7.41	14.2	13.3	10.1	13.8
Total Dissolved Solids		...							2110	2256
Turbidity NTU		...							-3.1	0.1
Physical Tests										
Acidity to pH 8.3 (as CaCO3)		1		4.6		6.4				
Alkalinity (Total as CaCO3)		1 to 2	165	152	155	156	157	154	157	161
Bicarbonate Alkalinity		1 to 2				156		154	157	161
Carbonate Alkalinity		1 to 2				<2		<2	<2	<2
Color TCU		5		<5	<5	<5	<5	<5		
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	1670	1760	1630	1710	1690	1750	1900	1820
Hydroxide Alkalinity		1 to 2				<2		<2	<2	<2
pH (unitless)		0.01 to 0.1	8.13	8.05	8.21	8.09	8.14	8.22	8.16	8.27
Specific Conductivity µS/cm		2	3150	3290	3360	3430	3370	3420	3410	3510
Total Dissolved Solids		1 to 2	2870	2900	2880	1030	2880	3110	3260	3250
Total Suspended Solids		3	<3	5.5	<3	<3	<3	<3	5.7	<3
Turbidity NTU		0.1				0.28	0.22	0.32	0.32	0.18
Dissolved Anions										
Bromide		0.05 to 2.495	<0.5	<0.5	<0.5	<2.5	<0.5	<0.5	<1	<1
Chloride		0.5 to 1	35.7	35	33.6	35	35.5	34.5	36	33
Fluoride		0.02 to 0.4	0.4		0.22	<1	0.27	<0.2	<0.4	0.209
Sulphate		0.5 to 1	1640	1660	1640	1670	1690	1690	1910	1960
Nutrients										
Ammonia (Total)		0.005 to 0.05	0.032	0.029	0.0326	<0.02	0.048	0.063	<0.005	0.0059
Nitrate (as N)		0.005 to 0.1	71.5	72.2	71.5	74.3	72.8	72.6	68.2	68.9
Nitrite (as N)		0.001 to 0.02	0.077	0.127	0.137	0.112	0.093	0.134	0.137	0.138
Nitrogen (Dissolved)		0.05 to 0.1								
Nitrogen (Total)		0.0025 to 0.11								
Nitrogen Kjeldahl (Total)		0.05 to 0.2	<0.05	<0.05	<0.05	0.064	<0.36	0.169	<0.05	<0.05
Orthophosphate (Dissolved)		0.001 to 0.01	<0.001	0.0013	0.002	0.0013	0.001		0.001	0.0017
Phosphorus - Dissolved		0.002 to 0.02							<0.002	<0.002
Phosphorus - Total		0.002 to 0.02	0.0036	0.0026	0.0036	0.0027	0.0041		0.0021	0.0032
Cyanide										
Cyanide (Free)		0.005				<0.005	<0.005		<0.005	<0.005
Cyanide (Total)		0.005	<0.005	<0.005	<0.005	0.0207	<0.005		<0.005	<0.005
Cyanide (WAD)		0.005				<0.005	<0.005		<0.005	<0.005
Dissolved Metals										
Aluminum		0.001 to 0.025	<0.05	<0.025	<0.05	<0.05	<0.05	<0.05	0.0065	<0.001
Antimony		0.0001 to 0.0025	0.0157	0.0166	0.0165	0.0198	0.0166	0.0179	0.0167	0.0174
Arsenic		0.0001 to 0.0025	0.025	0.0226	0.0214	0.0264	0.0207	0.0204	0.0177	0.0164
Barium		5E-005 to 0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.0157	0.0157
Beryllium		0.0001 to 0.005	<0.01	<0.005	<0.01	<0.01	<0.01	<0.01	<0.0001	<0.0001
Bismuth		0.0005 to 0.2							<0.0005	<0.0005
Boron		0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.065	0.073
Cadmium		1E-005 to 8.5E-005	0.00151	<0.005	<0.002	<0.002	0.00054	0.00093		<0.0002
Calcium		0.05 to 0.1	219	228	213	218	219	228	250	239
Chromium		0.0001 to 0.018	<0.01	<0.005	<0.01	<0.01	<0.01	<0.01	<0.0001	<0.0001
Cobalt		0.0001 to 0.0015	<0.003	<0.0015	<0.003	<0.003	<0.003	<0.003	0.0007	0.00071
Copper		0.0002 to 0.006	0.03	0.0311	0.028	0.035	0.031	0.032	0.0334	0.0338
Dissolved Cadmium (by saltwater extr		0.00002							<0.00008	<0.0001
Iron		0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.01	<0.01
Lead		5E-005 to 0.0025	<0.005	<0.0025	<0.005	<0.005	<0.005	<0.005	<0.00005	<0.00005
Lithium		0.0005 to 0.025	<0.05	0.048	0.051	0.061	<0.05	<0.05	0.0485	0.0534
Magnesium		0.1	273	289	267	284	278	287	310	298
Manganese		5E-005 to 0.0015	0.008	0.0111	0.0074	0.0073	0.0081	0.0066	0.00237	0.00308
Mercury		1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	3.41	3.28	3.23	4.09	3.21	3.48	4.56	4.15
Nickel		0.0005 to 0.005	0.012	0.0115	0.012	0.017	0.012	0.013	0.013	0.0138
Phosphorus		0.05 to 0.3							<0.05	<0.05
Potassium		0.05 to 2	23.8	26.1	25.3	24.9	26.1	26.8	31.2	29.5
Selenium		0.0001 to 0.006	0.031	0.0293	0.029	0.042	0.029	0.032	0.0505	0.0485
Silicon		0.05							7.1	7.16
Silver		1E-005 to 0.0001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001
Sodium		0.05 to 2	194	200	190	195	198	201	206	211
Strontium		0.0001 to 0.005							4.35	3.9
Sulphur		0.5							608	594
Thallium		1E-005 to 0.001	<0.002	<0.001	<0.002	<0.002	<0.002	<0.002	<0.00001	0.000012
Tin		0.0001 to 0.0025	<0.005	<0.0025	<0.005	<0.005	<0.005	<0.005	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium		1E-005 to 0.001	0.0111	0.0102	0.0107	0.0118	0.0108	0.0114	0.0107	0.0101
Vanadium		0.001 to 0.03	<0.03	<0.03	<0.03	<0.01	<0.01	<0.01	0.0054	0.005
Zinc		0.001 to 0.006	<0.05	<0.025	<0.05	<0.005	<0.005	<0.005	<0.001	0.0037
Total Metals										
Aluminum		0.003 to 0.025	<0.05	<0.025	<0.05	<0.05	<0.05	<0.05	<0.003	<0.009
Antimony		0.0001 to 0.0025	0.0156	0.016	0.0163	0.0194	0.016	0.0174	0.0164	0.0184
Arsenic		0.0001 to 0.0025	0.0237	0.0218	0.0209	0.0258	0.0231	0.0199	0.0174	0.0167
Barium		5E-005 to 0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.0153	0.0163
Beryllium		0.0001 to 0.005	<0.01	<0.005	<0.01	<0.01	<0.01	<0.01	<0.0001	<0.0001
Bismuth		0.0005 to 0.2							<0.0005	<0.0005
Boron		0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.07	0.082
Cadmium		1E-005 to 8.5E-005	0.00113	<0.005	<0.002	<0.002	0.00066	0.00069		<0.0002
Calcium		0.05 to 0.1	217	230	213	219	217	227	241	245
Chromium		0.0001 to 0.005	<0.01	<0.005	<0.01	<0.01	<0.01	<0.01	<0.0001	0.00019
Cobalt		0.0001 to 0.0015	<0.003	<0.0015	<0.003	<0.003	<0.003	<0.003	0.00065	0.00082
Copper		0.0005 to 0.007	0.031	0.0309	0.028	0.036	0.031	0.031	0.0331	0.0358
Iron		0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.01	0.01
Lead		5E-005 to 0.0025	<0.005	<0.0025	<0.005	<0.005	<0.005	<0.005	<0.00005	<0.00005
Lithium		0.0005 to 0.025	<0.05	0.044	<0.05	0.066	<0.05	<0.05	0.0489	0.0561
Magnesium		0.1	273	291	261	287	279	286	304	295
Manganese		5E-005 to 0.0015	0.0099	0.0107	0.0076	0.0102	0.0092	0.0073	0.00129	0.0037
Mercury		1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	3.23	3.16	3.16	3.99	3.1	3.48	4.75	4.47
Nickel		0.0005 to 0.005	0.012	0.011	0.011	0.016	0.012	0.012	0.0135	0.0144
Phosphorus		0.05 to 0.3							<0.05	<0.05
Potassium		0.05 to 2	24	26	26	24.9	26.3	26.6	29.6	30.3
Selenium		0.0001 to 0.006	0.027	0.0294	0.028	0.041	0.029	0.032	0.048	0.0502
Silicon		0.05							7.02	7.37
Silver		1E-005 to 0.0001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001
Sodium		0.05 to 2	196	200	196	196	199	199	206	215
Strontium		0.0001 to 0.005							4.32	4.1
Sulphur		0.5							614	594
Thallium		1E-005 to 0.001	<0.002	<0.001	<0.002	<0.002	<0.002	<0.002	<0.00001	0.000012
Tin		0.0001 to 0.0025	<0.005	<0.0025	<0.005	<0.005	<0.005	<0.005	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extractio		0.00002							<0.00008	<0.0001
Uranium		1E-005 to 0.001	0.0109	0.0101	0.0101	0.0116	0.0105	0.0114	0.0106	0.0117
Vanadium		0.001 to 0.03	<0.03	<0.03	<0.03	<0.01	<0.01	<0.01	0.0054	0.0052
Zinc		0.003 to 0.006	<0.05	<0.025	<0.05	<0.005	<0.005	<0.005	<0.003	<0.003
Organics										
Carbon Organic (Dissolved)		0.5 to 5	2.67	2.5	2.38	2.43	2.16	1.56	1.43	1.32
Carbon Organic (Total)		0.5 to 5							1.41	1.39
Nitrogen Organic (Dissolved)		0.05 to 0.26								
Nitrogen Organic (Total)		0.05 to 0.3								
ALS LAB ID			L502198	L532652	L556006	L624576	L653575	L679128	L1450350	L1523985

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C2.8 - ANDER10
PAGE 1 OF 2

Analytes		MDL	ANDER-10 12-Mar-14	ANDER-10 19-Mar-14	ANDER-10 26-Mar-14	ANDER-10 2-Apr-14	ANDER-10 9-Apr-14	ANDER-10 23-Apr-14	ANDER-10 6-May-14	ANDER-10 21-May-14	ANDER-10 3-Jun-14	ANDER-10 17/Jun/2014	ANDER-10 3-Jul-14	ANDER-10 15-Jul-14	ANDER-10 29-Jul-14	ANDER-10 11-Aug-14
In Situ Parameters																
Conductivity µS/cm		...	430	392	402	424	390	377	367	524	602	543	602	499	554	627
Oxygen Dissolved %	...			85.6	77.8	83.1	82.4	84.7	107	97.6	84.8	84.5	79.3	88.3	85	79.8
Oxygen Dissolved	...		11.3	12.4	11.3	12	11.7	11.3	12.5	10.1	7.99	8.58	7.86	8.74	8.57	8.49
pH (unitless)		...	7.84	8.12	7.9	8.11	8.01	8.25	8.36	8.27	8.31	8.41	8.36	8.73	8.47	7.94
Redox Potential mV		...	37.9	24.8	182	168	153	127	206	60.6	136	81.5	79.6	161	121	192
Salinity ppt		...	0.4	0.36	0.37	0.39	0.29	0.31	0.26	0.33	0.34	0.33	0.36	0.3	0.34	0.41
Specific Conductivity µS/cm		...	821	748	767	805	612	641	533	665	691	677	733	603	685	824
Temperature °C		...	0.05	0.1	0.05	0.22	0.79	3.43	8	13.9	18.3	14.6	15.6	15.8	15	12.4
Total Dissolved Solids		...	533	486	499	523	398	417	349	433	449	441	476	396	446	536
Turbidity NTU		...														
Physical Tests																
Acidity to pH 8.3 (as CaCO3)		1														
Alkalinity (Total as CaCO3)		1 to 2	349	321	337	298	254	249	258	266	286	282	310	323	334	385
Bicarbonate Alkalinity		1 to 2	349	321	337	289	254	237	258	266	278	262	295	306	325	385
Carbonate Alkalinity		1 to 2	<1	<2	<2	8.6	<2	11.2	<2	<1	7.8	19.2	14.2	17.4	9.2	<2
Color TCU		5														
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	385	343	355	346	281	281	278	320	306	306	326	360	347	379
Hydroxide Alkalinity		1 to 2	<1	<2	<2	<1	<2	<1	<2	<1	<1	<1	<1	<1	<1	<2
pH (unitless)		0.01 to 0.1	8.38	8.26	8.26	8.3	8.22	8.37	8.26	8.32	8.49	8.46	8.47	8.38	8.36	8.29
Specific Conductivity µS/cm		2	809	728	775	714	585	630	595	655	668	665	710	770	774	840
Total Dissolved Solids		1 to 2	488	443	435	461	382	388	367	410	415	410	441	471	479	527
Total Suspended Solids		3	4	4.3	6.3	14.6	8.8	<3	6	11.4	21.8	13.7	10.1	13.6	3.6	124
Turbidity NTU		0.1	2.31	1.43	1.25	2.94	2.21	0.98	1.33	3.1	6.33	4.99	3.87	2.14	1.44	15.9
Dissolved Anions																
Bromide		0.05 to 2.495	<0.5	<0.05	<0.5	<0.25	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.5	<0.5	<0.5
Chloride		0.5 to 1	52.3	45.1	57.4	60.5	40.9	50.4	50.7	46.2	47.5	52.4	59	61.4	60.7	58.3
Fluoride		0.02 to 0.4	0.31	0.19	<0.2	0.17	0.162	0.183	0.195	0.218	0.23	0.219	0.241	0.229	0.244	0.37
Sulphate		0.5 to 1	23.9	20	21.6	22.8	21.5	21	20.2	16.7	13.3	11.9	11.9	12.4	11.8	18.1
Nutrients																
Ammonia (Total)		0.005 to 0.05	0.0619	0.0389	0.0353	0.0234	0.0215	0.0076	0.0075	0.0154	0.0192	0.0117	0.0244	0.0307	0.0167	0.0164
Nitrate (as N)		0.005 to 0.1	0.142	0.102	0.102	0.064	0.0496	0.0134	0.0054	0.0105	0.022	<0.025	0.0541	<0.05	<0.05	<0.05
Nitrite (as N)		0.001 to 0.02	<0.01	0.0028	<0.01	<0.005	0.0017	<0.001	<0.001	<0.001	0.0012	<0.005	0.002	<0.01	<0.01	<0.01
Nitrogen (Dissolved)		0.05 to 0.1														
Nitrogen (Total)		0.0025 to 0.11								0.715						
Nitrogen Kjeldahl (Total)		0.05 to 0.2	0.668	0.635	0.605	0.586	0.504	0.619	0.715	0.74	0.922	0.934	0.873	1.89	0.807	0.693
Orthophosphate (Dissolved)		0.001 to 0.01	0.0777	0.0578	0.0396	0.0355	0.0342	0.0227	0.0194	0.0376	0.0562	0.034	0.0659	0.0787	0.0803	0.0926
Phosphorus - Dissolved		0.002 to 0.02	0.0858	0.0761	0.0512	0.0467	0.0696	0.0337	0.0278	0.0501	0.0672	0.0456	0.0747	0.096	0.0916	
Phosphorus - Total		0.002 to 0.02	0.0967	0.089	0.0604	0.0761	0.0449	0.0451	0.0384	0.072	0.103	0.0772	0.0985	0.486	0.115	0.137
Cyanide																
Cyanide (Free)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																
Aluminum		0.001 to 0.025	0.0022	0.0016	0.0012	0.0011	0.0023	0.0022	0.0017	0.0016	0.0019	0.0019	0.0019	0.0176	0.0021	0.0013
Antimony		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic		0.0001 to 0.0025	0.00121	0.00108	0.00097	0.00093	0.00109	0.00108	0.00112	0.00148	0.00157	0.00124	0.00166	0.00208	0.00203	0.00166
Barium		5E-005 to 0.02	0.079	0.0691	0.0728	0.0692	0.0593	0.0573	0.0615	0.0707	0.0757	0.0695	0.0771	0.0805	0.0785	0.0826
Beryllium		0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium		1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium		0.05 to 0.1	87.2	77.4	79.9	78.9	63.8	65	68.1	74.9	72.7	73.3	75.5	81.2	79.1	84.6
Chromium		0.0001 to 0.018	0.00016	0.00014	0.00013	0.00012	<0.0001	0.00012	0.00012	0.00014	0.00012	0.00012	0.00014	0.00018	0.00016	0.00012
Cobalt		0.0001 to 0.0015	0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	0.00012	0.00015	0.00012	0.00016	0.00018	0.00017	0.00026
Copper		0.0002 to 0.006	0.00183	0.0014	0.00115	0.00115	0.00116	0.00141	0.00149	0.00147	0.00145	0.00123	0.00159	0.00199	0.00177	0.00114
Dissolved Cadmium (by saltwater extr		0.00002														
Iron		0.01 to 0.03	0.049	0.052	0.043	0.031	0.037	0.026	0.024	0.037	0.039	0.034	0.046	0.094	0.054	0.055
Lead		5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium		0.0005 to 0.025	0.00919	0.00795	0.00802	0.00744	0.00739	0.00716	0.00707	0.00834	0.008	0.00811	0.00827	0.00976	0.00897	0.00966
Magnesium		0.1	40.6	36.3	37.7	36.1	29.6	28.9	26.3	32.3	30.2	29.9	33.5	38.3	36.3	40.6
Manganese		5E-005 to 0.0015	0.0695	0.0338	0.0233	0.0271	0.0441	0.0115	0.0161	0.052	0.102	0.0555	0.159	0.243	0.196	0.962
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.00189	0.00185	0.00186	0.00187	0.00294	0.00269	0.00277	0.00262	0.00229	0.00175	0.00196	0.00232	0.00207	0.00192
Nickel		0.0005 to 0.005	0.00155	0.00125	0.00108	0.00108	0.00094	0.00101	0.00111	0.00125	0.00152	0.00122	0.00197	0.00224	0.00233	0.00248
Phosphorus		0.05 to 0.3	0.092	0.081	<0.05	<0.05	0.05	<0.05	<0.05	0.051	0.069	0.053	0.079	0.102	0.11	0.119
Potassium		0.05 to 2	9.2	8.98	8.55	8.16	7.2	7.61	7.67	8.57	8.39	8.86	9.77	10.7	10.4	9.37
Selenium		0.0001 to 0.006	0.00033	0.00026	0.00022	0.00023	0.00028	0.00027	0.00024	0.00026	0.00023	0.00022	0.00023	0.00026	0.00026	0.0002
Silicon		0.05	11.8	11.5	11.6	11	8.8	9.41	9.28	9.79	8.74	6.63	7.21	9.09	9.33	13.5
Silver		1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	36.4	31.2	32.2	33	26	28.7	30.8	32.6	31.2	31.8	36	38.6	39	40.7
Strontium		0.0001 to 0.005	0.405	0.376	0.369	0.347	0.296	0.281	0.295	0.322	0.33	0.315	0.367	0.426	0.407	0.469
Sulphur		0.5	8.29	7	7.58	8.11	7.36	7.51	7	6.53	5.25	4.67	4.43	4.81	4.51	6.64
Thallium		1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium		1E-005 to 0.001	0.00258	0.00228	0.00273	0.00271	0.00273	0.00269	0.00241	0.00216	0.00186	0.00166	0.00134	0.00125	0.00114	0.000958
Vanadium		0.001 to 0.03	0.0024	0.0023	0.0025	0.0024	0.0026	0.0027	0.003	0.0034	0.0036	0.0029	0.0028	0.0025	0.0021	0.0015
Zinc		0.001 to 0.006	<0.001	0.0023	0.0013	<0.001	<0.001	0.0011	0.0012	0.0017	<0.001	0.0068	<0.001	<0.001	<0.001	0.0016
Total Metals																
Aluminum		0.003 to 0.025	0.0727	0.0854	0.0508	0.332	0.155	0.0539	0.0866	0.152	0.361	0.331	0.104	<0.003	0.0339	0.117
Antimony		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00012	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	<0.0001
Arsenic		0.0001 to 0.0025	0.00122	0.00107	0.00097	0.00106	0.00109	0.00102	0.00113	0.00147	0.00161	0.00137	0.0018	0.00199	0.00196	0.00178
Barium		5E-005 to 0.02	0.0783	0.0692	0.0699	0.0743	0.0588	0.0579	0.062	0.0706	0.0812	0.0749	0.0787	0.0789	0.0788	0.0829
Beryllium		0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	<0.01	0.013
Cadmium		1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium		0.05 to 0.1	84.8	75.3	78.3	75.5	60.1	65.4	66.1	71.8	68.7	70.9	74.1	79.3	77.7	80.9
Chromium		0.0001 to 0.005	0.00038	0.00034	0.00028	0.00112	0.00059	0.00027	0.00038	<0.0006	0.00107	0.00098	0.00047	0.00017	0.00025	0.0005
Cobalt		0.0001 to 0.0015	0.00016	0.00016	0.00013	0.0004	0.00026	0.00011	0.00015	0.00025	0.00047	0.00041	0.00028	0.00018	0.0002	0.00036
Copper		0.0005 to 0.007	0.00231	0.00196	0.00151	0.00327	0.00255	0.00196	0.00212	0.00242	0.00367	0.00283	0.00265	0.00192	0.00202	0.00183
Iron		0.01 to 0.03	0.161	0.184	0.129	0.512	0.287	0.103	0.151	0.275	0.618	0.513	0.2	0.051	0.102	0.299
Lead		5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	0.000084	0.000131	<0.00005	<0.00005	<0.00005	0.000094	0.000077	<0.00005	<0.00005	<0.00005	<0.00005
Lithium		0.0005 to 0.025	0.00923	0.00718	0.00753	0.00759	0.00695	0.00741	0.00695	0.00816	0.00787	0.00858	0.00819	0.0083	0.00858	0.00958
Magnesium		0.1	40	34.2	34.4	33.8	28.2	28.3	26.1	31.2	29.5	29.4	33	37.2	36.1	39.4
Manganese		5E-005 to 0.0015	0.0814	0.0526	0.035	0.0815	0.0835	0.0215	0.0356	0.0975	0.214	0.137	0.185	0.231	0.207	1
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.00201	0.00197	0.00194	0.00189	0.003	0.00296	0.0028	0.00274	0.00234	0.00211	0.00201	0.00239	0.00214	0.00202
Nickel		0.0005 to 0.005	0.00188	0.00154	0.00132	0.00274	0.00167	0.00125	0.00143	0.00199	0.00283	0.00257	0.00244	0.00228	0.00248	0.00302
Phosphorus		0.05 to 0.3	0.084	0.09	<0.05	0.087	0.067	0.052	<0.05	0.071	0.118	0.08	0.102	0.099	0.108	0.127
Potassium		0.05 to 2	9.06	8.62	8.28	7.77	6.75	7.64	7.34	8.28	8.05	8.82	9.66	10	10.3	9.08
Selenium		0.0001 to 0.006	0.0003	0.00026	0.00023	0.00025	0.00028	0.00025	0.00025	0.00025	0.00027	0.00023	0.00025	0.00023	0.00024	0.00022
Silicon		0.05	11.8	11.2	11.3	11.3	8.79	9.53	9.18	9.79	9.34	7.45	7.46	8.92	9.25	13.3
Silver		1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	36.5	29.4	32.2	32.5	25	28.5	29.9	31.3	30.6	32.3	36.5	36	39.3	39.3
Strontium		0.0001 to 0.005	0.399	0.393	0.359	0.338	0.287	0.293	0.284	0.325	0.328	0.357	0.369	0.41	0.41	0.462
Sulphur		0.5	8.35	7.16	7.63	8.14	7.29	7.56	6.98	6.39	5.11	4.78	4.55	5.03	4.6	6.59
Thallium		1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001	0.00081	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	0.013	<0.01	<0.01	<0.01	<0.01	0.013	0.013	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extractio		0.00002														
Uranium		1E-005 to 0.001	0.00261	0.00234	0.00274	0.00266	0.00276	0.00284	0.00251	0.00228	0.0019	0.00185	0.00138	0.00132	0.00118	0.00101
Vanadium		0.001 to 0.03	0.0027	0.0027	0.0026	0.0035	0.0033	0.0029	0.0033	0.004	0.0045	0.004	0.0033	0.0025	0.0023	0.0019
Zinc		0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics																
Carbon Organic (Dissolved)		0.5 to 5	12.8	12.3	11.2	11	9.75	12.8	13.7	14.4	14.9	16.1	15	15.2	16.3	12.8
Carbon Organic (Total)		0.5 to 5	12.9	12.1	11.6	11.4	10.1	13	14.1	15	16	16.3	15.9	26.8	16.4	13.1
Nitrogen Organic (Dissolved)		0.05 to 0.26														
Nitrogen Organic (Total)		0.05 to 0.3														
ALS LAB ID			**L1432163**	**L1434695**	**L1437439**	**L1439467**	**L1441961**	**L1446462**	**L1451608**	**L1458340**	**L1465108**	**L1472862**	**L1481215**	**L1488139**	**L1494491**	**L1500711**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes		MDL	ANDER-10 3-Sep-14	ANDER-10 17-Sep-14
In Situ Parameters				
Conductivity µS/cm		...		554
Oxygen Dissolved %	...			9.14
Oxygen Dissolved	...			7.82
pH (unitless)		...	8.23	12.8
Redox Potential mV		...		0
Salinity ppt		...		76.5
Specific Conductivity µS/cm		...		832
Temperature °C		...	11	7.53
Total Dissolved Solids		...		541
Turbidity NTU		...		
Physical Tests				
Acidity to pH 8.3 (as CaCO3)		1		
Alkalinity (Total as CaCO3)		1 to 2	401	404
Bicarbonate Alkalinity		1 to 2	384	399
Carbonate Alkalinity		1 to 2	16.3	4.7
Color TCU		5		
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	418	400
Hydroxide Alkalinity		1 to 2	<1	<1
pH (unitless)		0.01 to 0.1	8.4	8.31
Specific Conductivity µS/cm		2	867	860
Total Dissolved Solids		1 to 2	529	556
Total Suspended Solids		3	<3	3.2
Turbidity NTU		0.1	1.31	1
Dissolved Anions				
Bromide		0.05 to 2.495	<0.5	<0.5
Chloride		0.5 to 1	58.8	59.5
Fluoride		0.02 to 0.4	0.199	<0.2
Sulphate		0.5 to 1	23	26.4
Nutrients				
Ammonia (Total)		0.005 to 0.05	0.0103	0.0074
Nitrate (as N)		0.005 to 0.1	<0.05	<0.05
Nitrite (as N)		0.001 to 0.02	<0.01	<0.01
Nitrogen (Dissolved)		0.05 to 0.1		
Nitrogen (Total)		0.0025 to 0.11		
Nitrogen Kjeldahl (Total)		0.05 to 0.2	0.658	0.535
Orthophosphate (Dissolved)		0.001 to 0.01	0.0843	0.0706
Phosphorus - Dissolved		0.002 to 0.02	0.0894	0.0713
Phosphorus - Total		0.002 to 0.02	0.0808	0.0626
Cyanide				
Cyanide (Free)		0.005	<0.005	<0.005
Cyanide (Total)		0.005	<0.005	<0.005
Cyanide (WAD)		0.005	<0.005	<0.005
Dissolved Metals				
Aluminum		0.001 to 0.025	0.0011	0.0028
Antimony		0.0001 to 0.0025	<0.0001	<0.0001
Arsenic		0.0001 to 0.0025	0.00173	0.00117
Barium		5E-005 to 0.02	0.0768	0.0849
Beryllium		0.0001 to 0.005	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005
Boron		0.01 to 0.1	<0.01	<0.01
Cadmium		1E-005 to 8.5E-005	<0.00001	<0.00001
Calcium		0.05 to 0.1	92.5	89.4
Chromium		0.0001 to 0.018	0.00014	0.00012
Cobalt		0.0001 to 0.0015	0.00021	0.00015
Copper		0.0002 to 0.006	0.00152	0.00109
Dissolved Cadmium (by saltwater extr		0.00002		
Iron		0.01 to 0.03	0.083	0.036
Lead		5E-005 to 0.0025	<0.00005	0.000186
Lithium		0.0005 to 0.025	0.0102	0.0106
Magnesium		0.1	45.5	42.9
Manganese		5E-005 to 0.0015	0.283	0.289
Mercury		1E-005 to 5E-005	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.00192	0.0021
Nickel		0.0005 to 0.005	0.00234	0.00211
Phosphorus		0.05 to 0.3	0.105	0.069
Potassium		0.05 to 2	10.2	9.61
Selenium		0.0001 to 0.006	0.00025	0.00017
Silicon		0.05	12.1	12.1
Silver		1E-005 to 0.0001	<0.00001	<0.00001
Sodium		0.05 to 2	41.2	40.6
Strontium		0.0001 to 0.005	0.461	0.46
Sulphur		0.5	8.51	9.35
Thallium		1E-005 to 0.001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01
Uranium		1E-005 to 0.001	0.00133	0.00156
Vanadium		0.001 to 0.03	0.0018	0.0013
Zinc		0.001 to 0.006	0.0012	<0.001
Total Metals				
Aluminum		0.003 to 0.025	0.0524	0.0172
Antimony		0.0001 to 0.0025	0.0001	<0.0001
Arsenic		0.0001 to 0.0025	0.0018	0.00123
Barium		5E-005 to 0.02	0.078	0.089
Beryllium		0.0001 to 0.005	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005
Boron		0.01 to 0.1	0.012	0.017
Cadmium		1E-005 to 8.5E-005	<0.00001	<0.00001
Calcium		0.05 to 0.1	90.9	89.5
Chromium		0.0001 to 0.005	0.00035	0.0003
Cobalt		0.0001 to 0.0015	0.00027	0.00018
Copper		0.0005 to 0.007	0.00195	0.00119
Iron		0.01 to 0.03	0.2	0.112
Lead		5E-005 to 0.0025	<0.00005	<0.00005
Lithium		0.0005 to 0.025	0.00978	0.0105
Magnesium		0.1	45.6	44.1
Manganese		5E-005 to 0.0015	0.301	0.32
Mercury		1E-005 to 5E-005	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.00212	0.00236
Nickel		0.0005 to 0.005	0.00289	0.00228
Phosphorus		0.05 to 0.3	0.108	0.091
Potassium		0.05 to 2	10	9.89
Selenium		0.0001 to 0.006	0.00024	0.00019
Silicon		0.05	12	12.6
Silver		1E-005 to 0.0001	<0.00001	<0.00001
Sodium		0.05 to 2	41.5	37.7
Strontium		0.0001 to 0.005	0.473	0.478
Sulphur		0.5	8.69	9.95
Thallium		1E-005 to 0.001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01
Total Cadmium (by saltwater extractio		0.00002		
Uranium		1E-005 to 0.001	0.00138	0.00172
Vanadium		0.001 to 0.03	0.0021	0.0015
Zinc		0.003 to 0.006	<0.003	<0.003
Organics				
Carbon Organic (Dissolved)		0.5 to 5	14.8	12.4
Carbon Organic (Total)		0.5 to 5	15.4	12.9
Nitrogen Organic (Dissolved)		0.05 to 0.26		
Nitrogen Organic (Total)		0.05 to 0.3		
ALS LAB ID			**L1513418**	**L1519657**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes		MDL	ANDR15 5-Feb-14	ANDR15 13-Mar-14	ANDR15 19-Mar-14	ANDR15 27-Mar-14	ANDR15 3-Apr-14	ANDR15 9-Apr-14	ANDR15 24-Apr-14	ANDR15 7-May-14	ANDR15 23-May-14	ANDR15 4-Jun-14	ANDR15 17-Jun-14	ANDR15 3-Jul-14	ANDR15 15-Jul-14	ANDR15 29-Jul-14
In Situ Parameters																
Conductivity µS/cm		...	421	408	474	517	576	470	295	358	443	485	535	569	502	485
Oxygen Dissolved %	...		43.5	77.2	82.9	87.1	67.7	80.7	81.1	101	93.8	89.7	84.1	82.3	84.9	85.9
Oxygen Dissolved	...		6.33	11	12.1	12.5	9.64	11.7	10.9	13	10.5	10.1	8.88	8.6	8.96	9.32
pH (unitless)		...	8.65	8.1	8.02	8.06	8.2	8.29	8.24	8.44	8.45	8.41	8.49	8.43	8.5	8.53
Redox Potential mV		...	-76	45.4	172	86.2	-1.3	-69.5	87.8	203	35.6	154	92.5	45.7	40.4	66.7
Salinity ppt		...	0.39	0.36	0.44	0.47	0.52	0.43	0.24	0.26	0.3	0.33	0.34	0.36	0.32	0.32
Specific Conductivity µS/cm		...	811	756	908	968	1070	896	510	592	614	683	699	734	653	650
Temperature °C		...	-0.25	0.92	0.02	0.6	0.82	0.14	2.89	4.3	10.4	9.84	12.7	13.2	12.9	17.7
Total Dissolved Solids		...	528	490	590	629	695	582	332	384	399	444	454	477	424	423
Turbidity NTU		...														
Physical Tests																
Acidity to pH 8.3 (as CaCO3)		1														
Alkalinity (Total as CaCO3)		1 to 2	266	258	255	275	251	235	175	207	216	231	230	255	253	265
Bicarbonate Alkalinity		1 to 2	266	258	255	262	243	235	169	207	209	227	215	247	238	257
Carbonate Alkalinity		1 to 2	<2	<2	<2	13.4	8	<2	6	<2	7.5	4.4	15.1	8.3	14.9	8.1
Color TCU		5								33.7						
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	369	351	338	371	385	322	215	237	260	274	272	294	297	310
Hydroxide Alkalinity		1 to 2	<2	<2	<2	<1	<1	<2	<1	<2	<1	<1	<1	<1	<1	<1
pH (unitless)		0.01 to 0.1	8.06	8.2	8.26	8.32	8.31	8.24	8.37	8.26	8.35	8.45	8.46	8.48	8.39	8.37
Specific Conductivity µS/cm		2	809	785	909	987	976	846	507	562	592	663	686	714	718	793
Total Dissolved Solids		1 to 2	528	489	495	606	637	561	331	384	382	368	426	418	442	476
Total Suspended Solids		3	<3	<3	4.1	4.3	3.1	108	36.7	16.7	7	6.1	33.8	7.9	15.9	8.5
Turbidity NTU		0.1	0.61	0.42	1.15	0.8	0.54	15.8	7.04	2.63	1.45	2.76	4.76	2.48	3.48	1.35
Dissolved Anions																
Bromide		0.05 to 2.495	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.5	<0.5
Chloride		0.5 to 1	114	90.8	131	148	155	134	48.2	53.9	58.9	71.9	81.8	80	77.1	92.7
Fluoride		0.02 to 0.4	<0.2	0.39	<0.2	<0.2	0.2	<0.2	0.158	0.192	0.21	0.218	0.221	0.24	0.232	0.223
Sulphate		0.5 to 1	34.5	29.8	36.2	37.4	36.3	32	19	21.6	17.9	17.7	18.2	17.2	16.6	21.7
Nutrients																
Ammonia (Total)		0.005 to 0.05	0.0101	0.012	0.0109	0.0076	0.0093	0.0153	0.0084	0.0051	0.0077	0.0063	0.0101	0.0125	0.0206	0.0083
Nitrate (as N)		0.005 to 0.1	0.137	0.142	0.107	0.113	0.103	<0.05	0.0327	0.0203	0.0103	0.011	<0.025	0.0205	0.064	<0.05
Nitrite (as N)		0.001 to 0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.01	<0.01
Nitrogen (Dissolved)		0.05 to 0.1														
Nitrogen (Total)		0.0025 to 0.11														
Nitrogen Kjeldahl (Total)		0.05 to 0.2	0.359	0.329	0.565	0.448	0.506	1.26	0.709	0.492	0.579	0.555	0.978	0.77	0.59	0.447
Orthophosphate (Dissolved)		0.001 to 0.01	0.0176	0.0232	0.0207	0.0171	0.018	0.0149	0.0174	0.013	0.0156	0.0191	0.0171	0.0272	0.0313	0.026
Phosphorus - Dissolved		0.002 to 0.02	0.019	0.0231	0.0268	0.0226	0.0257	0.222	0.154	0.0206	0.0262	0.0263	0.0263	0.0308	0.0398	0.0303
Phosphorus - Total		0.002 to 0.02	0.0291	0.025	0.0378	0.0256	0.0196	0.019	0.0305	0.0398	0.0346	0.0604	0.0762	0.14	0.0589	0.0365
Cyanide																
Cyanide (Free)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																
Aluminum		0.001 to 0.025	<0.001	0.0017	0.0015	0.0019	0.0012	0.002	0.0067	0.0032	0.0025	0.0043	0.0033	0.0023	0.0024	0.0018
Antimony		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic		0.0001 to 0.0025	0.00054	0.00048	0.00047	0.00045	0.00046	0.00042	0.00042	0.00045	0.00056	0.00056	0.00055	0.00064	0.00068	0.00059
Barium		5E-005 to 0.02	0.0857	0.0841	0.0711	0.0741	0.0759	0.0673	0.045	0.0479	0.0576	0.0629	0.0635	0.0685	0.0747	0.0736
Beryllium		0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium		1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000027	<0.00001	<0.00001	<0.00001	<0.00001
Calcium		0.05 to 0.1	98.2	93.9	92.9	98.6	105	88.7	59.4	67	72.8	75.6	76.9	81.1	80.6	85.3
Chromium		0.0001 to 0.018	<0.0001	0.00019	<0.0001	<0.0001	<0.0001	<0.0001	0.00012	0.00012	0.0001	0.0001	0.00011	0.00015	0.00011	<0.0001
Cobalt		0.0001 to 0.0015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper		0.0002 to 0.006	0.00113	0.00105	0.00104	0.00102	0.00103	0.00105	0.00149	0.00137	0.00131	0.00145	0.00127	0.00135	0.00127	0.00126
Dissolved Cadmium (by saltwater extr		0.00002														
Iron		0.01 to 0.03	0.02	0.022	0.029	0.016	0.015	0.041	0.032	0.027	0.038	0.051	0.043	0.018	0.039	0.02
Lead		5E-005 to 0.0025	<0.00005	0.000061	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium		0.0005 to 0.025	0.00881	0.00706	0.00775	0.00817	0.00739	0.00659	0.00442	0.00453	0.00612	0.00718	0.00682	0.00842	0.00811	0.0077
Magnesium		0.1	30.1	28.2	25.6	30.4	29.9	24.5	16.2	16.8	18.9	20.8	19.4	22.2	23.1	23.6
Manganese		5E-005 to 0.0015	0.014	0.0135	0.00834	0.00633	0.00603	0.0186	0.00323	0.00339	0.00597	0.00895	0.00663	0.018	0.0489	0.0203
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.00335	0.00283	0.00309	0.00327	0.00313	0.00308	0.00205	0.00213	0.00255	0.00251	0.00236	0.00311	0.00359	0.00345
Nickel		0.0005 to 0.005	0.0005	<0.0005	0.00055	<0.0005	0.00052	0.00068	0.0008	0.00074	0.0007	0.00108	0.0007	0.00065	0.00062	0.00067
Phosphorus		0.05 to 0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium		0.05 to 2	9.41	8.4	10.7	10.1	9.81	9.01	6.6	6.97	7.87	8.66	9.13	9.72	9.13	10.1
Selenium		0.0001 to 0.006	0.00038	0.00038	0.00031	0.00028	0.00031	0.00028	0.00022	0.00023	0.00018	0.00019	0.00021	0.00019	0.00017	0.00016
Silicon		0.05	9.34	9.21	8	8.48	8.49	8.37	8.53	8.81	8.77	8.07	7.55	9.2	10.2	9.49
Silver		1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	43.8	36.1	54.4	58.4	58.9	55.6	25.2	28.4	30	37.6	41.4	38.9	38.7	44.9
Strontium		0.0001 to 0.005	0.41	0.377	0.396	0.422	0.412	0.355	0.229	0.245	0.292	0.322	0.318	0.331	0.37	0.367
Sulphur		0.5	12	10	12.5	12.4	12.5	11.1	6.74	8	6.31	6.54	6.59	6.04	6.19	7.63
Thallium		1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium		1E-005 to 0.001	0.00464	0.00396	0.0049	0.00558	0.00548	0.0044	0.00233	0.0024	0.00246	0.00251	0.00242	0.00296	0.00339	0.00332
Vanadium		0.001 to 0.03	0.0018	0.002	0.0014	0.0015	0.0016	0.0015	0.0021	0.0019	0.0023	0.0019	0.0019	0.0022	0.0025	0.0019
Zinc		0.001 to 0.006	<0.001	<0.001	<0.001	<0.001	<0.001	0.0012	<0.001	<0.001	0.0013	0.0062	0.0034	0.0019	<0.001	<0.001
Total Metals																
Aluminum		0.003 to 0.025	0.0854	0.0074	0.0896	0.0241	0.0182	1.85	0.733	0.178	0.142	0.124	0.463	0.0833	0.282	0.0605
Antimony		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic		0.0001 to 0.0025	0.0005	0.00047	0.00049	0.00047	0.00047	0.00084	0.00058	0.00046	0.00058	0.00061	0.00067	0.00067	0.00077	0.00071
Barium		5E-005 to 0.02	0.0828	0.0761	0.0698	0.0753	0.0762	0.0989	0.0561	0.0451	0.0567	0.0626	0.0711	0.0727	0.0766	0.0787
Beryllium		0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium		1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000055	0.000022	<0.00001	0.000011	0.000012	0.000023	<0.00001	0.000012	<0.00001
Calcium		0.05 to 0.1	91	89.8	90.9	96.1	102	85.9	58.7	63.9	68.7	71.8	74.2	80	79.9	86.4
Chromium		0.0001 to 0.005	0.0004	0.00025	0.00028	0.00021	0.00015	0.00401	0.00152	0.00045	0.00041	0.00038	0.00104	0.00027	0.00073	0.00027
Cobalt		0.0001 to 0.0015	0.00012	<0.0001	0.00012	<0.0001	<0.0001	0.00146	0.00056	0.00018	0.00017	0.00017	0.00047	0.00015	0.00024	0.0001
Copper		0.0005 to 0.007	0.00153	0.00123	0.00145	0.00122	0.00136	0.00881	0.00499	0.00225	0.00203	0.00195	0.00332	0.00194	0.00265	0.00169
Iron		0.01 to 0.03	0.152	0.035	0.16	0.053	0.045	3.07	1.14	0.341	0.287	0.268	0.894	0.162	0.478	0.113
Lead		5E-005 to 0.0025	<0.00005	<0.00005	0.00007	<0.00005	<0.00005	0.00101	0.00036	0.000111	0.00011	0.000087	0.000318	0.000079	0.000144	<0.00005
Lithium		0.0005 to 0.025	0.00807	0.00694	0.0073	0.00808	0.00776	0.00799	0.00491	0.00501	0.00576	0.00657	0.00667	0.00756	0.00902	0.00847
Magnesium		0.1	28.7	26.4	24.9	28.6	29.2	24.1	16.2	15.9	17.9	20.1	18.9	22.2	22.9	24.3
Manganese		5E-005 to 0.0015	0.0239	0.0139	0.0164	0.00874	0.00781	0.253	0.0634	0.0217	0.0263	0.0309	0.0852	0.0367	0.0626	0.0269
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.00341	0.00306	0.00322	0.0035	0.00339	0.00327	0.00207	0.00231	0.00245	0.00246	0.00241	0.00301	0.0038	0.00376
Nickel		0.0005 to 0.005	0.00074	<0.0005	0.00075	0.00053	0.0006	0.00381	0.00205	0.00092	0.00099	0.00092	0.0015	0.00089	0.0011	0.00078
Phosphorus		0.05 to 0.3	0.059	<0.05	<0.05	<0.05	<0.05	0.212	0.097	<0.05	<0.05	0.051	0.09	<0.05	0.064	<0.05
Potassium		0.05 to 2	8.7	8.04	10.1	9.91	9.56	8.95	6.66	6.56	7.58	8.45	8.77	9.67	9.21	10.4
Selenium		0.0001 to 0.006	0.00033	0.00038	0.0003	0.00032	0.0003	0.00043	0.00028	0.00026	0.00019	0.00021	0.00029	0.00022	0.00019	0.0002
Silicon		0.05	9.02	8.9	7.85	8.33	8.41	11.9	9.71	8.52	8.58	8.06	8.28	9.4	10.7	9.96
Silver		1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000038	0.000012	<0.00001	<0.00001	<0.00001	0.000014	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	41.9	33.5	54.3	57.8	58.4	56.2	24.6	24.4	29.5	37.7	39.6	41.7	39.4	48.7
Strontium		0.0001 to 0.005	0.41	0.383	0.401	0.421	0.419	0.377	0.224	0.254	0.277	0.305	0.311	0.336	0.384	0.397
Sulphur		0.5	12.1	9.79	12.7	12.6	12.8	10.9	6.86	7.81	6.07	6.39	6.57	6.2	6.3	8.08
Thallium		1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000019	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.103	0.038	<0.01	<0.01	<0.01	0.025	<0.01	0.014	<0.01
Total Cadmium (by saltwater extractio		0.00002														
Uranium		1E-005 to 0.001	0.00461	0.00418	0.00509	0.00579	0.00578	0.00485	0.00239	0.00241	0.00246	0.00255	0.00247	0.00297	0.00348	0.00381
Vanadium		0.001 to 0.03	0.0022	0.002	0.0018	0.0017	0.0018	0.0085	0.0047	0.0025	0.0028	0.0025	0.0036	0.0028	0.0035	0.0023
Zinc		0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	0.0082	0.0032	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics																
Carbon Organic (Dissolved)		0.5 to 5	9.12	8.42	12.3	10.6	11.8	11.1	13.8	13.2	13	12.8	14.4	11.3	10	10.3
Carbon Organic (Total)		0.5 to 5	8.9	8.48	12.9	10.5	11.5	13	14.6	14.1	13.3	13.4	16.9	12.9	11.6	9.8
Nitrogen Organic (Dissolved)		0.05 to 0.26														
Nitrogen Organic (Total)		0.05 to 0.3														
ALS LAB ID			**L1419486**	**L1432163**	**L1434695**	**L1437439**	**L1439655**	**L1441961**	**L1447300**	**L1452368**	**L1459728**	**L1465478**	**L1472862**	**L1481215**	**L1488139**	**L1494491**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes		MDL	ANDR15 11-Aug-14	ANDR15 3-Sep-14	ANDR15 17-Sep-14
In Situ Parameters					
Conductivity µS/cm		...	598		549
Oxygen Dissolved %	...		82.3		92.9
Oxygen Dissolved	...		8.66		10.8
pH (unitless)		...	8.27	8.38	8.26
Redox Potential mV		...	23		107
Salinity ppt		...	0.38		0.39
Specific Conductivity µS/cm		...	778		794
Temperature °C		...	12.9	10.1	8.84
Total Dissolved Solids		...	506		516
Turbidity NTU		...			
Physical Tests					
Acidity to pH 8.3 (as CaCO3)		1			
Alkalinity (Total as CaCO3)		1 to 2	279	266	295
Bicarbonate Alkalinity		1 to 2	269	254	282
Carbonate Alkalinity		1 to 2	10.4	11.3	13.8
Color TCU		5			
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	317	330	340
Hydroxide Alkalinity		1 to 2	<1	<1	<1
pH (unitless)		0.01 to 0.1	8.44	8.43	8.47
Specific Conductivity µS/cm		2	778	850	821
Total Dissolved Solids		1 to 2	490	519	563
Total Suspended Solids		3	3.7	<3	5.6
Turbidity NTU		0.1	0.4	0.49	0.57
Dissolved Anions					
Bromide		0.05 to 2.495	<0.5	<0.5	<0.5
Chloride		0.5 to 1	85.4	113	97
Fluoride		0.02 to 0.4	0.42	0.217	0.21
Sulphate		0.5 to 1	20.3	25.4	23.7
Nutrients					
Ammonia (Total)		0.005 to 0.05	0.0146	0.0072	0.0077
Nitrate (as N)		0.005 to 0.1	0.063	<0.05	<0.05
Nitrite (as N)		0.001 to 0.02	<0.01	<0.01	<0.01
Nitrogen (Dissolved)		0.05 to 0.1			
Nitrogen (Total)		0.0025 to 0.11			
Nitrogen Kjeldahl (Total)		0.05 to 0.2	0.518	0.46	0.565
Orthophosphate (Dissolved)		0.001 to 0.01	0.0307	0.0251	0.0286
Phosphorus - Dissolved		0.002 to 0.02		0.0284	0.0296
Phosphorus - Total		0.002 to 0.02	0.0544	0.0257	0.068
Cyanide					
Cyanide (Free)		0.005	<0.005	<0.005	<0.005
Cyanide (Total)		0.005	<0.005	<0.005	<0.005
Cyanide (WAD)		0.005	<0.005	<0.005	<0.005
Dissolved Metals					
Aluminum		0.001 to 0.025	0.0019	0.0016	0.0016
Antimony		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001
Arsenic		0.0001 to 0.0025	0.00068	0.00059	0.00065
Barium		5E-005 to 0.02	0.0787	0.0757	0.0802
Beryllium		0.0001 to 0.005	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	<0.01	<0.01	<0.01
Cadmium		1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001
Calcium		0.05 to 0.1	85.9	90.6	91.9
Chromium		0.0001 to 0.018	0.00011	<0.0001	0.00015
Cobalt		0.0001 to 0.0015	<0.0001	<0.0001	<0.0001
Copper		0.0002 to 0.006	0.00126	0.00119	0.00126
Dissolved Cadmium (by saltwater extr		0.00002			
Iron		0.01 to 0.03	0.029	0.025	0.027
Lead		5E-005 to 0.0025	<0.00005	<0.00005	<0.00005
Lithium		0.0005 to 0.025	0.00809	0.00874	0.00871
Magnesium		0.1	25	25.1	26.7
Manganese		5E-005 to 0.0015	0.0219	0.0134	0.012
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.00333	0.00326	0.00327
Nickel		0.0005 to 0.005	0.00063	0.00063	0.00065
Phosphorus		0.05 to 0.3	<0.05	<0.05	<0.05
Potassium		0.05 to 2	9.71	11	10.1
Selenium		0.0001 to 0.006	0.00016	0.00018	0.00017
Silicon		0.05	10.3	9.1	10.1
Silver		1E-005 to 0.0001	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	43	51.1	46.9
Strontium		0.0001 to 0.005	0.379	0.36	0.398
Sulphur		0.5	7.34	9.01	8.26
Thallium		1E-005 to 0.001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01
Uranium		1E-005 to 0.001	0.00352	0.00323	0.00392
Vanadium		0.001 to 0.03	0.002	0.0017	0.0019
Zinc		0.001 to 0.006	0.0012	<0.001	<0.001
Total Metals					
Aluminum		0.003 to 0.025	0.12	0.0323	0.115
Antimony		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001
Arsenic		0.0001 to 0.0025	0.00079	0.00059	0.00066
Barium		5E-005 to 0.02	0.086	0.0747	0.0841
Beryllium		0.0001 to 0.005	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	<0.01	<0.01	<0.01
Cadmium		1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001
Calcium		0.05 to 0.1	85.2	86.3	93.3
Chromium		0.0001 to 0.005	0.00039	0.00021	0.00054
Cobalt		0.0001 to 0.0015	0.00015	<0.0001	0.00014
Copper		0.0005 to 0.007	0.00182	0.00144	0.00202
Iron		0.01 to 0.03	0.224	0.079	0.211
Lead		5E-005 to 0.0025	<0.00005	<0.00005	0.000058
Lithium		0.0005 to 0.025	0.00838	0.00878	0.00897
Magnesium		0.1	25.2	24.2	26.9
Manganese		5E-005 to 0.0015	0.0481	0.0207	0.038
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.00308	0.00343	0.00378
Nickel		0.0005 to 0.005	0.00083	0.00068	0.00107
Phosphorus		0.05 to 0.3	0.069	<0.05	0.056
Potassium		0.05 to 2	9.82	10.6	10.1
Selenium		0.0001 to 0.006	0.00018	0.00016	0.00017
Silicon		0.05	10.5	8.86	10.4
Silver		1E-005 to 0.0001	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	45.5	51.1	47.8
Strontium		0.0001 to 0.005	0.345	0.378	0.429
Sulphur		0.5	7.55	8.97	8.69
Thallium		1E-005 to 0.001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extractio		0.00002			
Uranium		1E-005 to 0.001	0.00316	0.00332	0.00421
Vanadium		0.001 to 0.03	0.0028	0.0019	0.0026
Zinc		0.003 to 0.006	<0.003	<0.003	<0.003
Organics					
Carbon Organic (Dissolved)		0.5 to 5	9.09	12.2	9
Carbon Organic (Total)		0.5 to 5	10.4	12.1	11.6
Nitrogen Organic (Dissolved)		0.05 to 0.26			
Nitrogen Organic (Total)		0.05 to 0.3			
ALS LAB ID			**L1500711**	**L1513418**	**L1519657**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C2.10 - CC02
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Analytes		MDL	CC02 1-May-07	CC02 18-Jul-07	CC02 14-Sep-07	CC02 28-Apr-08	CC02 7-Jul-08	CC02 4-Sep-08	CC02 02/Sep/2010	CC02 22-Nov-10	CC02 28-Mar-11	CC02 14-Apr-11	CC02 21-Apr-11	CC02 28-Apr-11	CC02 5-May-11	CC02 12-May-11
In Situ Parameters																
Conductivity µS/cm		...	223		408	548	460	461	455	403	522	578	537	469	256	165
Oxygen Dissolved %	...					95	99	96.8	91.6	76.7	97		98.2	80.3	96.6	93.3
Oxygen Dissolved	...		15	11.8	11.7	11.4	10.7	10.4	10.1	11.3	12.3		14.1	10.7	12.3	12
pH (unitless)		...	8.03	7.9	8.29	7.87	8.02	8.25	7.9	7.65	8.39	8.5	8.15	8.11	8.13	7.91
Redox Potential mV		...	-56.7				-103	-75.6	11.6	268	117	20.2	165	114	119	97.9
Salinity ppt		...											0.49	0.39	0.2	0.13
Specific Conductivity µS/cm		...	352	582	534	828	615	614	622	773	840	892	1025	802	413	270
Temperature °C		...	5.78	12.1	12.6	7.97	11.9	12	10.9	-0.05	5.14	6.61	-0.02	3.39	5.08	4.66
Total Dissolved Solids		...							405	503	547	580	660	520	269	175
Turbidity NTU		...														
Physical Tests																
Acidity to pH 8.3 (as CaCO3)		1														
Alkalinity (Total as CaCO3)		1 to 2	150	232	240	334	260	262	255	309	325	343	315	322	170	122
Bicarbonate Alkalinity		1 to 2								309			305			
Carbonate Alkalinity		1 to 2								<1			10.2			
Color TCU		5	16.4	9.4	8.4	7.1	9.5	7.3	10.7	7.1	9.2	10.6	7	6.9	21.1	54.3
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	187	270	246	404	281	295	284	365	391	427	414	432	213	142
Hydroxide Alkalinity		1 to 2								<1			<1			
pH (unitless)		0.01 to 0.1	8.33	8.37	8.44	7.91	8.38	8.46	8.29	8.32	8.27	8.46	8.35	8.31	8.31	
Specific Conductivity µS/cm		2	336	541	538	807	602	624	591	749	802	825	835	813	396	271
Total Dissolved Solids		1 to 2	222	338	340	528	390	386	374	476	536	560	548	547	261	196
Total Suspended Solids		3	9	6.6	6.2	<3	<3	<3	<3	<3	<3	<3	<3	<3	65.5	542
Turbidity NTU		0.1				0.91	1.25	1.01	0.77	1.41	0.79	1.03	1.22	0.61	26.3	192
Dissolved Anions																
Bromide		0.05 to 2.495	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.69	<0.76	<0.5	<0.25	<0.05	<0.05
Chloride		0.5 to 1	1.41	2.48	2.45	7.02	3.71	3.23	2.8	3.77	8.1	9	8.6	6.6	2	1.42
Fluoride		0.02 to 0.4	0.093		0.116	0.094	0.116	0.113	0.106	0.101	<0.2	<0.2	<0.2	<0.1	0.078	0.072
Sulphate		0.5 to 1	30.3	66.5	61.4	134	85.3	86.2	74.5	111	137	151	156	157	45.4	23.8
Nutrients																
Ammonia (Total)		0.005 to 0.05	0.023	0.031	0.024	0.031	<0.02	0.024	<0.005	0.0319	0.0269	0.0168	0.0144	0.0193	0.0122	0.0214
Nitrate (as N)		0.005 to 0.1	0.033	0.0389	0.0322	0.224	0.14	0.0677	0.0905	0.29	0.448	0.32	0.417	0.357	0.161	0.0491
Nitrite (as N)		0.001 to 0.02	<0.001	0.0022	<0.001	0.0029	0.0026	0.0015	<0.001	0.002	<0.01	<0.01	<0.01	<0.005	<0.001	<0.001
Nitrogen (Dissolved)		0.05 to 0.1													0.74	0.4	0.56
Nitrogen (Total)		0.0025 to 0.11							0.618	0.491	0.779	0.599	0.748	0.628	0.47	2.17
Nitrogen Kjeldahl (Total)		0.05 to 0.2	0.247	0.335	0.177	0.299	0.277	0.221	0.527	0.199	0.331	0.279	0.331	0.271	0.309	1.75
Orthophosphate (Dissolved)		0.001 to 0.01	0.0088	0.0192	0.015	0.0104	0.0172	0.0279	0.0169	0.0155	0.0286					
Phosphorus - Dissolved		0.002 to 0.02			0.0169				0.019			0.0196	0.0128	0.0217	0.0242	0.0517
Phosphorus - Total		0.002 to 0.02	0.025	0.0315	0.0258	0.0257	0.0222	0.0335	0.0233	0.0208	0.0402	0.029	0.0198	0.0207	0.206	0.87
Cyanide																
Cyanide (Free)		0.005				<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Cyanide (Total)		0.005	0.0055	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005		<0.005	<0.005	0.008	0.0217
Cyanide (WAD)		0.005	<0.005			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Dissolved Metals																
Aluminum		0.001 to 0.025	0.006	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.01	<0.005	<0.005	0.0199
Antimony		0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005
Arsenic		0.0001 to 0.0025	0.00057	0.00095	0.00075	<0.001	0.00076	0.00075	0.00069	<0.001	0.00051	<0.001	<0.001	0.00052	0.00059	0.0007
Barium		5E-005 to 0.02	0.051	0.06	0.07	0.114	0.085	0.08	0.077	0.104	0.104	0.109	0.108	0.111	0.055	0.036
Beryllium		0.0001 to 0.005	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001
Bismuth		0.0005 to 0.2									<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Boron		0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium		1E-005 to 8.5E-005	<0.000017	<0.000017	<0.000017	<0.000034	<0.000017	0.000031	0.00003	<0.000034	0.000025	<0.000034	<0.000034	0.000021	0.000029	0.000043
Calcium		0.05 to 0.1	50.1	66.6	60.2	100	70.8	72.9	69.7	90.5	98	106	103	107	57.1	38.1
Chromium		0.0001 to 0.018	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001
Cobalt		0.0001 to 0.0015	<0.0003	<0.0003	<0.0003	<0.0006	<0.0003	<0.0003	<0.0003	<0.0006	<0.0003	<0.0006	<0.0006	<0.0003	<0.0003	<0.0003
Copper		0.0002 to 0.006	0.0026	0.0019	0.0017	<0.002	0.002	0.0015	0.0019	<0.002	0.0013	<0.002	<0.002	0.0014	0.0023	0.0045
Dissolved Cadmium (by saltwater extr		0.00002														
Iron		0.01 to 0.03	<0.03	<0.03	<0.03	0.031	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.084
Lead		5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005
Lithium		0.0005 to 0.025	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.01	<0.005	<0.005	<0.005
Magnesium		0.1	15	25.1	23.3	37.1	25.3	27.5	26.8	33.8	35.7	39.3	38.2	40	17.1	11.3
Manganese		5E-005 to 0.0015	0.00466	0.0279	0.0208	0.0542	0.0283	0.0207	0.0264	0.0388	0.0353	0.0345	0.0355	0.0336	0.00883	0.00513
Mercury		1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.0122	0.0106	0.0103	0.0085	0.01	0.0099	0.0099	0.0081	0.0083	0.008	0.0082	0.0079	0.0088	0.0078
Nickel		0.0005 to 0.005	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001
Phosphorus		0.05 to 0.3									<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium		0.05 to 2	2	2.3	3.3	4.6	3.5	3.8	3.9	4.2	5.1	5.7	4.5	4.8	2.4	2.7
Selenium		0.0001 to 0.006	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	0.0018	<0.001	<0.001
Silicon		0.05									6.65	6.12	6.17	6.46	6.86	6.21
Silver		1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00004	<0.00002	<0.00002	<0.00002	<0.00004	<0.00002	<0.00004	<0.00004	<0.00002	<0.00002	<0.00002
Sodium		0.05 to 2	8.9	20.3	22.5	36.5	27.2	28.3	28	36.6	37.4	41.8	40.3	40.9	11.2	7.3
Strontium		0.0001 to 0.005									0.408	0.447	0.446	0.464	0.223	0.148
Sulphur		0.5														
Thallium		1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0004	<0.0002	<0.0002	<0.0002	<0.0004	<0.0002	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002
Tin		0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium		1E-005 to 0.001	0.00046	0.00063	0.00056	0.00089	0.00062	0.00063	0.00067	0.0008	0.00097	0.00108	0.0011	0.00102	0.00049	0.00025
Vanadium		0.001 to 0.03	<0.03	<0.03	<0.03	<0.002	0.0019	0.002	0.0018	<0.002	0.0019	0.0021	<0.002	0.0018	0.0015	0.0018
Zinc		0.001 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Metals																
Aluminum		0.003 to 0.025	0.107	0.0894	0.0249	<0.01	0.0186	0.0117	0.0202	0.022	0.0213	0.018	0.025	0.0237	1.32	11.5
Antimony		0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005
Arsenic		0.0001 to 0.0025	0.00059	0.00074	0.00073	<0.001	0.00078	0.00073	0.00073	<0.001	<0.0005	<0.001	<0.001	<0.0005	0.00087	0.00409
Barium		5E-005 to 0.02	0.052	0.063	0.073	0.116	0.089	0.079	0.081	0.099	0.106	0.112	0.111	0.106	0.072	0.183
Beryllium		0.0001 to 0.005	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001
Bismuth		0.0005 to 0.2									<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Boron		0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium		1E-005 to 8.5E-005	<0.000017	<0.000017	<0.000017	<0.000034	0.000031	0.000027	<0.000017	<0.000034	0.000036	<0.000034	<0.000034	0.000021	0.000039	0.000116
Calcium		0.05 to 0.1	47.7	67.8	59.3	100	72.7	71.6	70.8	89.7	98.7	105	102	101	56.5	52.6
Chromium		0.0001 to 0.005	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.001	0.0025	0.0211
Cobalt		0.0001 to 0.0015	<0.0003	<0.0003	<0.0003	<0.0006	<0.0003	<0.0003	<0.0003	<0.0006	<0.0003	<0.0006	<0.0006	<0.0003	0.00116	0.0106
Copper		0.0005 to 0.007	0.0035	0.0032	0.0022	<0.002	0.0023	0.0016	0.0022	<0.002	0.0014	<0.002	<0.002	0.0016	0.0098	0.0658
Iron		0.01 to 0.03	0.131	0.169	0.069	0.068	0.06	0.041	0.055	0.067	0.086	0.071	0.076	0.073	1.9	17
Lead		5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.0005	0.00183
Lithium		0.0005 to 0.025	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.01	<0.005	<0.005	0.0073
Magnesium		0.1	14.9	25.6	22.7	37.1	26.4	27.5	28.7	33.2	36.6	41.6	38.5	38.9	17.5	21.1
Manganese		5E-005 to 0.0015	0.0125	0.0459	0.0333	0.0683	0.0352	0.0255	0.035	0.0463	0.047	0.0394	0.0433	0.0413	0.0735	0.631
Mercury		1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000033
Molybdenum		5E-005 to 0.005	0.0121	0.0111	0.0103	0.0084	0.0099	0.0096	0.011	0.0084	0.0089	0.0086	0.0091	0.0086	0.0095	0.0084
Nickel		0.0005 to 0.005	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.001	0.0023	0.017
Phosphorus		0.05 to 0.3									<0.3	<0.3	<0.3	<0.3	<0.3	1.19
Potassium		0.05 to 2	<2	2.4	3.2	4.6	3.6	3.8	4	4.2	5.2	6.4	4.6	4.5	2.6	4.8
Selenium		0.0001 to 0.006	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	0.0012	<0.001	<0.001
Silicon		0.05									6.74	6.21	6.28	6.21	9.67	30.7
Silver		1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00004	<0.00002	<0.00002	0.000046	0.000057	<0.00002	<0.00004	<0.00004	<0.00002	<0.00002	0.000076
Sodium		0.05 to 2	8.8	20.8	21.9	37	28.4	28	28.9	36.8	37.5	45.3	41.2	38.4	11	8.2
Strontium		0.0001 to 0.005									0.411	0.462	0.459	0.439	0.225	0.221
Sulphur		0.5														
Thallium		1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0004	<0.0002	<0.0002	<0.0002	<0.0004	<0.0002	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002
Tin		0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	0.06	0.518
Total Cadmium (by saltwater extractio		0.00002														
Uranium		1E-005 to 0.001	0.00046	0.00068	0.00054	0.00087	0.00061	0.00063	0.00072	0.0008	0.001	0.00117	0.00117	0.0011	0.00051	0.00055
Vanadium		0.001 to 0.03	<0.03	<0.03	<0.03	<0.002	0.002	0.002	0.0022	<0.002	0.0021	0.0024	0.002	0.0018	0.0069	0.0504
Zinc		0.003 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0335
Organics																
Carbon Organic (Dissolved)		0.5 to 5		6.11	5.35	5.12	6.03	5.39	5.87	5.33	5.86	5.35	4.75	4.22	10.5	16.5
Carbon Organic (Total)		0.5 to 5	8.76									4.96	4.7	4.26	10.6	33.3
Nitrogen Organic (Dissolved)		0.05 to 0.26												0.36	0.227	0.49
Nitrogen Organic (Total)		0.05 to 0.3										0.262			0.252	0.297	1.73
ALS LAB ID			**L501128**	**L532402**	**L554763**	**L623545**	**L652819**	**L678833**	**L927930**	**L956921**	**L990458**	**L995583**	**L997645**	**L999654**	**L1002049**	**L1005044**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes		MDL	CC02 30-May-11	CC02 28-Jun-11	CC02 28-Jul-11	CC02 1-Sep-11	CC02 27-Sep-11	CC02 26-Oct-11	CC02 5-Dec-11	CC02 10-Jan-12	CC02 13-Feb-12	CC02 7-Mar-12	CC02 10-Apr-12	CC02 26-Apr-12	CC02 4-May-12	CC02 10-May-12
In Situ Parameters																
Conductivity µS/cm		...	207	394	422	383		436	414	384	428	422	479	127	200	223
Oxygen Dissolved %	...		78.6	94.7	90.8	104	93.2	94.3	91.4	88.4	92.3	93.3		96.3	90.8	94.7
Oxygen Dissolved	...		9.08	10.3	10.2	12.4	10	12.4	12.7	12.8	12.8	12.9	15.7	12.9	11.5	11.3
pH (unitless)		...	5.8	7.97	8.07	8.1	8.26	8.26	8.23	8.25	8.08	8.09	8.36	7.85	8.4	8.25
Redox Potential mV		...	511	184	80	112	217	163	73.5	103	144	66	106	130	91.2	136
Salinity ppt		...	0.14	0.26	0.29	0.28		0.36	0.36	0.35	0.37	0.37	0.37	0.1	0.15	0.16
Specific Conductivity µS/cm		...	297	531	585	573	630	730	747	727	766	755	762	219	320	333
Temperature °C		...	8.99	11.6	10.4	7.65	12.1	3.93	1.69	0.31	1.88	1.93	5.51	3.14	5.4	7.68
Total Dissolved Solids		...	193	345	380	373		474	485	473	498	491	495	142	208	216
Turbidity NTU		...	57.4		1	0.95			8.2	1	0	0.8		167	9.6	3.4
Physical Tests																
Acidity to pH 8.3 (as CaCO3)		1			3											
Alkalinity (Total as CaCO3)		1 to 2	134	214	239	234	273	291	316	256	288	290	314	97.9	128	136
Bicarbonate Alkalinity		1 to 2								256	288	280	287	97.9	128	136
Carbonate Alkalinity		1 to 2								<1	<2	10.3	26.8	<2	<2	<1
Color TCU		5	48.7	16	11.7	10.2	10.8	8.3	6.7	5.7	5.4	8.7	7.1	55.9	41.2	33.4
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	145	244	274	260	290	330	339	349	371	379	387	115	164	164
Hydroxide Alkalinity		1 to 2								<1	<2	<1	<1	<2	<2	<1
pH (unitless)		0.01 to 0.1	8.26	8.36	8.22	8.34	8.36	8.37	8.34	8.34	8.28	8.34	8.54	7.97	8.19	8.33
Specific Conductivity µS/cm		2	275	491	562	538	612	686	723	714	730	753	759	215	312	337
Total Dissolved Solids		1 to 2	186	328	351	333	389	429	449	472	482	510	509	162	221	218
Total Suspended Solids		3	195	<3	<3	4.4	<3	<3	3.3	<3	<3	<3	3.3	611	23.3	10.7
Turbidity NTU		0.1		0.84	1.06	0.92	0.54	1.43	2.02	1.12	1.05	1.07	0.81	184	7.81	2.4
Dissolved Anions																
Bromide		0.05 to 2.495	<0.25	<0.05	<0.05	<0.05	<0.05	<0.25	<0.25	<0.25	<0.25	<0.5	<0.25	<0.05	<0.05	<0.05
Chloride		0.5 to 1	2.5	3.02	3.19	2.82	3.49	4.5	3.9	4.3	4.8	5.1	5.9	1.32	2.29	2.06
Fluoride		0.02 to 0.4	<0.1	0.109	0.125	0.128	0.135	0.12	0.11	0.11	0.1	<0.2	<0.1	0.079	0.096	0.09
Sulphate		0.5 to 1	19.3	65	71.6	67.9	84.1	100	111	126	128	141	135	19.1	39.9	45
Nutrients																
Ammonia (Total)		0.005 to 0.05	0.0185	0.0116	0.0109	0.009	0.0077	0.0228	0.0405	0.0232	0.053	0.0831	0.0099	0.0095	0.0062	<0.005
Nitrate (as N)		0.005 to 0.1	<0.025	0.0886	0.0815	0.109	0.107	0.265	0.287	0.37	0.469	0.635	0.331	0.0341	0.0495	0.0213
Nitrite (as N)		0.001 to 0.02	<0.005	<0.001	<0.001	<0.001	0.0015	0.0068	0.0052	0.006	0.0065	<0.01	<0.005	0.0045	<0.001	<0.001
Nitrogen (Dissolved)		0.05 to 0.1	0.48	0.44	0.37	0.36	0.29	0.26		0.45	0.84	0.96	0.55	0.61	0.38	0.32
Nitrogen (Total)		0.0025 to 0.11	0.47	0.44	0.39	0.38	0.372		0.49	0.593	0.73	0.972	0.502	0.593	0.508	0.345
Nitrogen Kjeldahl (Total)		0.05 to 0.2	0.47	0.351	0.308	0.215	0.263	0.266	0.27	0.217	0.25	0.337	0.171	0.555	0.459	0.324
Orthophosphate (Dissolved)		0.001 to 0.01	0.0257	0.0218	0.0239			0.0224								
Phosphorus - Dissolved		0.002 to 0.02	0.0317	0.0258	0.0283	0.0306	0.0419	0.0263	0.0372	0.0279	0.0272	0.0829	0.0111	0.0567	0.0312	0.0186
Phosphorus - Total		0.002 to 0.02	0.249	0.0314	0.0333	0.0341	0.0467	0.0321	0.045	0.033	0.0327	0.0921	0.0202	0.742	0.0916	0.0415
Cyanide																
Cyanide (Free)		0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)		0.005	0.0124	0.0051	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0119	<0.005
Cyanide (WAD)		0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																
Aluminum		0.001 to 0.025	0.0118	<0.005	<0.005	<0.005	<0.005	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0165	0.0079	0.007
Antimony		0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001
Arsenic		0.0001 to 0.0025	0.00078	0.00073	0.00071	0.00069	0.0007	0.00057	0.0005	0.00048	0.00047	0.00063	0.0005	0.00052	0.00064	0.00057
Barium		5E-005 to 0.02	0.039	0.072	0.076	0.07	0.082	0.0834	0.0902	0.0941	0.107	0.101	0.108	0.0309	0.0417	0.048
Beryllium		0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.037	0.039	0.04	0.034	0.036	0.036	<0.01	0.013	0.014
Cadmium		1E-005 to 8.5E-005	0.000028	0.000036	0.000042	<0.000017	<0.000017	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	<0.00001	<0.00001	<0.00001
Calcium		0.05 to 0.1	38.5	60.7	68.2	64.2	72.2	82.5	82.7	86.5	93.2	92.9	93.8	32.3	42.9	42.5
Chromium		0.0001 to 0.018	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00015	0.00014	0.0002
Cobalt		0.0001 to 0.0015	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper		0.0002 to 0.006	0.0043	0.0028	0.0022	0.0019	0.0018	0.00139	0.00098	0.00106	0.00118	0.00151	0.00122	0.0042	0.00403	0.00376
Dissolved Cadmium (by saltwater extr		0.00002														
Iron		0.01 to 0.03	0.045	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.116	0.04	<0.03
Lead		5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium		0.0005 to 0.025	<0.005	<0.005	<0.005	<0.005	<0.005	0.00248	0.00321	0.00285	0.00245	0.00242	0.00267	<0.0005	0.00125	0.00118
Magnesium		0.1	11.8	22.5	25.2	24.2	26.6	30	32.2	32.3	33.7	35.7	37.1	8.38	13.9	14.2
Manganese		5E-005 to 0.0015	0.00491	0.0131	0.0171	0.0139	0.0169	0.0233	0.0308	0.0305	0.0308	0.0311	0.0347	0.00626	0.00305	0.00391
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.0081	0.0088	0.0096	0.0102	0.0101	0.00958	0.00941	0.00898	0.00931	0.00931	0.0086	0.00803	0.0099	0.00957
Nickel		0.0005 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00054	0.00055	<0.0005
Phosphorus		0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium		0.05 to 2	2.4	3.4	3.7	3.5	4.2	4.14	4.31	4.07	4.63	6.24	4.13	2.19	2.57	2.3
Selenium		0.0001 to 0.006	<0.001	<0.001	<0.001	<0.001	<0.001	0.00029	0.00039	0.00047	0.00054	0.00064	0.00062	0.00035	0.0004	0.00039
Silicon		0.05	7.48	7.76	7.96	8.19	8.62	8.05	8.19	7.6	7.3	7.19	6.31	5.44	6.49	6.32
Silver		1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	7.8	23.1	26.3	25	31.9	31.4	35.2	32.8	30.1	30.1	30.9	4.5	9.22	10.2
Strontium		0.0001 to 0.005	0.156	0.29	0.314	0.297	0.331	0.326	0.401	0.386	0.376	0.377	0.403	0.108	0.175	0.176
Sulphur		0.5														
Thallium		1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.012	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium		1E-005 to 0.001	0.00022	0.00047	0.00055	0.00053	0.00059	0.000668	0.000749	0.000768	0.000894	0.000989	0.000979	0.000167	0.00031	0.000298
Vanadium		0.001 to 0.03	0.0018	0.0018	0.0017	0.0018	0.0021	0.0016	0.0016	0.0015	0.0018	0.0023	0.002	0.0014	0.0016	0.0016
Zinc		0.001 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.005	0.0043	<0.003	0.0032	0.0256	<0.003	<0.003	<0.003	<0.003	<0.003
Total Metals																
Aluminum		0.003 to 0.025	3.3	0.058	0.0551	0.0315	<0.025	0.0302	0.0583	0.0648	0.0209	0.0224	0.01	8.32	0.425	0.219
Antimony		0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	0.00021	0.00011	<0.0001
Arsenic		0.0001 to 0.0025	0.00183	0.00074	0.00072	0.0007	0.00061	0.00054	0.00048	0.00049	0.00051	0.00059	0.00051	0.00304	0.00084	0.0006
Barium		5E-005 to 0.02	0.081	0.071	0.08	0.075	0.082	0.083	0.088	0.0953	0.111	0.103	0.104	0.142	0.0469	0.0482
Beryllium		0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00018	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.042	0.04	0.044	0.044	0.044	0.04	0.017	0.017	0.018
Cadmium		1E-005 to 8.5E-005	0.000051	<0.000017	<0.000017	<0.000017	<0.000017	<0.00001	<0.00001	0.00001	0.00001	<0.00001	<0.00001	0.000065	0.000012	<0.00001
Calcium		0.05 to 0.1	41.6	59.6	70.1	65	71.3	81.4	82.6	87.7	96.4	92.9	93.8	39.2	42.3	41.6
Chromium		0.0001 to 0.005	0.0059	<0.001	<0.001	<0.001	<0.001	0.00017	0.0002	0.00036	0.00253	0.00026	0.00019	0.015	0.00101	<0.0006
Cobalt		0.0001 to 0.0015	0.00292	<0.0003	<0.0003	<0.0003	<0.0003	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	0.00773	0.00045	0.00021
Copper		0.0005 to 0.007	0.0209	0.0034	0.0028	0.0023	0.0019	0.00165	0.00151	0.00154	0.00154	0.00185	0.00145	0.0528	0.0067	0.00462
Iron		0.01 to 0.03	4.32	0.101	0.102	0.067	0.059	0.076	0.117	0.132	0.076	0.071	0.046	12.2	0.686	0.27
Lead		5E-005 to 0.0025	0.00056	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00142	0.000089	<0.00005
Lithium		0.0005 to 0.025	<0.005	<0.005	<0.005	<0.005	<0.005	0.00287	0.00303	0.0029	0.00264	0.00275	0.00252	0.00495	0.00149	0.00121
Magnesium		0.1	14	22.2	26	25.2	26.9	30	31.5	32.9	35.2	36	37.1	14.7	14	14
Manganese		5E-005 to 0.0015	0.14	0.0193	0.0256	0.0201	0.0213	0.0284	0.0399	0.0462	0.0393	0.0367	0.0364	0.426	0.0221	0.0115
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000035	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.009	0.0103	0.0112	0.0109	0.0103	0.00994	0.00941	0.0095	0.0107	0.00996	0.00854	0.0106	0.00952	0.00967
Nickel		0.0005 to 0.005	0.0049	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	0.00225	<0.0005	<0.0005	0.0133	0.00125	0.00071
Phosphorus		0.05 to 0.3	0.4	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.83	<0.3	<0.3
Potassium		0.05 to 2	2.9	3.4	3.9	3.8	4.2	4.13	4.26	4.21	4.77	6.48	4.1	3.48	2.54	2.23
Selenium		0.0001 to 0.006	<0.001	<0.001	<0.001	<0.001	<0.001	0.00026	0.00033	0.00039	0.00056	0.0006	0.00061	0.0006	0.00035	0.00038
Silicon		0.05	14.5	7.78	8.29	8.46	8.49	8.08	8.16	7.84	7.62	7.29	6.33	23.1	7.31	6.54
Silver		1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000048	<0.00001	<0.00001
Sodium		0.05 to 2	8.1	23.2	27.5	26.8	31.2	31.2	34.2	34	31.5	31	30	4.79	9.01	9.83
Strontium		0.0001 to 0.005	0.175	0.289	0.327	0.312	0.329	0.33	0.393	0.39	0.399	0.387	0.393	0.152	0.166	0.173
Sulphur		0.5														
Thallium		1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000034	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01	0.156	<0.01	<0.01	0.013	<0.01	0.015	<0.01	0.012	<0.01	<0.01	<0.01	0.375	0.023	0.01
Total Cadmium (by saltwater extractio		0.00002														
Uranium		1E-005 to 0.001	0.00035	0.00056	0.0006	0.00058	0.00061	0.00067	0.000744	0.000792	0.000956	0.00104	0.000929	0.000394	0.000311	0.000311
Vanadium		0.001 to 0.03	0.0161	0.0023	0.0021	0.002	0.0021	0.0017	0.0019	0.0019	0.0022	0.0024	0.002	0.0359	0.0034	0.0022
Zinc		0.003 to 0.006	0.0097	<0.005	<0.005	<0.005	<0.005	<0.003	<0.003	0.0084	0.0033	0.0033	<0.003	0.0238	<0.003	<0.003
Organics																
Carbon Organic (Dissolved)		0.5 to 5	17.4	9.35	7.2	6.9	6.76	5.6	5.1	4.6	4.61	5.22	5.05	16.2	13.5	10.3
Carbon Organic (Total)		0.5 to 5	17.7	9.4	7.43	6.92	6.76	6.45	5.02	4.61	4.76	5.27	5.13	26.6	13.6	10.8
Nitrogen Organic (Dissolved)		0.05 to 0.26	0.461	0.34	0.278	0.242	0.174	<0.052		<0.09	0.31	0.24	0.21	0.562	0.324	0.294
Nitrogen Organic (Total)		0.05 to 0.3	0.451	0.34	0.298	0.262	0.164	0.095	0.158	0.194	<0.3	0.254	0.161	0.545	0.453	0.324
ALS LAB ID			**L1011001**	**L1025075**	**L1038168**	**L1053400**	**L1065234**	**L1077732**	**L1092368**	**L1103104**	**L1114029**	**L1122039**	**L1133342**	**L1140194**	**L1143149**	**L1146570**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes	MDL	CC02 16-May-12	CC02 24-May-12	CC02 12-Jul-12	CC02 8-Aug-12	CC02 5-Sep-12	CC02 11-Oct-12	CC02 5-Nov-12	CC02 4-Dec-12	CC02 10-Jan-13	CC02 5-Feb-13	CC02 5-Mar-13	CC02 2-Apr-13	CC02 6-May-13	CC02 4-Jun-13
In Situ Parameters															
Conductivity µS/cm	...	254	319	368	454	4.4	425	293	433	384	0.397	422	555	178	264
Oxygen Dissolved %	...	90.7	95	95.7	95.3	103	96.1	100	85.7	90.3	90.4	107		89.4	91.6
Oxygen Dissolved	...	10.6	10.6	10.4	9.51	11.4	11.8	11.9	11	12.9	12.6	14.2		9.9	9.58
pH (unitless)	...	8.25	8.31	8.14	8.17	8.29	8.14	8.14	8.26	8.65	8.08	8.46	8.18	7.95	8.22
Redox Potential mV	...	155	130	132	91.1	85.9	-233	97.4	176	109	153	80.4	144	214	110
Salinity ppt	...	0.18	0.21		0.27	0.29	0.32	0.21	0.34	0.34	0.34	0.35	0.42	0.12	0.16
Specific Conductivity µS/cm	...	370	442	496	557	603	661	434	708	716	713	714	850	245	339
Temperature °C	...	8.61	10.4	11.5	15.3	10.8	6.32	7.89	4.66	0.73	1.79	3.6	6.83	10.8	13.3
Total Dissolved Solids	...	240	287		362	392	430	282	460	465	463	464	552	159	220
Turbidity NTU	...	2.4	1.8	0.2	2.6	1.1	0.9	1	0	0.5	0.7	0.6	0.8	134	17.5
Physical Tests															
Acidity to pH 8.3 (as CaCO3)	1					<1									
Alkalinity (Total as CaCO3)	1 to 2	150	182	199	248	259	283	284	290	298	283	290	313	110	152
Bicarbonate Alkalinity	1 to 2	150	182	199	238	251	283	284	284	298	283	273	300	110	152
Carbonate Alkalinity	1 to 2	<1	<1	<1	10.8	7.9	<2	<1	6	<2	<1	17	13	<2	<1
Color TCU	5	28.4	19.7	15	13	9.5	8	8.6	6.8	5.4	6.4	9	7.7	41.3	34.1
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	177	209	235	261	285	323	316	331	335	347	374	387	116	162
Hydroxide Alkalinity	1 to 2	<1	<1	<1	<1	<1	<2	<1	<1	<2	<1	<1	<1	<2	<1
pH (unitless)	0.01 to 0.1	8.31	8.18	8.38	8.45	8.46	8.27	8.41	8.33	8.3	8.31	8.41	8.36	8.25	8.38
Specific Conductivity µS/cm	2	362	432	480	556	593	618	668	670	660	695	741	797	229	328
Total Dissolved Solids	1 to 2	244	291	336	368	389	425	460	449	426	444	492	533	151	222
Total Suspended Solids	3	6.8	3.3	5.3	3.1	<3	<3	<3	<3	<3	<3	4	<3	346	41.7
Turbidity NTU	0.1	1.76	1.12	1.37	1.5	0.92	0.59	0.83	0.47	1.01	0.66	0.66	1.13	123	14.2
Dissolved Anions															
Bromide	0.05 to 2.495	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.25	<0.25	<0.5	<0.05	<0.5	<0.05	<0.05
Chloride	0.5 to 1	2.16	2.68	2.46	2.83	2.92	3.23	<5	4.1	3.9	<5	5.44	5.4	1.24	2.14
Fluoride	0.02 to 0.4	0.093	0.102	0.118	0.134	0.135	0.13	0.27	0.1	0.17	<0.2	0.117	0.27	0.101	0.113
Sulphate	0.5 to 1	52.8	69	63	78.5	80.7	94.5	96.7	105	110	120	131	153	18.3	24.8
Nutrients															
Ammonia (Total)	0.005 to 0.05	0.0069	<0.005	0.0072	0.008	0.0082	0.0089	0.0183	0.0272	0.0151	0.03	0.0151	0.021	0.0148	0.0061
Nitrate (as N)	0.005 to 0.1	0.0624	0.0496	0.103	0.0938	0.108	0.0689	0.236	0.277	0.326	0.41	0.385	0.518	0.0199	0.042
Nitrite (as N)	0.001 to 0.02	0.001	<0.001	<0.001	<0.001	0.0018	0.007	0.012	0.0101	0.0073	<0.01	0.0047	0.016	<0.001	<0.001
Nitrogen (Dissolved)	0.05 to 0.1	0.32	0.25	0.18	0.42	0.36	0.37	0.56	0.588	0.527	0.671	0.616	0.758		
Nitrogen (Total)	0.0025 to 0.11	0.368	0.331		0.336		0.318	0.497	0.526	0.502	0.669	0.655	0.834	1.37	0.364
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.305	0.281	0.274	0.242	0.232	0.242	0.249	0.24	0.208	0.291	0.337	0.3	1.62	0.426
Orthophosphate (Dissolved)	0.001 to 0.01						0.0224								
Phosphorus - Dissolved	0.002 to 0.02	0.0172	0.0145	0.03	0.0411	0.0353	0.0261	0.0325	0.0269	0.0397	0.0345	0.0544	0.0367	0.0335	0.0288
Phosphorus - Total	0.002 to 0.02	0.0296	0.02	0.0384	0.0495	0.0374	0.031	0.0364	0.0301		0.0375	0.0587	0.0449	0.844	0.116
Cyanide															
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals															
Aluminum	0.001 to 0.025	0.0044	0.0029	0.0019	0.0049	0.0015	<0.001	<0.001	<0.001	0.0012	0.0012	0.001	<0.001	0.0156	0.0066
Antimony	0.0001 to 0.0025	<0.0001	0.00012	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00052	0.00061	0.00072	0.00078	0.00072	0.00053	0.0005	0.00048	0.00049	0.00048	0.0005	0.00056	0.00061	0.00072
Barium	5E-005 to 0.02	0.0513	0.0589	0.0638	0.0703	0.0756	0.0815	0.0866	0.0913	0.0901	0.0965	0.0929	0.108	0.031	0.0451
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.015	0.019	0.027	0.039	0.042	0.039	0.041	0.042	0.037	0.04	0.035	0.044	<0.01	0.014
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	45.7	53.6	60.1	63.6	71.7	79.4	79	84.2	82.7	85.3	90.4	96.6	31.6	43.1
Chromium	0.0001 to 0.018	0.00015	0.00012	<0.0001	<0.0001	0.00011	<0.0001	<0.0001	0.00014	<0.0001	<0.0001	<0.0001	<0.0001	0.00015	0.00015
Cobalt	0.0001 to 0.0015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	0.0002 to 0.006	0.0035	0.00301	0.00274	0.00214	0.00137	0.00136	0.00113	0.00112	0.00105	0.00123	0.0016	0.00126	0.00391	0.00357
Dissolved Cadmium (by saltwater extr	0.00002														
Iron	0.01 to 0.03	<0.03	0.011	0.014	0.017	0.02	0.019	0.017	0.021	0.016	0.017	0.022	0.015	0.048	0.02
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00132	0.00143	0.00178	0.00255	0.003	0.00229	0.00251	0.00289	0.0022	0.00306	0.00285	0.00198	0.00093	0.00102
Magnesium	0.1	15.3	18.3	20.6	24.9	25.8	30.4	28.8	29.3	31.2	32.6	36	35.3	8.93	13.3
Manganese	5E-005 to 0.0015	0.00465	0.00655	0.0132	0.0159	0.0181	0.0212	0.0223	0.0236	0.0249	0.0236	0.0239	0.0302	0.00501	0.00363
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00935	0.00885	0.00935	0.00989	0.0101	0.00945	0.00839	0.00923	0.0088	0.00945	0.00884	0.00866	0.00982	0.00954
Nickel	0.0005 to 0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00053
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	<0.05	<0.3	<0.3	<0.05	<0.05	<0.05	0.056	<0.05	<0.05	<0.05
Potassium	0.05 to 2	2.24	2.6	2.94	3.72	4.04	3.71	4.04	4.17	4.16	4.69	6.53	4.92	2.1	2.35
Selenium	0.0001 to 0.006	0.00038	0.00053	0.00037	0.00034	0.00025	0.00023	0.00022	0.00028	0.00038	0.0005	0.00057	0.00133	0.00024	0.00023
Silicon	0.05	6.47	6.57	7.84	8.12	7.86	8.2	8.06	7.77	7.49	7.25	7.03	6.76	6.38	7.2
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	11.5	15.3	19.7	27.5	30.3	31	30.4	36.2	31	33.3	32.2	34.4	5.45	8.7
Strontium	0.0001 to 0.005	0.2	0.231	0.254	0.281	0.307	0.328	0.33	0.356	0.364	0.386	0.391	0.407	0.124	0.175
Sulphur	0.5								34.5	36.4	38.3	42.2	47.6	6.07	8.01
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.000318	0.000407	0.000434	0.000597	0.000578	0.000672	0.000659	0.000714	0.000771	0.000817	0.000877	0.00101	0.000169	0.000278
Vanadium	0.001 to 0.03	0.0015	0.0017	0.002	0.0021	0.0019	0.0016	0.0015	0.0015	0.0017	0.0017	0.0019	0.0021	0.0017	0.0019
Zinc	0.001 to 0.006	<0.003	0.0049	0.0029	0.0016	0.0019	<0.001	<0.001	<0.001	0.002	0.0011	<0.001	0.0019	<0.001	0.0015
Total Metals															
Aluminum	0.003 to 0.025	0.107	0.0575	0.0987	0.0829	0.0382	0.0172	0.0231	0.0146	0.0093	0.0168	0.0062	0.0159	7.23	0.581
Antimony	0.0001 to 0.0025	0.00011	<0.0001	0.0001	0.00012	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	0.00011	<0.0001	<0.0001	0.0002	0.00013
Arsenic	0.0001 to 0.0025	0.00059	0.00064	0.00073	0.00075	0.00074	0.00054	0.00055	0.00046	0.0005	0.00049	0.00057	0.00053	0.00301	0.00096
Barium	5E-005 to 0.02	0.0546	0.0566	0.0648	0.0748	0.0773	0.0779	0.0913	0.0859	0.087	0.0965	0.0948	0.105	0.13	0.0558
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00017	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.021	0.023	0.03	0.047	0.048	0.039	0.046	0.043	0.04	0.045	0.038	0.048	0.011	0.017
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	0.000016	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000015	0.000012	0.000064	<0.00001
Calcium	0.05 to 0.1	46.8	50.3	61.8	63.3	71.9	75.9	79.4	80.4	82.5	88	94.5	93.3	39.2	43.1
Chromium	0.0001 to 0.005	0.00041	0.00027	0.00034	0.0003	0.00033	0.00016	0.00014	0.00019	0.00016	0.00018	0.00011	0.00015	0.0135	0.0012
Cobalt	0.0001 to 0.0015	0.00014	<0.0001	0.00015	0.00012	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00731	0.00058
Copper	0.0005 to 0.007	0.00469	0.00344	0.0035	0.00313	0.00229	0.00158	0.00154	0.00334	0.00142	0.00174	0.00175	0.00162	0.0483	0.00679
Iron	0.01 to 0.03	0.17	0.09	0.149	0.121	0.082	0.049	0.062	0.053	0.035	0.055	0.042	0.053	11	0.838
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	0.000051	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00132	0.000118
Lithium	0.0005 to 0.025	0.00154	0.00147	0.00176	0.00283	0.00298	0.00192	0.00281	0.00294	0.00241	0.00314	0.00315	0.00202	0.00472	0.00168
Magnesium	0.1	15.9	17.7	21	25	26.3	27	28.1	27.8	31.4	32.7	35.3	33.9	14.7	13.6
Manganese	5E-005 to 0.0015	0.00985	0.0102	0.0202	0.0249	0.0245	0.0251	0.0295	0.0272	0.0274	0.0277	0.0256	0.0336	0.381	0.0296
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000029	<0.00001
Molybdenum	5E-005 to 0.005	0.0101	0.00911	0.0102	0.0107	0.0107	0.00932	0.00914	0.00889	0.00939	0.0101	0.00968	0.0087	0.00835	0.0112
Nickel	0.0005 to 0.005	0.00057	<0.0005	0.00059	0.00057	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0122	0.00156
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	<0.05	<0.3	<0.3	<0.05	<0.05	<0.05	0.064	<0.05	0.816	0.081
Potassium	0.05 to 2	2.34	2.52	3	3.75	4.28	3.72	4.1	3.94	4.26	4.85	6.78	4.97	3.27	2.44
Selenium	0.0001 to 0.006	0.00043	0.00052	0.00037	0.00029	0.00022	0.00023	0.00024	0.00027	0.00052	0.00052	0.00057	0.00118	0.00042	0.00026
Silicon	0.05	6.87	6.21	8.25	8.35	8.13	7.8	8.16	7.47	7.57	7.34	7.16	6.67	21.1	8.41
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000043	0.000011
Sodium	0.05 to 2	12	14.9	20.2	27.2	31.7	30.2	30.9	29.9	31.6	34.2	32.6	33.4	5.73	9.14
Strontium	0.0001 to 0.005	0.208	0.229	0.262	0.303	0.319	0.319	0.345	0.329	0.357	0.39	0.417	0.404	0.156	0.184
Sulphur	0.5								34.3	37.4	40.4	44.8	47.2	6.16	8.29
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000028	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	0.012	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.245	0.024
Total Cadmium (by saltwater extractio	0.00002														
Uranium	1E-005 to 0.001	0.000343	0.00044	0.000473	0.000652	0.00061	0.00064	0.000684	0.000684	0.000809	0.000872	0.000957	0.001	0.000353	0.000306
Vanadium	0.001 to 0.03	0.0021	0.0021	0.0024	0.0026	0.0023	0.0017	0.0017	0.0017	0.0018	0.002	0.0022	0.0022	0.0319	0.0044
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0218	<0.003
Organics															
Carbon Organic (Dissolved)	0.5 to 5	10.4	9.33	7.97	6.7	5.81	5.77	5.49	4.79	4.56	4.45	5.32	5.42	11.9	12
Carbon Organic (Total)	0.5 to 5	10.6	9.47	8.06	6.91	5.82	5.75	5.51	4.88	4.41	4.53	5.25	5.48	13.2	12.9
Nitrogen Organic (Dissolved)	0.05 to 0.26	0.25	0.196	0.07	0.318	0.242	0.285	0.29	0.27				0.2		
Nitrogen Organic (Total)	0.05 to 0.3	0.298	0.281	0.266	0.234	0.223	0.233	0.231	0.212	0.193	0.261	0.322	0.279		
ALS LAB ID		**L1148880**	**L1152500**	**L1178283**	**L1191600**	**L1205273**	**L1222966**	**L1233797**	**L1245799**	**L1256678**	**l1265809**	**L1275746**	**L1285503**	**L1298960**	**L1311741**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes	MDL	CC02 2-Jul-13	CC02 6-Aug-13	CC02 3-Sep-13	CC02 8-Oct-13	CC02 6-Nov-13	CC02 4-Dec-13	CC02 10-Apr-14	CC02 10-Sep-14
In Situ Parameters									
Conductivity µS/cm	...	349	425		633	404	365	462	387
Oxygen Dissolved %	...	95.7	104	85.9	91.6	94.5	98	102	90.1
Oxygen Dissolved	...	9.27	10.4	9.1	10.3	12.2	14.3	12.9	10.3
pH (unitless)	...	8.19	8.13	8.17	8.24	8.38	8.06	8.41	8.25
Redox Potential mV	...	104	222	233	82.2	74.5	110	129	170
Salinity ppt	...	0.2	0.25	0.3	0.31	0.32	0.33	0.36	0.27
Specific Conductivity µS/cm	...	414	521	616	451	662	697	740	552
Temperature °C	...	16.9	15.3	12.7	9.96	4.65	0.04	5.28	9.36
Total Dissolved Solids	...	269	339	400	412	430	453	481	359
Turbidity NTU	...	3	1.2		0	1.2	0.6	0.6	
Physical Tests									
Acidity to pH 8.3 (as CaCO3)	1					<1			
Alkalinity (Total as CaCO3)	1 to 2	170	209	267	276	287	291	312	267
Bicarbonate Alkalinity	1 to 2	164	202	263		283	291	290	263
Carbonate Alkalinity	1 to 2	6.4	7.5	3.6		3.8	<2	21.3	4.3
Color TCU	5	25.4	12.2	9.8	9.3	7.9	6.2		
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	194	233	263	301	298	312	379	275
Hydroxide Alkalinity	1 to 2	<1	<1	<1		<1	<2	<1	<1
pH (unitless)	0.01 to 0.1	8.37	8.41	8.41	8.46	8.37	8.18	8.42	8.32
Specific Conductivity µS/cm	2	391	505	580	611	666	623	762	567
Total Dissolved Solids	1 to 2	272	334	380	391	431	428	513	381
Total Suspended Solids	3	10.9	<3	<3	<3	<3	<3	<3	<3
Turbidity NTU	0.1	1.56	0.66	1.13	0.75	1.31	0.67	1.69	0.7
Dissolved Anions									
Bromide	0.05 to 2.495	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.25	<0.05
Chloride	0.5 to 1	2.38	2.86	3.25	3.75	5	3.95	6.5	2.76
Fluoride	0.02 to 0.4	0.126	0.13	0.13	0.136	0.12	0.132	0.11	0.142
Sulphate	0.5 to 1	31	56	66.1	73.8	85.2	85.9	125	67.3
Nutrients									
Ammonia (Total)	0.005 to 0.05	0.0087	0.0103	0.0106	0.006	0.0102	0.0279	0.0109	0.0073
Nitrate (as N)	0.005 to 0.1	0.0625	0.0719	0.166	0.16	0.311	0.402	0.552	0.145
Nitrite (as N)	0.001 to 0.02	<0.001	<0.001	<0.001	0.0018	0.0056	0.0032	0.0058	<0.001
Nitrogen (Dissolved)	0.05 to 0.1		0.361	0.375					
Nitrogen (Total)	0.0025 to 0.11	0.453	0.377	0.394	0.36	0.499			
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.391	0.277	0.332	0.237	0.285	0.27	0.331	0.24
Orthophosphate (Dissolved)	0.001 to 0.01				0.0185	0.0195	0.0408	0.0336	0.038
Phosphorus - Dissolved	0.002 to 0.02	0.058	0.0206	0.0326		0.0216	0.0454	0.0381	
Phosphorus - Total	0.002 to 0.02	0.0343	0.0343	0.0368	0.0276	0.0278	0.049	0.0498	0.0508
Cyanide									
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals									
Aluminum	0.001 to 0.025	0.0035	0.0015	0.0015	0.0019	<0.001	<0.001	<0.001	<0.001
Antimony	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00091	0.00079	0.00073	0.00066	0.00057	0.00047	0.00054	0.00066
Barium	5E-005 to 0.02	0.0564	0.07	0.0791	0.0846	0.0921	0.0863	0.0937	0.0773
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.02	0.036	0.044	0.042	0.043	0.039	0.038	0.041
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	49.9	58.3	64.7	76.5	75.6	75.9	94.2	68.1
Chromium	0.0001 to 0.018	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	0.0002 to 0.006	0.00297	0.00223	0.00177	0.00139	0.00115	0.00101	0.00152	0.00126
Dissolved Cadmium (by saltwater extr	0.00002								
Iron	0.01 to 0.03	0.017	0.018	0.018	0.017	0.015	0.013	0.017	0.022
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00133	0.00212	0.00353	0.00161	0.00296	0.00268	0.00261	0.00211
Magnesium	0.1	16.7	21.3	24.8	26.6	26.6	29.7	34.8	25.4
Manganese	5E-005 to 0.0015	0.00726	0.0129	0.0148	0.0154	0.0213	0.0194	0.0275	0.0223
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.01	0.0105	0.0104	0.00958	0.00861	0.0098	0.00908	0.0093
Nickel	0.0005 to 0.005	0.00052	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Phosphorus	0.05 to 0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	0.05 to 2	3.05	3.56	4.02	4.15	4.38	4.24	4.91	3.57
Selenium	0.0001 to 0.006	0.00023	0.00027	0.00027	0.00026	0.00026	0.00038	0.00098	0.00034
Silicon	0.05	7.77	7.9	8.36	7.98	8.29	7.89	6.54	7.97
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	12.8	24.4	30.7	30.6	31.3	28.7	32.5	26.2
Strontium	0.0001 to 0.005	0.221	0.27	0.297	0.322	0.325	0.33	0.377	0.293
Sulphur	0.5	10.2	18.1	21.4	24.1	29	28	42.4	22
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.000363	0.000537	0.000618	0.000586	0.000638	0.000716	0.000979	0.000545
Vanadium	0.001 to 0.03	0.0022	0.0023	0.0022	0.002	0.0016	0.0016	0.0023	0.0018
Zinc	0.001 to 0.006	0.0017	0.0011	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Metals									
Aluminum	0.003 to 0.025	0.283	0.0505	0.0372	0.0268	0.0429	0.0263	0.0383	0.0305
Antimony	0.0001 to 0.0025	0.00014	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	0.00011	0.00012
Arsenic	0.0001 to 0.0025	0.00101	0.00079	0.00069	0.00068	0.00068	0.00051	0.00059	0.00065
Barium	5E-005 to 0.02	0.0605	0.0734	0.076	0.0886	0.0946	0.0886	0.0958	0.074
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.023	0.043	0.047	0.046	0.043	0.042	0.042	0.045
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	50.2	61.9	65.8	76.5	78	78	93.5	64.7
Chromium	0.0001 to 0.005	0.0006	0.00033	0.00019	0.00017	0.00023	0.00015	0.00019	0.00016
Cobalt	0.0001 to 0.0015	0.00031	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	<0.0001
Copper	0.0005 to 0.007	0.00491	0.00288	0.00212	0.00176	0.00165	0.00136	0.0018	0.00153
Iron	0.01 to 0.03	0.425	0.097	0.093	0.068	0.098	0.062	0.085	0.084
Lead	5E-005 to 0.0025	0.000057	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00166	0.00222	0.00375	0.00162	0.00257	0.00278	0.00281	0.00191
Magnesium	0.1	17.3	22.5	25.2	26.7	28.8	29	34.8	24.5
Manganese	5E-005 to 0.0015	0.0231	0.0209	0.0221	0.0212	0.0318	0.0247	0.0312	0.0283
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.011	0.0114	0.0108	0.0102	0.00933	0.0102	0.0103	0.00905
Nickel	0.0005 to 0.005	0.00096	0.00052	<0.0005	<0.0005	0.00052	<0.0005	<0.0005	<0.0005
Phosphorus	0.05 to 0.3	0.053	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.056
Potassium	0.05 to 2	3.22	3.84	4.06	4.13	5.31	4.53	4.91	3.49
Selenium	0.0001 to 0.006	0.00025	0.00026	0.00025	0.00025	0.00023	0.00037	0.00088	0.0003
Silicon	0.05	8.63	8.32	8.41	8.17	8.56	8.06	6.7	7.88
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	13.3	25.6	31.2	31.7	31.7	29.5	33.4	25
Strontium	0.0001 to 0.005	0.236	0.292	0.304	0.334	0.336	0.333	0.409	0.284
Sulphur	0.5	10.2	19.5	22.3	25.1	30.6	29.1	44	22.1
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	0.012	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extractio	0.00002								
Uranium	1E-005 to 0.001	0.00039	0.000582	0.000639	0.000616	0.000676	0.000789	0.00109	0.00053
Vanadium	0.001 to 0.03	0.0034	0.0026	0.0024	0.0023	0.0023	0.0018	0.0027	0.002
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics									
Carbon Organic (Dissolved)	0.5 to 5	11	7.57	6.48	5.37	5.46	4.86	5.41	5.07
Carbon Organic (Total)	0.5 to 5	11.4	7.62	6.29	5.79	5.72	5	5.37	5.24
Nitrogen Organic (Dissolved)	0.05 to 0.26								
Nitrogen Organic (Total)	0.05 to 0.3								
ALS LAB ID		**L1326032**	**L1344180**	**L1357647**	**L1376311**	**L1388680**	**L1399806**	**L1442672**	**L1516193**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes	MDL	CC08 1-May-07	CC08 18-Jul-07	CC08 14-Sep-07	CC08 28-Apr-08	CC08 7-Jul-08	CC08 4-Sep-08	CC08 02/Sep/2010	CC08 22-Nov-10	CC08 28-Mar-11	CC08 14-Apr-11	CC08 21-Apr-11	CC08 28-Apr-11	CC08 5-May-11	CC08 12-May-11
In Situ Parameters															
Conductivity µS/cm	...	158	233	166	107	220	212	201	171	196	194	201	185	163	106
Oxygen Dissolved %	...				94.1	96.6	89.4	88.3	75.2	88.4	90.4	91.9	79.1	91.8	89.5
Oxygen Dissolved	...	11.8	10.2	12.9	13	10.6	9.85	10.3	10.9	12.2	12.5	15.9	11.5	12.5	12.1
pH (unitless)	...	8.34	7.82	8.6	8.2	8.16	8.21	7.91	7.48	8.85	8.18	8.14	8.05	8.26	7.85
Redox Potential mV	...	-72.6	-60.4			-106	-92.9	26	251	95.4	66.2	150	109	97.4	171
Salinity ppt	...							0.14				0.19	0.17	0.13	0.09
Specific Conductivity µS/cm	...	252	300	228	333	299	290	293	327	348	347	388	351	284	184
Temperature °C	...	5.46	13.3	10.3	2.02	11.3	11	8.65	0.07	2.13	1.9	-0.13	0.17	2.66	2.76
Total Dissolved Solids	...							190	212	226	225	254	228	185	119
Turbidity NTU	...														
Physical Tests															
Acidity to pH 8.3 (as CaCO3)	1														
Alkalinity (Total as CaCO3)	1 to 2	108	135	130	158	143	149	138	161	167	170	171	166	134	90.6
Bicarbonate Alkalinity	1 to 2								161			171			
Carbonate Alkalinity	1 to 2								<2			<2			
Color TCU	5	20.7	18.4	15.1	7.7	15.1	9.7	15.7	7.4	5.1	8.1	5.7	7.1	30.7	57.3
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	133	158	118	182	153	153	143	179	181	186	184	187	157	102
Hydroxide Alkalinity	1 to 2								<2			<2			
pH (unitless)	0.01 to 0.1	8.31	8.29	8.32	8.11	8.36	8.34	8.22	8.2	8.2	8.31	8.21	8.24	8.22	
Specific Conductivity µS/cm	2	230	280	232	333	290	292	266	322	329	320	328	316	269	186
Total Dissolved Solids	1 to 2	161	186	149	195	197	179	175	196	196	194	204	209	190	152
Total Suspended Solids	3	3	3.1	4.7	10.4	<3	<3	<3	<3	<3	<3	<3	<3	6	179
Turbidity NTU	0.1				3.08	0.22	0.51	0.37	0.32	0.17	0.18	0.38	0.26	1.82	54
Dissolved Anions															
Bromide	0.05 to 2.495	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.073	<0.05	<0.05	<0.05	<0.05	<0.05
Chloride	0.5 to 1	0.54	<0.5	0.55	0.95	0.66	0.62	0.58	0.83	0.99	1.04	1.15	0.98	1.1	0.6
Fluoride	0.02 to 0.4	0.067		0.069	0.094	0.083	0.076	0.066	0.066	0.067	0.074	0.084	0.072	0.055	0.057
Sulphate	0.5 to 1	14.6	13.4	3.4	25.3	11.3	8.4	7.4	15.6	14.6	15	15.3	15.5	13.9	9.16
Nutrients															
Ammonia (Total)	0.005 to 0.05	<0.02	0.03	0.031	<0.02	<0.02	0.036	<0.005	<0.005	<0.005	0.0064	<0.005	0.0074	<0.005	0.0082
Nitrate (as N)	0.005 to 0.1	0.0082	0.0634	0.0379	0.167	0.0085	<0.005	0.006	<0.005	0.176	0.0936	0.0754	0.0613	0.0845	0.0352
Nitrite (as N)	0.001 to 0.02	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen (Dissolved)	0.05 to 0.1												0.37	0.33	0.43
Nitrogen (Total)	0.0025 to 0.11							0.351	0.112	0.3	0.222	0.19	0.219	0.42	0.95
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.232	0.307	0.18	0.243	0.215	0.14	0.345	0.112	0.124	0.128	0.115	0.157	0.336	0.854
Orthophosphate (Dissolved)	0.001 to 0.01	0.0039	0.0109	0.0094	0.0076	0.0108	0.0117	0.0095	0.0104	0.0081					
Phosphorus - Dissolved	0.002 to 0.02			0.0122				0.0121			0.007	0.0051	0.0095	0.0149	0.0336
Phosphorus - Total	0.002 to 0.02	0.0105	0.0198	0.0194	0.0213	0.0226	0.0155	0.0121	0.0126	0.0104	0.0075	0.0072	0.0081	0.0266	0.241
Cyanide															
Cyanide (Free)	0.005				<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	0.0061	0.0065	0.006	<0.005	0.0061		0.0061	<0.005	<0.005		<0.005	<0.005	0.0069	0.0205
Cyanide (WAD)	0.005	<0.005			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Dissolved Metals															
Aluminum	0.001 to 0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0052	0.0317
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Barium	5E-005 to 0.02	0.04	0.043	0.04	0.055	0.055	0.052	0.052	0.058	0.052	0.052	0.051	0.05	0.042	0.029
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth	0.0005 to 0.2									<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	1E-005 to 8.5E-005	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	0.000027	0.000024	0.000023	0.000037	0.000036	0.00003	0.000024	0.000029	0.000028
Calcium	0.05 to 0.1	41.1	47.4	35.2	54.1	45.7	45.9	42.9	53.7	53.5	54.9	54.5	55.5	47.4	30.5
Chromium	0.0001 to 0.018	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	0.0001 to 0.0015	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Copper	0.0002 to 0.006	0.0025	0.0026	0.0024	0.0016	0.0029	0.0025	0.0029	0.0018	0.0016	0.0016	0.0017	0.0016	0.0027	0.004
Dissolved Cadmium (by saltwater extr	0.00002														
Iron	0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.098
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Lithium	0.0005 to 0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Magnesium	0.1	7.48	9.68	7.31	11.3	9.54	9.28	8.75	11	11.4	11.8	11.6	11.7	9.45	6.39
Manganese	5E-005 to 0.0015	<0.0003	0.00144	0.0007	0.00033	0.00159	0.00074	0.00071	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.00047	0.00206
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0122	0.0111	0.0057	0.0103	0.0106	0.0087	0.0079	0.0086	0.0095	0.0096	0.0096	0.0099	0.0086	0.0072
Nickel	0.0005 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Phosphorus	0.05 to 0.3									<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Selenium	0.0001 to 0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon	0.05									5.9	5.8	5.75	5.86	6.85	6.01
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	0.05 to 2	3.1	3.2	3.4	4.5	4.2	4	3.8	4.5	5.1	5.3	5.1	5.1	3.8	2.9
Strontium	0.0001 to 0.005									0.159	0.158	0.157	0.156	0.132	0.0865
Sulphur	0.5														
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	0.00051	<0.0002	<0.0002	<0.0002	0.00026	0.00049	0.0005	0.00052	0.00052	0.00028	<0.0002
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.03	<0.001	0.0013	0.0013	0.0012	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	0.001 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0076
Total Metals															
Aluminum	0.003 to 0.025	0.0391	0.0549	0.0339	0.0737	0.0106	<0.005	0.0083	<0.005	<0.005	<0.005	0.0135	0.0073	0.127	4.96
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00161
Barium	5E-005 to 0.02	0.039	0.04	0.041	0.051	0.056	0.052	0.051	0.054	0.051	0.052	0.053	0.052	0.045	0.096
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth	0.0005 to 0.2									<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	1E-005 to 8.5E-005	<0.000017	<0.000017	0.00002	0.000034	<0.000017	0.000027	0.000031	0.000027	<0.000017	<0.000017	<0.000017	<0.000017	0.000034	0.000064
Calcium	0.05 to 0.1	39.4	45	34.5	51.7	45.8	45.6	43.9	52.3	52.3	54	53.4	54.4	47.4	36.3
Chromium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0085
Cobalt	0.0001 to 0.0015	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.00419
Copper	0.0005 to 0.007	0.0028	0.003	0.0027	0.0027	0.003	0.0025	0.0032	0.0019	0.0017	0.0017	0.0019	0.0018	0.0033	0.0285
Iron	0.01 to 0.03	0.068	0.092	0.06	0.121	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.208	6.71
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00068
Lithium	0.0005 to 0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Magnesium	0.1	7.32	9.17	7.21	10.9	9.56	9.44	8.98	10.6	11.2	11.8	11.7	11.6	9.56	10.2
Manganese	5E-005 to 0.0015	0.00225	0.00458	0.00375	0.00515	0.00194	0.00103	0.00126	0.00058	<0.0003	<0.0003	<0.0009	0.00042	0.00528	0.248
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	0.000494	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0125	0.0109	0.0057	0.0099	0.0105	0.0087	0.0092	0.0092	0.0103	0.0111	0.0109	0.0109	0.0096	0.0081
Nickel	0.0005 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0059
Phosphorus	0.05 to 0.3									<0.3	<0.3	<0.3	<0.3	<0.3	0.66
Potassium	0.05 to 2	<2	<2	<2	<2	<2	<2	<2	<2	<2	2.1	<2	<2	<2	2.5
Selenium	0.0001 to 0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon	0.05									5.73	5.72	5.77	5.84	7.12	15.4
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	0.000028
Sodium	0.05 to 2	3.1	3	3.3	4.2	4.1	4.1	3.8	4.4	5	5.6	5.2	5.2	3.9	3.1
Strontium	0.0001 to 0.005									0.158	0.159	0.161	0.158	0.136	0.11
Sulphur	0.5														
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.012	0.242
Total Cadmium (by saltwater extractic	0.00002														
Uranium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	0.00053	<0.0002	<0.0002	<0.0002	0.00028	0.00053	0.00056	0.00054	0.00056	0.00031	0.00024
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.03	0.0014	0.0013	0.0013	0.0014	0.001	0.001	0.0011	<0.001	<0.001	0.0014	0.0213
Zinc	0.003 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0145
Organics															
Carbon Organic (Dissolved)	0.5 to 5		8.52	8.21	5.8	7.89	6.81	7.06	5.31	4.83	4.87	4.61	4.57	13.4	17.4
Carbon Organic (Total)	0.5 to 5	9.52									4.62	4.8	4.66	13.5	22.4
Nitrogen Organic (Dissolved)	0.05 to 0.26												0.301	0.242	0.387
Nitrogen Organic (Total)	0.05 to 0.3										0.122		0.15	0.332	0.846
ALS LAB ID		**L501128**	**L532402**	**L554763**	**L623545**	**L652819**	**L678833**	**L927930**	**L956921**	**L990458**	**L995583**	**L997645**	**L999654**	**L1002049**	**L1005044**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes		MDL	CC08 30-May-11	CC08 28-Jun-11	CC08 28-Jul-11	CC08 1-Sep-11	CC08 27-Sep-11	CC08 26-Apr-12	CC08 4-May-12	CC08 10-May-12	CC08 16-May-12	CC08 24-May-12	CC08 12-Jul-12	CC08 8-Aug-12	CC08 5-Sep-12	CC08 8-Jan-13
In Situ Parameters																
Conductivity µS/cm		...	129	219	215	167		97	109	116	120	122	203	212	176	179
Oxygen Dissolved %	...		76.4	92.6	89.9	92.7	84.4	95.8	88.9	92.4	88.4	90.1	92	88.2	98	85.6
Oxygen Dissolved	...		9.12	10.3	10.1	11.1	10.1	13.2	11.6	11.8	10.4	10.7	9.85	8.97	10.9	12.2
pH (unitless)		...	7.3	7.97	8.04	7.93	7.98	7.88	8.08	8.18	8.11	8.02	8.18	8.1	8.12	8.41
Redox Potential mV		...	436	194	76.5	100	157	124	120	164	152	141	114	109	96	84.1
Salinity ppt		...	0.09	0.14	0.14	0.12		0.08	0.09	0.09	0.08	0.09		0.13	0.12	0.16
Specific Conductivity µS/cm		...	193	301	301	250	256	172	181	189	177	182	268	265	243	330
Temperature °C		...	7.65	10.7	10.1	7.65	9.79	2.08	4.21	4.92	8.2	4.81	12.3	14.6	10.6	1.01
Total Dissolved Solids		...	126	195	195	162		112	118	123	115	118		172	158	214
Turbidity NTU		...	9.6		0.2	2.6		49.8	2.9	1.6	1.2	0.6	-2	0.6	0.3	0.1
Physical Tests																
Acidity to pH 8.3 (as CaCO3)		1			2.9										<1	
Alkalinity (Total as CaCO3)		1 to 2	97.4	143	153	124	138	82.4	81	90.6	94.2	103	131	144	125	156
Bicarbonate Alkalinity		1 to 2						82.4	81	90.6	94.2	103	131	142	125	156
Carbonate Alkalinity		1 to 2						<2	<2	<2	<1	<1	<1	2	<1	<2
Color TCU		5	55.8	25.9	19.9	22.9	17.7	58.6	49.3	42.8	42	33.6	25.2	21.6	20.4	5.7
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	104	151	162	130	136	89.4	100	100	98.4	106	143	148	136	164
Hydroxide Alkalinity		1 to 2						<2	<2	<2	<1	<1	<1	<1	<1	<2
pH (unitless)		0.01 to 0.1	8.09	8.3	8.25	8.23	8.2	8.15	8.1	8.26	8.17	7.58	8.35	8.33	8.38	8.23
Specific Conductivity µS/cm		2	183	267	296	232	253	172	178	191	186	196	260	263	237	281
Total Dissolved Solids		1 to 2	141	198	170	160	163	139	140	142	138	140	186	181	163	184
Total Suspended Solids		3	18.1	<3	<3	<3	<3	120	3.3	<3	3.5	<3	<3	<3	<3	<3
Turbidity NTU		0.1		0.32	0.41	0.37	0.33	34	1.66	1.05	0.68	0.39	0.41	0.49	0.42	0.24
Dissolved Anions																
Bromide		0.05 to 2.495	<0.25	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloride		0.5 to 1	<2.5	0.51	0.55	0.54	0.62	1.07	0.93	0.86	0.85	0.79	0.55	0.56	0.63	0.96
Fluoride		0.02 to 0.4	<0.1	0.086	0.097	0.081	0.087	0.066	0.07	0.068	0.07	0.073	0.091	0.094	0.084	0.083
Sulphate		0.5 to 1	8.1	8.83	8.84	6.45	4.56	9.9	13.2	12.4	10.3	10.2	8.97	10.5	5.94	10.7
Nutrients																
Ammonia (Total)		0.005 to 0.05	0.0159	<0.005	<0.005	0.0052	<0.005	0.0138	<0.005	0.0058	<0.005	<0.005	<0.005	<0.005	0.0057	<0.005
Nitrate (as N)		0.005 to 0.1	<0.025	0.0068	0.0163	0.0114	<0.005	0.0461	0.02	<0.005	<0.005	<0.005	0.0561	0.0264	0.0142	0.0075
Nitrite (as N)		0.001 to 0.02	<0.005	<0.001	<0.001	<0.001	<0.001	0.0032	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen (Dissolved)		0.05 to 0.1	0.41	0.35	0.31	0.32	0.17	0.57	0.3	0.29	0.29	0.2	0.13	0.34	0.29	0.14
Nitrogen (Total)		0.0025 to 0.11	0.64	0.35	0.32	0.33	0.231	0.921	0.44	0.351	0.328	0.323		0.283		0.181
Nitrogen Kjeldahl (Total)		0.05 to 0.2	0.64	0.343	0.304	0.281	0.231	0.871	0.42	0.351	0.328	0.323	0.28	0.256	0.23	0.132
Orthophosphate (Dissolved)		0.001 to 0.01	0.0084	0.0132	0.0139											
Phosphorus - Dissolved		0.002 to 0.02	0.0147	0.0157	0.0166	0.0112	0.0144	0.0369	0.018	0.0142	0.0134	0.01	0.0166	0.0126	0.0104	0.0131
Phosphorus - Total		0.002 to 0.02	0.0416	0.0171	0.0183	0.0127	0.0148	0.224	0.0278	0.0209	0.0169	0.012	0.0168	0.0145	0.0112	
Cyanide																
Cyanide (Free)		0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)		0.005	0.0132	0.0078	<0.005		0.0054	<0.005	0.0104	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)		0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																
Aluminum		0.001 to 0.025	0.0218	<0.005	<0.005	<0.005	<0.005	0.0219	0.0129	0.0118	0.0074	0.0059	0.0033	0.0023	0.0023	0.0012
Antimony		0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic		0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00038	0.00032	0.00031	0.00031	0.00031	0.00041	0.00043	0.00037	0.00037
Barium		5E-005 to 0.02	0.032	0.05	0.051	0.042	0.047	0.0287	0.03	0.0315	0.0323	0.033	0.045	0.0485	0.043	0.0464
Beryllium		0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium		1E-005 to 8.5E-005	0.00003	0.000042	0.000036	<0.000017	<0.000017	0.000013	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium		0.05 to 0.1	31.2	44.8	48.1	39	40.5	26.3	30.4	29.9	29.5	32.1	43.1	44.2	41.4	48.5
Chromium		0.0001 to 0.018	<0.001	<0.001	<0.001	<0.001	<0.001	0.00013	0.00018	0.00026	0.00016	0.00016	0.00011	<0.0001	0.00013	<0.0001
Cobalt		0.0001 to 0.0015	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper		0.0002 to 0.006	0.0043	0.0031	0.0028	0.003	0.0031	0.00372	0.00413	0.0037	0.00376	0.0035	0.00329	0.00295	0.00254	0.00154
Dissolved Cadmium (by saltwater extr		0.00002														
Iron		0.01 to 0.03	0.06	<0.03	<0.03	<0.03	<0.03	0.125	0.061	0.054	0.04	0.023	<0.01	<0.01	<0.01	<0.01
Lead		5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium		0.0005 to 0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0005	<0.0005	0.00064	0.00051	0.00055	0.00089	0.00088	0.00096	<0.0005
Magnesium		0.1	6.4	9.5	10.2	7.9	8.55	5.74	5.94	6.26	6.03	6.3	8.6	9.09	7.94	10.4
Manganese		5E-005 to 0.0015	0.00094	0.00068	0.00047	0.00053	0.00077	0.00571	0.00038	0.000329	0.000228	0.000224	0.000754	0.000728	0.000565	0.000102
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.0083	0.0088	0.0088	0.0079	0.0076	0.00728	0.0116	0.0104	0.00907	0.0084	0.00958	0.011	0.00794	0.00825
Nickel		0.0005 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	0.00062	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Phosphorus		0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.05	<0.05
Potassium		0.05 to 2	<2	<2	<2	<2	<2	1.75	1.31	1.2	1.25	1.2	1.52	1.58	1.62	1.61
Selenium		0.0001 to 0.006	<0.001	<0.001	<0.001	<0.001	<0.001	0.00019	0.00022	0.00013	0.00011	0.00011	0.00012	0.00013	<0.0001	<0.0001
Silicon		0.05	7.04	7.75	7.55	7.71	7.51	5.18	5.82	5.82	5.95	6.14	7.78	7.86	6.7	6.08
Silver		1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	3	4.2	4.3	3.3	3.8	2.52	2.59	2.53	2.73	2.85	3.73	3.85	3.38	4.06
Strontium		0.0001 to 0.005	0.0911	0.133	0.143	0.117	0.125	0.0757	0.0887	0.0837	0.0878	0.0883	0.129	0.128	0.115	0.149
Sulphur		0.5														3.73
Thallium		1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium		1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.000093	0.000075	0.000076	0.000062	0.000065	0.000113	0.000128	0.000102	0.000308
Vanadium		0.001 to 0.03	0.0011	0.0013	0.0012	0.001	0.0011	<0.001	<0.001	<0.001	<0.001	<0.001	0.0014	0.0013	0.0011	<0.001
Zinc		0.001 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.003	<0.003	<0.003	<0.003	0.0014	0.0059	<0.001	0.0016	<0.001
Total Metals																
Aluminum		0.003 to 0.025	0.492	0.0184	0.0161	0.018	<0.01	2.27	0.1	0.0638	0.0633	0.0221	0.0482	0.0185	0.0124	<0.003
Antimony		0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic		0.0001 to 0.0025	<0.0015	<0.0005	<0.0005	<0.0005	<0.0005	0.00093	0.00031	0.00031	0.00035	0.00033	0.00046	0.00045	0.00042	0.00045
Barium		5E-005 to 0.02	0.038	0.049	0.053	0.044	0.048	0.0627	0.03	0.0315	0.0336	0.0316	0.0453	0.0477	0.0427	0.0486
Beryllium		0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium		1E-005 to 8.5E-005	0.000033	0.000021	0.000039	<0.000017	<0.000017	0.000021	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium		0.05 to 0.1	31.2	43.7	48.2	39.2	41.4	28.8	29.9	29.2	29.8	30.4	44.2	42.3	41.1	48.9
Chromium		0.0001 to 0.005	0.0012	<0.001	<0.001	<0.001	<0.001	0.0044	0.00039	<0.0004	0.00057	0.00024	0.00033	0.00016	0.00029	0.00013
Cobalt		0.0001 to 0.0015	0.00041	<0.0003	<0.0003	<0.0003	<0.0003	0.00224	0.00012	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper		0.0005 to 0.007	0.0064	0.0034	0.0027	0.0032	0.0033	0.0165	0.00466	0.0155	0.00458	0.00354	0.00357	0.00343	0.00362	0.00207
Iron		0.01 to 0.03	0.67	<0.03	0.03	0.031	<0.03	3.5	0.181	0.124	0.106	0.045	0.039	0.033	0.025	<0.01
Lead		5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00037	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium		0.0005 to 0.025	<0.005	<0.005	<0.005	<0.005	<0.005	0.00157	<0.0005	0.00061	0.00061	<0.0005	0.00078	0.00099	0.0009	<0.0005
Magnesium		0.1	6.6	9.34	10.3	8.14	8.67	7.35	5.91	6.19	6.24	6.04	8.82	8.88	7.91	10.5
Manganese		5E-005 to 0.0015	0.0223	0.00151	0.00125	0.00137	0.00126	0.134	0.00345	0.00236	0.00237	0.00105	0.00181	0.0018	0.00143	0.00011
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000012	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.0093	0.01	0.0096	0.0087	0.0078	0.00759	0.0111	0.0107	0.00961	0.00875	0.0102	0.0119	0.00845	0.0087
Nickel		0.0005 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	0.00365	0.0006	0.0137	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Phosphorus		0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.05	<0.05
Potassium		0.05 to 2	<2	<2	<2	<2	<2	2.05	1.28	1.18	1.3	1.15	1.52	1.56	1.67	1.63
Selenium		0.0001 to 0.006	<0.004	<0.001	<0.001	<0.001	<0.001	0.00027	0.00016	0.00014	0.00012	0.00012	0.00014	0.00012	<0.0001	<0.0001
Silicon		0.05	7.92	7.64	7.57	7.9	7.66	9.73	5.89	5.8	6.19	5.79	7.94	7.82	6.75	6.06
Silver		1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	0.000023	0.000012	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	2.9	4.2	4.5	3.5	3.8	2.5	2.53	2.51	2.85	2.75	3.86	3.71	3.48	4.12
Strontium		0.0001 to 0.005	0.0929	0.134	0.148	0.123	0.13	0.0833	0.0818	0.0839	0.0897	0.0872	0.127	0.131	0.122	0.153
Sulphur		0.5														3.9
Thallium		1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01	0.034	<0.01	<0.01	<0.01	<0.01	0.112	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extractio		0.00002														
Uranium		1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.000171	0.000075	0.000079	0.000067	0.000072	0.000121	0.000138	0.000106	0.000318
Vanadium		0.001 to 0.03	0.0039	0.0015	0.0014	0.0011	0.0012	0.0107	0.0011	0.0011	0.0012	0.0011	0.0016	0.0015	0.0013	0.001
Zinc		0.003 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.005	0.0087	<0.003	0.0044	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics																
Carbon Organic (Dissolved)		0.5 to 5	18.3	12	9.86	10.8	9.65	16.6	14.8	11.8	13.4	12.2	10.2	9.13	8.97	4.21
Carbon Organic (Total)		0.5 to 5	19.2	12.2	9.96	10.9	9.51	16.8	14.7	11.8	13.6	12.6	10.4	9.36	8.83	4.26
Nitrogen Organic (Dissolved)		0.05 to 0.26	0.394	0.34	0.289	0.303	0.166	0.507	0.275	0.284	0.285	0.197	0.07	0.31	0.27	
Nitrogen Organic (Total)		0.05 to 0.3	0.624	0.34	0.299	0.313	0.186	0.857	0.42	0.345	0.328	0.323	0.28	0.256	0.224	0.132
ALS LAB ID			**L1011001**	**L1025075**	**L1038168**	**L1053400**	**L1065234**	**L1140194**	**L1143149**	**L1146570**	**L1148880**	**L1152500**	**L1178283**	**L1191600**	**L1205273**	**L1256678**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes		MDL	CC08 5-Feb-13	CC08 5-Mar-13	CC08 2-Apr-13	CC08 6-May-13	CC08 4-Jun-13	CC08 2-Jul-13	CC08 6-Aug-13	CC08 3-Sep-13	CC08 8-Oct-13	CC08 6-Nov-13	CC08 10-Apr-14	CC08 8-May-14	CC08 5-Jun-14	CC08 2-Jul-14
In Situ Parameters																
Conductivity µS/cm		...	177	279	205	121	168	241	195		305	192	172	133	149	201
Oxygen Dissolved %	...		85.4	93.2		85.7	91.8	93.2		80.3	87	87	7.97	95.1	76.3	83.1
Oxygen Dissolved	...		12	12.8		9.74	10.1	9.24		8.62	10.3	11.5	116	11.9	8.63	9.02
pH (unitless)		...	8.16	8.29	8.05	8.1	8.21	8.1	8.08	7.82	8.03	8.14	-0.9	8.62	8.28	8.26
Redox Potential mV		...	216	116	186	192	149	142	238	225	151	102	91.2	63.4	190	141
Salinity ppt		...	0.15	0.13	0.17	0.08	0.11	0.12	0.12	0.14	0.15	0.16	0.15	0.1	0.1	0.13
Specific Conductivity µS/cm		...	321	158	348	170	228	260	245	300	207	327	307	210	209	270
Temperature °C		...	1.53	2.26	3.44	9.69	11.2	15.7	14.3	12.1	8.12	3.35	2.06	5.8	9.91	11.6
Total Dissolved Solids		...	209	181	226	111	148	169	159	195	198	213	199	1365	136	175
Turbidity NTU		...	0.1	1.3	0	33.2	2.7	0	0.7		0	-0.1	12.6			
Physical Tests																
Acidity to pH 8.3 (as CaCO3)		1										<1				
Alkalinity (Total as CaCO3)		1 to 2	156	157	152	79.5	109	121	126	137	165	173	161	79.2	1770	143
Bicarbonate Alkalinity		1 to 2	156	150	152	79.5	109	118	126	137		173	161	79.2	948	143
Carbonate Alkalinity		1 to 2	<2	7.3	<1	<2	<2	2.9	<2	<1		<2	<2	<2	825	<1
Color TCU		5	5.3	5.1	6.6	46.1	40	34	26.7	16.1	9.2	9.7				
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	163	165	168	83.9	112	135	128	141	179	163	170	95.3	948	148
Hydroxide Alkalinity		1 to 2	<2	<1	<1	<2	<2	<1	<2	<1		<2	<2	<2	<1	<1
pH (unitless)		0.01 to 0.1	8.2	8.37	8.15	8.14	8.29	8.32	8.27	8.3	8.38	8.29	8.24	8	9.41	8.35
Specific Conductivity µS/cm		2	295	307	306	161	214	243	232	266	304	319	312	173	4880	262
Total Dissolved Solids		1 to 2	181	185	195	119	156	184	166	187	195	209	208	147	3940	154
Total Suspended Solids		3	<3	<3	<3	76.7	<3	<3	5.1	<3	<3	<3	<3	7.5	7.6	<3
Turbidity NTU		0.1	0.4	0.2	0.19	22.2	1.57	0.85	0.43	0.3	0.18	0.19	0.18	2.92	0.97	0.37
Dissolved Anions																
Bromide		0.05 to 2.495	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	1.4	<0.05
Chloride		0.5 to 1	1.02	1.06	1.03	0.64	0.53	<0.5	0.53	0.6	0.71	0.84	1.03	0.76	107	0.59
Fluoride		0.02 to 0.4	0.077	0.088	0.09	0.068	0.089	0.093	0.085	0.081	0.09	0.101	0.092	0.064	0.046	0.093
Sulphate		0.5 to 1	11.6	13.5	15.9	9.12	8.75	7.09	6.07	5.31	7.56	9.4	20.4	11	1390	8.4
Nutrients																
Ammonia (Total)		0.005 to 0.05	<0.005	<0.005	<0.005	0.0053	<0.005	0.0066	0.0065	0.0059	<0.005	<0.005	<0.005	0.0069	0.101	0.0063
Nitrate (as N)		0.005 to 0.1	0.0239	0.014	0.302	<0.005	0.0059	0.0405	0.0224	0.0459	<0.005	<0.005	0.207	0.0214	<0.1	0.0253
Nitrite (as N)		0.001 to 0.02	<0.001	<0.001	0.0011	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.02	<0.001
Nitrogen (Dissolved)		0.05 to 0.1	0.155	0.16	0.429				0.279	0.241						
Nitrogen (Total)		0.0025 to 0.11	0.141	0.122	0.47	0.683	0.288	0.378	0.29	0.246	0.15	0.141				
Nitrogen Kjeldahl (Total)		0.05 to 0.2	0.158	0.146	0.167	0.622	0.362	0.338	0.258	0.217	0.182	0.18	0.136	0.508	7.54	0.305
Orthophosphate (Dissolved)		0.001 to 0.01									0.0133	0.034	0.0065	0.0046	0.0097	0.0127
Phosphorus - Dissolved		0.002 to 0.02	0.0101	0.0088	0.009	0.0149	0.0145	0.0188	0.0112	0.0127		0.0371	0.0083	0.0158	0.0661	0.0152
Phosphorus - Total		0.002 to 0.02	0.0098	0.0097	0.0102	0.219	0.0194	0.0138	0.0146	0.0137	0.017	0.0381	0.0086	0.0353	0.0721	0.0194
Cyanide																
Cyanide (Free)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																
Aluminum		0.001 to 0.025	0.0011	<0.001	<0.001	0.0191	0.0076	0.0049	0.0035	0.002	0.0015	<0.001	<0.001	0.0247	<0.005	0.0036
Antimony		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00201	<0.0001
Arsenic		0.0001 to 0.0025	0.00036	0.00035	0.00035	0.0003	0.00034	0.00039	0.00041	0.00042	0.00046	0.00046	0.00036	0.00032	0.0195	0.00043
Barium		5E-005 to 0.02	0.047	0.0449	0.0475	0.0267	0.036	0.0447	0.0435	0.0508	0.0537	0.0595	0.0474	0.029	0.017	0.047
Beryllium		0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0025	<0.0005
Boron		0.01 to 0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.248	<0.01
Cadmium		1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001
Calcium		0.05 to 0.1	48.2	49.1	49.7	25.3	33.7	41	38.6	42	54.1	48	50.9	29.7	7.41	44.5
Chromium		0.0001 to 0.018	<0.0001	<0.0001	<0.0001	0.00017	0.00017	<0.0001	0.00012	<0.0001	<0.0001	<0.0001	<0.0001	0.00019	<0.0005	<0.0001
Cobalt		0.0001 to 0.0015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001
Copper		0.0002 to 0.006	0.00143	0.00146	0.00148	0.00373	0.00354	0.00323	0.0032	0.00281	0.00215	0.00167	0.00148	0.00426	<0.001	0.00326
Dissolved Cadmium (by saltwater extr		0.00002													<0.00002	
Iron		0.01 to 0.03	<0.01	<0.01	<0.01	0.055	0.027	0.02	0.013	<0.01	<0.01	<0.01	<0.01	0.068	<0.01	<0.01
Lead		5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00025	<0.00005
Lithium		0.0005 to 0.025	0.00082	0.00077	0.00053	<0.0005	<0.0005	<0.0005	<0.0005	0.001	<0.0005	0.00104	<0.0005	<0.0005	0.0668	0.00072
Magnesium		0.1	10.2	10.4	10.8	5.05	6.79	7.87	7.54	8.68	10.7	10.4	10.4	5.13	226	9.05
Manganese		5E-005 to 0.0015	0.000078	<0.00005	0.000197	0.000822	0.000382	0.000913	0.000756	0.000882	0.000631	0.00181	0.000132	0.000739	0.00095	0.000668
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.00911	0.00934	0.00991	0.00972	0.00974	0.0111	0.00902	0.00839	0.00808	0.00738	0.00928	0.01	0.00426	0.0096
Nickel		0.0005 to 0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0025	<0.0005
Phosphorus		0.05 to 0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.053	<0.05
Potassium		0.05 to 2	1.45	1.55	1.91	1.16	1.25	1.54	1.56	1.81	1.86	1.92	1.68	1.3	170	1.75
Selenium		0.0001 to 0.006	<0.0001	<0.0001	<0.0001	0.00013	0.00012	0.00011	0.00012	0.00011	<0.0001	<0.0001	0.0001	0.00017	<0.0005	0.00011
Silicon		0.05	5.84	5.83	5.58	5.87	6.81	7.57	7.4	7.45	7.43	7.28	5.78	5.99	0.185	7.22
Silver		1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001
Sodium		0.05 to 2	4.25	4.08	4.3	2.44	2.9	3.24	3.25	3.84	4.22	4.31	4.27	2.59	932	3.76
Strontium		0.0001 to 0.005	0.149	0.147	0.139	0.076	0.0983	0.124	0.112	0.126	0.148	0.154	0.139	0.0792	0.52	0.126
Sulphur		0.5	4.06	4.46	5.32	3.1	2.98	2.46	2.26	1.94	2.64	3.34	7.21	3.74	395	3
Thallium		1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01
Uranium		1E-005 to 0.001	0.000345	0.000372	0.000391	0.000049	0.000078	0.000107	0.000091	0.000122	0.000202	0.000252	0.000423	0.000065	0.00423	0.000136
Vanadium		0.001 to 0.03	<0.001	<0.001	<0.001	<0.001	0.0012	0.0012	0.0012	0.0012	0.0013	<0.001	<0.001	<0.001	<0.005	0.0012
Zinc		0.001 to 0.006	0.0022	<0.001	<0.001	0.0023	0.0014	0.0012	0.001	<0.001	<0.001	<0.001	0.0012	<0.001	<0.005	0.0026
Total Metals																
Aluminum		0.003 to 0.025	<0.003	<0.003	0.0041	1.76	0.103	0.0742	0.0578	0.0089	0.0134	0.007	<0.003	0.273	<0.015	0.013
Antimony		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	0.00011	0.00011	0.00012	<0.0001	<0.0001	<0.0001	0.00011	<0.0001	0.00011	0.00191	<0.0001
Arsenic		0.0001 to 0.0025	0.00035	0.00039	0.00035	0.00087	0.00039	0.00043	0.00042	0.00041	0.00052	0.00055	0.00035	0.00042	0.0191	0.00049
Barium		5E-005 to 0.02	0.047	0.0471	0.0471	0.0569	0.0369	0.0459	0.0446	0.0489	0.0546	0.0607	0.0474	0.0298	0.018	0.0479
Beryllium		0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0025	<0.0005
Boron		0.01 to 0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.242	<0.01
Cadmium		1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001
Calcium		0.05 to 0.1	49.6	51.2	48.8	27.8	34.8	40.2	40.6	42.6	51.8	50.5	50	28.8	7.58	44.8
Chromium		0.0001 to 0.005	0.00017	<0.0001	0.00013	0.00348	0.00037	0.00028	0.00029	0.00014	0.00016	0.00013	0.00011	0.00058	<0.0005	0.00014
Cobalt		0.0001 to 0.0015	<0.0001	<0.0001	<0.0001	0.00186	0.00013	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00025	<0.0005	<0.0001
Copper		0.0005 to 0.007	0.00195	0.0016	0.00177	0.0144	0.00439	0.00383	0.00376	0.00303	0.00271	0.00199	0.00179	0.00559	<0.0025	0.00336
Iron		0.01 to 0.03	<0.01	<0.01	<0.01	2.95	0.165	0.125	0.102	0.017	0.016	0.011	<0.01	0.408	0.025	0.021
Lead		5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	0.0003	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000053	<0.00025	<0.00005
Lithium		0.0005 to 0.025	0.00097	0.00087	0.0006	0.00162	0.00052	<0.0005	<0.0005	0.00184	<0.0005	0.00093	0.00076	<0.0005	0.0695	0.00074
Magnesium		0.1	10.6	10.8	10.7	6.53	6.98	7.9	7.98	8.88	10.3	11.2	10.1	5.17	228	9.41
Manganese		5E-005 to 0.0015	0.000169	<0.00005	0.000423	0.112	0.00518	0.00472	0.00368	0.00164	0.00161	0.00243	0.000191	0.0111	0.00116	0.00129
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.00963	0.00993	0.0105	0.00932	0.0108	0.0116	0.00969	0.009	0.009	0.00833	0.0102	0.0103	0.00437	0.0105
Nickel		0.0005 to 0.005	<0.0005	<0.0005	<0.0005	0.00297	0.00068	0.00052	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00079	<0.0025	<0.0005
Phosphorus		0.05 to 0.3	<0.05	<0.05	<0.05	0.262	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.074	<0.05
Potassium		0.05 to 2	1.5	1.6	1.94	1.51	1.27	1.59	1.71	1.87	1.78	2.24	1.62	1.34	176	1.77
Selenium		0.0001 to 0.006	<0.0001	<0.0001	<0.0001	0.00017	0.00013	0.00013	0.00012	0.00012	<0.0001	<0.0001	<0.0001	0.00017	<0.0005	0.00013
Silicon		0.05	5.97	5.88	5.61	9.36	7.17	7.72	7.73	7.38	7.18	7.48	5.69	6.29	0.217	7.44
Silver		1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	0.000019	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000011	<0.00005	<0.00001
Sodium		0.05 to 2	4.38	4.33	4.52	2.45	3.03	3.25	3.33	3.89	4.42	4.43	4.32	2.49	983	3.9
Strontium		0.0001 to 0.005	0.162	0.155	0.147	0.0824	0.106	0.128	0.119	0.131	0.155	0.169	0.148	0.0792	0.53	0.13
Sulphur		0.5	4.18	4.71	5.45	3.1	3.1	2.49	2.36	1.99	2.71	3.57	7.09	3.72	430	3.17
Thallium		1E-005 to 0.001	<0.00001	<0.00001	<0.00001	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	<0.0005	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	0.079	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.012	<0.05	<0.01
Total Cadmium (by saltwater extractio		0.00002													<0.00002	
Uranium		1E-005 to 0.001	0.000342	0.000402	0.000411	0.000099	0.000086	0.000109	0.000097	0.00013	0.000216	0.000275	0.000428	0.000075	0.00436	0.00015
Vanadium		0.001 to 0.03	0.001	0.0012	<0.001	0.0089	0.0016	0.0016	0.0016	0.0014	0.0014	0.0015	<0.001	0.0017	<0.005	0.0015
Zinc		0.003 to 0.006	0.0055	<0.003	<0.003	0.0075	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.015	<0.003
Organics																
Carbon Organic (Dissolved)		0.5 to 5	3.8	4.09	4.47	12.4	12.9	12.6	10.9	8.34	5.69	6.08	5.1	14.4	122	8.76
Carbon Organic (Total)		0.5 to 5	3.67	4.12	4.26	12.2	14.2	12.9	11.1	8.34	5.7	6.39	5.14	14.5	128	9.85
Nitrogen Organic (Dissolved)		0.05 to 0.26			0.122											
Nitrogen Organic (Total)		0.05 to 0.3	0.158	0.146	0.167											
ALS LAB ID			**I1265809**	**L1275746**	**L1285503**	**L1298960**	**L1311741**	**L1326032**	**L1344180**	**L1357647**	**L1376311**	**L1388680**	**L1442672**	**L1453031**	**L1466627**	**L1481215**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes		MDL	CC08 28-Jul-14	CC08 2-Sep-14
In Situ Parameters				
Conductivity µS/cm		...	185	
Oxygen Dissolved %	...		68.5	
Oxygen Dissolved	...		7.47	
pH (unitless)		...	8.23	8.16
Redox Potential mV		...	64.4	
Salinity ppt		...	0.12	
Specific Conductivity µS/cm		...	249	
Temperature °C		...	11.5	11.1
Total Dissolved Solids		...	162	
Turbidity NTU		...		
Physical Tests				
Acidity to pH 8.3 (as CaCO3)		1		
Alkalinity (Total as CaCO3)		1 to 2	129	143
Bicarbonate Alkalinity		1 to 2	129	142
Carbonate Alkalinity		1 to 2	<2	<1
Color TCU		5		
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	141	146
Hydroxide Alkalinity		1 to 2	<2	<1
pH (unitless)		0.01 to 0.1	8.24	8.31
Specific Conductivity µS/cm		2	252	263
Total Dissolved Solids		1 to 2	166	180
Total Suspended Solids		3	<3	<3
Turbidity NTU		0.1	0.49	0.29
Dissolved Anions				
Bromide		0.05 to 2.495	<0.05	<0.05
Chloride		0.5 to 1	<0.5	0.53
Fluoride		0.02 to 0.4	0.094	0.091
Sulphate		0.5 to 1	6.43	7.08
Nutrients				
Ammonia (Total)		0.005 to 0.05	<0.005	0.0058
Nitrate (as N)		0.005 to 0.1	0.0408	0.0351
Nitrite (as N)		0.001 to 0.02	<0.001	<0.001
Nitrogen (Dissolved)		0.05 to 0.1		
Nitrogen (Total)		0.0025 to 0.11		
Nitrogen Kjeldahl (Total)		0.05 to 0.2	0.241	0.226
Orthophosphate (Dissolved)		0.001 to 0.01	0.009	0.0096
Phosphorus - Dissolved		0.002 to 0.02	0.0125	0.0129
Phosphorus - Total		0.002 to 0.02	0.0128	0.0091
Cyanide				
Cyanide (Free)		0.005	<0.005	<0.005
Cyanide (Total)		0.005	<0.005	<0.005
Cyanide (WAD)		0.005	<0.005	<0.005
Dissolved Metals				
Aluminum		0.001 to 0.025	0.0029	0.0019
Antimony		0.0001 to 0.0025	<0.0001	<0.0001
Arsenic		0.0001 to 0.0025	0.0004	0.00043
Barium		5E-005 to 0.02	0.0443	0.0493
Beryllium		0.0001 to 0.005	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005
Boron		0.01 to 0.1	<0.01	<0.01
Cadmium		1E-005 to 8.5E-005	<0.00001	<0.00001
Calcium		0.05 to 0.1	42.3	43.6
Chromium		0.0001 to 0.018	<0.0001	<0.0001
Cobalt		0.0001 to 0.0015	<0.0001	<0.0001
Copper		0.0002 to 0.006	0.0029	0.00266
Dissolved Cadmium (by saltwater extr		0.00002		
Iron		0.01 to 0.03	<0.01	<0.01
Lead		5E-005 to 0.0025	<0.00005	<0.00005
Lithium		0.0005 to 0.025	0.00078	0.00089
Magnesium		0.1	8.45	8.93
Manganese		5E-005 to 0.0015	0.000536	0.000572
Mercury		1E-005 to 5E-005	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.00961	0.00897
Nickel		0.0005 to 0.005	<0.0005	<0.0005
Phosphorus		0.05 to 0.3	<0.05	<0.05
Potassium		0.05 to 2	1.81	1.75
Selenium		0.0001 to 0.006	0.0001	<0.0001
Silicon		0.05	7.23	7.35
Silver		1E-005 to 0.0001	<0.00001	<0.00001
Sodium		0.05 to 2	3.54	3.56
Strontium		0.0001 to 0.005	0.124	0.133
Sulphur		0.5	2.35	2.6
Thallium		1E-005 to 0.001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01
Uranium		1E-005 to 0.001	0.000119	0.000124
Vanadium		0.001 to 0.03	0.0011	0.0011
Zinc		0.001 to 0.006	<0.001	<0.001
Total Metals				
Aluminum		0.003 to 0.025	0.018	0.022
Antimony		0.0001 to 0.0025	<0.0001	<0.0001
Arsenic		0.0001 to 0.0025	0.00041	0.0004
Barium		5E-005 to 0.02	0.0418	0.0489
Beryllium		0.0001 to 0.005	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005
Boron		0.01 to 0.1	<0.01	<0.01
Cadmium		1E-005 to 8.5E-005	<0.00001	<0.00001
Calcium		0.05 to 0.1	38.5	42.9
Chromium		0.0001 to 0.005	0.00018	0.00022
Cobalt		0.0001 to 0.0015	<0.0001	<0.0001
Copper		0.0005 to 0.007	0.003	0.00297
Iron		0.01 to 0.03	0.024	0.038
Lead		5E-005 to 0.0025	<0.00005	<0.00005
Lithium		0.0005 to 0.025	0.00071	0.00082
Magnesium		0.1	7.82	8.81
Manganese		5E-005 to 0.0015	0.00125	0.00221
Mercury		1E-005 to 5E-005	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.00877	0.00972
Nickel		0.0005 to 0.005	0.00054	<0.0005
Phosphorus		0.05 to 0.3	<0.05	<0.05
Potassium		0.05 to 2	1.74	1.76
Selenium		0.0001 to 0.006	0.00011	<0.0001
Silicon		0.05	6.68	7.28
Silver		1E-005 to 0.0001	<0.00001	<0.00001
Sodium		0.05 to 2	3.29	3.63
Strontium		0.0001 to 0.005	0.111	0.14
Sulphur		0.5	2.17	2.64
Thallium		1E-005 to 0.001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01
Total Cadmium (by saltwater extractio		0.00002		
Uranium		1E-005 to 0.001	0.000111	0.000131
Vanadium		0.001 to 0.03	0.0012	0.0013
Zinc		0.003 to 0.006	<0.003	<0.003
Organics				
Carbon Organic (Dissolved)		0.5 to 5	8.73	8.03
Carbon Organic (Total)		0.5 to 5	8.66	7.61
Nitrogen Organic (Dissolved)		0.05 to 0.26		
Nitrogen Organic (Total)		0.05 to 0.3		
ALS LAB ID			**L1494516**	**L1511703**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C2.12 - EDITH-01D
PAGE 1 OF 1

Analytes	MDL	EDITH-01D 30-Apr-14	EDITH-01D 14-May-14	EDITH-01D 27-May-14	EDITH-01D 10-Jun-14	EDITH-01D 27-Jun-14	EDITH-01D 8-Jul-14	EDITH-01D 22-Jul-14	EDITH-01D 7-Aug-14	EDITH-01D 20-Aug-14	EDITH-01D 14-Sep-14	EDITH-01D 30-Sep-14
In Situ Parameters												
Conductivity µS/cm	...	527	677	712	720	765	642	875	614	614	660	1148
Oxygen Dissolved %	...		76.5	87.8	92.3		1.6	81.4	5.1	2.7	3.4	4.4
Oxygen Dissolved	...		8.13	9	8.99		0.17	7.38	0.61	0.33	0.41	0.53
pH (unitless)	...	8.14	8.81	8.75	8.76	8.81	8.12	7.88	8.03	7.65	7.26	7.41
Redox Potential mV	...	0.8	71.3	49.9	27.8	-52.6	88.5	-49.2	-105	-161	272	-279
Salinity ppt	...	0.39	0.44	0.44	0.42	0.44	0.46	0.43	0.46	0.47	0.51	0.89
Specific Conductivity µS/cm	...	798	885	897	859	883	921	792	926	956	1021	1765
Temperature °C	...	7.23	12.7	14.3	16.6	17.9	9.12	20	7.51	6.27	6.49	6.7
Total Dissolved Solids	...	518	575	584	559	574	600	569	603	622	664	1461
Turbidity NTU	...	-0.9	-0.3	-0.4	0.8	3.7	3.2	1.5	2.5	2.2	2.6	-8.7
Physical Tests												
Acidity to pH 8.3 (as CaCO3)	1											
Alkalinity (Total as CaCO3)	1 to 2	400	394	390	401	413	418	409	419	442	426	552
Bicarbonate Alkalinity	1 to 2	368	356	370	383	404	410	379	406	442	377	552
Carbonate Alkalinity	1 to 2	31.9	38.1	20.4	18.3	9.4	8.3	29.8	12.7	<2	49.3	<20
Color TCU	5											
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	393	383	401	402	389	397	397	388	422	407	407
Hydroxide Alkalinity	1 to 2	<1	<1	<1	<1	<1	<1	<1	<1	<2	<1	<20
pH (unitless)	0.01 to 0.1	8.61	8.77	8.46	8.45	8.34	8.34	8.36	8.37	8.17	8.75	8.25
Specific Conductivity µS/cm	2	871	880	880	900	900	912	872	916	969	898	954
Total Dissolved Solids	1 to 2	371	533	527	518	533	526	527	540	568	546	565
Total Suspended Solids	3	6.9	<3	<3	<3	<3	<3	<3	5.8	4.5	<3	<3
Turbidity NTU	0.1	1.56	1.2	0.5	0.5	1.11	3.9	3.73	2.81	4.62	1.09	43.3
Dissolved Anions												
Bromide	0.05 to 2.495	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	0.5 to 1	52	48.4	51.6	50.3	50.8	48.6	47.9	49.4	49.4	50.2	50.4
Fluoride	0.02 to 0.4	0.21	0.21	0.25	0.23	0.24	0.33	0.242	0.42	0.228	0.248	0.246
Sulphate	0.5 to 1	39.7	40.6	42.7	42.6	41.3	41.2	40.5	41.9	27.5	41.9	25.6
Nutrients												
Ammonia (Total)	0.005 to 0.05	0.0169	0.0163	0.147	0.238	0.32	0.402	0.322	0.152	2.42	0.0186	1.87
Nitrate (as N)	0.005 to 0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.051	<0.05
Nitrite (as N)	0.001 to 0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen (Dissolved)	0.05 to 0.1											
Nitrogen (Total)	0.0025 to 0.11											
Nitrogen Kjeldahl (Total)	0.05 to 0.2	1.58	1.58	1.44	1.5	1.72	1.61	1.99	1.7	3.64	1.44	3.2
Orthophosphate (Dissolved)	0.001 to 0.01	0.0023	0.0019	0.0236	0.0532	0.0772	0.0367	<0.001	<0.001	0.434	0.0011	0.32
Phosphorus - Dissolved	0.002 to 0.02	0.0254	0.0245	0.0467	0.0746	0.117	0.0607	0.021	0.0198	0.502	0.0197	0.375
Phosphorus - Total	0.002 to 0.02	0.0732	0.0535	0.0495	0.0806	0.12	0.12	0.0528	0.054	0.504	0.038	0.34
Cyanide												
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals												
Aluminum	0.001 to 0.025	<0.001	<0.001	0.0011	0.001	0.0016	0.0011	0.0041	0.0023	0.0014	0.0037	0.002
Antimony	0.0001 to 0.0025	0.00011	0.00012	0.00011	0.00012	0.0001	0.00011	0.00014	0.00012	<0.0001	0.00013	<0.0001
Arsenic	0.0001 to 0.0025	0.00151	0.00145	0.0015	0.00151	0.0014	0.00149	0.00166	0.00158	0.00154	0.00161	0.00159
Barium	5E-005 to 0.02	0.0537	0.0486	0.0496	0.0508	0.0541	0.0549	0.0488	0.0572	0.066	0.0506	0.0679
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.015	0.018	0.019	0.018	0.017	0.019	0.016	0.018	0.017	0.016	0.019
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	40.2	41.1	41.7	41.5	41.7	42	39	42	45.8	39.8	43.7
Chromium	0.0001 to 0.018	<0.0001	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00012	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015	0.0001	<0.0001	0.00011	0.00011	0.0001	0.00012	0.00014	0.0001	0.00011	0.00012	0.00011
Copper	0.0002 to 0.006	0.00124	0.00099	0.00172	0.0047	0.00081	0.00104	0.0016	0.0014	0.00027	0.00152	<0.0002
Dissolved Cadmium (by saltwater extr	0.00002											
Iron	0.01 to 0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.016	<0.01	0.012
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.0111	0.0117	0.0115	0.0123	0.0108	0.0127	0.0113	0.012	0.0117	0.0109	0.0123
Magnesium	0.1	71.1	68.1	72.1	72.4	69.1	70.9	72.7	68.8	74.6	74.6	72.3
Manganese	5E-005 to 0.0015	0.00189	0.0015	0.00858	0.0375	0.0908	0.127	0.00217	0.166	0.173	0.00507	0.254
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00184	0.00246	0.0018	0.00195	0.00169	0.00168	0.00198	0.00167	0.000476	0.00193	0.000589
Nickel	0.0005 to 0.005	0.00088	0.00079	0.00089	0.00075	0.00063	0.00075	0.0007	0.00065	0.00069	0.00065	0.00071
Phosphorus	0.05 to 0.3	<0.05	<0.05	<0.05	0.074	0.1	0.09	<0.05	<0.05	0.474	<0.05	0.375
Potassium	0.05 to 2	17.7	17	17.1	20	17.8	19.9	17.5	20.4	21.3	18.8	18.1
Selenium	0.0001 to 0.006	0.0001	0.0001	0.00012	0.00011	0.00027	0.00035	<0.0001	<0.0001	0.00052	<0.0001	0.00791
Silicon	0.05	0.054	0.124	0.424	1.08	1.46	1.58	0.178	1.58	3.81	0.897	3.55
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	56.4	53.7	55.6	50.8	53	54.1	55.7	55.5	57.4	56.5	59.5
Strontium	0.0001 to 0.005	0.274	0.262	0.269	0.287	0.283	0.293	0.278	0.292	0.317	0.278	0.331
Sulphur	0.5	13.6	14.7	14.6	14.1	15.2	19.9	14.8	14	119	14.8	150
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00146	0.0013	0.00141	0.00154	0.00161	0.00161	0.00167	0.00163	0.00143	0.00167	0.00155
Vanadium	0.001 to 0.03	0.0022	0.0022	0.0022	0.002	0.0019	0.002	0.0032	0.0021	0.002	0.0032	0.0021
Zinc	0.001 to 0.006	0.0011	<0.001	<0.001	0.0013	<0.001	<0.001	<0.001	0.0022	<0.001	<0.001	<0.001
Total Metals												
Aluminum	0.003 to 0.025	0.0104	0.0072	0.0058	0.0056	0.0092	0.009	0.0124	0.0169	0.0078	0.0218	0.011
Antimony	0.0001 to 0.0025	0.00011	0.00015	0.00017	0.00013	0.00012	0.00015	0.00013	0.00014	0.00011	0.00013	0.00011
Arsenic	0.0001 to 0.0025	0.00136	0.00137	0.00131	0.00153	0.0015	0.00156	0.00158	0.00148	0.00163	0.00185	0.00158
Barium	5E-005 to 0.02	0.0492	0.0486	0.0495	0.0496	0.0539	0.0554	0.0574	0.0539	0.0635	0.0556	0.0619
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.015	0.016	0.016	0.018	0.019	0.021	0.018	0.017	0.02	0.021	0.024
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	38.2	41.5	40.9	39.5	41.1	41.1	42.2	39.3	46.8	38.8	41.4
Chromium	0.0001 to 0.005	0.00014	0.00014	0.0001	<0.0001	0.00018	0.0001	0.00012	0.0001	0.00016	<0.0003	0.00031
Cobalt	0.0001 to 0.0015	0.00012	0.00012	0.00012	0.00012	0.00012	0.00013	0.00014	0.00013	0.00014	0.00017	0.00014
Copper	0.0005 to 0.007	0.00404	0.00226	0.00234	0.00472	0.00284	0.00319	0.00242	0.00152	0.00672	0.00163	0.00093
Iron	0.01 to 0.03	0.019	0.013	0.01	0.012	0.018	0.019	0.021	0.023	0.045	0.026	0.053
Lead	5E-005 to 0.0025	<0.00005	<0.00005	0.000054	<0.00005	<0.00005	0.000206	<0.00005	<0.00005	0.000157	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.0105	0.0114	0.00979	0.0109	0.0105	0.0123	0.0111	0.0104	0.012	0.0112	0.0105
Magnesium	0.1	65.1	67.7	69.3	69.7	68.3	68.8	71.4	65.5	76.2	72.8	68.8
Manganese	5E-005 to 0.0015	0.0157	0.0103	0.0103	0.041	0.0918	0.132	0.146	0.163	0.188	0.0234	0.235
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00188	0.00237	0.00186	0.00189	0.00179	0.00174	0.00178	0.00166	0.0015	0.00198	0.000903
Nickel	0.0005 to 0.005	0.00082	0.00093	0.00091	0.00078	0.00073	0.00076	0.00078	0.00069	0.00081	0.00088	0.00081
Phosphorus	0.05 to 0.3	0.076	0.058	0.076		0.114	0.104		0.055	0.518	<0.05	0.376
Potassium	0.05 to 2	16.5	17.1	16.8	17.5	17.5	18.8	17.5	19	21.6	18.6	17.3
Selenium	0.0001 to 0.006	<0.0001	0.00013	<0.0001	0.00011	0.0001	<0.0001	<0.0001	<0.0001	0.0001	0.00019	<0.0001
Silicon	0.05	0.106	0.144	0.428	1.1	1.45	1.58	1.55	1.55	3.93	0.942	3.41
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	50.3	56.3	52.7	53.6	53.4	54	56.3	53	60.3	61.3	53.7
Strontium	0.0001 to 0.005	0.272	0.273	0.261	0.284	0.284	0.299	0.294	0.282	0.347	0.281	0.285
Sulphur	0.5	13.7	14.4	14.5	15.1	14.2	14.5	14.7	13.8	13.2	15	11
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extractio	0.00002											
Uranium	1E-005 to 0.001	0.00175	0.00179	0.00178	0.00175	0.00172	0.00171	0.00166	0.0016	0.00158	0.00176	0.00143
Vanadium	0.001 to 0.03	0.0022	0.0024	0.0022	0.0023	0.0022	0.0022	0.0022	0.0022	0.0022	0.0039	0.0022
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0041	0.0031	<0.003
Organics												
Carbon Organic (Dissolved)	0.5 to 5	19.1	20.1	18.4	18	19.4	9.78	19.4	19.6	20.8	20.5	20
Carbon Organic (Total)	0.5 to 5	20.1	19.4	18.7	18.1	19.3	9.89	19.7	20	21.5	19.8	20.2
Nitrogen Organic (Dissolved)	0.05 to 0.26											
Nitrogen Organic (Total)	0.05 to 0.3											
ALS LAB ID		**L1449318**	**L1455480**	**L1461081**	**L1469099**	**L1478913**	**L1483419**	**L1490937**	**L1499202**	**L1506521**	**L1518246**	**L1526071**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes		MDL	EDITH-01M 20-Aug-14	EDITH-01M 14-Sep-14	EDITH-01M 30-Sep-14
In Situ Parameters					
Conductivity µS/cm		...	723	699	1227
Oxygen Dissolved %	...		25.4	5.4	18.8
Oxygen Dissolved	...		2.3	0.59	2
pH (unitless)		...	8.5	7.93	8.31
Redox Potential mV		...	130	-233	109
Salinity ppt		...	0.44	0.48	0.83
Specific Conductivity µS/cm		...	893	978	1640
Temperature °C		...	15.1	10	11.8
Total Dissolved Solids		...	581	634	1066
Turbidity NTU		...	1.1	9.6	-10.1
Physical Tests					
Acidity to pH 8.3 (as CaCO3)		1			
Alkalinity (Total as CaCO3)		1 to 2	418	448	407
Bicarbonate Alkalinity		1 to 2	418	447	374
Carbonate Alkalinity		1 to 2	<1	<1	32.8
Color TCU		5			
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	400	414	397
Hydroxide Alkalinity		1 to 2	<1	<1	<1
pH (unitless)		0.01 to 0.1	8.37	8.36	8.58
Specific Conductivity µS/cm		2	917	942	906
Total Dissolved Solids		1 to 2	549	562	534
Total Suspended Solids		3	5.8	<3	<3
Turbidity NTU		0.1	5.22	23.8	1.02
Dissolved Anions					
Bromide		0.05 to 2.495	<0.5	<0.5	<0.5
Chloride		0.5 to 1	48.7	49.7	50.8
Fluoride		0.02 to 0.4	0.232	0.247	0.252
Sulphate		0.5 to 1	40.5	26.5	42.1
Nutrients					
Ammonia (Total)		0.005 to 0.05	0.36	1.56	0.243
Nitrate (as N)		0.005 to 0.1	<0.05	<0.05	<0.05
Nitrite (as N)		0.001 to 0.02	<0.01	<0.01	<0.01
Nitrogen (Dissolved)		0.05 to 0.1			
Nitrogen (Total)		0.0025 to 0.11			
Nitrogen Kjeldahl (Total)		0.05 to 0.2	2.09	3.18	1.51
Orthophosphate (Dissolved)		0.001 to 0.01	0.0011	0.325	0.0114
Phosphorus - Dissolved		0.002 to 0.02	0.0217	0.377	0.0297
Phosphorus - Total		0.002 to 0.02	0.0699	0.407	0.044
Cyanide					
Cyanide (Free)		0.005	<0.005	<0.005	<0.005
Cyanide (Total)		0.005	<0.005	<0.005	<0.005
Cyanide (WAD)		0.005	<0.005	<0.005	<0.005
Dissolved Metals					
Aluminum		0.001 to 0.025	0.0021	0.0015	0.0033
Antimony		0.0001 to 0.0025	0.00012	<0.0001	0.00013
Arsenic		0.0001 to 0.0025	0.00156	0.00164	0.00158
Barium		5E-005 to 0.02	0.0592	0.0673	0.0525
Beryllium		0.0001 to 0.005	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	0.017	0.018	0.018
Cadmium		1E-005 to 8.5E-005	0.000011	<0.00001	<0.00001
Calcium		0.05 to 0.1	42.1	44.9	40.2
Chromium		0.0001 to 0.018	<0.0001	0.0001	<0.0001
Cobalt		0.0001 to 0.0015	0.0001	0.00011	0.00012
Copper		0.0002 to 0.006	0.00122	0.00026	0.00099
Dissolved Cadmium (by saltwater extr		0.00002			
Iron		0.01 to 0.03	<0.01	0.015	<0.01
Lead		5E-005 to 0.0025	0.000051	<0.00005	<0.00005
Lithium		0.0005 to 0.025	0.0108	0.011	0.0123
Magnesium		0.1	71.6	73.4	72
Manganese		5E-005 to 0.0015	0.215	0.204	0.107
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.00141	0.000298	0.00237
Nickel		0.0005 to 0.005	0.00063	0.00071	0.00064
Phosphorus		0.05 to 0.3	<0.05	0.343	<0.05
Potassium		0.05 to 2	19.4	19.4	18.7
Selenium		0.0001 to 0.006	<0.0001	0.00018	<0.0001
Silicon		0.05	1.97	3.4	1.36
Silver		1E-005 to 0.0001	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	56.3	59.1	55
Strontium		0.0001 to 0.005	0.29	0.292	0.305
Sulphur		0.5	13.8	113	14.6
Thallium		1E-005 to 0.001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01
Uranium		1E-005 to 0.001	0.00153	0.00147	0.00171
Vanadium		0.001 to 0.03	0.0021	0.0021	0.0029
Zinc		0.001 to 0.006	0.0032	<0.001	<0.001
Total Metals					
Aluminum		0.003 to 0.025	0.0136	0.0056	0.0165
Antimony		0.0001 to 0.0025	0.00012	0.00011	0.00013
Arsenic		0.0001 to 0.0025	0.00158	0.00165	0.00164
Barium		5E-005 to 0.02	0.0583	0.0643	0.0546
Beryllium		0.0001 to 0.005	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	0.019	0.022	0.024
Cadmium		1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001
Calcium		0.05 to 0.1	42.1	42.6	38.8
Chromium		0.0001 to 0.005	0.00015	<0.0003	0.00016
Cobalt		0.0001 to 0.0015	0.00014	0.00014	0.00014
Copper		0.0005 to 0.007	0.00155	0.00173	0.00149
Iron		0.01 to 0.03	0.024	0.046	0.023
Lead		5E-005 to 0.0025	<0.00005	<0.00005	<0.00005
Lithium		0.0005 to 0.025	0.0114	0.0112	0.0117
Magnesium		0.1	71.9	72	69.8
Manganese		5E-005 to 0.0015	0.225	0.198	0.121
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.00163	0.00096	0.00241
Nickel		0.0005 to 0.005	0.00076	0.00085	0.00071
Phosphorus		0.05 to 0.3	0.075	0.328	<0.05
Potassium		0.05 to 2	19.2	18.1	17.9
Selenium		0.0001 to 0.006	<0.0001	<0.0001	<0.0001
Silicon		0.05	2	3.21	1.35
Silver		1E-005 to 0.0001	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	56.5	56.4	55.8
Strontium		0.0001 to 0.005	0.312	0.304	0.299
Sulphur		0.5	14.4	11.4	14.5
Thallium		1E-005 to 0.001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extractic		0.00002			
Uranium		1E-005 to 0.001	0.00158	0.00151	0.00183
Vanadium		0.001 to 0.03	0.0023	0.0025	0.0031
Zinc		0.003 to 0.006	<0.003	<0.003	<0.003
Organics					
Carbon Organic (Dissolved)		0.5 to 5	19.1	20.8	19.7
Carbon Organic (Total)		0.5 to 5	20.3	20.9	19.7
Nitrogen Organic (Dissolved)		0.05 to 0.26			
Nitrogen Organic (Total)		0.05 to 0.3			
ALS LAB ID			**L1506521**	**L1518246**	**L1526071**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C2.14 - EDITH-01S
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Analytes	MDL	EDITH-01S 5-Feb-14	EDITH-01S 30-Apr-14	EDITH-01S 13-May-14	EDITH-01S 27-May-14	EDITH-01S 10/Jun/2014	EDITH-01S 27-Jun-14	EDITH-01S 8-Jul-14	EDITH-01S 22-Jul-14	EDITH-01S 7-Aug-14	EDITH-01S 20-Aug-14	EDITH-01S 14-Sep-14	EDITH-01S 30-Sep-14
In Situ Parameters													
Conductivity µS/cm	...		527	677	712	720	765	782	792	833	794	794	1236
Oxygen Dissolved %	...			76.5	87.8	92.3		12.9	81.4	52.2	88.1	85.1	84.1
Oxygen Dissolved	...			8.13	9	8.99		1.21	7.38	4.6	7.92	8.75	8.75
pH (unitless)	...		8.14	8.81	8.75	8.76	8.81	8.69	7.88	8.82	8.75	8.78	8.72
Redox Potential mV	...		0.8	71.1	49.9	27.8	-52.6	-196	-49.2	58.7	123	168	81.9
Salinity ppt	...		0.39	0.44	0.44	0.42	0.44	0.44	0.43	0.44	0.43	0.46	0.81
Specific Conductivity µS/cm	...		798	885	897	859	883	894	875	888	872	929	1597
Temperature °C	...		7.23	12.7	14.3	16.6	17.6	18.5	20	21.8	20.4	14	13.2
Total Dissolved Solids	...		518	575	584	559	574	581	569	577	566	603	1037
Turbidity NTU	...		-0.9	-0.3	-0.4	0.8	3.7	1.9	1.5	0.7	1.2	1.6	-9.9
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1												
Alkalinity (Total as CaCO3)	1 to 2		384	355	394	393	404	403	400	416	402	421	408
Bicarbonate Alkalinity	1 to 2		344	304	346	343	355	345	339	358	345	382	364
Carbonate Alkalinity	1 to 2		39.9	51.1	47.8	50.3	49.5	58.3	60.7	58.1	56.6	39.3	43.5
Color TCU	5												
Hardness as CaCO3 (Dissolved)	0.5 to 1.1		393	394	387	382	382	391	396	387	390	408	394
Hydroxide Alkalinity	1 to 2		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1		8.7	8.84	8.68	8.73	8.71	8.8	8.77	8.79	8.77	8.76	8.63
Specific Conductivity µS/cm	2		842	864	867	861	858	860	846	891	883	898	901
Total Dissolved Solids	1 to 2		501	527	528	457	481	525	494	545	541	547	538
Total Suspended Solids	3		7.4	<3	<3	<3	5	<3	<3	3.8	5.5	<3	3.1
Turbidity NTU	0.1		1.69	0.69	0.52	1.48	6.47	1.98	1.95	1.1	3.41	1.18	2.22
Dissolved Anions													
Bromide	0.05 to 2.495		<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	0.5 to 1		47.3	48.1	46.6	49.8	50	48.8	49.2	50.8	50	50.3	51
Fluoride	0.02 to 0.4		0.22	0.21	0.25	0.23	0.23	0.35	0.257	0.46	0.235	0.244	0.25
Sulphate	0.5 to 1		38.9	40.5	41.1	41.6	40.7	41.1	42	42.4	42	42.1	42.4
Nutrients													
Ammonia (Total)	0.005 to 0.05		0.0183	0.0293	0.0922	0.0238	0.0161	0.0319	0.0238	0.0288	0.0125	0.0172	0.052
Nitrate (as N)	0.005 to 0.1		<0.05	<0.05	0.0063	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrite (as N)	0.001 to 0.02		<0.01	<0.01	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen (Dissolved)	0.05 to 0.1												
Nitrogen (Total)	0.0025 to 0.11												
Nitrogen Kjeldahl (Total)	0.05 to 0.2		1.58	1.39	1.36	1.32	1.64	1.26	1.42	1.66	1.5	1.43	1.4
Orthophosphate (Dissolved)	0.001 to 0.01		0.0024	0.004	0.0078	<0.001	<0.001	<0.001	0.0012	<0.001	<0.001	<0.001	<0.001
Phosphorus - Dissolved	0.002 to 0.02		0.0251	0.0263	0.0314	0.0217	0.0216	0.0221	0.0214	0.0212	0.0214	0.0179	0.0183
Phosphorus - Total	0.002 to 0.02		0.0698	0.0313	0.0371	0.034	0.0395	0.0308	0.0328	0.0281	0.0314	0.0298	0.029
Cyanide													
Cyanide (Free)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	0.001 to 0.025		<0.001	0.0012	0.0021	0.0019	0.0041	0.0049	0.0042	0.0116	0.0059	0.0044	0.0105
Antimony	0.0001 to 0.0025		0.0001	0.00012	0.00011	0.00013	0.00013	0.00013	0.00012	0.00014	0.00012	0.00013	0.00013
Arsenic	0.0001 to 0.0025		0.00141	0.00141	0.00141	0.00149	0.00149	0.00158	0.00162	0.00176	0.00173	0.00175	0.0017
Barium	5E-005 to 0.02		0.0494	0.0488	0.0455	0.0418	0.0469	0.0467	0.0476	0.0502	0.0489	0.054	0.0543
Beryllium	0.0001 to 0.005		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1		0.014	0.015	0.015	0.016	0.015	0.016	0.015	0.018	0.016	0.016	0.02
Cadmium	1E-005 to 8.5E-005		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1		40.4	42	40.7	39.2	40.5	39.1	39.4	38.9	37.7	40.5	39.8
Chromium	0.0001 to 0.018		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015		<0.0001	<0.0001	0.00011	0.00011	0.00012	0.00012	0.00014	0.00014	0.00014	0.00013	0.00013
Copper	0.0002 to 0.006		0.00074	0.00079	0.00102	0.00103	0.00114	0.0011	0.00115	0.00123	0.0014	0.00105	0.00108
Dissolved Cadmium (by saltwater extr	0.00002												
Iron	0.01 to 0.03		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead	5E-005 to 0.0025		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025		0.0106	0.0118	0.0108	0.0119	0.0104	0.012	0.0112	0.0125	0.0113	0.0102	0.0129
Magnesium	0.1		70.9	70.3	69.2	69	68.2	71.1	72.2	70.4	71.8	74.5	71.5
Manganese	5E-005 to 0.0015		0.00106	0.00238	0.00483	0.00375	0.00249	0.00176	0.00172	0.00185	0.00104	0.00487	0.00936
Mercury	1E-005 to 5E-005		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005		0.00185	0.00201	0.00186	0.002	0.00186	0.00188	0.00203	0.00208	0.00204	0.00189	0.00217
Nickel	0.0005 to 0.005		0.00061	0.00063	0.00074	0.00069	0.00062	0.00058	0.00065	0.00067	0.00064	0.00067	0.00066
Phosphorus	0.05 to 0.3		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	0.05 to 2		17.6	16.9	16.8	17.2	17.4	18.2	17.8	20.9	19.3	19.1	18.7
Selenium	0.0001 to 0.006		0.00013	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	0.0001	<0.0001	<0.0001
Silicon	0.05		<0.05	<0.05	0.16	0.282	0.32	0.511	0.174	0.202	0.324	0.899	1.03
Silver	1E-005 to 0.0001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2		52.2	53	53.7	52.6	54.5	53.7	57.2	57.4	56.5	59.8	60.8
Strontium	0.0001 to 0.005		0.282	0.271	0.267	0.287	0.272	0.267	0.282	0.277	0.289	0.273	0.331
Sulphur	0.5		13.7	14.8	14.2	15.7	13.8	14.7	14.6	14.7	14.3	14.2	14.5
Thallium	1E-005 to 0.001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001		0.00156	0.00143	0.00162	0.00162	0.00168	0.0016	0.00169	0.00177	0.00155	0.00166	0.00177
Vanadium	0.001 to 0.03		0.0021	0.0022	0.0023	0.0023	0.0026	0.0028	0.0032	0.0033	0.0033	0.0033	0.0033
Zinc	0.001 to 0.006		<0.001	0.0012	0.0034	<0.001	<0.001	<0.001	<0.001	0.0011	0.0017	<0.001	0.0013
Total Metals													
Aluminum	0.003 to 0.025		0.0088	0.0037	0.006	0.0056	0.0149	0.0137	0.017	0.0224	0.0232	0.0144	0.0141
Antimony	0.0001 to 0.0025		0.00013	0.00013	0.00015	0.00014	0.00012	0.00015	0.00014	0.00017	0.00016	0.00014	0.00013
Arsenic	0.0001 to 0.0025		0.00136	0.00133	0.00129	0.00148	0.00153	0.00156	0.00169	0.00162	0.00172	0.00167	0.00159
Barium	5E-005 to 0.02		0.0483	0.0463	0.0423	0.0408	0.0461	0.0467	0.0495	0.0478	0.0451	0.052	0.0505
Beryllium	0.0001 to 0.005		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1		0.014	0.015	0.015	0.017	0.017	0.019	0.018	0.018	0.018	0.02	0.022
Cadmium	1E-005 to 8.5E-005		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1		38.5	40.7	39.3	37.8	39.9	39.5	39.4	37.1	37.9	38.3	37.2
Chromium	0.0001 to 0.005		0.00011	<0.0001	<0.0001	<0.0001	0.00015	<0.0001	<0.0001	0.00012	0.00015	<0.0003	0.00018
Cobalt	0.0001 to 0.0015		0.00011	<0.0001	0.00011	0.00011	0.00016	0.00013	0.00016	0.00016	0.00017	0.00015	0.00014
Copper	0.0005 to 0.007		0.00099	0.00095	0.00106	0.00111	0.00128	0.00123	0.00144	0.00142	0.00277	0.0013	0.00212
Iron	0.01 to 0.03		0.016	0.049	0.012	0.011	0.021	0.014	0.02	0.027	0.03	0.023	0.02
Lead	5E-005 to 0.0025		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000077	<0.00005	<0.00005
Lithium	0.0005 to 0.025		0.00996	0.0112	0.00936	0.0112	0.0101	0.0114	0.0111	0.0112	0.0118	0.0102	0.011
Magnesium	0.1		64.7	68.8	68.7	68.5	67.4	71.2	73.4	68.6	72.6	72.2	67.6
Manganese	5E-005 to 0.0015		0.0107	0.00389	0.00573	0.00649	0.00691	0.00395	0.00419	0.00523	0.00506	0.0205	0.0232
Mercury	1E-005 to 5E-005		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005		0.00195	0.00202	0.00191	0.00206	0.00206	0.00208	0.00213	0.00212	0.00218	0.00211	0.00207
Nickel	0.0005 to 0.005		0.00071	0.00072	0.00072	0.00073	0.00072	0.00065	0.00074	0.00079	0.00074	0.00083	0.00076
Phosphorus	0.05 to 0.3		0.078	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05	<0.05	<0.05
Potassium	0.05 to 2		16.7	16.3	16.5	17	17.5	18.4	18.1	20.2	19.5	18.4	17.5
Selenium	0.0001 to 0.006		0.00012	<0.0001	0.00011	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	0.0001
Silicon	0.05		0.071	0.057	0.168	0.292	0.36	0.54	0.232	0.24	0.378	0.911	1.01
Silver	1E-005 to 0.0001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2		50.9	53.4	52.8	53.7	53.9	55.8	56.6	55.2	58.1	57.7	54.4
Strontium	0.0001 to 0.005		0.28	0.27	0.261	0.288	0.278	0.295	0.291	0.277	0.295	0.289	0.293
Sulphur	0.5		13.6	14.5	14.3	14.7	14	15.1	15.5	14.6	14.8	14.6	14
Thallium	1E-005 to 0.001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extractic	0.00002												
Uranium	1E-005 to 0.001		0.00168	0.00176	0.00181	0.00182	0.0018	0.00178	0.00187	0.00183	0.00188	0.00183	0.00187
Vanadium	0.001 to 0.03		0.0023	0.0023	0.0023	0.0026	0.0026	0.003	0.0034	0.0035	0.0036	0.0035	0.0031
Zinc	0.003 to 0.006		<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics													
Carbon Organic (Dissolved)	0.5 to 5		18.4	19.5	18.6	19.1	18.8	9.75	19.2	19.9	19	20.2	19.7
Carbon Organic (Total)	0.5 to 5		20.4	19.3	18.9	19.8	20	9.96	19.9	20.1	20.1	20.4	20.3
Nitrogen Organic (Dissolved)	0.05 to 0.26												
Nitrogen Organic (Total)	0.05 to 0.3												
ALS LAB ID			L1449318	L1455480	L1461081	L1469099	L1478913	L1483419	L1490937	L1499202	L1506521	L1518246	L1526071

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID	GOOSE LAKE	GOOSE LAKE	GOOSE LAKE	GOOSE LAKE	GOOSE LAKE	GOOSE LAKE	GOOSE LAKE	GOOSE LAKE	GOOSE LAKE	GOOSE LAKE	GOOSE LAKE	GOOSE LAKE
Date/Time Sampled	9-Apr-14	24-Apr-14	8-May-14	23-May-14	5-Jun-14	18-Jun-14	3-Jul-14	15-Jul-14	29-Jul-14	11-Aug-14	3-Sep-14	18-Sep-14
In Situ Parameters												
Conductivity (In Situ) µS/cm	2631	2923	3284	4046	4884	5436	5259	5310	5357	6755		5332
Oxygen Dissolved %	...	12.6	90.3	60.3	91.8	30.8	87	84.9	75.6	61.6	33.1	36.9
Oxygen Dissolved	...	1.4	10.5	6.28	8.73	6.94	6.97	6.92	5.92	5.15	2.78	3.42
pH (In Situ) pH	9.49	9.53	9.58	9.59	9.59	9.58	9.57	9.36	9.77	9.35	9.35	9.33
Redox Potential (In Situ) mV	-241	67.4	-6.2	-21.4	34.9	43	-63.7	-349	-296	-280		-237
Secchi Depth m												
Specific Conductivity (In Situ) µS/cm	3703	4284	4281	4776	5172	5374	5272	5117	5504	7000		6361
Temperature (In Situ) °C	9.84	8.33	12.8	16.9	22.1	25.6	24.6	27	23.6	23.2	17.9	16.5
Total Dissolved Solids (In Situ)	2407	2787	2782	3105	3362	3492	3459	3326	3578	4550		4134
Turbidity (In Situ) NTU												
Physical Tests												
Acidity to pH 8.3 (as CaCO3)												
Alkalinity (Total as CaCO3)	1310	1370	1540	1640	1770	1800	2040	2100	2220	2420	2200	2450
Bicarbonate Alkalinity	732	790	863	902	955	994	1070	1170	1120	1230	1290	1360
Carbonate Alkalinity	576	584	677	736	816	808	966	939	1100	1180	911	1090
Color TCU												
Hardness as CaCO3 (Dissolved)	676	752	850	918	955	1040	1130	1170	1160	1160	1030	1230
Hydroxide Alkalinity	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
pH pH	9.42	9.45	9.34	9.4	9.4	9.39	9.42	9.45	9.52	9.47	9.34	9.43
Specific Conductivity µS/cm	3730	4190	4630	4620	4850	5200	5660	6330	6510	7290	6620	7140
Total Dissolved Solids	2980	3470	3850	3870	4240	4470	4940	6150	5920	6260	5680	6040
Total Suspended Solids	26.7	15.6	5.1	<3	13.8	4.5	17.5	41	50.1	36.6	218	19.9
Turbidity NTU	50.2	3.78	1.21	0.76	1	1.48	3.5	5.67	10.7	12	161	19.3
Dissolved Anions												
Bromide (Dissolved)	1.1	1.1	1.5	<2.5	1.3	1.4	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Chloride (Dissolved)	86	100	103	103	106	114	147	143	145	169	148	162
Fluoride (Dissolved)	<0.4	<0.4	<0.4	<1	0.045	0.039	0.033	0.031	<0.03	<1	<0.03	<0.03
Sulphate (Dissolved)	997	1120	1250	1280	1370	1480	1620	1850	1870	2170	1880	2130
Nutrients												
Ammonia (Total)	0.341	0.0633	0.0818	0.124	0.127	0.148	0.137	0.186	0.0913	0.147	0.167	0.149
Nitrate (as N)	<0.1	<0.1	<0.1	<0.25	<0.1	<0.1	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Nitrite (as N)	<0.02	<0.02	<0.02	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.065	<0.05
Nitrogen (Dissolved)												
Nitrogen (Total)												
Nitrogen Kjeldahl (Total)	10.8	7.22	8.67	7.73	7.57	9.71	10.6	12.5	16.5	17.2	14.4	14.3
Orthophosphate (Dissolved)	0.0027	0.0013	0.0018	0.0092	0.0196	0.0017	0.0011	0.0022	0.0042	0.0041	0.0216	0.0043
Phosphorus (Nutrient) Dissolved	0.196	0.127	0.0415	0.0613	0.0766	0.06	0.0311	0.0858	0.0939		0.178	0.135
Phosphorus (Nutrient) Total	0.0516	0.0423	0.0611	0.113	0.0801	0.0817	0.0746	0.165	0.295	0.4	0.38	0.301
Cyanide												
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals												
Aluminum (Dissolved)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.007	<0.005	<0.005	<0.01	<0.005	<0.005
Antimony (Dissolved)	0.00153	0.00165	0.00191	0.00198	0.00206	0.00177	0.00229	0.00234	0.0027	0.0028	0.00306	0.00319
Arsenic (Dissolved)	0.0193	0.0201	0.0204	0.0198	0.0192	0.0181	0.0193	0.0198	0.0226	0.0283	0.0302	0.0325
Barium (Dissolved)	0.011	0.0148	0.0158	0.0182	0.017	0.0168	0.0186	0.0164	0.007	0.00662	0.00584	0.00472
Beryllium (Dissolved)	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005
Bismuth (Dissolved)	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.005	<0.0025	<0.0025
Boron (Dissolved)	0.161	0.17	0.224	0.242	0.228	0.229	0.325	0.341	0.308	0.32	0.314	0.326
Cadmium (Dissolved)	<0.00005		<0.00005	<0.00005	0.000058	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.00005
Calcium (Dissolved)	5.67	6.01	7.35	8.98	7.42	7.4	6.91	6.52	6.06	5.92	5.55	5.64
Chromium (Dissolved)	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005
Cobalt (Dissolved)	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005
Copper (Dissolved)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	0.0014
Dissolved Cadmium (by saltwater extra		<0.00002	<0.00002	<0.00002		<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	
Iron (Dissolved)	0.027	0.016	<0.01	0.029	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	0.058	<0.02
Lead (Dissolved)	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.0005	<0.00025	<0.00025
Lithium (Dissolved)	0.0503	0.0511	0.0623	0.0653	0.0611	0.0611	0.0832	0.0881	0.0938	0.0927	0.0892	0.0829
Magnesium (Dissolved)	161	179	202	218	227	249	270	280	278	279	247	294
Manganese (Dissolved)	0.00247	0.00167	0.00079	0.00077	0.00112	0.00109	0.00158	0.00073	0.00107	0.00087	0.00146	0.00076
Mercury (Dissolved)	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Dissolved)	0.00323	0.00377	0.00424	0.00435	0.0043	0.00449	0.00512	0.0051	0.00507	0.00495	0.00456	0.00439
Nickel (Dissolved)	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.005	<0.0025	<0.0025
Phosphorus (Metal) Dissolved	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.1	<0.1	0.14	0.11	<0.1	<0.1
Potassium (Dissolved)	138	146	157	160	173	177	214	237	236	287	250	269
Selenium (Dissolved)	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005
Silicon (Dissolved)	3.67	1.8	0.336	0.698	0.184	0.58	0.58	0.62	0.78	1.82	3.82	4.17
Silver (Dissolved)	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.00005
Sodium (Dissolved)	719	792	852	860	884	891	1110	1230	1320	1440	1280	1370
Strontium (Dissolved)	0.375	0.377	0.46	0.54	0.518	0.523	0.555	0.583	0.546	0.449	0.467	0.483
Sulphur (Dissolved)	319	339	366	372	399	450	524	548	575	689	610	684
Thallium (Dissolved)	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.00005
Tin (Dissolved)	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005
Titanium (Dissolved)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05
Uranium (Dissolved)	0.00342	0.00367	0.00418	0.00447	0.00442	0.00431	0.00499	0.00507	0.00526	0.00525	0.00433	0.00473
Vanadium (Dissolved)	<0.005	0.005	0.0058	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005
Zinc (Dissolved)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	0.0055	<0.005
Total Metals												
Aluminum (Total)	0.465	<0.015	<0.015	0.027	<0.015	0.02	<0.015	0.016	0.056	<0.03	0.031	<0.015
Antimony (Total)	0.00153	0.00175	0.00212	0.00204	0.00207	0.00181	0.00245	0.00233	0.00262	0.0025	0.00293	0.00323
Arsenic (Total)	0.0189	0.0202	0.0222	0.0191	0.0195	0.018	0.0187	0.0192	0.0211	0.0271	0.0294	0.0309
Barium (Total)	0.0247	0.0137	0.0177	0.0184	0.0184	0.0175	0.0185	0.0177	0.0093	0.00839	0.00702	0.00542
Beryllium (Total)	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005
Bismuth (Total)	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.005	<0.0025	<0.0025
Boron (Total)	0.153	0.168	0.224	0.245	0.232	0.229	0.32	0.356	0.289	0.3	0.298	0.341
Cadmium (Total)	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.00005
Calcium (Total)	9.82	5.93	7.46	8.38	7.6	7.63	6.93	6.78	6.61	6.15	5.23	5.7
Chromium (Total)	0.00165	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005
Cobalt (Total)	0.00059	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005
Copper (Total)	0.003	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.005	<0.0025	<0.0025
Iron (Total)	0.814	0.031	0.016	0.021	0.022	0.041	<0.02	0.03	0.107	0.062	0.065	0.034
Lead (Total)	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.0005	<0.00025	<0.00025
Lithium (Total)	0.0453	0.051	0.0625	0.0642	0.0658	0.0608	0.0806	0.095	0.0871	0.0808	0.0831	0.0869
Magnesium (Total)	155	178	195	222	232	258	272	293	279	275	233	289
Manganese (Total)	0.0271	0.00175	0.00113	0.00129	0.0011	0.00183	0.00179	0.00131	0.00413	0.00383	0.00331	0.00174
Mercury (Total)	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Total)	0.0032	0.00424	0.00444	0.0045	0.00437	0.00452	0.00536	0.00542	0.00481	0.00464	0.00432	0.00438
Nickel (Total)	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.005	<0.0025	<0.0025
Phosphorus (Metal) Total	0.308	0.107	0.07	0.059	0.058	<0.1	<0.1	0.12	0.29	0.37	0.33	0.21
Potassium (Total)	129	144	154	161	179	181	211	241	234	278	229	262
Selenium (Total)	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005
Silicon (Total)	5.58	1.89	0.345	0.737	0.219	0.65	0.59	0.7	1.01	1.93	3.69	4.18
Silver (Total)	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.00005
Sodium (Total)	691	784	908	845	992	896	1090	1240	1270	1350	1200	1300
Strontium (Total)	0.442	0.395	0.486	0.563	0.529	0.532	0.556	0.622	0.555	0.433	0.46	0.48
Sulphur (Total)	313	357	375	409	429	477	541	598	600	690	579	671
Thallium (Total)	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.00005
Tin (Total)	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005
Titanium (Total)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05
Total Cadmium (by saltwater extraction		<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	
Uranium (Total)	0.00336	0.0037	0.00464	0.00447	0.00433	0.00449	0.00486	0.005	0.00512	0.00499	0.00506	0.00484
Vanadium (Total)	0.0051	0.005	0.0063	0.0052	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005
Zinc (Total)	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.03	<0.015	<0.015
Organics												
Carbon Organic (Dissolved)	102	119	109	111	120	123	144	159	169	184	170	199
Carbon Organic (Total)	111	112	107	117	137	123	147	168	176	187	181	196
Nitrogen Organic (Dissolved)												
Nitrogen Organic (Total)												
Lab ID	L1441961	L1447300	L1453031	L1459728	L1466627	L1473827	L1481215	L1488139	L1494491	L1500711	L1513418	L1520952

Notes:
(a) Units are mg/L/ unless otherwise stated
(b) BCWQG - BCWQG: Drinking Water (Max) - BC Water Quality Guidelines for Raw Drinking Water (Maximum) (.).
(c) HC - HC: Drinking Water Quality - Guidelines for Canadian Drinking Water Quality - FPT Committee on Drinking Water (December 2010).
alue exceeds the limits of BCWQG: Drinking Water (Max)
value exceeds the limits of HC: Drinking Water Quality
he limits of BCWQG: Drinking Water (Max) HC: Drinking Water Quality
(g) Detection limit values displayed with less than symbol (<); statistics calculated using the detection limit value.

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C2.16 - HUMPH02
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Analytes	MDL	HUMPH02 13-Mar-14	HUMPH02 21-Mar-14	HUMPH02 26-Mar-14	HUMPH02 3-Apr-14	HUMPH02 10-Apr-14	HUMPH02 24-Apr-14	HUMPH02 7-May-14	HUMPH02 22-May-14	HUMPH02 4-Jun-14	HUMPH02 17-Jun-14	HUMPH02 3-Jul-14	HUMPH02 15-Jul-14	HUMPH02 29-Jul-14	HUMPH02 11-Aug-14
In Situ Parameters															
Conductivity µS/cm	...	904	840	814	919	854	859	814	861	772	600	828	767	828	920
Oxygen Dissolved %	...		83.9	82.4	79.5	70.7	88.6	83.9	106	87	104	89.9	88.1	96.7	88.3
Oxygen Dissolved	...		11.6	11	10.2	8.91	11.3	10.5	13.3	9.82	12.2	9.89	9.01	9.67	9.1
pH (unitless)	...	8.33	8.14	8.24	8.28	8.27	8.3	8.37	8.39	8.35	8.5	8.41	8.54	8.68	8.4
Redox Potential mV	...	64.5	52.3	117	-0.9	-70.4	87.8	217	58.9	151	80.9	68.4	118	48.9	54
Salinity ppt	...	0.81	0.72	0.66	0.74	0.69	0.68	0.64	0.61	0.57	0.41	0.52	0.417	0.52	0.6
Specific Conductivity µS/cm	...	1619	1443	1330	1470	1384	1354	12850	1215	1141	825	1044	942	1051	1187
Temperature °C	...	1.87	3.11	4.72	5.37	4.98	5.85	5.8	9.79	8.07	10.7	14.7	15.3	13.9	13
Total Dissolved Solids	...	1052	937	863	955	900	880	832	789	742	542	679	612	683	780
Turbidity NTU	...														
Physical Tests															
Acidity to pH 8.3 (as CaCO3)	1														
Alkalinity (Total as CaCO3)	1 to 2	469	484	289	473	495	481	475	465	443	482	453	442	473	489
Bicarbonate Alkalinity	1 to 2	469	476	188	443	450	439	442	444	425	429	434	409	440	460
Carbonate Alkalinity	1 to 2	<2	8.5	101	30.1	45.2	42.1	32.8	21.4	17.3	53.3	19.4	33.1	32.9	28.3
Color TCU	5							17.7							
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	850	782	760	733	721	675	651	597	639	632	489	483	562	583
Hydroxide Alkalinity	1 to 2	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1	8.28	8.44	8.39	8.39	8.36	8.49	8.43	8.48	8.51	8.53	8.54	8.45	8.49	8.49
Specific Conductivity µS/cm	2	1540	1450	1420	1380	1370	1310	1240	1210	1200	1230	1000	1030	1150	1230
Total Dissolved Solids	1 to 2	1000	1050	1010	988	963	946	851	800	801	826	493	664	728	804
Total Suspended Solids	3	17.7	19.3	28.3	14.5	13	11.6	19.7	5.8	22.7	9.4	4.3	3.9	9.3	4.6
Turbidity NTU	0.1	7.22	5.55	4.9	3.24	2.14	1.89	3.39	0.47	7.59	1.95	1.12	0.98	3.52	1.4
Dissolved Anions															
Bromide	0.05 to 2.495	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	0.5 to 1	25.4	30.6	28.4	29.1	30.4	32.1	34	32.4	35.2	32.2	47.7	48.9	45.3	43.1
Fluoride	0.02 to 0.4	0.36	0.25	0.25	0.26	0.28	0.26	0.23	0.28	0.26	0.285	0.27	0.293	0.282	0.4
Sulphate	0.5 to 1	478	386	369	342	329	313	248	230	224	231	95.5	84.9	158	200
Nutrients															
Ammonia (Total)	0.005 to 0.05	0.0237	0.018	0.012	0.0105	0.0077	0.0062	0.0063	0.0083	0.0071	0.0073	0.0186	0.019	0.0112	0.012
Nitrate (as N)	0.005 to 0.1	0.053	0.18	0.129	0.088	0.055	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.055
Nitrite (as N)	0.001 to 0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen (Dissolved)	0.05 to 0.1														
Nitrogen (Total)	0.0025 to 0.11														
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.92	0.678	0.679	0.605	0.646	0.552	0.591	0.597	0.916	0.611	0.97	1.05	0.86	0.805
Orthophosphate (Dissolved)	0.001 to 0.01	0.0866	0.0817	0.0771	0.0753	0.0744	0.0767	0.0864	0.0819	0.0856	0.0834	0.123	0.133	0.0934	0.0961
Phosphorus - Dissolved	0.002 to 0.02	0.0893	0.0901	0.0879	0.114	0.0777	0.094	0.0921	0.0875	0.0891	0.0878	0.146	0.16	0.0995	
Phosphorus - Total	0.002 to 0.02	0.144	0.152	0.16	0.0811	0.092	0.0813	0.142	0.0914	0.114	0.116	0.141	0.166	0.114	0.132
Cyanide															
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals															
Aluminum	0.001 to 0.025	0.0019	<0.001	0.0014	<0.001	<0.001	<0.001	0.0013	0.0016	<0.001	0.0018	0.0018	0.0019	0.0018	0.0026
Antimony	0.0001 to 0.0025	0.0002	0.00026	0.00021	0.00023	0.00023	0.00021	0.00019	0.00021	0.00021	0.00021	0.00019	0.00018	0.00021	0.00018
Arsenic	0.0001 to 0.0025	0.0028	0.00352	0.00331	0.00325	0.00356	0.00345	0.00327	0.00383	0.00361	0.00358	0.00306	0.00327	0.00346	0.00318
Barium	5E-005 to 0.02	0.069	0.0635	0.0586	0.0547	0.0552	0.0554	0.0567	0.0567	0.0528	0.0576	0.0672	0.067	0.065	0.0675
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.039	0.029	0.029	0.027	0.026	0.028	0.023	0.029	0.029	0.032	0.029	0.033	0.033	0.037
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	132	121	113	114	113	106	99.2	92.7	96.8	99.6	69.8	68.8	86.7	90.6
Chromium	0.0001 to 0.018	0.00044	0.00013	0.00012	0.00014	0.00012	0.00016	0.00016	0.00021	0.00015	0.00014	<0.0001	0.00011	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015	<0.0001	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	0.00013	<0.0001	<0.0001
Copper	0.0002 to 0.006	0.004	0.00632	0.00608	0.00629	0.00681	0.00635	0.00724	0.00741	0.00671	0.00641	0.00732	0.00722	0.00679	0.00631
Dissolved Cadmium (by saltwater extr	0.00002								<0.00002		<0.00002				
Iron	0.01 to 0.03	0.028	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	0.012
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00715	0.00699	0.00717	0.00643	0.00673	0.00646	0.00643	0.00702	0.0066	0.00672	0.00783	0.00804	0.00766	0.00753
Magnesium	0.1	126	117	116	109	107	99.5	98.1	88.9	96.6	93	76.5	75.6	83.8	86.5
Manganese	5E-005 to 0.0015	0.0248	0.0153	0.0126	0.00971	0.00772	0.00923	0.00531	0.00697	0.0103	0.0128	0.00358	0.00583	0.00923	0.0204
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0199	0.0248	0.0245	0.0242	0.0239	0.0235	0.0205	0.0226	0.0233	0.0228	0.0126	0.0135	0.0212	0.0191
Nickel	0.0005 to 0.005	0.00134	0.00135	0.00113	0.00114	0.00123	0.00115	0.00121	0.00128	0.0012	0.00122	0.00152	0.00166	0.00142	0.00138
Phosphorus	0.05 to 0.3	0.096	0.101	0.071	0.095	0.074	0.078	0.099	0.078	0.081	0.093	0.138	0.145	0.109	0.115
Potassium	0.05 to 2	14.5	15.2	14.2	13.8	13.7	13.2	13.8	13.2	13.9	14.5	18	17	15.7	15.5
Selenium	0.0001 to 0.006	0.00211	0.00618	0.00486	0.00505	0.00477	0.00448	0.00333	0.0027	0.0021	0.00178	0.00072	0.00064	0.0008	0.00056
Silicon	0.05	9.5	8.79	8.64	8.29	8.4	8.04	8.51	8.64	8.96	9.15	7.98	8.45	9.75	9.96
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	68.5	65.6	63.7	62.5	63.7	63.8	57.3	62.5	58.8	60.3	54.4	57.8	60	63
Strontium	0.0001 to 0.005	1.19	1.01	0.985	0.959	0.955	0.972	0.83	0.888	0.815	0.839	0.593	0.621	0.81	0.892
Sulphur	0.5	150	123	113	110	109	100	84.7	72.5	76.9	75.6	31.1	28.4	52.2	64.3
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.0038	0.00471	0.00455	0.0045	0.00435	0.004	0.00377	0.00363	0.0036	0.00326	0.00258	0.0024	0.00277	0.0026
Vanadium	0.001 to 0.03	0.0042	0.0049	0.0052	0.0051	0.0053	0.0051	0.0052	0.0059	0.0055	0.0054	0.0056	0.0044	0.0048	0.0039
Zinc	0.001 to 0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0011	<0.001	<0.001	<0.001	<0.001	0.0011	<0.001
Total Metals															
Aluminum	0.003 to 0.025	0.19	0.345	0.36	0.205	0.18	0.156	0.192	0.186	0.0788	0.129	0.0484	0.0604	0.07	0.054
Antimony	0.0001 to 0.0025	0.0002	0.00028	0.00023	0.00026	0.00021	0.00022	0.00024	0.00021	0.00021	0.00019	0.0002	0.00019	0.00021	0.00018
Arsenic	0.0001 to 0.0025	0.00275	0.00338	0.00326	0.00332	0.00333	0.00329	0.00317	0.00341	0.00331	0.00332	0.00312	0.00305	0.00327	0.00322
Barium	5E-005 to 0.02	0.0717	0.0687	0.0637	0.0605	0.0585	0.0595	0.0604	0.06	0.0515	0.0554	0.0684	0.0659	0.0628	0.0673
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.04	0.032	0.032	0.03	0.029	0.028	0.024	0.028	0.032	0.035	0.032	0.032	0.032	0.043
Cadmium	1E-005 to 8.5E-005	0.000012	0.000016	0.000012	0.000012	0.000012	0.000011	0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	129	116	107	111	109	108	99.5	93.2	90.1	95.1	68.7	67.9	81.3	90.5
Chromium	0.0001 to 0.005	0.00055	0.00086	0.00093	0.00057	0.00055	0.00047	0.00064	0.00059	0.00033	0.00046	0.00027	0.00025	0.00023	0.00021
Cobalt	0.0001 to 0.0015	0.00027	0.00049	0.00047	0.0003	0.00031	0.0003	0.00035	0.00027	0.00014	0.0002	0.00016	0.00017	0.00016	0.00015
Copper	0.0005 to 0.007	0.00741	0.0134	0.0143	0.0111	0.0112	0.0111	0.0143	0.0117	0.00864	0.0101	0.00892	0.00871	0.00909	0.00821
Iron	0.01 to 0.03	0.282	0.518	0.571	0.327	0.32	0.243	0.341	0.294	0.114	0.197	0.072	0.095	0.096	0.087
Lead	5E-005 to 0.0025	0.00007	0.000132	0.000131	0.000074	0.000088	0.000071	0.000092	0.000065	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00696	0.00734	0.00651	0.00691	0.00659	0.00635	0.00675	0.00681	0.00634	0.0065	0.00794	0.00676	0.00694	0.00774
Magnesium	0.1	122	110	103	107	103	101	89.9	89.3	91.4	87.9	75.8	72.9	78.5	86.9
Manganese	5E-005 to 0.0015	0.065	0.0848	0.0739	0.0458	0.0537	0.0454	0.0399	0.0317	0.0189	0.0308	0.00848	0.0125	0.0227	0.0282
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0199	0.0251	0.024	0.0253	0.0239	0.0238	0.0219	0.0234	0.0229	0.0228	0.0136	0.014	0.02	0.0206
Nickel	0.0005 to 0.005	0.00186	0.00252	0.00242	0.00185	0.0019	0.00179	0.00202	0.00197	0.00139	0.00162	0.00178	0.00184	0.00166	0.0015
Phosphorus	0.05 to 0.3	0.122	0.13	0.126	0.116	0.105	0.106	0.122	0.106	0.1	0.105	0.137	0.158	0.108	0.095
Potassium	0.05 to 2	14.1	14.1	13.3	13.3	12.9	13.6	13.3	13.2	12.9	13.6	17.4	16.5	14.8	15.5
Selenium	0.0001 to 0.006	0.00196	0.0051	0.00477	0.00492	0.00443	0.00384	0.00292	0.00245	0.00173	0.00162	0.00057	0.00059	0.00077	0.0007
Silicon	0.05	9.67	9.13	9.02	8.64	8.48	8.44	8.76	9.12	8.64	9.24	8.04	8.43	9.29	10.1
Silver	1E-005 to 0.0001	<0.00001	0.000017	<0.00001	<0.00001	<0.00001	<0.00001	0.00003	<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	67.2	64.9	59.8	63	62.9	63.1	56.3	60.6	55.7	57.1	56	51.4	56.2	60.8
Strontium	0.0001 to 0.005	1.16	1.04	0.967	0.985	0.982	0.969	0.846	0.855	0.794	0.833	0.617	0.599	0.775	0.906
Sulphur	0.5	147	122	110	111	109	102	85.4	74.3	74.5	75	32.5	28.8	49.7	66.6
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	0.013	0.015	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extractio	0.00002										<0.00002				
Uranium	1E-005 to 0.001	0.00386	0.00476	0.0044	0.00462	0.00431	0.00405	0.00399	0.00384	0.0035	0.00327	0.0027	0.00249	0.00263	0.00272
Vanadium	0.001 to 0.03	0.0049	0.0062	0.0064	0.0062	0.0061	0.0058	0.0063	0.0067	0.0057	0.0058	0.0062	0.0045	0.005	0.0041
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics															
Carbon Organic (Dissolved)	0.5 to 5	9.93	10.9	10.2	10.8	9.87	9.63	10.4	9.83	9.31	9.8	17.2	17.1	12.8	11.9
Carbon Organic (Total)	0.5 to 5	13.3	11.5	12.3	12.4	11.8	10.1	10.6	10.3	20.6	10.8	16.4	17	13.2	12.1
Nitrogen Organic (Dissolved)	0.05 to 0.26														
Nitrogen Organic (Total)	0.05 to 0.3														
ALS LAB ID		L1432163	L1435186	L1437439	L1439655	L1442672	L1447300	L1452368	L1459064	L1465478	L1472862	L1481215	L1488139	L1494491	L1500711

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes		MDL	HUMPH02 3-Sep-14	HUMPH02 17-Sep-14
In Situ Parameters				
Conductivity µS/cm		...		882
Oxygen Dissolved %	...		89.8	89.4
Oxygen Dissolved	...		9.43	10
pH (unitless)		...	8.5	8.36
Redox Potential mV		...		109
Salinity ppt		...		0.62
Specific Conductivity µS/cm		...		1231
Temperature °C		...	11.5	10.1
Total Dissolved Solids		...		800
Turbidity NTU		...		
Physical Tests				
Acidity to pH 8.3 (as CaCO3)		1		
Alkalinity (Total as CaCO3)		1 to 2	494	508
Bicarbonate Alkalinity		1 to 2	452	464
Carbonate Alkalinity		1 to 2	41.3	44.1
Color TCU		5		
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	635	642
Hydroxide Alkalinity		1 to 2	<1	<1
pH (unitless)		0.01 to 0.1	8.52	8.56
Specific Conductivity µS/cm		2	1260	1270
Total Dissolved Solids		1 to 2	858	934
Total Suspended Solids		3	10.5	9.1
Turbidity NTU		0.1	2.56	1.88
Dissolved Anions				
Bromide		0.05 to 2.495	<0.5	<0.5
Chloride		0.5 to 1	38.2	40.9
Fluoride		0.02 to 0.4	0.257	0.25
Sulphate		0.5 to 1	217	238
Nutrients				
Ammonia (Total)		0.005 to 0.05	0.0107	0.0098
Nitrate (as N)		0.005 to 0.1	<0.05	<0.05
Nitrite (as N)		0.001 to 0.02	<0.01	<0.01
Nitrogen (Dissolved)		0.05 to 0.1		
Nitrogen (Total)		0.0025 to 0.11		
Nitrogen Kjeldahl (Total)		0.05 to 0.2	0.598	0.637
Orthophosphate (Dissolved)		0.001 to 0.01	0.102	0.103
Phosphorus - Dissolved		0.002 to 0.02	0.138	0.12
Phosphorus - Total		0.002 to 0.02	0.153	0.166
Cyanide				
Cyanide (Free)		0.005	<0.005	<0.005
Cyanide (Total)		0.005	<0.005	<0.005
Cyanide (WAD)		0.005	<0.005	<0.005
Dissolved Metals				
Aluminum		0.001 to 0.025	0.0017	0.0021
Antimony		0.0001 to 0.0025	0.00013	0.00014
Arsenic		0.0001 to 0.0025	0.00319	0.00291
Barium		5E-005 to 0.02	0.0648	0.0651
Beryllium		0.0001 to 0.005	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005
Boron		0.01 to 0.1	0.034	0.034
Cadmium		1E-005 to 8.5E-005	<0.00001	<0.00001
Calcium		0.05 to 0.1	101	101
Chromium		0.0001 to 0.018	<0.0001	<0.0001
Cobalt		0.0001 to 0.0015	<0.0001	<0.0001
Copper		0.0002 to 0.006	0.00547	0.00512
Dissolved Cadmium (by saltwater extr		0.00002		
Iron		0.01 to 0.03	0.012	0.012
Lead		5E-005 to 0.0025	<0.00005	<0.00005
Lithium		0.0005 to 0.025	0.00759	0.00775
Magnesium		0.1	92.9	94.7
Manganese		5E-005 to 0.0015	0.0241	0.0216
Mercury		1E-005 to 5E-005	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.0172	0.017
Nickel		0.0005 to 0.005	0.00128	0.00145
Phosphorus		0.05 to 0.3	0.113	0.118
Potassium		0.05 to 2	15.4	15.1
Selenium		0.0001 to 0.006	0.00073	0.00075
Silicon		0.05	10.4	10.3
Silver		1E-005 to 0.0001	<0.00001	<0.00001
Sodium		0.05 to 2	59.4	63.6
Strontium		0.0001 to 0.005	0.875	0.962
Sulphur		0.5	73	76.2
Thallium		1E-005 to 0.001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01
Uranium		1E-005 to 0.001	0.00243	0.00251
Vanadium		0.001 to 0.03	0.0034	0.0033
Zinc		0.001 to 0.006	0.0018	<0.001
Total Metals				
Aluminum		0.003 to 0.025	0.182	0.211
Antimony		0.0001 to 0.0025	0.00018	0.00016
Arsenic		0.0001 to 0.0025	0.00297	0.00311
Barium		5E-005 to 0.02	0.0685	0.0713
Beryllium		0.0001 to 0.005	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005
Boron		0.01 to 0.1	0.038	0.041
Cadmium		1E-005 to 8.5E-005	<0.00001	<0.00001
Calcium		0.05 to 0.1	102	102
Chromium		0.0001 to 0.005	0.0005	0.00058
Cobalt		0.0001 to 0.0015	0.0003	0.00028
Copper		0.0005 to 0.007	0.00967	0.00956
Iron		0.01 to 0.03	0.29	0.285
Lead		5E-005 to 0.0025	0.000109	0.000065
Lithium		0.0005 to 0.025	0.00758	0.00802
Magnesium		0.1	94.8	96
Manganese		5E-005 to 0.0015	0.0587	0.0552
Mercury		1E-005 to 5E-005	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.0183	0.0188
Nickel		0.0005 to 0.005	0.00193	0.00209
Phosphorus		0.05 to 0.3	0.127	0.14
Potassium		0.05 to 2	15.4	15.3
Selenium		0.0001 to 0.006	0.00071	0.00077
Silicon		0.05	11	11
Silver		1E-005 to 0.0001	<0.00001	<0.00001
Sodium		0.05 to 2	59.8	64.9
Strontium		0.0001 to 0.005	0.919	0.99
Sulphur		0.5	76	80.3
Thallium		1E-005 to 0.001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01
Total Cadmium (by saltwater extractio		0.00002		
Uranium		1E-005 to 0.001	0.00257	0.00271
Vanadium		0.001 to 0.03	0.004	0.0044
Zinc		0.003 to 0.006	<0.003	0.0031
Organics				
Carbon Organic (Dissolved)		0.5 to 5	11.5	11.1
Carbon Organic (Total)		0.5 to 5	12.4	12.6
Nitrogen Organic (Dissolved)		0.05 to 0.26		
Nitrogen Organic (Total)		0.05 to 0.3		
ALS LAB ID			**L1513418**	**L1519657**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C2.17 - HUMPH08
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Analytes		MDL	HUMPH-08 22-May-14	HUMPH-08 5-Jun-14	HUMPH-08 17-Jun-14	HUMPH-08 3-Jul-14	HUMPH-08 15-Jul-14	HUMPH-08 30-Jul-14	HUMPH-08 11-Aug-14	HUMPH-08 3-Sep-14	HUMPH-08 18-Sep-14
In Situ Parameters											
Conductivity µS/cm		...	750	709	714	855	792	686	836		723
Oxygen Dissolved %	...		76.4	73.2	90.9	81.2	86.4	83.3	76.1		73.4
Oxygen Dissolved	...		8.05	8.15	9.98	7.32	7.63	8.68	7.21		7.74
pH (unitless)		...	8.23	8.35	8.47	8.41	8.53	8.59	8.46	8.57	8.28
Redox Potential mV		...	45.9	56.8	72.4	76.8	93	171	72.3		134
Salinity ppt		...	0.48	0.49	0.48	0.47	0.42	0.44	0.48		0.47
Specific Conductivity µS/cm		...	975	981	972	942	850	884	964		942
Temperature °C		...	12.9	10.5	11.2	20.1	21.4	13.1	18.1	13.8	12.8
Total Dissolved Solids		...	630	638	632	612	553	575	627		613
Turbidity NTU		...									
Physical Tests											
Acidity to pH 8.3 (as CaCO3)		1									
Alkalinity (Total as CaCO3)		1 to 2	413	433	431	427	415	462	465	472	463
Bicarbonate Alkalinity		1 to 2	405	397	385	410	385	433	433	430	463
Carbonate Alkalinity		1 to 2	7.7	36.2	45.3	16.7	29.8	29.3	31.5	42.1	<1
Color TCU		5									
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	458	447	451	418	407	432	429	461	447
Hydroxide Alkalinity		1 to 2	<1	<1	<1	<1	<1	<1	<1	<1	<1
pH (unitless)		0.01 to 0.1	8.48	8.4	8.54	8.55	8.44	8.43	8.56	8.59	8.63
Specific Conductivity µS/cm		2	973	934	949	898	920	973	974	990	970
Total Dissolved Solids		1 to 2	566	586	572	487	578	577	605	593	616
Total Suspended Solids		3	49.7	26.5	22.1	40.5	66.8	42.8	12.8	17.2	24.9
Turbidity NTU		0.1	12.9	10	9.05	13	15.1	14.7	6.47	9.27	17.4
Dissolved Anions											
Bromide		0.05 to 2.495	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride		0.5 to 1	37	39.3	44.4	49	50.3	47.6	45	41.4	39.6
Fluoride		0.02 to 0.4	0.23	0.22	0.24	0.24	0.255	0.24	0.43	0.236	0.235
Sulphate		0.5 to 1	91.7	80.2	76.2	41.7	38.8	47.3	53.5	68.1	75.7
Nutrients											
Ammonia (Total)		0.005 to 0.05	0.0207	0.0166	0.0115	0.0433	0.0654	0.0328	0.024	0.0183	0.0273
Nitrate (as N)		0.005 to 0.1	<0.05	0.066	0.063	<0.05	0.078	0.064	0.071	0.118	0.165
Nitrite (as N)		0.001 to 0.02	<0.01	<0.01	<0.01	<0.01	0.014	0.012	<0.01	<0.01	<0.01
Nitrogen (Dissolved)		0.05 to 0.1									
Nitrogen (Total)		0.0025 to 0.11									
Nitrogen Kjeldahl (Total)		0.05 to 0.2	0.905	0.653	0.819	1.83	1.73	1.28	1.02	0.709	0.9
Orthophosphate (Dissolved)		0.001 to 0.01	0.13	0.114	0.107	0.153	0.183	0.158	0.137	0.135	0.137
Phosphorus - Dissolved		0.002 to 0.02	0.153	0.115	0.118	0.192	0.242	0.167		0.169	0.179
Phosphorus - Total		0.002 to 0.02	0.222	0.155	0.187	0.294	0.332	0.298	0.176	0.201	0.245
Cyanide											
Cyanide (Free)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals											
Aluminum		0.001 to 0.025	0.0014	<0.001	0.002	0.0045	0.0101	0.0023	0.0026	0.0015	0.0017
Antimony		0.0001 to 0.0025	0.00021	0.00019	0.00017	0.00014	0.00014	0.00019	0.0002	0.0002	0.00022
Arsenic		0.0001 to 0.0025	0.00384	0.00389	0.00406	0.00245	0.00264	0.0048	0.00497	0.00521	0.00492
Barium		5E-005 to 0.02	0.0689	0.0648	0.065	0.0618	0.0582	0.0695	0.0772	0.0733	0.0748
Beryllium		0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	0.031	0.028	0.029	0.019	0.022	0.027	0.033	0.029	0.032
Cadmium		1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium		0.05 to 0.1	66.1	64.5	66	48.4	46	61.3	62.5	67.5	66.4
Chromium		0.0001 to 0.018	0.00023	0.00027	0.00027	<0.0001	0.00014	0.00015	0.00016	0.00023	0.00021
Cobalt		0.0001 to 0.0015	0.00019	0.00015	0.00012	0.00029	0.00029	0.00017	0.00013	0.00012	0.00015
Copper		0.0002 to 0.006	0.00534	0.00523	0.00515	0.00292	0.00314	0.00494	0.00589	0.0055	0.00463
Dissolved Cadmium (by saltwater extr		0.00002									
Iron		0.01 to 0.03	0.023	0.017	0.011	0.026	0.041	0.015	0.011	<0.01	<0.01
Lead		5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium		0.0005 to 0.025	0.00668	0.00614	0.00595	0.00989	0.011	0.00698	0.00702	0.00705	0.00687
Magnesium		0.1	71.1	69.5	69.6	72.2	71	67.8	66.3	71.1	68.2
Manganese		5E-005 to 0.0015	0.0434	0.0348	0.0308	0.03	0.0365	0.0556	0.0233	0.0181	0.0275
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.0119	0.0124	0.0126	0.00387	0.00422	0.0127	0.0147	0.0156	0.0155
Nickel		0.0005 to 0.005	0.00224	0.00174	0.00165	0.00175	0.00174	0.00204	0.00184	0.00155	0.00148
Phosphorus		0.05 to 0.3	0.144	0.133	0.126	0.182	0.221	0.167	0.164	0.145	0.161
Potassium		0.05 to 2	15.4	15.3	16.3	20.5	18.7	18.9	18	18.2	18.1
Selenium		0.0001 to 0.006	0.0013	0.00101	0.00085	0.00019	0.00018	0.00064	0.00081	0.00114	0.00132
Silicon		0.05	8.31	8.21	8.32	3.23	3.65	9.16	8.98	8.99	8.71
Silver		1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	50	50.9	51	54.2	57.2	52.9	58.3	53.3	50.6
Strontium		0.0001 to 0.005	0.595	0.536	0.509	0.354	0.371	0.513	0.555	0.561	0.537
Sulphur		0.5	29.7	26.7	25.3	14.6	13.7	15.6	18.1	22.7	24.8
Thallium		1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium		1E-005 to 0.001	0.00315	0.00321	0.00334	0.00183	0.00172	0.00262	0.00302	0.00352	0.00338
Vanadium		0.001 to 0.03	0.0076	0.0074	0.0074	0.0043	0.004	0.0076	0.0099	0.0099	0.0103
Zinc		0.001 to 0.006	<0.001	<0.001	0.0018	<0.001	0.0028	<0.001	0.0014	<0.001	<0.001
Total Metals											
Aluminum		0.003 to 0.025	1.18	0.604	0.518	0.276	3.42	1.37	0.302	0.455	1.05
Antimony		0.0001 to 0.0025	0.00024	0.00023	0.00019	0.00016	0.00024	0.00023	0.00023	0.00023	0.00023
Arsenic		0.0001 to 0.0025	0.00403	0.00397	0.00414	0.00253	0.00353	0.00482	0.00437	0.00517	0.0049
Barium		5E-005 to 0.02	0.0794	0.0707	0.0701	0.0661	0.0992	0.0829	0.069	0.0781	0.0793
Beryllium		0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	0.032	0.029	0.031	0.021	0.026	0.029	0.037	0.033	0.037
Cadmium		1E-005 to 8.5E-005	0.000018	0.000013	0.000015	<0.00001	0.000028	0.000017	<0.00001	0.00001	<0.00001
Calcium		0.05 to 0.1	62.7	62.5	62.5	47.2	47.2	60.3	60.6	67.2	60.8
Chromium		0.0001 to 0.005	0.00317	0.00171	0.00162	0.00084	0.00744	0.00352	0.00088	0.00144	0.00282
Cobalt		0.0001 to 0.0015	0.00105	0.00054	0.0005	0.00068	0.00253	0.00112	0.00032	0.00043	0.00088
Copper		0.0005 to 0.007	0.0171	0.0123	0.0124	0.00935	0.0295	0.0192	0.00933	0.0113	0.0154
Iron		0.01 to 0.03	1.65	0.811	0.727	0.374	3.88	1.89	0.451	0.614	1.46
Lead		5E-005 to 0.0025	0.000294	0.000118	0.000116	0.00015	0.000626	0.000272	0.000067	0.000101	0.000197
Lithium		0.0005 to 0.025	0.00744	0.00602	0.00581	0.0094	0.0125	0.00732	0.00704	0.00727	0.00721
Magnesium		0.1	69.2	68.1	66.9	69.8	70.5	68.1	64.5	71.6	64.2
Manganese		5E-005 to 0.0015	0.0656	0.0472	0.0421	0.0521	0.16	0.0866	0.0288	0.0315	0.0491
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.0127	0.0126	0.0128	0.00367	0.00433	0.0129	0.015	0.0167	0.0154
Nickel		0.0005 to 0.005	0.00575	0.00345	0.00333	0.00332	0.0102	0.00611	0.00253	0.00312	0.0048
Phosphorus		0.05 to 0.3	0.208	0.161	0.153	0.216	0.425	0.246	0.177	0.188	0.198
Potassium		0.05 to 2	14.8	14.9	15.6	18.5	18.4	18.7	17.5	18.2	16.8
Selenium		0.0001 to 0.006	0.00133	0.00091	0.00082	0.0002	0.00048	0.00066	0.00078	0.0011	0.00126
Silicon		0.05	10.8	9.63	9.39	3.61	11.2	12.7	9.59	10.1	11
Silver		1E-005 to 0.0001	0.000103	<0.00001	0.000013	<0.00001	0.000032	0.000024	0.000011	<0.00001	0.000017
Sodium		0.05 to 2	49.3	49	50.2	53.7	54.3	51.8	47.9	53.7	47.1
Strontium		0.0001 to 0.005	0.62	0.515	0.503	0.359	0.412	0.506	0.544	0.577	0.53
Sulphur		0.5	29.1	26.6	25.6	14.8	13.8	16.1	18.1	23.3	23.7
Thallium		1E-005 to 0.001	0.000011	<0.00001	<0.00001	<0.00001	0.000016	0.000011	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01	0.047	0.027	0.02	<0.01	0.13	0.053	0.013	0.019	0.04
Total Cadmium (by saltwater extractio		0.00002									
Uranium		1E-005 to 0.001	0.00326	0.00341	0.00343	0.00188	0.0019	0.00283	0.00316	0.0037	0.00333
Vanadium		0.001 to 0.03	0.0112	0.0092	0.0088	0.0054	0.0133	0.0116	0.0096	0.0115	0.013
Zinc		0.003 to 0.006	0.0033	<0.003	<0.003	0.0031	0.0087	0.0041	0.0034	<0.003	0.0043
Organics											
Carbon Organic (Dissolved)		0.5 to 5	11.1	9.14	9.48	19.7	20.2	13.8	11.6	10.7	10.6
Carbon Organic (Total)		0.5 to 5	14.4	10.5	12	19.7	21.1	20.1	11.9	12.2	12.6
Nitrogen Organic (Dissolved)		0.05 to 0.26									
Nitrogen Organic (Total)		0.05 to 0.3									
ALS LAB ID			**L1459064**	**L1466627**	**L1472862**	**L1481215**	**L1488139**	**L1495443**	**L1500711**	**L1513418**	**L1520952**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C2.18 - HUMPH10
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Analytes		MDL	HUMPH-10 12-Mar-14	HUMPH-10 19-Mar-14	HUMPH-10 26-Mar-14	HUMPH-10 2-Apr-14	HUMPH-10 9-Apr-14	HUMPH-10 23-Apr-14	HUMPH-10 6-May-14	HUMPH-10 21-May-14	HUMPH-10 3-Jun-14	HUMPH-10 17-Jun-14	HUMPH-10 3-Jul-14	HUMPH-10 15-Jul-14	HUMPH-10 29-Jul-14	HUMPH-10 11-Aug-14
In Situ Parameters																
Conductivity µS/cm		...	386	588	539	672	511	638	364	797	831	930	812	727	895	898
Oxygen Dissolved %	...		56.9	73.6	66.6	67.9	52.9	82.8		95.6	55.4	65.1	87.1	85.7	49.7	79.4
Oxygen Dissolved	...		7.57	9.61	8.89	7.79	6.81	9.41		9.08	5.38	5.78	7.86	7.38	3.75	6.88
pH (unitless)		...	7.75	7.86	7.75	7.78	7.76	7.92	8.72	8.49	7.81	7.96	8.91	9.11	7.99	7.77
Redox Potential mV		...	-24.3	-9	30.7	54.3	-22.8	49	175	35.4	39.6	82.7	31.2	53.1	55.2	35.8
Salinity ppt		...	0.32	0.48	0.45	0.48	0.41	0.45	0.45	0.46	0.49	0.5	0.44	0.4	0.42	0.47
Specific Conductivity µS/cm		...	658	982	926	963	837	906	908	932	992	1007	892	813	865	951
Temperature °C		...	3.48	3.95	3.09	9.16	4.61	9.53	12.3	17.8	16.5	20.9	20.3	22.7	26.9	22
Total Dissolved Solids		...	427	638	602	626	544	588	591	600	645	655	580	529	591	618
Turbidity NTU		...														
Physical Tests																
Acidity to pH 8.3 (as CaCO3)		1														
Alkalinity (Total as CaCO3)		1 to 2	280	451	452	438	382	407	411	406	419	474	414	396	487	474
Bicarbonate Alkalinity		1 to 2	280	451	452	438	382	407	379	397	419	436	361	340	487	474
Carbonate Alkalinity		1 to 2	<1	<2	<2	<2	<2	<2	31.9	8.7	<1	37.9	52.7	55.4	<2	<1
Color TCU		5														
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	292	437	437	418	369	394	401	421	424	436	403	397	411	397
Hydroxide Alkalinity		1 to 2	<1	<2	<2	<2	<2	<2	<1	<1	<1	<1	<1	<1	<2	<1
pH (unitless)		0.01 to 0.1	8.33	8.22	8.24	8.2	8.1	8.28	8.59	8.48	8.4	8.46	8.79	8.78	8.2	8.3
Specific Conductivity µS/cm		2	671	959	926	877	820	887	874	895	960	959	862	884	978	955
Total Dissolved Solids		1 to 2	372	546	537	541	497	469	490	532	539	592	527	526	572	567
Total Suspended Solids		3	6.4	8.3	7.1	4.5	14.1	<3	84.5	<3	30.7	5.9	17	11.5	51.9	68.6
Turbidity NTU		0.1	3.51	0.78	0.84	2.14	1.45	0.92	0.98	1.04	5.54	2.9	5.67	2	10.9	10.1
Dissolved Anions																
Bromide		0.05 to 2.495	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.25	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride		0.5 to 1	31.1	52.5	49.5	47.4	41	41.2	50.5	48.9	48.7	50.2	52.7	50.5	50.4	50.8
Fluoride		0.02 to 0.4	0.177	0.23	0.24	0.25	0.25	0.24	0.23	0.23	0.3	0.34	0.24	0.265	0.317	0.46
Sulphate		0.5 to 1	32.4	39.2	37.9	37.8	37	52.6	42.9	40.3	30.6	26.3	40	42.3	19.8	15.4
Nutrients																
Ammonia (Total)		0.005 to 0.05	0.386	0.088	0.0571	0.0769	0.0869	0.0782	0.0199	0.0282	0.0883	0.0563	0.0648	0.0857	0.535	0.227
Nitrate (as N)		0.005 to 0.1	0.0779	0.068	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.025	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrite (as N)		0.001 to 0.02	0.0058	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0052	<0.01	0.01	<0.01	<0.01	0.017
Nitrogen (Dissolved)		0.05 to 0.1														
Nitrogen (Total)		0.0025 to 0.11								1.25						
Nitrogen Kjeldahl (Total)		0.05 to 0.2	2.13	1.16	1.21	1.01	1.32	1.11	1.53	1.34	1.37	1.37	1.59	1.65	2.35	2.12
Orthophosphate (Dissolved)		0.001 to 0.01	0.401	0.0493	0.0423	0.0363	0.0434	0.0543	0.0098	0.0351	0.077	0.0613	<0.001	0.0055	0.0969	0.0448
Phosphorus - Dissolved		0.002 to 0.02	0.479	0.0697	0.058	0.0529	0.107	0.0636	0.0316	0.0624	0.0913	0.0723	0.0241	0.03	0.131	
Phosphorus - Total		0.002 to 0.02	0.574	0.113	0.14	0.11	0.0595	0.103	0.0528	0.0747	0.176	0.126	0.0609	0.0533	0.248	0.165
Cyanide																
Cyanide (Free)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																
Aluminum		0.001 to 0.025	0.0027	0.0016	<0.001	0.0017	<0.001	<0.001	0.0028	0.0027	0.0015	0.0026	0.0045	0.0051	0.0032	0.0026
Antimony		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	0.00011	<0.0001	0.00011	0.00013	0.00013	0.00013	0.00015	0.00014	0.00014	0.00018	0.00019
Arsenic		0.0001 to 0.0025	0.00133	0.00149	0.00137	0.00158	0.00143	0.00153	0.00158	0.00192	0.00243	0.00256	0.00163	0.00171	0.00379	0.00312
Barium		5E-005 to 0.02	0.0658	0.0903	0.0879	0.093	0.0805	0.0828	0.0576	0.0646	0.107	0.129	0.0484	0.0471	0.138	0.145
Beryllium		0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	0.012	<0.01	<0.01	<0.01	<0.01	<0.01	0.015	0.017	0.019	0.021	0.014	0.018	0.025	0.023
Cadmium		1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium		0.05 to 0.1	33.3	47.5	45.5	45.2	41.2	42.1	42.4	44.3	47.1	50.5	41.1	39.6	47.6	45.5
Chromium		0.0001 to 0.018	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00012	0.00011	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt		0.0001 to 0.0015	0.00055	0.00053	0.00049	0.00062	0.00072	0.00077	0.00023	0.0004	0.00098	0.00118	0.00017	0.00016	0.00146	0.00139
Copper		0.0002 to 0.006	0.00399	0.00329	0.00308	0.00269	0.00296	0.00331	0.00142	0.00226	0.00286	0.00271	0.00118	0.00118	0.00309	0.00417
Dissolved Cadmium (by saltwater extr		0.00002														
Iron		0.01 to 0.03	0.086	0.074	0.076	0.055	0.095	0.097	0.024	0.033	0.151	0.082	0.011	<0.01	0.095	0.097
Lead		5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium		0.0005 to 0.025	0.00424	0.00601	0.00513	0.00596	0.00508	0.00506	0.0107	0.0104	0.0076	0.00744	0.0112	0.0121	0.00884	0.00907
Magnesium		0.1	50.6	77.4	78.6	74	64.7	70.2	71.8	75.4	74.5	75.2	72.9	72.3	70.9	68.8
Manganese		5E-005 to 0.0015	0.221	0.262	0.232	0.283	0.385	0.428	0.0717	0.118	0.577	0.666	0.015	0.0146	0.694	0.561
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	0.000013	0.000012	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000013	0.000015
Molybdenum		5E-005 to 0.005	0.00455	0.00442	0.00379	0.00498	0.00435	0.00463	0.00285	0.00369	0.00736	0.00846	0.00195	0.00217	0.00484	0.00457
Nickel		0.0005 to 0.005	0.00366	0.00457	0.00426	0.00477	0.00473	0.00463	0.00127	0.00218	0.00568	0.00648	0.00075	0.00069	0.0068	0.00743
Phosphorus		0.05 to 0.3	0.504	0.059	0.066	0.063	0.074	0.089	<0.05	0.062	0.112	0.093	<0.05	<0.05	0.14	0.071
Potassium		0.05 to 2	13	13.4	13	13.5	12.4	12.9	17.1	17.8	16.2	19.2	19.8	18.8	21.8	20.7
Selenium		0.0001 to 0.006	0.0001	0.00012	0.00011	0.00013	0.00012	0.00021	0.00013	0.00013	0.00015	0.00017	0.00011	<0.0001	0.00018	0.00016
Silicon		0.05	3.64	4.14	4.05	4.22	4.2	4.59	0.761	1.71	5.54	6.53	0.576	0.611	6.13	5.86
Silver		1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	36.4	60.2	58	58.2	53.6	51.1	53.3	58.6	59.5	61.4	54.9	57.4	60.7	55.9
Strontium		0.0001 to 0.005	0.27	0.402	0.37	0.379	0.345	0.353	0.299	0.328	0.444	0.45	0.272	0.289	0.408	0.391
Sulphur		0.5	10.8	13.7	12.9	13.2	12.5	18	14.4	15.3	11.7	9.17	14.3	14.8	7.25	5.81
Thallium		1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium		1E-005 to 0.001	0.00144	0.00216	0.0021	0.00216	0.00178	0.00169	0.00193	0.00178	0.00199	0.00191	0.00162	0.0017	0.00145	0.00133
Vanadium		0.001 to 0.03	0.002	0.0013	0.0012	0.0018	0.0015	0.0019	0.0026	0.0026	0.0024	0.0031	0.0031	0.0034	0.0055	0.0045
Zinc		0.001 to 0.006	0.0015	<0.001	<0.001	<0.001	0.0017	<0.001	<0.001	0.0017	<0.001	<0.001	<0.001	<0.001	0.0022	<0.001
Total Metals																
Aluminum		0.003 to 0.025	0.0857	0.0187	0.0329	0.121	0.47	0.0161	0.0376	0.0308	0.171	0.129	0.099	0.233	0.376	0.711
Antimony		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	0.00012	0.00013	0.00012	0.00017	0.00013	0.00014	0.00016	0.00012	0.00014	0.00021	0.00021
Arsenic		0.0001 to 0.0025	0.00146	0.00147	0.00142	0.00161	0.00179	0.0016	0.00148	0.00182	0.00257	0.00276	0.00167	0.00173	0.00384	0.00347
Barium		5E-005 to 0.02	0.0654	0.09	0.0918	0.0935	0.112	0.0889	0.0563	0.0622	0.117	0.133	0.0509	0.0502	0.146	0.149
Beryllium		0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	0.014	<0.01	<0.01	0.014	0.014	<0.01	0.015	0.017	0.019	0.024	0.015	0.019	0.026	0.03
Cadmium		1E-005 to 8.5E-005	0.000013	<0.00001	<0.00001	<0.00001	0.000018	<0.00001	<0.00001	<0.00001	0.000014	0.000012	<0.00001	<0.00001	0.000013	0.000018
Calcium		0.05 to 0.1	32.7	46.9	44.9	42.5	40.3	43.1	40.3	43.5	46.7	47.6	40.3	38.6	46.8	45.1
Chromium		0.0001 to 0.005	0.00024	0.00013	0.00013	0.00031	0.00088	0.00012	0.00015	0.00017	0.00037	0.00037	0.00022	0.00048	0.00068	0.00125
Cobalt		0.0001 to 0.0015	0.00066	0.00058	0.00066	0.00073	0.00184	0.00085	0.00028	0.00041	0.00136	0.00133	0.00028	0.00033	0.00179	0.00204
Copper		0.0005 to 0.007	0.00601	0.00529	0.00559	0.00611	0.00916	0.00646	0.00203	0.00308	0.00697	0.00702	0.00243	0.00273	0.00885	0.0133
Iron		0.01 to 0.03	0.206	0.147	0.174	0.337	0.836	0.207	0.073	0.092	0.516	0.491	0.135	0.266	0.836	1.1
Lead		5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	0.000121	<0.00005	<0.00005	<0.00005	0.000053	0.000054	0.000058	0.000059	0.000139	0.000215
Lithium		0.0005 to 0.025	0.00407	0.00534	0.00544	0.00562	0.00504	0.00528	0.00972	0.00936	0.00695	0.00699	0.00973	0.0123	0.00838	0.00958
Magnesium		0.1	49.9	72.8	73.5	68	62.7	67.7	65.8	73.8	73.1	70.5	71.5	69.6	69.1	68.5
Manganese		5E-005 to 0.0015	0.254	0.273	0.309	0.278	1.04	0.454	0.081	0.129	0.678	0.675	0.0335	0.0299	0.708	0.576
Mercury		1E-005 to 5E-005	0.000014	0.000015	0.000017	0.000025	0.000027	0.000023	<0.00001	<0.00001	0.000021	0.000019	<0.00001	<0.00001	0.000029	0.000038
Molybdenum		5E-005 to 0.005	0.00505	0.00474	0.00413	0.00512	0.0041	0.00512	0.00273	0.00374	0.00689	0.00887	0.00171	0.00233	0.00482	0.00475
Nickel		0.0005 to 0.005	0.00384	0.00459	0.00474	0.00502	0.00666	0.00504	0.00149	0.00222	0.00628	0.00696	0.00113	0.00125	0.00796	0.00995
Phosphorus		0.05 to 0.3	0.63	0.087	0.084	0.107	0.179	0.141	0.051	0.079	0.151	0.14	<0.05	0.064	0.216	0.16
Potassium		0.05 to 2	12.9	12.9	12.6	12.7	12.2	13.2	16	17.7	15.9	17.8	18.8	18.1	20.9	20.3
Selenium		0.0001 to 0.006	0.00013	0.00011	0.00011	0.00012	0.00017	0.00021	0.00012	0.00012	0.00016	0.00018	0.00011	0.00011	0.00018	0.00011
Silicon		0.05	3.85	4.06	4.02	4.28	5.13	4.67	0.79	1.76	5.84	6.55	0.724	1.08	6.77	7.22
Silver		1E-005 to 0.0001	0.000016	0.000016	0.000016	0.000019	0.000061	0.000019	<0.00001	<0.00001	0.000019	0.00004	<0.00001	<0.00001	0.00002	0.000023
Sodium		0.05 to 2	36.2	57.8	57.2	56.4	52.5	52.9	54.2	55.5	56.7	59.1	54.6	55.4	59.2	55.4
Strontium		0.0001 to 0.005	0.266	0.425	0.379	0.357	0.352	0.373	0.279	0.33	0.41	0.432	0.257	0.303	0.404	0.426
Sulphur		0.5	10.9	13.9	13.4	13.2	12.7	18.9	14.4	15.1	11.5	9.4	14.6	14.6	7.32	5.98
Thallium		1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	0.016	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.014	0.026
Total Cadmium (by saltwater extractio		0.00002														
Uranium		1E-005 to 0.001	0.00156	0.00225	0.00222	0.00221	0.00187	0.00182	0.00189	0.0019	0.00199	0.00207	0.00145	0.00178	0.00148	0.00138
Vanadium		0.001 to 0.03	0.0024	0.0016	0.0015	0.0023	0.0034	0.0022	0.0028	0.003	0.0031	0.004	0.0036	0.0039	0.0067	0.0068
Zinc		0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	0.0055	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.005	0.0062
Organics																
Carbon Organic (Dissolved)		0.5 to 5	16.9	16.4	16.2	15.8	14.3	15.3	17.7	18.1	18	18.9	19.1	19.6	19.6	19.5
Carbon Organic (Total)		0.5 to 5	18	16.8	16.1	16.3	15.4	15.6	18.3	18.3	18.9	19.9	20.5	21.9	20.1	20.4
Nitrogen Organic (Dissolved)		0.05 to 0.26														
Nitrogen Organic (Total)		0.05 to 0.3														
ALS LAB ID			**L1432163**	**L1434695**	**L1437439**	**L1439467**	**L1441961**	**L1446462**	**L1451608**	**L1458340**	**L1465108**	**L1472862**	**L1481215**	**L1488139**	**L1494491**	**L1500711**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes	MDL	HUMPH-10 3-Sep-14
In Situ Parameters		
Conductivity µS/cm	...	
Oxygen Dissolved %	...	
Oxygen Dissolved	...	
pH (unitless)	...	8.25
Redox Potential mV	...	
Salinity ppt	...	
Specific Conductivity µS/cm	...	
Temperature °C	...	17.5
Total Dissolved Solids	...	
Turbidity NTU	...	
Physical Tests		
Acidity to pH 8.3 (as CaCO3)	1	
Alkalinity (Total as CaCO3)	1 to 2	462
Bicarbonate Alkalinity	1 to 2	438
Carbonate Alkalinity	1 to 2	24.6
Color TCU	5	
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	415
Hydroxide Alkalinity	1 to 2	<1
pH (unitless)	0.01 to 0.1	8.47
Specific Conductivity µS/cm	2	936
Total Dissolved Solids	1 to 2	552
Total Suspended Solids	3	7.6
Turbidity NTU	0.1	2.53
Dissolved Anions		
Bromide	0.05 to 2.495	<0.5
Chloride	0.5 to 1	51
Fluoride	0.02 to 0.4	0.288
Sulphate	0.5 to 1	21.6
Nutrients		
Ammonia (Total)	0.005 to 0.05	0.0886
Nitrate (as N)	0.005 to 0.1	<0.05
Nitrite (as N)	0.001 to 0.02	0.025
Nitrogen (Dissolved)	0.05 to 0.1	
Nitrogen (Total)	0.0025 to 0.11	
Nitrogen Kjeldahl (Total)	0.05 to 0.2	1.29
Orthophosphate (Dissolved)	0.001 to 0.01	0.0349
Phosphorus - Dissolved	0.002 to 0.02	0.0487
Phosphorus - Total	0.002 to 0.02	0.0618
Cyanide		
Cyanide (Free)	0.005	<0.005
Cyanide (Total)	0.005	<0.005
Cyanide (WAD)	0.005	<0.005
Dissolved Metals		
Aluminum	0.001 to 0.025	0.002
Antimony	0.0001 to 0.0025	0.00016
Arsenic	0.0001 to 0.0025	0.00275
Barium	5E-005 to 0.02	0.118
Beryllium	0.0001 to 0.005	<0.0001
Bismuth	0.0005 to 0.2	<0.0005
Boron	0.01 to 0.1	0.021
Cadmium	1E-005 to 8.5E-005	<0.00001
Calcium	0.05 to 0.1	48.4
Chromium	0.0001 to 0.018	0.00016
Cobalt	0.0001 to 0.0015	0.0008
Copper	0.0002 to 0.006	0.00376
Dissolved Cadmium (by saltwater extr	0.00002	
Iron	0.01 to 0.03	0.044
Lead	5E-005 to 0.0025	<0.00005
Lithium	0.0005 to 0.025	0.00932
Magnesium	0.1	71.5
Manganese	5E-005 to 0.0015	0.203
Mercury	1E-005 to 5E-005	0.000012
Molybdenum	5E-005 to 0.005	0.00431
Nickel	0.0005 to 0.005	0.007
Phosphorus	0.05 to 0.3	<0.05
Potassium	0.05 to 2	20.3
Selenium	0.0001 to 0.006	0.00016
Silicon	0.05	6.78
Silver	1E-005 to 0.0001	<0.00001
Sodium	0.05 to 2	55.7
Strontium	0.0001 to 0.005	0.383
Sulphur	0.5	8.02
Thallium	1E-005 to 0.001	<0.00001
Tin	0.0001 to 0.0025	<0.0001
Titanium	0.01	<0.01
Uranium	1E-005 to 0.001	0.00112
Vanadium	0.001 to 0.03	0.0032
Zinc	0.001 to 0.006	0.0013
Total Metals		
Aluminum	0.003 to 0.025	0.136
Antimony	0.0001 to 0.0025	0.00017
Arsenic	0.0001 to 0.0025	0.00297
Barium	5E-005 to 0.02	0.123
Beryllium	0.0001 to 0.005	<0.0001
Bismuth	0.0005 to 0.2	<0.0005
Boron	0.01 to 0.1	0.023
Cadmium	1E-005 to 8.5E-005	<0.00001
Calcium	0.05 to 0.1	47.7
Chromium	0.0001 to 0.005	0.00035
Cobalt	0.0001 to 0.0015	0.00096
Copper	0.0005 to 0.007	0.00821
Iron	0.01 to 0.03	0.374
Lead	5E-005 to 0.0025	0.000055
Lithium	0.0005 to 0.025	0.00917
Magnesium	0.1	71.8
Manganese	5E-005 to 0.0015	0.22
Mercury	1E-005 to 5E-005	0.000027
Molybdenum	5E-005 to 0.005	0.00473
Nickel	0.0005 to 0.005	0.00776
Phosphorus	0.05 to 0.3	0.079
Potassium	0.05 to 2	20.5
Selenium	0.0001 to 0.006	0.00014
Silicon	0.05	7.07
Silver	1E-005 to 0.0001	0.000015
Sodium	0.05 to 2	56.9
Strontium	0.0001 to 0.005	0.401
Sulphur	0.5	8.12
Thallium	1E-005 to 0.001	<0.00001
Tin	0.0001 to 0.0025	<0.0001
Titanium	0.01	<0.01
Total Cadmium (by saltwater extractio	0.00002	
Uranium	1E-005 to 0.001	0.00119
Vanadium	0.001 to 0.03	0.0037
Zinc	0.003 to 0.006	<0.003
Organics		
Carbon Organic (Dissolved)	0.5 to 5	19
Carbon Organic (Total)	0.5 to 5	19.3
Nitrogen Organic (Dissolved)	0.05 to 0.26	
Nitrogen Organic (Total)	0.05 to 0.3	
ALS LAB ID		**L1513418**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C2.19 - INKS-S
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Analytes		MDL	INKS-S 05/Jun/2010	INKS-S 30-Aug-10	INKS-S 28-Mar-11	INKS-S 14-Apr-11	INKS-S 1-Jun-11	INKS-S 29-Jun-11	INKS-S 28-Jul-11	INKS-S 31-Aug-11	INKS-S 27-Sep-11	INKS-S 26-Oct-11	INKS-S 10-Jan-12	INKS-S 14-Feb-12	INKS-S 6-Mar-12	INKS-S 25-Apr-12
In Situ Parameters																
Conductivity µS/cm		...	7072	9736	1355	4417	7138	8247	9936	85.3		3719	6314	6675	4054	7949
Oxygen Dissolved %	...		88.3	66.3	66.7	106	87.2	67.6		7.2		91.2	52.7	78.8		
Oxygen Dissolved	...		8.8	6.53	9.37	13.1	8.24	6.22		0.66		11.9	7.33	11		11
pH (unitless)		...	8.57	8.91	8.95	8.28	8.75	8.8	8.85	8.84	9.25	9.14	8.89	8.81	9.25	8.68
Redox Potential mV		...		9.3	151	71.1	-176	-53.7	146	78.4	171	118	244	-295	143	155
Salinity ppt		...		5.51			4.75	5.41	5.96	5.59		3.42	6.68	7.1	4.19	5.6
Specific Conductivity µS/cm		...	8935	7800	2493	792	8480	9586	10500	9906	804	6350	12040	12750	7802	9907
Temperature °C		...	14.1	14.6	1.09	5.23	16.7	17.7	22.1	17.7	14.4	3.37	0.5	0.02	-0.14	14.7
Total Dissolved Solids		...		6330	1620	4613	5500	6230	6833	6435		4150	7829	8298	5068	6432
Turbidity NTU		...							12.3	17	18.2	10.2	0.5		6.6	3
Physical Tests																
Acidity to pH 8.3 (as CaCO3)		1	<1						<1							
Alkalinity (Total as CaCO3)		1 to 2	615	656	183	498	580	625	641	683	700	721	767	830	518	671
Bicarbonate Alkalinity		1 to 2	315										606		293	493
Carbonate Alkalinity		1 to 2	300										161		225	178
Color TCU		5	19.5	26.1	17	17.3	17.1	17.4	19.4	22.8	23.7	21.6	20.6	21.5	28.6	20.1
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	3170	3480	741	2500	3170	3420	3500	3860	3990	4170	5280	4660	3080	3790
Hydroxide Alkalinity		1 to 2	<1										<1		<1	<1
pH (unitless)		0.01 to 0.1	9.18	8.86	8.82	8.94	8.87	8.76	8.87	9.01	8.84	8.74	8.66	8.67	9.13	8.78
Specific Conductivity µS/cm		2	8500	9350	2360	6920	9010	9380	10100	10600	10700	10900	11600	12000	8120	10300
Total Dissolved Solids		1 to 2	7900	9680	1810	6670	8550	8880	9000	9750	8310	10600	11400	11300	7370	9660
Total Suspended Solids		3	55	13.3	6	14.5	5.9	8	14.1	283	8.4	18	6.9	16.5	17.3	5.3
Turbidity NTU		0.1	41.5	1.92	3.98	8.78	0.73	0.99	10.5	16.4	2.37	6.63	4.32	2.45	8.74	2.56
Dissolved Anions																
Bromide		0.05 to 2.495	<1	<2.5	<5.5	<20	<2.5	<2.5	<2.5	<2.5	<5	<5	<2.5	<2.5	<2.5	<2.5
Chloride		0.5 to 1	345	376	76	285	352	393	431	420	382	431	472	504	343	453
Fluoride		0.02 to 0.4	<0.4	<1	<0.4	<1	<1	1	<1	<1	<2	0.247	<1	<1	<1	<1
Sulphate		0.5 to 1	4840	5390	1090	3990	5150	5530	6150	5990	5570	6360	6910	7260	4530	6390
Nutrients																
Ammonia (Total)		0.005 to 0.05	0.129	0.0748	0.0086	0.0271	0.102	0.148	0.0407	0.0469	0.0639	0.161	0.327	0.208	0.0394	0.0348
Nitrate (as N)		0.005 to 0.1	<0.1	<0.25	<0.1	<0.25	<0.25	<0.25	<0.25	<0.25	<0.5	<0.5	<0.25	<0.25	<0.25	<0.25
Nitrite (as N)		0.001 to 0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.1	0.086	0.052	0.051	<0.05
Nitrogen (Dissolved)		0.05 to 0.1					2.83	3.4	3.44	4.32	3.19	3.68	3.75	3.51	2.67	3.11
Nitrogen (Total)		0.0025 to 0.11	2.94	3.24	0.078	2.19	2.52	3.25	3.55	4.36	3.42		3.42	3.35	3.61	3.36
Nitrogen Kjeldahl (Total)		0.05 to 0.2	2.94	3.5	0.078	2.19	2.52	3.25	3.55	3.23	3.42	3.38	3.33	3.3	3.56	3.36
Orthophosphate (Dissolved)		0.001 to 0.01	0.0553	0.0502	0.0178	<0.001	0.0226	0.0284	0.0019	0.008	0.0424	0.0649	0.0779	0.0474	<0.001	0.0039
Phosphorus - Dissolved		0.002 to 0.02	0.116	0.104		0.0373	0.0835	0.088	0.0669	0.0785	0.105	0.112	0.142	0.111	0.0564	0.0764
Phosphorus - Total		0.002 to 0.02		0.121	0.105	0.0908	0.0845	0.0948	0.116	0.117	0.112	0.152	0.159	0.188	0.394	0.122
Cyanide																
Cyanide (Free)		0.005	<0.005		<0.005		<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)		0.005	0.0075	0.0084	0.0067		0.006	0.0094	0.0077		0.0078	0.0085	0.0076	0.0076	0.0082	<0.005
Cyanide (WAD)		0.005	<0.005		<0.005		<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																
Aluminum		0.001 to 0.025	<0.05	<0.1	<0.025	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.03	<0.03	<0.03	<0.03	<0.03
Antimony		0.0001 to 0.0025	<0.005	<0.01	<0.0025	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001
Arsenic		0.0001 to 0.0025	0.0164	0.021	0.0068	0.013	0.016	<0.02	0.021	0.022	0.022	0.0204	0.0219	0.0218	0.016	0.0169
Barium		5E-005 to 0.02	<0.04	<0.04	<0.02	<0.04	<0.04	<0.06	<0.06	0.054	<0.06	0.0331	0.0317	0.0336	0.0391	0.0266
Beryllium		0.0001 to 0.005	<0.01	<0.02	<0.005	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth		0.0005 to 0.2			0.2	<0.4	<0.4	<0.6	<0.6	<0.4	<0.6	<0.005	<0.005	<0.005	<0.005	<0.005
Boron		0.01 to 0.1	1.58	1.79	0.37	1.25	1.66	1.8	1.89	1.96	2.12	1.84	2.43	2.63	1.68	1.88
Cadmium		1E-005 to 8.5E-005	<0.00017	<0.00034	<0.000085	<0.00034	<0.00034	<0.00034	<0.00034	<0.00034	<0.00034	<0.00034	<0.0001	<0.0001	<0.0001	<0.0001
Calcium		0.05 to 0.1	72.9	80.5	31.6	56.3	70.4	70.7	72.8	80.4	76.9	80.8	103	94.1	66.5	75.1
Chromium		0.0001 to 0.018	<0.01	<0.02	<0.005	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt		0.0001 to 0.0015	<0.003	<0.006	<0.0015	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.001	<0.001	<0.001	<0.001	<0.001
Copper		0.0002 to 0.006	<0.02	<0.02	0.0066	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.005	<0.005	<0.005	0.0124	<0.005
Dissolved Cadmium (by saltwater extr		0.00002														
Iron		0.01 to 0.03	<0.06	<0.06	<0.03	<0.06	<0.06	<0.09	<0.09	<0.06	<0.09	<0.09	<0.09	<0.09	<0.06	<0.06
Lead		5E-005 to 0.0025	<0.005	<0.01	<0.0025	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Lithium		0.0005 to 0.025	<0.05	<0.1	<0.025	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.0238	0.0479	0.0603	0.0393	0.042
Magnesium		0.1	727	797	161	573	728	788	805	887	922	964	1220	1070	708	876
Manganese		5E-005 to 0.0015	0.0539	0.108	0.101	0.0706	0.0515	0.0435	0.101	0.0477	0.0494	0.0359	0.0451	0.0821	0.0702	0.138
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.03	0.029	0.0073	0.02	0.027	0.029	0.03	0.032	0.032	0.0322	0.0353	0.0359	0.0278	0.0305
Nickel		0.0005 to 0.005	<0.01	<0.02	<0.005	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.005	<0.005	<0.005	<0.005	<0.005
Phosphorus		0.05 to 0.3			<0.3	<0.6	<0.6	<0.9	<0.9	<0.6	<0.9	<0.9	<0.9	<0.9	<0.6	<0.6
Potassium		0.05 to 2	163	183	36.5	129	167	178	187	202	214	222	244	291	175	202
Selenium		0.0001 to 0.006	<0.01	<0.02	<0.005	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon		0.05			0.496	0.45	0.16	0.17	0.85	1.24	1.32	1.06	1.02	0.99	1.07	0.88
Silver		1E-005 to 0.0001	<0.0002	<0.0004	<0.0001	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Sodium		0.05 to 2	1220	1490	288	1000	1370	1450	1520	1660	1680	1550	1830	2000	1370	1610
Strontium		0.0001 to 0.005			1.13	3.75	4.86	5.29	5.57	5.95	6.18	5.99	6.35	6.82	4.58	5.56
Sulphur		0.5														
Thallium		1E-005 to 0.001	<0.002	<0.004	<0.001	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Tin		0.0001 to 0.0025	<0.005	<0.01	<0.0025	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001
Titanium		0.01	<0.02	<0.02	<0.01	<0.02	<0.02	<0.03	<0.03	<0.02	<0.03	<0.03	<0.03	<0.03	<0.02	<0.02
Uranium		1E-005 to 0.001	0.003	<0.004	<0.001	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	0.00308	0.00354	0.00355	0.00266	0.00328
Vanadium		0.001 to 0.03	<0.01	<0.02	<0.005	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc		0.001 to 0.006	<0.01	<0.01	<0.005	<0.01	0.01	<0.015	<0.015	<0.01	<0.015	<0.03	0.129	0.043	<0.03	<0.03
Total Metals																
Aluminum		0.003 to 0.025	<0.05	<0.1	0.138	0.17	<0.1	<0.1	<0.1	0.42	<0.1	0.911	<0.03	<0.03	1.33	0.044
Antimony		0.0001 to 0.0025	<0.005	<0.01	<0.0025	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	0.001	<0.001	<0.001	<0.001
Arsenic		0.0001 to 0.0025	0.017	0.021	0.0066	0.013	0.017	<0.03	0.022	0.021	0.021	0.0203	0.0227	0.0229	0.0157	0.018
Barium		5E-005 to 0.02	<0.04	<0.04	<0.02	<0.04	<0.04	<0.06	<0.06	0.042	<0.06	0.0444	0.0335	0.0362	0.0418	0.0279
Beryllium		0.0001 to 0.005	<0.01	<0.02	<0.005	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth		0.0005 to 0.2			0.2	<0.4	<0.4	<0.6	<0.6	<0.4	<0.6	<0.005	<0.005	<0.005	<0.005	<0.005
Boron		0.01 to 0.1	1.59	1.74	0.36	1.29	1.76	1.89	2.03	2	2.05	2.03	2.68	2.77	1.7	1.94
Cadmium		1E-005 to 8.5E-005	<0.00017	<0.00034	<0.000085	<0.00034	<0.00034	<0.00034	<0.00034	<0.00034	<0.00034	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium		0.05 to 0.1	73.2	79	31.1	58.6	73.3	74.4	80.4	82.2	76.6	81.1	105	95.8	69.2	76.8
Chromium		0.0001 to 0.005	<0.01	<0.02	<0.005	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.0028	<0.001	<0.001	0.0012	<0.001
Cobalt		0.0001 to 0.0015	<0.003	<0.006	<0.0015	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.001	<0.001	<0.001	<0.001	<0.001
Copper		0.0005 to 0.007	<0.02	<0.02	0.011	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.0097	<0.005	<0.005	0.0183	<0.005
Iron		0.01 to 0.03	<0.06	<0.06	0.166	0.232	<0.06	0.097	<0.09	0.464	0.112	1.19	<0.09	<0.09	0.226	<0.06
Lead		5E-005 to 0.0025	<0.005	<0.01	<0.0025	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Lithium		0.0005 to 0.025	<0.05	<0.1	<0.025	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.0361	0.054	0.0631	0.0423	0.0441
Magnesium		0.1	731	776	158	586	767	818	861	905	894	930	1240	1100	742	888
Manganese		5E-005 to 0.0015	0.0692	0.113	0.112	0.0908	0.0573	0.0474	0.139	0.0742	0.0514	0.08	0.0472	0.0875	0.0794	0.15
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.032	0.027	0.0073	<0.02	0.029	0.03	0.031	0.033	0.031	0.0314	0.0374	0.0373	0.0286	0.0319
Nickel		0.0005 to 0.005	<0.01	<0.02	<0.005	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.0052	<0.005	<0.005	<0.005	<0.005
Phosphorus		0.05 to 0.3			<0.3	<0.6	<0.6	<0.9	<0.9	<0.6	<0.9	<0.9	<0.9	<0.9	<0.6	<0.6
Potassium		0.05 to 2	161	178	35.6	122	175	186	209	205	211	214	251	296	177	205
Selenium		0.0001 to 0.006	<0.01	<0.02	<0.005	<0.02	<0.02	<0.03	<0.02	<0.02	<0.02	<0.001	<0.001	<0.001	0.0012	<0.001
Silicon		0.05			0.848	0.81	0.2	0.3	0.95	2.1	1.5	3.31	1.07	1.01	1.5	0.99
Silver		1E-005 to 0.0001	<0.0002	<0.0004	<0.0001	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Sodium		0.05 to 2	1210	1460	280	964	1450	1520	1680	1680	1650	1530	1910	2060	1400	1620
Strontium		0.0001 to 0.005			1.12	3.61	5.08	5.56	6.09	6.02	5.99	5.85	6.76	6.91	4.77	5.76
Sulphur		0.5														
Thallium		1E-005 to 0.001	<0.002	<0.004	<0.001	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Tin		0.0001 to 0.0025	<0.005	<0.01	<0.0025	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001
Titanium		0.01	<0.02	<0.02	<0.01	<0.02	<0.02	<0.03	<0.03	<0.02	<0.03	0.052	<0.03	<0.03	<0.02	<0.02
Total Cadmium (by saltwater extractio		0.00002														
Uranium		1E-005 to 0.001	0.0032	<0.004	<0.001	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	0.00312	0.0038	0.00345	0.00242	0.00337
Vanadium		0.001 to 0.03	<0.01	<0.02	<0.005	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc		0.003 to 0.006	<0.01	<0.01	<0.005	<0.01	<0.01	<0.015	<0.015	<0.01	<0.015	<0.03	<0.03	0.063	<0.03	<0.03
Organics																
Carbon Organic (Dissolved)		0.5 to 5	33.9	39.9	12.2	29.2	36	41.8	38.2	46.1	46.2	46.4	45.6	45.5	37.5	40.2
Carbon Organic (Total)		0.5 to 5				27.8	35.9	38.8	37.5	44.5	47.4	46.4	42.5	50.9	38.5	40.8
Nitrogen Organic (Dissolved)		0.05 to 0.26					2.73	3.25	3.4	4.27	3.13	3.52	3.34	3.25	2.58	3.08
Nitrogen Organic (Total)		0.05 to 0.3				2.17	2.42	3.1	3.51	4.31	3.24	3.91	3.01	3.09	3.52	3.33
ALS LAB ID				L894378	L927439	L990458	L995583	L1012627	L1025917	L1038168	L1052924	L1065234	L1077732	L1103104	L1114498	L1122039	L1140194

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes	MDL	INKS-S 2-May-12	INKS-S 10-Jul-12	INKS-S 7-Aug-12	INKS-S 12-Oct-12	INKS-S 7-Nov-12	INKS-S 9-Jan-13	INKS-S 7-Feb-13	INKS-S 3-Apr-13	INKS-S 7-May-13	INKS-S 5-Jun-13	INKS-S 3-Jul-13	INKS-S 7-Aug-13	INKS-S 5-Sep-13	INKS-S 9-Oct-13
In Situ Parameters															
Conductivity µS/cm	...	8222	1082	1137	8469	7570	6717	7024	6975	10470	11220	11600	12760		13.6
Oxygen Dissolved %	...			39.8	81.3	72.7	63.3	47.7					59.4		
Oxygen Dissolved	...	11.1		3.13	8.69	8.84	8.84	6.61					4.75		
pH (unitless)	...	8.94	8.84	8.63	8.68	8.72	9.15	8.78	9.15	9.03	8.83	8.87	8.84	8.83	9.06
Redox Potential mV	...	131	-40.6	-121	-254	54.8	154	240	106	94.7	191	8.1	196	158	40.5
Salinity ppt	...	5.99		6.43	6.69	6.94	7.21	7.5	5.23	6.99	7.18	7.04	7.4	7.94	7.88
Specific Conductivity µS/cm	...	10533	1143	1131	11700	12230	12950	13430	9295	12170	12500	12270	12890	13687	9.79
Temperature °C	...	13.5	22.3	25.2	10.5	5.08	-0.21	0.01	11.8	17.7	19.6	22.1	24.5	19	10.5
Total Dissolved Solids	...	6846		7357	7608	7950	8420	8731	6038	7910	8120	7980	8377	8898	8847
Turbidity NTU	...	4.5	1.4	14.2	8.7	25.7	2.9	1.3	23.1	5.8	4.6	182	17.3		3.8
Physical Tests															
Acidity to pH 8.3 (as CaCO3)	1				<1									<1	
Alkalinity (Total as CaCO3)	1 to 2	680	720	760	793	828	855	867	619	771	782	814	815	876	818
Bicarbonate Alkalinity	1 to 2	495	551	573	667	728	784	790		513	534	556	563	553	542
Carbonate Alkalinity	1 to 2	185	169	187	126	100	70.4	77.1		258	247	258	252	324	276
Color TCU	5	20.7	19.9	21.6	25	22.4	21.7	22.1	15.8	19.3	19.3	19.9	24.3	20.8	23
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	3690	4200	4080	4570	4800	4990	4670	3280	4480	4620	4270	4640	5110	5150
Hydroxide Alkalinity	1 to 2	<1	<1	<1	<1	<1	<1	<1		<1	<1	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1	8.78	8.73	8.72	8.59	8.53	8.51	8.5	8.78	8.89	8.83	8.87	8.88	8.96	8.91
Specific Conductivity µS/cm	2	10300	10900	11100	12000	12000	12600	12400	9000	11700	12200	12100	12400	12900	13300
Total Dissolved Solids	1 to 2	10300	11900	12400	11400		12600	13000	9300	11300	12200	11900	12600	13700	12600
Total Suspended Solids	3	13.1	6.2	10.1	28.8	31.8	7	9.5	33.8	32.1	17.8	24.3	25.7	34.7	13.1
Turbidity NTU	0.1	3.84	0.94	0.98	14.2	18.6	3.37	2.88	14.2	3.54	1.92	0.92	24.9	6.51	8.41
Dissolved Anions															
Bromide	0.05 to 2.495	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	2.7	<2.5	2.6	<2.5
Chloride	0.5 to 1	426	459	466	505	524	523	529	391	486	502	497	529	574	561
Fluoride	0.02 to 0.4	<1	<1	<1	<1	<1	<1	<1	<1	<1	1.1	<1	<1	<0.4	<1
Sulphate	0.5 to 1	6130	6620	6830	7480	7650	7870	7930	5540	7220	7540	7190	7900	8070	8390
Nutrients															
Ammonia (Total)	0.005 to 0.05	0.0355	0.14	0.221	0.803	1.52	1.67	1.68	0.07	0.044	0.0289	0.069	0.053	0.0426	0.0466
Nitrate (as N)	0.005 to 0.1	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.1	<0.25
Nitrite (as N)	0.001 to 0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05
Nitrogen (Dissolved)	0.05 to 0.1	2.85	0.407	5.06	4.7	4.35	5.49	5.07	2.38				3.63		
Nitrogen (Total)	0.0025 to 0.11	2.89	3.28	3.71	5.15	1.28	5.51	5.18	4.71	3.74	3.54	3.68	4.27	17.5	4.46
Nitrogen Kjeldahl (Total)	0.05 to 0.2	2.89	3.28	3.71	5.15	1.28	5.72	6.19	4.71	3.74	3.63	3.68	4.03	4.58	5.21
Orthophosphate (Dissolved)	0.001 to 0.01	0.0164	0.0929	0.127	0.162	0.178	0.161	0.204	<0.001		0.133	0.096		0.0026	0.0029
Phosphorus - Dissolved	0.002 to 0.02	0.0938	0.178	0.196	0.235	0.233	0.245	0.275	0.0601	0.0956	0.226	0.176	0.202	0.0926	0.0819
Phosphorus - Total	0.002 to 0.02	0.135	0.173	0.216	0.3	0.29	0.28	0.308	0.354	0.146	0.241	0.188	0.324	0.312	0.256
Cyanide															
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	0.0093	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals															
Aluminum	0.001 to 0.025	<0.03	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Antimony	0.0001 to 0.0025	<0.001	0.0011	<0.001	0.0011	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	0.0012	0.0012	0.001
Arsenic	0.0001 to 0.0025	0.0171	0.0207	0.0235	0.021	0.0161	0.0133	0.0153	0.0094	0.0146	0.0173	0.0197	0.0229	0.023	0.0199
Barium	5E-005 to 0.02	0.0278	0.0345	0.035	0.0338	0.0292	0.0258	0.0302	0.0207	0.0268	0.0315	0.026	0.0186	0.0215	0.0215
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth	0.0005 to 0.2	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Boron	0.01 to 0.1	2.21	2.18	1.83	2.68	2.26	2.11	2.59	1.61	1.99	2.15	2.05	2.44	2.63	2.68
Cadmium	1E-005 to 8.5E-005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium	0.05 to 0.1	72.9	79.2	79.7	90	96.2	96.5	97.2	68.1	92.2	90.2	89.4	89	88.4	83.2
Chromium	0.0001 to 0.018	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	0.0001 to 0.0015	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	0.0002 to 0.006	<0.005	0.0029	<0.002	<0.002	<0.002	<0.004	0.0022	0.0056	0.003	0.0025	0.003	0.0032	<0.002	<0.002
Dissolved Cadmium (by saltwater extr	0.00002														
Iron	0.01 to 0.03	<0.09	<0.1	<0.1	<0.1	0.057	0.055	0.052	0.023	<0.03	<0.05	<0.03	<0.05	<0.05	<0.05
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Lithium	0.0005 to 0.025	0.0479	0.0483	0.0427	0.0627	0.0497	0.043	0.0524	0.0298	0.0545	0.0461	0.0398	0.0499	0.0601	0.0598
Magnesium	0.1	852	973	943	1060	1110	1150	1070	755	963	1070	983	1070	1190	1200
Manganese	5E-005 to 0.0015	0.138	0.175	0.205	0.1	0.0982	0.0534	0.0659	0.0423	0.132	0.108	0.0416	0.096	0.0328	0.0182
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0315	0.0321	0.0252	0.0376	0.038	0.0351	0.0387	0.027	0.0411	0.0347	0.0351	0.0368	0.0382	0.0387
Nickel	0.0005 to 0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	0.0082	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Phosphorus	0.05 to 0.3	<0.9	<0.9	<0.9	<1.5	0.26	<0.25	0.24	<0.1	<0.15	<0.25	0.18	<0.25	<0.25	<0.25
Potassium	0.05 to 2	200	231	249	272	252	258	258	164	239	245	224	253	271	281
Selenium	0.0001 to 0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	0.0017	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon	0.05	1.12	0.64	1.51	2.15	2.7	2.96	3.25	1.83	2.96	1.02	0.32	2.01	3.74	3.64
Silver	1E-005 to 0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Sodium	0.05 to 2	1600	1790	1890	2120	1950	1910	2030	1290	1870	1950	1830	2170	2260	2140
Strontium	0.0001 to 0.005	5.55	6.33	5.69	7.3	6.83	6.59	7.11	4.78	6.63	6.3	6.3	7.2	7.56	7.57
Sulphur	0.5					2430	2570	2470	1690	2310	2380	2240	2520	2700	2630
Thallium	1E-005 to 0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Tin	0.0001 to 0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Titanium	0.01	<0.03	<0.03	<0.03	<0.05	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Uranium	1E-005 to 0.001	0.00331	0.00346	0.00276	0.00387	0.00392	0.00377	0.00426	0.00286	0.00408	0.00374	0.00378	0.0039	0.00403	0.004
Vanadium	0.001 to 0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	0.012	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	0.001 to 0.006	<0.03	<0.01	<0.01	<0.01	<0.01	<0.02	0.01	0.013	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Metals															
Aluminum	0.003 to 0.025	0.805	<0.03	<0.03	0.353	0.704	<0.06	<0.03	0.174	0.074	0.065	<0.03	0.036	<0.03	0.059
Antimony	0.0001 to 0.0025	<0.001	<0.001	0.0011	0.0011	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	0.0032	0.0012	0.0013	<0.001
Arsenic	0.0001 to 0.0025	0.0175	0.0194	0.0236	0.0215	0.0166	0.0133	0.015	0.01	0.0145	0.0173	0.0199	0.0228	0.0234	0.0199
Barium	5E-005 to 0.02	0.0296	0.0323	0.0351	0.0379	0.0392	0.0269	0.0299	0.0228	0.0276	0.0328	0.0267	0.0201	0.0221	0.0226
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth	0.0005 to 0.2	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Boron	0.01 to 0.1	2.21	1.89	2.14	2.71	2.22	2.21	2.48	1.65	2.04	2.16	2.06	2.49	2.58	2.58
Cadmium	1E-005 to 8.5E-005	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium	0.05 to 0.1	72	77.3	84.8	96	102	103	100	71.9	92.9	91.1	91.8	95.2	90.5	81.1
Chromium	0.0001 to 0.005	<0.001	<0.001	<0.001	0.0015	0.0018	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	0.0001 to 0.0015	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	0.0005 to 0.007	<0.005	<0.005	<0.005	<0.005	0.0074	<0.01	<0.005	<0.005	0.0052	<0.005	<0.005	<0.005	<0.005	<0.005
Iron	0.01 to 0.03	0.161	<0.1	<0.1	0.48	0.966	0.136	0.117	0.254	0.116	0.131	0.052	0.051	<0.05	0.111
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Lithium	0.0005 to 0.025	0.0485	0.0459	0.0504	0.0648	0.048	0.047	0.0512	0.032	0.0553	0.0486	0.0414	0.0516	0.0587	0.0633
Magnesium	0.1	825	941	984	1090	1140	1220	1130	793	959	1090	1010	1120	1210	1200
Manganese	5E-005 to 0.0015	0.148	0.173	0.195	0.129	0.141	0.0638	0.0717	0.0733	0.141	0.123	0.0511	0.122	0.048	0.0702
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.031	0.0299	0.0296	0.0388	0.0379	0.0373	0.0378	0.0285	0.0437	0.036	0.0393	0.0376	0.0387	0.0378
Nickel	0.0005 to 0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Phosphorus	0.05 to 0.3	<0.9	<0.9	<0.9	<1.5	0.36	0.31	0.31	0.36	<0.15	0.27	0.21	0.33	0.3	0.31
Potassium	0.05 to 2	196	214	240	270	260	275	263	171	237	250	236	267	279	271
Selenium	0.0001 to 0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	0.0019	<0.001	<0.001	<0.001	0.001	0.0011	<0.001
Silicon	0.05	1.32	0.61	1.62	3.43	4.75	3.22	3.39	2.35	3.1	1.24	0.39	2.22	3.86	3.71
Silver	1E-005 to 0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00012	<0.0001
Sodium	0.05 to 2	1560	1650	1840	2100	1940	1860	2010	1310	1870	1920	1880	2180	2260	2050
Strontium	0.0001 to 0.005	5.6	5.88	6.61	7.51	6.85	6.95	6.94	4.83	6.66	6.47	6.29	7.31	7.54	7.23
Sulphur	0.5					2500	2740	2620	1780	2330	2430	2320	2660	2770	2630
Thallium	1E-005 to 0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	0.00024	<0.0001	<0.0001	<0.0001
Tin	0.0001 to 0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Titanium	0.01	<0.03	<0.03	<0.03	<0.05	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Cadmium (by saltwater extractio	0.00002														
Uranium	1E-005 to 0.001	0.00324	0.00324	0.00323	0.00402	0.00399	0.00388	0.00416	0.00287	0.00414	0.00411	0.00401	0.00396	0.00416	0.00405
Vanadium	0.001 to 0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	0.013	0.011	<0.01	<0.01	<0.01	<0.01
Zinc	0.003 to 0.006	<0.03	<0.03	<0.03	<0.03	<0.03	<0.06	<0.03	0.031	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Organics															
Carbon Organic (Dissolved)	0.5 to 5	41.8	42.9	42.8	49.7	47.4	51.1	46.9	34.9	45	48.1	50.6	53.2	47.2	49.7
Carbon Organic (Total)	0.5 to 5	42.1	40.6	43.5	51.1	54.9	49.4	46.3	38	48	47.9	51.2	56.3	51.8	55.1
Nitrogen Organic (Dissolved)	0.05 to 0.26	2.81	0.267	4.84	3.9	2.83		3.39	2.31						
Nitrogen Organic (Total)	0.05 to 0.3	2.85	3.14	3.49	4.35	<0.08	4.05	4.51	4.64						
ALS LAB ID		**L1142492**	**L1176520**	**L1190914**	**L1223406**	**L1235306**	**L1256679**	**L1266846**	**L1286585**	**L1298960**	**L1312719**	**L1327102**	**L1344180**	**L1358626**	**L1375698**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes		MDL	INKS-S 7-Nov-13
In Situ Parameters			
Conductivity µS/cm		...	7735
Oxygen Dissolved %	...		27.8
Oxygen Dissolved	...		3.45
pH (unitless)		...	9.01
Redox Potential mV		...	119
Salinity ppt		...	7.32
Specific Conductivity µS/cm		...	12890
Temperature °C		...	4.05
Total Dissolved Solids		...	8380
Turbidity NTU		...	17.1
Physical Tests			
Acidity to pH 8.3 (as CaCO3)		1	
Alkalinity (Total as CaCO3)		1 to 2	760
Bicarbonate Alkalinity		1 to 2	550
Carbonate Alkalinity		1 to 2	210
Color TCU		5	
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	5050
Hydroxide Alkalinity		1 to 2	<1
pH (unitless)		0.01 to 0.1	8.78
Specific Conductivity µS/cm		2	12800
Total Dissolved Solids		1 to 2	12500
Total Suspended Solids		3	35.7
Turbidity NTU		0.1	12.8
Dissolved Anions			
Bromide		0.05 to 2.495	<2.5
Chloride		0.5 to 1	535
Fluoride		0.02 to 0.4	<1
Sulphate		0.5 to 1	7870
Nutrients			
Ammonia (Total)		0.005 to 0.05	0.132
Nitrate (as N)		0.005 to 0.1	<0.25
Nitrite (as N)		0.001 to 0.02	<0.05
Nitrogen (Dissolved)		0.05 to 0.1	
Nitrogen (Total)		0.0025 to 0.11	4.54
Nitrogen Kjeldahl (Total)		0.05 to 0.2	4.83
Orthophosphate (Dissolved)		0.001 to 0.01	0.0019
Phosphorus - Dissolved		0.002 to 0.02	0.0667
Phosphorus - Total		0.002 to 0.02	2.77
Cyanide			
Cyanide (Free)		0.005	<0.005
Cyanide (Total)		0.005	<0.005
Cyanide (WAD)		0.005	<0.005
Dissolved Metals			
Aluminum		0.001 to 0.025	<0.01
Antimony		0.0001 to 0.0025	<0.001
Arsenic		0.0001 to 0.0025	0.0161
Barium		5E-005 to 0.02	0.0198
Beryllium		0.0001 to 0.005	<0.001
Bismuth		0.0005 to 0.2	<0.005
Boron		0.01 to 0.1	2.32
Cadmium		1E-005 to 8.5E-005	<0.0001
Calcium		0.05 to 0.1	75.6
Chromium		0.0001 to 0.018	<0.001
Cobalt		0.0001 to 0.0015	<0.001
Copper		0.0002 to 0.006	0.0031
Dissolved Cadmium (by saltwater extr		0.00002	
Iron		0.01 to 0.03	<0.05
Lead		5E-005 to 0.0025	<0.0005
Lithium		0.0005 to 0.025	0.0537
Magnesium		0.1	1180
Manganese		5E-005 to 0.0015	0.069
Mercury		1E-005 to 5E-005	<0.00001
Molybdenum		5E-005 to 0.005	0.0379
Nickel		0.0005 to 0.005	<0.005
Phosphorus		0.05 to 0.3	<0.25
Potassium		0.05 to 2	263
Selenium		0.0001 to 0.006	0.0011
Silicon		0.05	3.5
Silver		1E-005 to 0.0001	<0.0001
Sodium		0.05 to 2	1860
Strontium		0.0001 to 0.005	6.89
Sulphur		0.5	2590
Thallium		1E-005 to 0.001	<0.0001
Tin		0.0001 to 0.0025	<0.001
Titanium		0.01	<0.1
Uranium		1E-005 to 0.001	0.00421
Vanadium		0.001 to 0.03	<0.01
Zinc		0.001 to 0.006	<0.01
Total Metals			
Aluminum		0.003 to 0.025	0.123
Antimony		0.0001 to 0.0025	<0.001
Arsenic		0.0001 to 0.0025	0.0149
Barium		5E-005 to 0.02	0.0197
Beryllium		0.0001 to 0.005	<0.001
Bismuth		0.0005 to 0.2	<0.005
Boron		0.01 to 0.1	2.06
Cadmium		1E-005 to 8.5E-005	<0.0001
Calcium		0.05 to 0.1	71.9
Chromium		0.0001 to 0.005	<0.001
Cobalt		0.0001 to 0.0015	<0.001
Copper		0.0005 to 0.007	0.0053
Iron		0.01 to 0.03	0.188
Lead		5E-005 to 0.0025	<0.0005
Lithium		0.0005 to 0.025	0.0474
Magnesium		0.1	1080
Manganese		5E-005 to 0.0015	0.0851
Mercury		1E-005 to 5E-005	<0.00001
Molybdenum		5E-005 to 0.005	0.0339
Nickel		0.0005 to 0.005	<0.005
Phosphorus		0.05 to 0.3	0.3
Potassium		0.05 to 2	243
Selenium		0.0001 to 0.006	0.0012
Silicon		0.05	3.71
Silver		1E-005 to 0.0001	<0.0001
Sodium		0.05 to 2	1730
Strontium		0.0001 to 0.005	6.16
Sulphur		0.5	2380
Thallium		1E-005 to 0.001	<0.0001
Tin		0.0001 to 0.0025	<0.001
Titanium		0.01	<0.1
Total Cadmium (by saltwater extractio		0.00002	
Uranium		1E-005 to 0.001	0.00379
Vanadium		0.001 to 0.03	<0.01
Zinc		0.003 to 0.006	<0.03
Organics			
Carbon Organic (Dissolved)		0.5 to 5	43.4
Carbon Organic (Total)		0.5 to 5	48.9
Nitrogen Organic (Dissolved)		0.05 to 0.26	
Nitrogen Organic (Total)		0.05 to 0.3	
ALS LAB ID			**L1389979**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes		MDL	JACL-D 3-May-07	JACL-D 19-Jul-07	JACL-D 20-Sep-07	JACL-D 29-Apr-08	JACL-D 10-Jul-08	JACL-D 7-Sep-08	JACL-D 3-Jun-10	JACL-D 1-Sep-10	JACL-D 1-Jun-11	JACL-D 29-Jun-11	JACL-D 28-Jul-11	JACL-D 31-Aug-11	JACL-D 28-Sep-11	JACL-D 3-Nov-11
In Situ Parameters																
Conductivity µS/cm		...	492	499	511	484	503	503	483	531	432	484	503	466		144
Oxygen Dissolved %	...					62.3	1.3	1.5	9.4	0.4	1.3	-0.4	0	0.8	0.1	
Oxygen Dissolved	...		0.47	0.01	0.21	7.99	0.16	0.19	1.22	0.05	0.18	-0.06	0	0.11	0.01	12.2
pH (unitless)		...	7.76	7.54	8	8.1	7.42	7.29	7.84	7.71	6.52	7.36	7.55		7.45	7.74
Redox Potential mV		...					-64.4				-57.9	-178		-124	-224	258
Salinity ppt		...									0.35	0.4	0.41	0.41		0.11
Specific Conductivity µS/cm		...	754	787	792	790	801	803	802	869	729	814	840	847	843	232
Temperature °C		...	5.44	5.85	6.42	4.72	5.47	5.43	4.18	4.62	3.69	3.77	3.99	1.46	4.2	5.21
Total Dissolved Solids		...		512							474	529	547	550		153
Turbidity NTU		...										300	1.6	1.5		
Physical Tests																
Acidity to pH 8.3 (as CaCO3)		1		5.2		4.2							7.7		4.9	
Alkalinity (Total as CaCO3)		1 to 2	248	247	280	257	250	255	236	244	255	259	280	256	272	272
Bicarbonate Alkalinity		1 to 2				257		255	236						272	
Carbonate Alkalinity		1 to 2				<2		<2	<2						<2	
Color TCU		5		13.9	15.3	21.3	12.6	14.2	13.7	14.3	15.6	14.7	17.1	16.4	16	16.6
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	321	337	329	341	322	320	318	336	324	321	331	333	325	323
Hydroxide Alkalinity		1 to 2				<2		<2	<2						<2	
pH (unitless)		0.01 to 0.1	8.24	7.99	7.9	8.12	8.2	7.85	8.3	7.97	8.11	8.09	8	8.04	8.04	8.1
Specific Conductivity µS/cm		2	749	774	779	790	793	801	758	769	785	751	811	800	809	774
Total Dissolved Solids		1 to 2	461	471	465	447	492	470	454	480	469	458	507	472	482	474
Total Suspended Solids		3	<3	3.6	<3	3.2	<3	<3	<3	<3	5.2	3.3	<3	<3	4	3
Turbidity NTU		0.1				2.43	2.15	9.9	0.78	2.2	2.07	1.67	13	1.61		23.4
Dissolved Anions																
Bromide		0.05 to 2.495	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.25	<0.25	<0.5	<0.5	<0.25	<0.5
Chloride		0.5 to 1	61.4	60	59.8	60.6	61.9	62.5	60.5	60.6	61	62.6	65	61.7	60.8	63.8
Fluoride		0.02 to 0.4	0.191		0.207	0.172	0.175	0.198	0.172	<0.2	0.21	0.32	0.34	<0.2	0.21	0.22
Sulphate		0.5 to 1	86.4	83.7	82.5	83.7	85.2	73.9	79.5	70.7	74.5	77.3	64.8	73.7	73.3	71.3
Nutrients																
Ammonia (Total)		0.005 to 0.05	0.131	0.932	1.57	0.076	0.448	1.94	0.19	0.939	0.499	0.513	1.19	0.93	1.59	0.294
Nitrate (as N)		0.005 to 0.1	0.161	<0.005	<0.005	0.0299	<0.005	<0.005	<0.005	<0.05	<0.025	<0.025	<0.05	<0.05	<0.025	0.062
Nitrite (as N)		0.001 to 0.02	0.0106	<0.001	<0.001	0.0045	<0.001	<0.001	<0.001	<0.01	<0.005	<0.005	<0.01	<0.01	<0.005	<0.01
Nitrogen (Dissolved)		0.05 to 0.1									1.59	1.61	2.28	2.25	2.45	2.83
Nitrogen (Total)		0.0025 to 0.11							1.06	2.01	1.56	1.68	2.3	2.55	2.5	2.77
Nitrogen Kjeldahl (Total)		0.05 to 0.2	1.02	1.95	2.94	1.13	1.34	3.17	1.06	2.01	1.56	1.68	2.3	1.97	2.5	2.38
Orthophosphate (Dissolved)		0.001 to 0.01	0.0523	0.216	0.336	0.0281	0.116	0.343	0.0261	0.168	0.109	0.0991	0.278	0.178	0.277	0.273
Phosphorus - Dissolved		0.002 to 0.02								0.179	0.118	0.106	0.279	0.178	0.278	0.276
Phosphorus - Total		0.002 to 0.02	0.0788	0.257	0.362	0.0816	0.16	0.383	0.0498	0.193	0.138	0.127	0.317	0.198	0.336	0.284
Cyanide																
Cyanide (Free)		0.005				<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005
Cyanide (Total)		0.005	0.006	0.0051	0.0117	<0.005	0.006		<0.005	0.0064	0.0052	0.0063	0.0055		<0.005	<0.005
Cyanide (WAD)		0.005				<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0063	<0.005		<0.005	<0.005
Dissolved Metals																
Aluminum		0.001 to 0.025	<0.01	<0.005	0.009	<0.005	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.003
Antimony		0.0001 to 0.0025	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001
Arsenic		0.0001 to 0.0025	0.0014	0.00138	0.00123	0.00126	0.0013	0.0016	0.00144	0.00131	0.00143	0.00145	0.00143	0.00136	0.00135	0.00137
Barium		5E-005 to 0.02	0.059	0.065	0.067	0.059	0.067	0.069	0.056	0.07	0.067	0.066	0.07	0.071	0.074	0.07
Beryllium		0.0001 to 0.005	<0.002	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001
Bismuth		0.0005 to 0.2									<0.2	<0.2	<0.2	<0.2	<0.2	<0.0005
Boron		0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.02
Cadmium		1E-005 to 8.5E-005	<0.000034	<0.000017	<0.000017	<0.000017	<0.000034	<0.000034	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.00001
Calcium		0.05 to 0.1	57.5	60.2	61.1	57.9	56.4	58.5	50.1	53.5	56.3	54.7	59	57.4	57.1	56.2
Chromium		0.0001 to 0.018	<0.002	<0.002	<0.001	<0.001	<0.002	<0.004	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.0001
Cobalt		0.0001 to 0.0015	<0.0006	<0.0003	<0.0003	<0.0003	<0.0006	<0.0006	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0001
Copper		0.0002 to 0.006	<0.002	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005
Dissolved Cadmium (by saltwater extr		0.00002														
Iron		0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Lead		5E-005 to 0.0025	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005
Lithium		0.0005 to 0.025	<0.01	0.0072	0.0063	0.0062	<0.01	<0.01	0.0055	0.0067	0.0062	<0.005	<0.005	0.0082	0.0072	0.00646
Magnesium		0.1	43	45.3	43	46.7	44	42.3	46.8	49.2	44.6	44.9	44.7	46	44.3	44.3
Manganese		5E-005 to 0.0015	0.0297	0.0995	0.107	0.00936	0.086	0.0982	0.00902	0.0578	0.122	0.103	0.1	0.101	0.108	0.102
Mercury		1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	<0.004	0.0021	0.0011	0.0024	0.0025	<0.002	0.0023	0.0018	0.002	0.002	0.0012	0.0014	<0.001	0.00066
Nickel		0.0005 to 0.005	<0.002	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00078
Phosphorus		0.05 to 0.3									<0.3	<0.3	<0.3	<0.3	0.33	0.3
Potassium		0.05 to 2	12.3	12.6	12.4	12.2	12.6	13	14.7	14.2	13.1	12.9	13.5	13.5	13.2	13.2
Selenium		0.0001 to 0.006	<0.002	0.0034	<0.001	<0.001	<0.002	0.0107	<0.001	<0.001	<0.001	<0.001	0.0019	<0.001	<0.001	0.00021
Silicon		0.05									3.19	3.13	3.94	3.41	4.13	3.95
Silver		1E-005 to 0.0001	<0.00004	<0.00002	<0.00002	<0.00002	<0.00004	<0.00004	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001
Sodium		0.05 to 2	39.8	42	43.4	40.7	41.3	39.2	42.9	44.6	42.4	42.2	42.1	42.6	42	47
Strontium		0.0001 to 0.005									0.429	0.419	0.427	0.428	0.428	0.446
Sulphur		0.5														
Thallium		1E-005 to 0.001	<0.0004	<0.0002	<0.0002	<0.0002	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001
Tin		0.0001 to 0.0025	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium		1E-005 to 0.001	0.00129	0.00118	0.00098	0.00109	0.00121	0.00112	0.00118	0.00118	0.00111	0.00117	0.00106	0.00117	0.00116	0.000948
Vanadium		0.001 to 0.03	<0.03	<0.03	<0.03	0.0016	<0.002	<0.002	0.0019	0.0018	0.0023	0.0018	0.0018	0.0018	0.0017	0.0017
Zinc		0.001 to 0.006	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.003
Total Metals																
Aluminum		0.003 to 0.025	<0.01	0.0058	0.0092	<0.005	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0033
Antimony		0.0001 to 0.0025	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001
Arsenic		0.0001 to 0.0025	0.0012	0.00137	0.0012	0.00127	0.0013	0.0016	0.00105	0.00132	0.00131	0.00137	0.00128	0.00139	0.00138	0.00125
Barium		5E-005 to 0.02	0.058	0.066	0.07	0.062	0.067	0.069	0.054	0.068	0.068	0.069	0.073	0.067	0.071	0.065
Beryllium		0.0001 to 0.005	<0.002	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001
Bismuth		0.0005 to 0.2									<0.2	<0.2	<0.2	<0.2	<0.2	<0.0005
Boron		0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.024
Cadmium		1E-005 to 8.5E-005	<0.000034	<0.000017	<0.000017	<0.000017	<0.000034	<0.000034	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.00001
Calcium		0.05 to 0.1	58.8	60.9	62.1	58.6	56.9	58	48.8	53	55.4	56.2	59.5	55.2	56.2	53.6
Chromium		0.0001 to 0.005	<0.002	<0.002	<0.001	<0.001	<0.002	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00029
Cobalt		0.0001 to 0.0015	<0.0006	<0.0003	<0.0003	<0.0003	<0.0006	<0.0006	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0001
Copper		0.0005 to 0.007	<0.002	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00087
Iron		0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.038	<0.03	0.031	0.064
Lead		5E-005 to 0.0025	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005
Lithium		0.0005 to 0.025	<0.01	0.0067	0.0063	0.0064	<0.01	<0.01	0.006	0.0077	0.0074	0.0059	0.0074	0.0077	0.0071	0.00576
Magnesium		0.1	44	45.9	43.2	47.2	44.3	42.3	45.1	48.2	44.7	46	45.3	44.7	43.9	41.7
Manganese		5E-005 to 0.0015	0.0479	0.0965	0.106	0.0359	0.0855	0.0982	0.0137	0.0642	0.13	0.11	0.109	0.102	0.108	0.0995
Mercury		1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	<0.004	0.002	0.0014	0.0024	0.0024	<0.002	0.0025	0.0024	0.0025	0.0024	0.0019	0.0022	0.0018	0.00138
Nickel		0.0005 to 0.005	<0.002	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00164
Phosphorus		0.05 to 0.3									<0.3	<0.3	0.31	<0.3	0.33	<0.3
Potassium		0.05 to 2	12.2	12.6	12.3	12.4	12.6	13	13.9	13.9	13.3	13.4	13.9	13.1	13.2	12.6
Selenium		0.0001 to 0.006	<0.002	0.0034	<0.001	<0.001	<0.002	0.0171	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0001
Silicon		0.05									3.23	3.18	3.98	3.29	4.08	3.73
Silver		1E-005 to 0.0001	<0.00004	<0.00002	<0.00002	<0.00002	<0.00004	<0.00004	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001
Sodium		0.05 to 2	39.6	41.4	43	41.4	41.2	39.3	41.8	43.9	42.9	43.8	44	41.7	41.8	44.8
Strontium		0.0001 to 0.005									0.435	0.437	0.445	0.422	0.43	0.42
Sulphur		0.5														
Thallium		1E-005 to 0.001	<0.0004	<0.0002	<0.0002	<0.0002	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001
Tin		0.0001 to 0.0025	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extractio		0.00002														
Uranium		1E-005 to 0.001	0.00126	0.00105	0.00083	0.00077	0.00115	0.00095	0.00129	0.00136	0.00131	0.0013	0.00127	0.00127	0.00126	0.000938
Vanadium		0.001 to 0.03	<0.03	<0.03	<0.03	0.0017	<0.002	<0.002	0.002	0.002	0.0025	0.002	0.002	0.0018	0.0018	0.0016
Zinc		0.003 to 0.006	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.003
Organics																
Carbon Organic (Dissolved)		0.5 to 5	14.2	14.7	14.1	14.7	14.9	13.2	13.7	13.3	14.5	14.7	15.4	16.8	15.9	14.5
Carbon Organic (Total)		0.5 to 5									15.9	15.1	16	16.8	15.9	15.6
Nitrogen Organic (Dissolved)		0.05 to 0.26									1.09	1.1	1.09	1.32	0.86	2.47
Nitrogen Organic (Total)		0.05 to 0.3									1.06	1.17	1.11	1.62	0.91	2.41
ALS LAB ID				**L502198**	**L532652**	**L557583**	**L624228**	**L654416**	**L679955**	**L894163**	**L927896**	**L1012627**	**L1025917**	**L1038168**	**L1052924**	**L1066047**	**L1081228**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes		MDL	JACL-D 10-Jan-12	JACL-D 13-Feb-12	JACL-D 7-Mar-12	JACL-D 26-Apr-12	JACL-D 3-May-12	JACL-D 11-Jul-12	JACL-D 8-Aug-12	JACL-D 6-Sep-12	JACL-D 6-Nov-12	JACL-D 9-Jan-13	JACL-D 7-Feb-13	JACL-D 8-May-13	JACL-D 4-Sep-13	JACL-D 7-Nov-13
In Situ Parameters																
Conductivity µS/cm		...	436	457	433	452	453	468	456	470	447	414	427	739		446
Oxygen Dissolved %	...		33.2	24.4	5.2	2.5	3.5	15.8	1.9	0	57.2	39.1	20.1	39.7	2.4	45.8
Oxygen Dissolved	...		4.44	3.25	0.7	0.33	0.46	2.12	0.25	0	6.8	5.31	2.72	5.08	0.31	5.82
pH (unitless)		...	7.77	7.64	7.62	7.48	7.74	7.48	7.5	7.46	7.94	8.23	7.8	7.87	7.44	8.08
Redox Potential mV		...	219	183	75.1	41.3	123	-140	-264	-225	135	102	212	229	-41.3	136
Salinity ppt		...	0.36	0.38	0.36	0.37	0.37		0.36	0.38	0.34	0.35	0.36	0.36	0.37	0.35
Specific Conductivity µS/cm		...	747	782	741	760	758	774	744	770	695	726	747	739	762	721
Temperature °C		...	3.23	3.26	3.24	3.76	3.91	4.29	4.72	4.54	6.29	2.51	2.57	4.86	5.03	5.04
Total Dissolved Solids		...	485	508	482	494	493		484	500	452	472	485	474	495	468
Turbidity NTU		...	0.6	0.1	0.6	2.6	1.2	0.8	1	0.6	1.2	2	0.4	0		0.9
Physical Tests																
Acidity to pH 8.3 (as CaCO3)		1									<1					
Alkalinity (Total as CaCO3)		1 to 2	258	250	253	258	257	247	264	277	245	251	252	259	252	251
Bicarbonate Alkalinity		1 to 2	258	250	253	258	257	247	264	277	245	251	252	252	252	251
Carbonate Alkalinity		1 to 2	<2	<2	<2	<2	<2	<2	<1	<1	<1	<2	<1	6.6	<2	<2
Color TCU		5	16.2	16.1	16.7	17.6	16.4	16.4	16.2	16	14.9	15.4	15	13.1	15.2	
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	308	316	316	321	323	319	315	326	296	304	297	300	308	298
Hydroxide Alkalinity		1 to 2	<2	<2	<2	<2	<2	<2	<1	<1	<1	<2	<1	<1	<2	<2
pH (unitless)		0.01 to 0.1	8.21	8.17	8.11	8.23	8.13	8.14	8.22	8.11	8.33	8.21	8.33	8.35	8.08	8.19
Specific Conductivity µS/cm		2	741	746	740	746	735	740	739	744	693	680	705	717	742	686
Total Dissolved Solids		1 to 2	458	454	452	448	462	494	488	486	428	413	419	439	448	430
Total Suspended Solids		3	<3	7.3	3.3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Turbidity NTU		0.1	1.4	5.24	1.04	1.82	1.21	2.05	2.26	0.92	0.87	2.06	1.04	1.1	7.14	1.21
Dissolved Anions																
Bromide		0.05 to 2.495	<0.5	<0.25	<0.5	<0.05	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.5	<0.25	
Chloride		0.5 to 1	59.6	60	58.9	59.3	59.7	59.6	60.4	57.4	55.6	56	55.9	56.5	60.5	53.8
Fluoride		0.02 to 0.4	0.21	0.21	0.2	0.229	0.21	0.21	0.22	0.2	0.19	0.28	0.21	0.23	0.26	0.19
Sulphate		0.5 to 1	67.2	67.9	65.9	66.9	67.6	65.9	67.5	63.6	59.4	60	60	58.8	55.4	51.4
Nutrients																
Ammonia (Total)		0.005 to 0.05	0.283	<0.05	0.0396	0.39	0.144	0.673	0.564	0.962	0.29	0.447	0.472	0.0716	0.863	0.251
Nitrate (as N)		0.005 to 0.1	0.297	0.557	0.562	<0.005	0.225	<0.025	<0.025	<0.025	<0.025	0.08	0.115	0.357	<0.05	0.121
Nitrite (as N)		0.001 to 0.02	0.018	<0.005	<0.01	0.0042	0.0295	<0.005	<0.005	<0.005	0.0067	0.0086	0.0232	0.0363	<0.01	0.0312
Nitrogen (Dissolved)		0.05 to 0.1	1.24	1.49	1.52	1.23	1.14	1.41	1.51	1.95	0.92	1.43	1.44		3.5	
Nitrogen (Total)		0.0025 to 0.11	1.39	1.59	1.44	1.01	1.26	1.52	1.45	1.77	1.16	1.45	1.41	1.36	1.67	1.14
Nitrogen Kjeldahl (Total)		0.05 to 0.2	1.07	1.03	0.876	1.01	1	1.52	1.45	1.77	1.15	1.32	1.48	0.969	1.9	1.14
Orthophosphate (Dissolved)		0.001 to 0.01	0.0676	0.0708	0.079	0.115	0.0641	0.182	0.162	0.22	0.0575	0.0836	0.096	0.0936	0.337	0.0938
Phosphorus - Dissolved		0.002 to 0.02	0.0863	0.0879	0.0986	0.122	0.0798	0.193	0.159	0.217	0.0685	0.0998	0.108	0.105	0.392	0.135
Phosphorus - Total		0.002 to 0.02	0.0885	0.092	0.099	0.14	0.0921	0.208	0.186	0.253	0.0771	0.092	0.108	0.111		0.141
Cyanide																
Cyanide (Free)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)		0.005	<0.005	<0.005	<0.005	<0.005	0.007	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																
Aluminum		0.001 to 0.025	<0.003	<0.003	<0.003	<0.003	<0.003	<0.001	<0.001	<0.001	0.0011	<0.001	0.0012	<0.001	<0.001	<0.001
Antimony		0.0001 to 0.0025	0.00011	0.0001	0.0001	<0.0001	0.0001	<0.0001	<0.0001	0.00012	<0.0001	0.00011	0.00012	<0.0001	<0.0001	0.0001
Arsenic		0.0001 to 0.0025	0.00142	0.00141	0.00139	0.00132	0.00137	0.00132	0.00133	0.00131	0.00124	0.00132	0.00142	0.00133	0.00128	0.00133
Barium		5E-005 to 0.02	0.0632	0.0751	0.07	0.0724	0.0674	0.0733	0.0681	0.0737	0.0452	0.0478	0.05	0.0547	0.0715	0.0625
Beryllium		0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	0.022	0.021	0.022	0.02	0.022	0.02	0.023	0.024	0.019	0.02	0.024	0.02	0.021	0.02
Cadmium		1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium		0.05 to 0.1	54.4	55.8	55.6	56.8	57.3	57.7	55.2	60.4	51.6	54.7	52.3	53.9	56.8	53.8
Chromium		0.0001 to 0.018	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001
Cobalt		0.0001 to 0.0015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper		0.0002 to 0.006	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	0.00055	0.0012	0.00159	0.0006	0.00023	0.00043
Dissolved Cadmium (by saltwater extr		0.00002														
Iron		0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.017	0.018	0.019	<0.01	0.01	0.01	<0.01	0.013	<0.01
Lead		5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000066	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium		0.0005 to 0.025	0.0061	0.00627	0.00607	0.00615	0.00633	0.00698	0.00651	0.00606	0.00574	0.00572	0.00577	0.00579	0.00593	0.00498
Magnesium		0.1	41.9	42.9	43.1	43.5	43.6	42.5	43.1	42.6	40.5	40.6	40.4	40.1	40.4	39.7
Manganese		5E-005 to 0.0015	0.0151	0.0173	0.031	0.147	0.0423	0.102	0.0937	0.104	0.0319	0.02	0.0278	0.0311	0.168	0.0198
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.00243	0.00238	0.00223	0.00184	0.00212	0.00181	0.00183	0.00109	0.00189	0.00325	0.00276	0.00227	0.0015	0.00207
Nickel		0.0005 to 0.005	0.00071	0.00077	0.00072	0.00065	0.00071	0.00075	0.0007	0.0007	0.00062	0.0007	0.00071	0.00067	0.0007	0.00062
Phosphorus		0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.075	0.104	0.109	0.11	0.364	0.111
Potassium		0.05 to 2	12.6	13.1	12.1	12.4	12.5	12.2	11.5	12.3	12.5	13.1	11.9	11.8	11.9	11.8
Selenium		0.0001 to 0.006	0.00015	0.00014	0.00015	0.00014	0.00015	0.00059	0.00068	0.00042	0.00012	0.00015	0.00015	0.00014	0.00043	0.00017
Silicon		0.05	3.42	3.57	3.79	4.2	3.73	4.62	4.41	4.87	3.33	3.98	4.04	4.28	5.76	5.78
Silver		1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	38.4	38.6	39	39.3	39.2	38.8	39.4	39	35.3	34.2	39.2	37.4	37.5	32.9
Strontium		0.0001 to 0.005	0.418	0.412	0.383	0.39	0.389	0.443	0.385	0.398	0.356	0.369	0.374	0.373	0.398	0.332
Sulphur		0.5									0.0196	20.5	20.5	20.9	29.9	17.1
Thallium		1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium		1E-005 to 0.001	0.00122	0.00121	0.00118	0.00111	0.00113	0.00119	0.00113	0.00103	0.00104	0.0012	0.00116	0.00114	0.000957	0.00105
Vanadium		0.001 to 0.03	0.002	0.002	0.0017	0.0019	0.0018	0.0017	0.0017	0.0017	0.0018	0.0022	0.0022	0.0019	0.0015	0.0023
Zinc		0.001 to 0.006	<0.003	<0.003	<0.003	<0.003	0.0034	0.0011	<0.001	0.0012	0.0014	0.0043	0.0029	0.0038	0.0012	<0.001
Total Metals																
Aluminum		0.003 to 0.025	0.0261	0.0841	0.0138	0.0049	0.0072	0.0035	0.0125	<0.003	0.0158	0.0175	0.008	0.0066	0.004	0.0081
Antimony		0.0001 to 0.0025	0.00011	0.00011	0.00011	0.00011	0.0001	0.0002	0.00013	0.00028	0.00011	0.00012	0.00012	0.00012	<0.0001	0.00011
Arsenic		0.0001 to 0.0025	0.00126	0.00119	0.00135	0.00133	0.00139	0.00141	0.00136	0.0014	0.00137	0.00138	0.00143	0.00132	0.00126	0.00139
Barium		5E-005 to 0.02	0.0635	0.0669	0.0707	0.071	0.0655	0.0746	0.0691	0.0742	0.0495	0.0486	0.0511	0.0553	0.0705	0.0605
Beryllium		0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	0.025	0.026	0.028	0.025	0.025	0.024	0.028	0.029	0.02	0.02	0.03	0.023	0.025	0.023
Cadmium		1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium		0.05 to 0.1	53.5	56.1	55.4	56.6	56.1	56.8	54.1	61	52.2	53.4	52.9	53.9	57.6	55.2
Chromium		0.0001 to 0.005	0.00022	0.00043	0.00019	0.00018	0.00012	0.00018	0.00019	0.00022	0.00014	0.00014	0.00022	0.00027	0.00013	0.00012
Cobalt		0.0001 to 0.0015	<0.0001	0.00013	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper		0.0005 to 0.007	0.00053	0.00113	<0.0005	<0.0005	0.00071	0.00061	0.00079	0.00051	0.00073	0.00101	0.00282	0.00068	0.00054	0.00073
Iron		0.01 to 0.03	<0.03	0.144	<0.03	<0.03	<0.03	0.022	0.035	0.026	0.032	0.038	0.024	0.017	0.019	0.017
Lead		5E-005 to 0.0025	<0.00005	0.00006	<0.00005	<0.00005	<0.00005	<0.00005	0.000083	<0.00005	<0.00005	0.000179	0.000588	0.000585	0.000081	<0.00005
Lithium		0.0005 to 0.025	0.00586	0.00634	0.0059	0.00616	0.00571	0.00668	0.00628	0.0063	0.00556	0.00596	0.00566	0.00594	0.00602	0.00513
Magnesium		0.1	41.7	43.5	43.1	43.8	42.7	42.6	43.1	42.9	40.1	39.3	39.7	40.5	39.3	38.7
Manganese		5E-005 to 0.0015	0.023	0.0264	0.0421	0.149	0.0471	0.104	0.0952	0.11	0.0378	0.028	0.0342	0.0541	0.172	0.0333
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.00258	0.00262	0.00239	0.00226	0.00212	0.00223	0.00214	0.00169	0.0021	0.0031	0.00293	0.00244	0.00179	0.00228
Nickel		0.0005 to 0.005	0.00073	0.00092	0.00078	0.00077	0.00083	0.00081	0.00076	0.00079	0.00077	0.00073	0.00082	0.00075	0.00077	0.00068
Phosphorus		0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.077	0.101	0.11	0.122	0.37	0.116
Potassium		0.05 to 2	12.9	11.4	12.3	12.2	12.1	12.3	11.6	12.7	12.2	12.6	12.3	11.8	12.2	12.6
Selenium		0.0001 to 0.006	0.00012	0.00015	0.00015	0.00014	0.00015	0.00013	0.00012	0.00013	0.00013	0.00015	0.00017	0.00014	0.00013	0.00021
Silicon		0.05	3.39	3.96	3.77	4.21	3.6	4.66	4.45	4.98	3.41	3.96	4.11	4.38	5.75	5.79
Silver		1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	39.6	33.5	40	38.8	38.1	39.3	39.9	41.7	37.9	35.3	41	38.8	38.5	33.6
Strontium		0.0001 to 0.005	0.426	0.418	0.389	0.412	0.366	0.461	0.376	0.409	0.365	0.376	0.385	0.399	0.404	0.348
Sulphur		0.5									20.1	20.3	21.2	21.7	18.3	17.8
Thallium		1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extractio		0.00002														
Uranium		1E-005 to 0.001	0.0013	0.00135	0.00128	0.00127	0.00114	0.00133	0.00118	0.0011	0.00115	0.00125	0.00121	0.00117	0.00101	0.00113
Vanadium		0.001 to 0.03	0.002	0.0022	0.0018	0.0019	0.0019	0.0019	0.002	0.0019	0.0021	0.0024	0.0026	0.0021	0.0016	0.0025
Zinc		0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics																
Carbon Organic (Dissolved)		0.5 to 5	14.1	15.8	15.8	16	15.3	15	14.6	14.8	12.3	13.7	13	14.4	13.6	13.1
Carbon Organic (Total)		0.5 to 5	14.3	18	15.7	16.1	15.4	15	15	14.9	12.4	14.2	13.3	13	14.3	13.3
Nitrogen Organic (Dissolved)		0.05 to 0.26	0.64	0.92	0.92	0.835	0.74	0.74	0.95	0.99	0.623		0.83		2.64	
Nitrogen Organic (Total)		0.05 to 0.3	0.791	1.03	0.837	0.62	0.859	0.844	0.888	0.81	0.86	0.875	1		1.04	
ALS LAB ID			**L1103104**	**L1114029**	**L1122039**	**L1140194**	**L1143149**	**L1177597**	**L1191600**	**L1206738**	**I1234688**	**L1256679**	**L1266846**	**L1299444**	**L1358222**	**L1389979**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes	MDL	JACL-D 9-Jan-14	JACL-D 28-Apr-14	JACL-D 13-May-14	JACL-D 26-May-14	JACL-D 10-Jun-14	JACL-D 27-Jun-14	JACL-D 8-Jul-14	JACL-D 22-Jul-14	JACL-D 7-Aug-14	JACL-D 20-Aug-14	JACL-D 14/Sep/2014	JACL-D 30-Sep-14
In Situ Parameters													
Conductivity µS/cm	...	429	426	542	542	558	588	447	600	439	440	465	804
Oxygen Dissolved %	...	19.1	12.4	69.2	69.2			2.1	86.6	2.6	1.3	4.1	3.3
Oxygen Dissolved	...	2.55	13.2	7.15	7.15			0.27	7.78	0.28	0.16	0.51	0.42
pH (unitless)	...	7.68	8.55	8.55	8.55	8.8	8.84	7.74	8.66	7.62	7.76	7.35	7.16
Redox Potential mV	...	154	102	112	112	-21.3	-37.4	21.4	-23.3	-88.9	-158	-276	-253
Salinity ppt	...	0.36	0.3	0.34	0.34	0.31	0.32	0.35	0.32	0.34	0.35	0.37	0.65
Specific Conductivity µS/cm	...	733	624	690	690	644	656	714	657	704	714	750	1302
Temperature °C	...	3.25	8.37	13.8	13.8	18	19.6	5.41	20.5	5.31	4.89	5.1	4.98
Total Dissolved Solids	...	477	405	449	449	418	426	464	427	457	464	487	846
Turbidity NTU	...	1.4	2.1	-0.4		2.9	11.7		1.2	0.5	0.3	0.5	-10.9
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1												
Alkalinity (Total as CaCO3)	1 to 2	246	244	244	219	244	236	249	252	238	264	264	285
Bicarbonate Alkalinity	1 to 2	246	244	244	219	244	214	249	252	238	264	264	285
Carbonate Alkalinity	1 to 2	<2	<2	<2	<1	<1	22.6	<1	<2	<2	<2	<1	<2
Color TCU	5	16.3											
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	321	294	299	291	296	281	300	308	295	310	315	304
Hydroxide Alkalinity	1 to 2	<2	<2	<2	<1	<1	<1	<1	<2	<2	<2	<1	<2
pH (unitless)	0.01 to 0.1	8.15	8.21	8.15	8.21	8.18	8.64	8.1	8.15	8.23	8.03	8.32	8.21
Specific Conductivity µS/cm	2	711	659	698	695	709	637	691	678	699	720	717	718
Total Dissolved Solids	1 to 2	445	427	362	370	424	399	436	399	429	430	454	428
Total Suspended Solids	3	<3	4.7	<3	<3	<3	6.8	<3	<3	<3	<3	<3	<3
Turbidity NTU	0.1	1.64	2.33	0.72	0.46	1.2	11	2.22	1.96	0.76	3.12	3.49	1.82
Dissolved Anions													
Bromide	0.05 to 2.495	<0.25	<0.25	<0.05	<0.05	<0.05	<0.25	<0.25	<0.25	<0.05	<0.05	<0.25	<0.25
Chloride	0.5 to 1	58.3	56	56	54.2	55.7	55.3	57.3	54.6	55.2	55.6	56.9	56.6
Fluoride	0.02 to 0.4	0.2	0.19	0.224	0.212	0.214	0.21	0.3	0.217	0.213	0.227	0.207	0.206
Sulphate	0.5 to 1	53.4	51.5	54.1	51.3	53.3	45.2	54	52	52.7	52.2	51.7	46.2
Nutrients													
Ammonia (Total)	0.005 to 0.05	0.0207	0.0068	0.0438	0.0906	0.194	0.0112	0.241	0.161	0.0344	0.917	0.768	0.906
Nitrate (as N)	0.005 to 0.1	0.503	0.107	0.149	0.0535	0.011	<0.025	<0.025	0.05	0.245	<0.005	<0.025	<0.025
Nitrite (as N)	0.001 to 0.02	<0.005	0.0056	0.0054	0.0027	0.004	<0.005	0.0078	0.0214	0.0128	0.005	0.0066	<0.005
Nitrogen (Dissolved)	0.05 to 0.1												
Nitrogen (Total)	0.0025 to 0.11		1.05										
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.852	1.08	0.899	0.888	0.981	1.29	0.985	0.981	0.925	1.88	1.59	1.68
Orthophosphate (Dissolved)	0.001 to 0.01	0.113	0.0423	0.0781	0.0704	0.142	<0.001	0.155	0.114	<0.001	0.302	0.299	0.304
Phosphorus - Dissolved	0.002 to 0.02	0.119	0.113	0.0969	0.088	0.183	0.0148	0.175	0.141	0.0106	0.351	0.352	0.356
Phosphorus - Total	0.002 to 0.02	0.125	0.0558	0.113	0.0907	0.188	0.0368	0.18	0.145	0.0187	0.355	0.353	0.43
Cyanide													
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	0.001 to 0.025	<0.001	<0.001	<0.001	<0.001	<0.001	0.0021	<0.001	<0.001	0.0011	<0.001	0.0011	0.0019
Antimony	0.0001 to 0.0025	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00132	0.00126	0.00123	0.00126	0.00131	0.00126	0.00124	0.00126	0.00122	0.00115	0.00123	0.00134
Barium	5E-005 to 0.02	0.0641	0.0649	0.0654	0.0643	0.0723	0.0539	0.0687	0.0702	0.0661	0.0751	0.0793	0.0778
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.025	0.023	0.022	0.022	0.023	0.02	0.024	0.023	0.021	0.024	0.026	0.026
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	59.7	56.6	58.3	55.8	56.2	57.9	57	60	57.8	59.7	61.3	58.1
Chromium	0.0001 to 0.018	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	0.0002 to 0.006	0.00046	0.00141	0.00126	0.00219	0.00149	0.00143	0.00075	0.00115	0.00117	0.00037	0.00032	<0.0002
Dissolved Cadmium (by saltwater extr	0.00002												
Iron	0.01 to 0.03	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	<0.01	<0.01	<0.01	0.012	0.015	<0.01
Lead	5E-005 to 0.0025	<0.00005	0.000056	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.0059	0.00576	0.00585	0.00525	0.00541	0.00466	0.00566	0.00556	0.00494	0.00568	0.00628	0.0057
Magnesium	0.1	41.8	37.1	37.2	36.7	37.9	33.2	38.2	38.3	36.5	39.1	39.3	38.5
Manganese	5E-005 to 0.0015	0.00371	0.00146	0.00107	0.00116	0.0383	0.00329	0.0596	0.0383	0.00182	0.112	0.111	0.0977
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00233	0.0021	0.00324	0.00233	0.00205	0.00236	0.00208	0.00204	0.00202	0.00139	0.00143	0.00227
Nickel	0.0005 to 0.005	0.00069	0.00072	0.00109	0.00079	0.0007	0.00069	0.00067	0.00094	0.00064	0.00073	0.0007	0.00066
Phosphorus	0.05 to 0.3	0.131	0.065	0.094	0.089	0.151	<0.05	0.154	0.127	<0.05	0.34	0.315	0.174
Potassium	0.05 to 2	11.6	11	11.5	10.1	11	9.79	11.4	11.2	12.2	12.7	12.1	11.2
Selenium	0.0001 to 0.006	0.00013	0.00014	0.00017	0.00014	0.00012	0.00015	0.00012	0.00012	0.00014	0.00043	0.00017	0.00139
Silicon	0.05	6.49	5.34	5.85	4.85	6.43	5.76	6.18	6.04	5.19	7.15	7.11	6.3
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	36	37.3	33.5	34.6	34.8	31.7	33.6	35.3	34.8	35.5	36.4	36.8
Strontium	0.0001 to 0.005	0.391	0.374	0.385	0.364	0.385	0.354	0.385	0.385	0.343	0.384	0.397	0.416
Sulphur	0.5	18.8	17.4	17.4	17.5	17.9	14.5	18.7	18.1	17.7	64.8	70.1	38.9
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00112	0.00103	0.00108	0.00102	0.000979	0.00106	0.00104	0.00101	0.00103	0.000965	0.000961	0.00108
Vanadium	0.001 to 0.03	0.0022	0.002	0.0019	0.002	0.0018	0.0026	0.0017	0.0018	0.002	0.0018	0.0018	0.0017
Zinc	0.001 to 0.006	0.0016	0.0033	<0.001	0.0014	<0.001	<0.001	0.0012	0.0013	0.0039	<0.001	<0.001	0.0015
Total Metals													
Aluminum	0.003 to 0.025	0.0149	0.0081	0.0049	<0.003	0.0032	0.0089	0.0031	0.0058	0.005	0.0044	0.0038	0.0034
Antimony	0.0001 to 0.0025	0.0001	<0.0001	0.00011	0.00013	0.00011	0.0001	0.00013	0.00011	0.00012	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00127	0.00124	0.00128	0.00117	0.0013	0.00131	0.00123	0.00132	0.00127	0.00128	0.00129	0.00129
Barium	5E-005 to 0.02	0.0651	0.0661	0.0723	0.0645	0.068	0.0539	0.0693	0.0718	0.0661	0.0749	0.077	0.0758
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.025	0.024	0.023	0.023	0.026	0.022	0.026	0.026	0.025	0.025	0.03	0.03
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000012	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	58	56.1	56.9	56.1	54.1	56.3	57.8	59.4	57.5	60.5	56.4	56
Chromium	0.0001 to 0.005	0.00017	<0.0001	0.00013	<0.0001	<0.0001	0.00011	0.00013	0.0001	<0.0001	0.00014	<0.0003	0.0002
Cobalt	0.0001 to 0.0015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	0.0005 to 0.007	0.00069	0.00155	0.00589	0.00166	0.00161	0.00179	0.00147	0.00245	0.00202	0.00116	0.00115	0.00153
Iron	0.01 to 0.03	0.023	0.019	0.013	<0.01	<0.01	0.021	<0.01	0.01	0.01	0.021	0.023	0.02
Lead	5E-005 to 0.0025	<0.00005	0.00012	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00549	0.00576	0.00531	0.00433	0.0052	0.00449	0.00515	0.00548	0.0051	0.00551	0.00613	0.00518
Magnesium	0.1	39.2	36.6	36.9	35.9	36.5	32	38.7	38.1	36.7	39.8	38.1	37.2
Manganese	5E-005 to 0.0015	0.00974	0.0165	0.0191	0.0048	0.046	0.00731	0.0638	0.0403	0.00447	0.12	0.11	0.111
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00245	0.00228	0.0033	0.0022	0.0021	0.00249	0.00211	0.00215	0.00232	0.0017	0.00169	0.00329
Nickel	0.0005 to 0.005	0.00076	0.00073	0.0012	0.00072	0.00072	0.00073	0.00073	0.00081	0.00071	0.00085	0.00081	0.0008
Phosphorus	0.05 to 0.3	0.139	0.105	0.096	0.082	0.152	<0.05	0.169	0.135	<0.05	0.356	0.305	0.338
Potassium	0.05 to 2	11.4	11.1	11.4	10.1	10.8	9.66	11.5	11.2	12.4	13	11.2	10.6
Selenium	0.0001 to 0.006	0.00013	0.00014	0.00013	0.00012	0.00015	0.00016	0.00012	0.00014	0.00015	0.00013	0.00012	<0.0001
Silicon	0.05	6.42	5.47	5.73	4.88	6.27	5.67	6.23	6.01	5.18	7.31	6.69	6.8
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	35.8	36.4	37.3	34	33.3	31.4	34.2	36.2	35.1	37.3	35.2	34.6
Strontium	0.0001 to 0.005	0.392	0.394	0.402	0.35	0.381	0.355	0.386	0.394	0.384	0.379	0.388	0.41
Sulphur	0.5	18.3	17.5	17.5	17.9	17.9	14.3	18.5	18.6	17.9	18	16.4	16.5
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extractio	0.00002												
Uranium	1E-005 to 0.001	0.0012	0.00112	0.00114	0.00118	0.00108	0.0011	0.00108	0.00109	0.00116	0.000996	0.000999	0.00106
Vanadium	0.001 to 0.03	0.0023	0.0022	0.0023	0.0021	0.002	0.0027	0.0019	0.0019	0.0021	0.002	0.0022	0.0017
Zinc	0.003 to 0.006	<0.003	0.004	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics													
Carbon Organic (Dissolved)	0.5 to 5	14.5	13.6	13.1	12.4	12.8	13.8	14.1	14.7	13.2	14.6	14.3	13.4
Carbon Organic (Total)	0.5 to 5	14.9	14.7	13	13	13	14.3	14.1	15	13.2	15.1	14.8	14.6
Nitrogen Organic (Dissolved)	0.05 to 0.26												
Nitrogen Organic (Total)	0.05 to 0.3												
ALS LAB ID		**L1410216**	**L1448657**	**L1454705**	**L1461081**	**L1469099**	**L1478913**	**L1483419**	**L1490937**	**L1499202**	**L1506521**	**L1518246**	**L1526071**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes		MDL	JACL-M 1-Jun-11	JACL-M 29-Jun-11	JACL-M 20-Aug-14	JACL-M 14/Sep/2014	JACL-M 30-Sep-14
In Situ Parameters							
Conductivity µS/cm		...	453	553	530	525	934
Oxygen Dissolved %	...		23.5	45.8	53.8	17.6	67.6
Oxygen Dissolved	...		2.95	4.94	5.47	1.94	6.99
pH (unitless)		...	6.97	8.33	8.39	7.7	8.42
Redox Potential mV		...	-143	-44.9	34.9	96.5	161
Salinity ppt		...	35	0.36	0.33	0.35	0.6
Specific Conductivity µS/cm		...	721	734	678	718	1195
Temperature °C		...	5.52	7.93	13.5	11.1	13.6
Total Dissolved Solids		...	469	478	440	465	778
Turbidity NTU		...		1.4	3.1	0.7	-11.4
Physical Tests							
Acidity to pH 8.3 (as CaCO3)		1					
Alkalinity (Total as CaCO3)		1 to 2	248	237	234	247	213
Bicarbonate Alkalinity		1 to 2			230	244	205
Carbonate Alkalinity		1 to 2			3.7	3.8	7.7
Color TCU		5	14.5	10.6			
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	308	310	293	296	285
Hydroxide Alkalinity		1 to 2			<1	<1	<1
pH (unitless)		0.01 to 0.1	8.21	8.24	8.36	8.45	8.47
Specific Conductivity µS/cm		2	758	716	661	684	664
Total Dissolved Solids		1 to 2	448	447	419	427	419
Total Suspended Solids		3	<3	<3	4.1	<3	<3
Turbidity NTU		0.1	0.46	1.81	7.29	0.69	1.67
Dissolved Anions							
Bromide		0.05 to 2.495	<0.25	<0.05	<0.05	<0.25	<0.05
Chloride		0.5 to 1	59.8	59.7	53.6	55.8	55.8
Fluoride		0.02 to 0.4	0.24	0.216	0.218	0.203	0.231
Sulphate		0.5 to 1	73.7	72.3	49.1	50.3	48.3
Nutrients							
Ammonia (Total)		0.005 to 0.05	0.0869	0.0884	0.0097	0.0993	0.0242
Nitrate (as N)		0.005 to 0.1	0.042	0.0847	<0.005	0.064	0.0109
Nitrite (as N)		0.001 to 0.02	<0.005	0.0105	<0.001	0.0222	0.0029
Nitrogen (Dissolved)		0.05 to 0.1	1.06	1.22			
Nitrogen (Total)		0.0025 to 0.11	1.1	1.16			
Nitrogen Kjeldahl (Total)		0.05 to 0.2	1.06	1.06	1.11	0.925	0.892
Orthophosphate (Dissolved)		0.001 to 0.01	0.022	0.0209	<0.001	0.0016	<0.001
Phosphorus - Dissolved		0.002 to 0.02	0.0364	0.0337	0.0121	0.0132	0.0129
Phosphorus - Total		0.002 to 0.02	0.0405	0.0415	0.0181	0.0157	0.0157
Cyanide							
Cyanide (Free)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals							
Aluminum		0.001 to 0.025	0.0075	<0.005	0.0019	0.0013	<0.001
Antimony		0.0001 to 0.0025	<0.0005	<0.0005	<0.0001	<0.0001	0.0001
Arsenic		0.0001 to 0.0025	0.00136	0.00134	0.00125	0.00132	0.00135
Barium		5E-005 to 0.02	0.06	0.06	0.059	0.0625	0.0583
Beryllium		0.0001 to 0.005	<0.001	<0.001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	<0.1	<0.1	0.021	0.023	0.022
Cadmium		1E-005 to 8.5E-005	<0.000017	<0.000017	<0.00001	<0.00001	<0.00001
Calcium		0.05 to 0.1	54	53.5	57.1	56.1	53.6
Chromium		0.0001 to 0.018	<0.001	<0.002	<0.0001	<0.0001	<0.0001
Cobalt		0.0001 to 0.0015	<0.0003	<0.0003	<0.0001	<0.0001	<0.0001
Copper		0.0002 to 0.006	<0.001	<0.001	0.00149	0.00275	0.00099
Dissolved Cadmium (by saltwater extr		0.00002					
Iron		0.01 to 0.03	<0.03	<0.03	<0.01	<0.01	<0.01
Lead		5E-005 to 0.0025	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005
Lithium		0.0005 to 0.025	0.0062	0.0055	0.00514	0.00583	0.00541
Magnesium		0.1	42.1	42.7	36.5	37.8	36.6
Manganese		5E-005 to 0.0015	0.0034	0.00385	0.00185	0.000537	0.000814
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.0024	0.0025	0.00232	0.0023	0.00317
Nickel		0.0005 to 0.005	<0.001	<0.001	0.00055	0.00064	0.00059
Phosphorus		0.05 to 0.3	<0.3	<0.3	<0.05	<0.05	<0.05
Potassium		0.05 to 2	12.5	12.3	11.2	11.1	11
Selenium		0.0001 to 0.006	<0.001	<0.001	0.00011	0.00014	0.00012
Silicon		0.05	1.57	1.76	5.36	5.7	6.25
Silver		1E-005 to 0.0001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	40.6	40.7	34	35.3	34.5
Strontium		0.0001 to 0.005	0.409	0.403	0.374	0.363	0.375
Sulphur		0.5			16.8	17	16.1
Thallium		1E-005 to 0.001	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium		1E-005 to 0.001	0.00119	0.0012	0.0011	0.00104	0.0011
Vanadium		0.001 to 0.03	0.0023	0.0017	0.0023	0.0023	0.0028
Zinc		0.001 to 0.006	<0.005	<0.005	0.004	<0.001	<0.001
Total Metals							
Aluminum		0.003 to 0.025	0.0086	<0.005	0.0099	0.0077	0.0083
Antimony		0.0001 to 0.0025	<0.0005	<0.0005	<0.0001	0.0001	<0.0001
Arsenic		0.0001 to 0.0025	0.00121	0.00119	0.00128	0.00131	0.0013
Barium		5E-005 to 0.02	0.061	0.062	0.0619	0.061	0.0551
Beryllium		0.0001 to 0.005	<0.001	<0.001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	<0.1	<0.1	0.024	0.027	0.025
Cadmium		1E-005 to 8.5E-005	0.000018	<0.000017	<0.00001	<0.00001	<0.00001
Calcium		0.05 to 0.1	54	54.1	57.5	54.6	49.8
Chromium		0.0001 to 0.005	<0.001	<0.001	0.00013	<0.0003	0.00018
Cobalt		0.0001 to 0.0015	<0.0003	<0.0003	<0.0001	<0.0001	<0.0001
Copper		0.0005 to 0.007	<0.001	<0.001	0.00122	0.00213	0.00119
Iron		0.01 to 0.03	<0.03	<0.03	0.016	0.013	0.014
Lead		5E-005 to 0.0025	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005
Lithium		0.0005 to 0.025	0.0068	<0.005	0.00538	0.00594	0.00489
Magnesium		0.1	43.3	42.5	37.2	35.2	34.8
Manganese		5E-005 to 0.0015	0.007	0.00762	0.00457	0.00361	0.00185
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.0028	0.0027	0.00252	0.00231	0.00286
Nickel		0.0005 to 0.005	<0.001	<0.001	0.0007	0.00077	0.00064
Phosphorus		0.05 to 0.3	<0.3	<0.3	<0.05	<0.05	<0.05
Potassium		0.05 to 2	12.7	12.5	11.8	10.7	10.3
Selenium		0.0001 to 0.006	<0.001	<0.001	0.00014	0.00015	0.00011
Silicon		0.05	1.63	1.75	5.51	5.6	5.93
Silver		1E-005 to 0.0001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	41.1	41.2	35.6	34.6	32.3
Strontium		0.0001 to 0.005	0.415	0.412	0.381	0.369	0.369
Sulphur		0.5			17.4	16.9	15.5
Thallium		1E-005 to 0.001	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extractio		0.00002					
Uranium		1E-005 to 0.001	0.0014	0.00134	0.00118	0.00109	0.00119
Vanadium		0.001 to 0.03	0.0025	0.0019	0.0026	0.0027	0.0027
Zinc		0.003 to 0.006	<0.005	<0.005	<0.003	<0.003	<0.003
Organics							
Carbon Organic (Dissolved)		0.5 to 5	14.2	14.3	14	15.1	13.8
Carbon Organic (Total)		0.5 to 5	14.4	14.3	15.1	15.1	14.4
Nitrogen Organic (Dissolved)		0.05 to 0.26	0.931	1.04			
Nitrogen Organic (Total)		0.05 to 0.3	0.971	0.976			
ALS LAB ID			**L1012627**	**L1025917**	**L1506521**	**L1518246**	**L1526071**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C2.22 - JACL-S
PAGE 1 OF 3

Analytes	MDL	JACL-S 3-May-07	JACL-S 19-Jul-07	JACL-S 20-Sep-07	JACL-S 29-Apr-08	JACL-S 10-Jul-08	JACL-S 7-Sep-08	JACL-S 2-Jun-10	JACL-S 1-Sep-10	JACL-S 28-Mar-11	JACL-S 1-Jun-11	JACL-S 29-Jun-11	JACL-S 28-Jul-11	JACL-S 31-Aug-11	JACL-S 28-Sep-11	JACL-S 26-Oct-11
In Situ Parameters																
Conductivity µS/cm	...	518	692	608	490	612	264	563	662	420	531	547	586	547		486
Oxygen Dissolved %	...				94.2	92	106	94.2	8.36	74.9	96.9			82.9	86.6	67.5
Oxygen Dissolved	...	14.7	9.67	8.2	11.9	8.43	10.5	9.78	8.36	9.78	9.46			8.34	9.1	8.32
pH (unitless)	...	8.73	8.62	8.87	8.21	8.29	8.39	8.66	8.66	8.03	8.15	8.82	8.6	8.23	8.27	8.31
Redox Potential mV	...					-116				115	27.5	136	155	136	105	12.7
Salinity ppt	...										0.31	0.32	0.32	0.33		
Specific Conductivity µS/cm	...	749	745	762	778	684	275	720	771	694	637	647	657		748	756
Temperature °C	...	8.81	21.3	14.5	5.61	19.5	15.7	13.6	14.9	4.37	16.3	16.9	19.4	15.2	13	6.12
Total Dissolved Solids	...									452	414	421	427	437		493
Turbidity NTU	...											20.4	8	1.5		
Physical Tests																
Acidity to pH 8.3 (as CaCO3)	1		<1		<1								<1		<1	
Alkalinity (Total as CaCO3)	1 to 2	246	229	231	252	218	230		222	113	230	206	222	227	227	247
Bicarbonate Alkalinity	1 to 2				252		218								221	
Carbonate Alkalinity	1 to 2				<2		12.7								6.4	
Color TCU	5		13.9	12.7	12.4	19.4	16.3	22.8	20.4	11.9	20.4	24.5	21.1	19.3	17.2	17
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	322	323	309	335	273	291	308	302	165	283	267	268	273	280	301
Hydroxide Alkalinity	1 to 2				<2		<1								<1	
pH (unitless)	0.01 to 0.1	8.55	8.58	8.36	8.1	8.44	8.35	8.69	8.47	8.06	8.5	8.53	8.68	8.42	8.35	8.35
Specific Conductivity µS/cm	2	725	732	736	777	678	717	681	698	367	670	582	627	659	693	722
Total Dissolved Solids	1 to 2	450	453	461	465	416	431	420	455	213	418	362	398	394	404	426
Total Suspended Solids	3	<3	5.6	<3	5.8	4.3	<3	<3	<3	<3	7.2	11.3	6.1	<3	<3	10
Turbidity NTU	0.1				2.31	8.57	1.09	0.75	1.02	4.08	1.83	15.9	7.32	1.33		6.66
Dissolved Anions																
Bromide	0.05 to 2.495	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.19	<0.05	<0.05	<0.05	<0.25	<0.05	<0.25
Chloride	0.5 to 1	60.3	59.6	61.6	60.5	53.4	59.1	54		25.2	52.6	47.8	48.9	50	53.7	56.3
Fluoride	0.02 to 0.4	0.19		0.2	0.174	0.174	0.199	0.161		0.088	0.169	0.216	0.209	0.18	0.222	0.2
Sulphate	0.5 to 1	84.5	81.7	83.9	83.5	66.2	74.6	70.2		37	57.4	50.3	50.1	49.9	57.9	62.8
Nutrients																
Ammonia (Total)	0.005 to 0.05	0.028	0.035	0.055	<0.02	0.037	0.098	0.044	0.0425	0.0078	0.0288	0.0291	0.0327	0.121	0.0827	0.206
Nitrate (as N)	0.005 to 0.1	<0.005	<0.005	0.0118	<0.005	<0.005	0.0293	<0.005		0.0253	<0.005	<0.005	<0.005	0.035	0.0633	0.121
Nitrite (as N)	0.001 to 0.02	<0.001	<0.001	0.0034	<0.001	<0.001	0.0136	<0.001		<0.001	<0.001	<0.001	0.001	0.0175	0.0243	0.0235
Nitrogen (Dissolved)	0.05 to 0.1										0.88	1.07	1.12	1.4	1.03	0.82
Nitrogen (Total)	0.0025 to 0.11							0.909	1.34	0.716	0.99	1.99	1.35	1.46	1.06	
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.895	1.1	0.943	1.62	1.38	1.26	0.909	1.34	0.691	0.99	1.99	1.35	0.94	0.972	1.33
Orthophosphate (Dissolved)	0.001 to 0.01	<0.001	<0.001	0.0016	0.0074	<0.001	0.0021		<0.001	0.0125	0.0013	<0.001	<0.001	<0.001	0.0017	0.0197
Phosphorus - Dissolved	0.002 to 0.02								0.036		0.017	0.0131	0.0123	0.0122	0.013	0.0324
Phosphorus - Total	0.002 to 0.02	0.0343	0.0279	0.0203	0.124	0.0307	0.0227	0.0253	0.0167	0.0498	0.0365	0.0375	0.0274	0.0236	0.0232	0.0513
Cyanide																
Cyanide (Free)	0.005				<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005
Cyanide (Total)	0.005	0.0062	0.0056	0.0099	<0.005	0.0082		0.0083	0.0106	0.0061	<0.005	0.0103	0.0077		0.0069	0.0061
Cyanide (WAD)	0.005				<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005
Dissolved Metals																
Aluminum	0.001 to 0.025	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.003
Antimony	0.0001 to 0.0025	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00011
Arsenic	0.0001 to 0.0025	0.0012	0.00141	0.00131	0.00118	0.00138	0.00168	0.00136	0.00147	0.00081	0.00125	0.00132	0.00123	0.00133	0.00131	0.00132
Barium	5E-005 to 0.02	0.057	0.056	0.057	0.058	0.051	0.06	0.027	0.05	0.031	0.055	0.054	0.056	0.063	0.066	0.0646
Beryllium	0.0001 to 0.005	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001
Bismuth	0.0005 to 0.2									<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.02
Cadmium	1E-005 to 8.5E-005	<0.000034	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.00001
Calcium	0.05 to 0.1	58.8	54	50.8	57.3	45.1	48.6	52.6	49.2	28.9	54.1	51.7	50.9	50.3	50.8	53.9
Chromium	0.0001 to 0.018	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.0015	<0.001	<0.0015	<0.001	<0.001	<0.001	<0.0001
Cobalt	0.0001 to 0.0015	<0.0006	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0001
Copper	0.0002 to 0.006	<0.002	<0.001	<0.001	<0.001	0.0013	0.0016	0.0013	0.0011	0.0014	0.0012	0.0013	<0.001	<0.001	<0.001	0.00067
Dissolved Cadmium (by saltwater extr	0.00002															
Iron	0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Lead	5E-005 to 0.0025	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005
Lithium	0.0005 to 0.025	<0.01	0.0068	0.0069	0.0063	<0.007	0.0066	0.0056	0.006	<0.005	0.0053	<0.005	0.0053	0.0059	0.0059	0.00539
Magnesium	0.1	42.6	45.7	44.3	46.7	38.9	41.2	42.9	43.6	22.6	36	33.5	34.1	35.8	37.3	40.4
Manganese	5E-005 to 0.0015	0.00088	0.001	0.00129	0.00111	0.00446	0.00216	0.00261	0.00122	0.016	0.00551	0.00396	0.00264	0.001	0.00725	0.0186
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	<0.004	0.0029	0.0031	0.0025	0.0027	0.003	0.003	0.003	0.0035	0.0024	0.0023	0.002	0.0025	0.0025	0.00263
Nickel	0.0005 to 0.005	<0.002	<0.001	<0.001	<0.001	<0.001	0.0015	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0007
Phosphorus	0.05 to 0.3									<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	11.8	12.4	12.4	12.1	11.8	13.3	13.5	13.2	7.3	10.6	10	10.5	10.7	11.4	11.5
Selenium	0.0001 to 0.006	<0.002	<0.001	<0.001	<0.001	<0.001	0.0011	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00013
Silicon	0.05									1.11	2.44	3.58	3.87	3.93	3.45	3.08
Silver	1E-005 to 0.0001	<0.00004	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001
Sodium	0.05 to 2	39	41.9	44.2	40.7	36.5	37.3	39.3	41	21.4	35.6	33.1	33.5	34.2	36	36.3
Strontium	0.0001 to 0.005									0.232	0.365	0.345	0.345	0.351	0.37	0.358
Sulphur	0.5															
Thallium	1E-005 to 0.001	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001
Tin	0.0001 to 0.0025	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00129	0.0012	0.00117	0.00116	0.00111	0.00118	0.00141	0.00133	0.00058	0.00112	0.001	0.00094	0.00101	0.00116	0.00117
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.03	0.0016	0.0019	0.0023	0.0028	0.0026	0.0011	0.0026	0.0021	0.0021	0.0023	0.0024	0.0023
Zinc	0.001 to 0.006	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0386	<0.005	<0.005	<0.005	0.0103	<0.003
Total Metals																
Aluminum	0.003 to 0.025	<0.01	0.0051	0.0079	<0.005	0.0105	0.0065	<0.005	0.007	0.0709	0.0074	0.007	0.0101	0.0111	0.0081	0.191
Antimony	0.0001 to 0.0025	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00011
Arsenic	0.0001 to 0.0025	0.0012	0.00143	0.00128	0.00116	0.00144	0.00177	0.00142	0.00159	0.00079	0.00114	0.00115	0.00114	0.00132	0.00122	0.00133
Barium	5E-005 to 0.02	0.058	0.056	0.058	0.06	0.051	0.059	0.026	0.048	0.033	0.057	0.056	0.059	0.061	0.062	0.0672
Beryllium	0.0001 to 0.005	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001
Bismuth	0.0005 to 0.2									<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.025
Cadmium	1E-005 to 8.5E-005	<0.000034	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	0.00002	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.00001
Calcium	0.05 to 0.1	59.3	54.9	50.3	57.8	44.2	48.4	51.4	49.5	28.9	55.5	52.7	51.9	48.7	49.1	55.4
Chromium	0.0001 to 0.005	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00049
Cobalt	0.0001 to 0.0015	<0.0006	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.0002
Copper	0.0005 to 0.007	<0.002	0.0011	0.0011	<0.001	0.0014	0.001	0.0015	0.0012	0.0023	0.0014	0.0015	0.001	<0.001	0.0011	0.00181
Iron	0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.096	<0.03	<0.03	<0.03	<0.03	<0.03	0.244
Lead	5E-005 to 0.0025	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.000053
Lithium	0.0005 to 0.025	<0.01	0.0069	0.0075	0.0062	<0.008	0.0069	0.0064	0.0062	<0.005	0.006	<0.005	0.0056	0.0054	0.0055	0.00595
Magnesium	0.1	43	45.8	44	46.9	37.9	40.9	41.4	43.7	22.6	36.7	32.9	34.6	35.7	35.7	41
Manganese	5E-005 to 0.0015	0.00622	0.0029	0.0027	0.0101	0.0102	0.00411	0.00341	0.003	0.0253	0.00666	0.0068	0.00463	0.00359	0.0101	0.0235
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	<0.004	0.0028	0.0029	0.0023	0.0029	0.0031	0.0035	0.0035	0.004	0.0027	0.0024	0.0022	0.0026	0.0026	0.00278
Nickel	0.0005 to 0.005	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	0.0012	<0.001	0.0011	<0.001	<0.001	<0.001	<0.001	<0.001	0.00108
Phosphorus	0.05 to 0.3									<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	12	12.3	12.5	12.3	11.5	13.2	12.7	12.9	7.3	10.9	9.9	11.1	10.7	10.9	11.6
Selenium	0.0001 to 0.006	<0.002	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00014
Silicon	0.05									1.28	2.52	3.51	3.96	3.85	3.31	3.68
Silver	1E-005 to 0.0001	<0.00004	<0.00002	0.000033	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001
Sodium	0.05 to 2	39.1	41	44.5	41.5	35.4	38.4	37.2	40	21.5	36.7	32.7	35.1	34.2	35.5	37
Strontium	0.0001 to 0.005									0.235	0.378	0.349	0.361	0.352	0.359	0.366
Sulphur	0.5															
Thallium	1E-005 to 0.001	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001
Tin	0.0001 to 0.0025	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.017
Total Cadmium (by saltwater extractic	0.00002															
Uranium	1E-005 to 0.001	0.00121	0.00099	0.00107	0.00079	0.00131	0.00113	0.00159	0.00152	0.00067	0.00132	0.00109	0.00116	0.00108	0.00117	0.00127
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.03	0.0015	0.0021	0.0023	0.003	0.0028	0.0015	0.0029	0.0022	0.0025	0.0023	0.0023	0.0028
Zinc	0.003 to 0.006	<0.01	<0.005	<0.005	<0.005	0.032	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.01	<0.005	<0.005	0.0037
Organics																
Carbon Organic (Dissolved)	0.5 to 5	14.5	15.1	15.3	14.4	16.7	15	13.6	14.6	9.13	13.9	15.3	16	16.8	14.7	15.2
Carbon Organic (Total)	0.5 to 5										14.2	17.5	17.7	16.9	15.3	15.2
Nitrogen Organic (Dissolved)	0.05 to 0.26										0.851	1.04	1.09	1.23	0.86	0.47
Nitrogen Organic (Total)	0.05 to 0.3										0.961	1.96	1.32	1.29	0.89	0.5
ALS LAB ID		**L502198**	**L532652**	**L557583**	**L624228**	**L654416**	**L679955**	**L893847**	**L927896**	**L990458**	**L1012627**	**L1025917**	**L1038168**	**L1052924**	**L1066047**	**L1077732**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes	MDL	JACL-S 10-Jan-12	JACL-S 13-Feb-12	JACL-S 7-Mar-12	JACL-S 26-Apr-12	JACL-S 3-May-12	JACL-S 11-Jul-12	JACL-S 8-Aug-12	JACL-S 6-Sep-12	JACL-S 6-Nov-12	JACL-S 9-Jan-13	JACL-S 7-Feb-13	JACL-S 8-May-13	JACL-S 4-Sep-13	JACL-S 7-Nov-13	JACL-S 9-Jan-14
In Situ Parameters																
Conductivity µS/cm	...	113	403	337	502	496	278	600	555	440	407	410	563		454	406
Oxygen Dissolved %	...	52.1	67.9	63.3	97.5	85.9	72.4	97.3	87.9	70.1	63.8	56.9	109	85.9	51	42.7
Oxygen Dissolved	...	7.57	9.8	8.94	10.8	9.66	6.82	8.38	8.5	8.6	8.71	8.05	11	8.16	4.63	5.95
pH (unitless)	...	7.59	7.91	7.89	8.13	8.45	9.21	8.62	8.48	8.14	8.46	7.76	7.77	8.14	8.26	7.91
Redox Potential mV	...	232	226	51.2	142	115	33.6	130		134	91.7	223	277	223	149	149
Salinity ppt	...	0.12	0.37	0.3	0.34	0.34		0.3		0.34	0.35	0.36	0.34	0.34	0.36	0.36
Specific Conductivity µS/cm	...	211	760	620	690	694	263	628	657	687	725	756	696	687	731	726
Temperature °C	...	0.51	0.38	1.38	10.7	10.1	17.9	22.7	16.8	6.44	2.28	1.02	15.1	17.7	5.13	1.97
Total Dissolved Solids	...	165	494	402	449	451		408	427	447	469	491	452	446	475	480
Turbidity NTU	...	0.2	0.2	2	0.8	0.6	17.9	1.5	0.7	0.9	0.3	-1.1	0		1	0.1
Physical Tests																
Acidity to pH 8.3 (as CaCO3)	1									<1						
Alkalinity (Total as CaCO3)	1 to 2	191	250	184	244	237	229	228	236	239	250	253	246	235	251	253
Bicarbonate Alkalinity	1 to 2	191	250	184	244	237	205	211	225	239	250	253	235	235	251	253
Carbonate Alkalinity	1 to 2	<2	<2	<2	<1	<2	23.8	16.7	10.9	<1	<2	<1	11.2	<1	<2	<2
Color TCU	5	11.4	15.3	15.9	15.8	17.1	16.8	16.9	14.4	14.8	14.5	14.4	16.1	18.5		15.8
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	230	309	242	300	306	282	266	282	296	300	301	287	265	299	314
Hydroxide Alkalinity	1 to 2	<2	<2	<2	<1	<2	<1	<1	<1	<1	<2	<1	<1	<1	<2	<2
pH (unitless)	0.01 to 0.1	8.22	8.17	8.19	8.5	8.12	8.61	8.58	8.41	8.37	8.25	8.35	8.38	8.41	8.26	8.18
Specific Conductivity µS/cm	2	555	721	556	681	677	623	619	634	695	687	717	679	643	689	718
Total Dissolved Solids	1 to 2	325	454	335	413	433	423	409	402	416	414	427	431	394	413	449
Total Suspended Solids	3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Turbidity NTU	0.1	0.7	1.04	10.5	0.87	0.71	0.84	1.45	0.77	0.73	0.3	0.31	0.59	1.86	0.84	0.31
Dissolved Anions																
Bromide	0.05 to 2.495	<0.05	<0.25	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.25	<0.5	<0.05	<0.05	<0.25	<0.25
Chloride	0.5 to 1	43.6	58.1	43.5	54.5	54.4	49	49.4	51.7	56.1	56.5	58.1	55.3	51	54.6	59
Fluoride	0.02 to 0.4	0.176	0.2	0.176	0.216	0.208	0.201	0.209	0.208	0.19	0.3	0.21	0.211	0.221	0.2	0.2
Sulphate	0.5 to 1	49.2	65.9	50.6	62.3	61.7	51.6	54.8	54.3	59	60.1	61.8	54.8	44.2	52.1	55.1
Nutrients																
Ammonia (Total)	0.005 to 0.05	0.2	<0.05	0.0108	0.0334	0.0655	0.012	0.0183	0.0591	0.247	0.361	0.306	0.0553	0.0631	0.252	<0.005
Nitrate (as N)	0.005 to 0.1	0.2	0.546	0.265	0.0382	0.0326	<0.005	<0.005	0.0056	0.037	0.07	0.172	0.0381	0.0576	0.129	0.48
Nitrite (as N)	0.001 to 0.02	0.0058	<0.005	0.0028	0.0026	0.0027	<0.001	<0.001	0.003	0.0105	0.0064	0.018	0.0036	0.0133	0.0313	<0.005
Nitrogen (Dissolved)	0.05 to 0.1	0.82	1.48	0.99	0.89	0.78	0.58	0.88	0.97	0.88	1.28	1.27		2.1		
Nitrogen (Total)	0.0025 to 0.11	0.976	1.44	1.11	0.767	0.876	0.831	0.85	0.866	1.12	1.33	1.27	0.909	1.1	1.17	
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.771	0.9	0.844	0.726	0.841	0.831	0.85	0.857	1.07	1.22	1.19	0.868	1.03	1.12	0.852
Orthophosphate (Dissolved)	0.001 to 0.01	0.0355	0.0641	0.0391	0.0038	0.0079	<0.001	<0.001	<0.001	0.0465	0.0718	0.0737	0.0125	0.0013	0.0958	0.0981
Phosphorus - Dissolved	0.002 to 0.02	0.0489	0.0839	0.0595	0.0227	0.026	0.014	0.0113	0.0106	0.0565	0.092	0.086	0.0291	0.0279	0.135	0.115
Phosphorus - Total	0.002 to 0.02	0.0521	0.0925	0.0887	0.0449	0.034	0.021	0.0172	0.0153	0.0644	0.093	0.0902	0.0411		0.14	0.116
Cyanide																
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	0.0054	0.0054	0.0061	<0.005	0.0061	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																
Aluminum	0.001 to 0.025	<0.003	<0.003	<0.003	<0.003	0.0034	0.0012	0.0011	0.0013	0.0016	<0.001	<0.001	0.0015	<0.001	0.0013	<0.001
Antimony	0.0001 to 0.0025	<0.0001	0.00011	<0.0001	<0.0001	0.0001	0.00011	0.0001	0.00013	0.00012	<0.0001	0.00011	<0.0001	0.00011	<0.0001	0.00011
Arsenic	0.0001 to 0.0025	0.00098	0.00131	0.00102	0.00122	0.00114	0.0012	0.0013	0.00134	0.00134	0.00138	0.00144	0.00124	0.00139	0.00136	0.0014
Barium	5E-005 to 0.02	0.0493	0.0712	0.0519	0.0602	0.0595	0.0443	0.0462	0.0456	0.0454	0.0477	0.0487	0.0488	0.0714	0.0636	0.0642
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.018	0.02	0.019	0.018	0.021	0.017	0.02	0.021	0.019	0.019	0.025	0.018	0.023	0.021	0.023
Cadmium	1E-005 to 8.5E-005	<0.00001	0.000034	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	40.8	54.8	42.6	52.8	55.8	55.6	47.8	52.9	52.2	53.5	52.5	54.7	47.7	53.7	58.3
Chromium	0.0001 to 0.018	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	0.0002 to 0.006	<0.0005	0.00055	0.0009	<0.0005	0.00071	0.00072	0.00069	0.00072	0.00046	0.00042	0.00152	0.001	0.00082	0.00044	0.00048
Dissolved Cadmium (by saltwater extr	0.00002															
Iron	0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	<0.01	0.011	<0.01
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00469	0.00602	0.00457	0.00565	0.00582	0.00568	0.00537	0.00542	0.00566	0.00576	0.00579	0.00543	0.00539	0.00548	0.00591
Magnesium	0.1	31	41.8	32.8	40.8	40.5	34.9	35.7	36.3	40.2	40.4	41.2	36.5	35.6	40	40.8
Manganese	5E-005 to 0.0015	0.0167	0.0138	0.0141	0.00179	0.00361	0.00213	0.000889	0.0017	0.0273	0.0206	0.0158	0.00494	0.00307	0.02	0.00152
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00175	0.00233	0.00212	0.00219	0.00235	0.00232	0.00195	0.00229	0.00195	0.00218	0.00226	0.00223	0.00242	0.00222	0.00234
Nickel	0.0005 to 0.005	0.00054	0.00073	0.00064	0.00062	0.00068	0.00074	0.00063	0.0006	0.00068	0.00065	0.00073	0.00069	0.00066	0.00062	0.00094
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.059	0.095	0.089	<0.05	<0.05	0.111	0.119
Potassium	0.05 to 2	10.4	12.6	9.75	11.4	11.3	10.4	10	11	12.2	13.1	12.1	10.6	11.2	12.3	11.4
Selenium	0.0001 to 0.006	0.0001	0.00012	0.00011	0.00011	0.00016	0.00013	0.00014	0.00014	0.00012	0.00013	0.00015	0.00016	0.00014	0.00018	0.00015
Silicon	0.05	2.35	3.4	2.61	1.87	2.16	0.929	1.4	2.11	3.23	3.56	3.63	3.96	6.35	5.76	6.06
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	31.6	37.1	29.7	35.8	35.8	32.8	32.8	34.9	37	35.3	39.7	34.7	34.4	34	36.6
Strontium	0.0001 to 0.005	0.306	0.395	0.291	0.355	0.379	0.375	0.313	0.339	0.35	0.362	0.385	0.357	0.352	0.358	0.386
Sulphur	0.5									0.0197	20.1	20.9	19.2	14.7	17.1	18.8
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.000862	0.00114	0.000913	0.0011	0.00119	0.00108	0.000988	0.000966	0.00106	0.00115	0.00112	0.00106	0.000891	0.00104	0.00109
Vanadium	0.001 to 0.03	0.0015	0.002	0.0016	0.002	0.0021	0.0019	0.0018	0.0021	0.0019	0.0019	0.002	0.0022	0.0026	0.0023	0.0023
Zinc	0.001 to 0.006	0.164	0.0497	0.015	0.0039	0.007	0.0046	0.0013	0.0122	0.0018	0.0012	0.0152	<0.001	0.0012	<0.001	0.0015
Total Metals																
Aluminum	0.003 to 0.025	0.004	0.0126	0.0816	0.0069	0.0086	0.0059	0.0062	0.0081	0.0068	<0.003	0.0037	0.0082	0.0064	0.0071	0.0034
Antimony	0.0001 to 0.0025	<0.0001	0.00012	0.0001	<0.0001	0.00011	0.00011	0.00012	0.00026	0.00011	0.00012	0.00011	0.00013	0.00012	0.00011	0.00012
Arsenic	0.0001 to 0.0025	0.00096	0.0013	0.00106	0.00118	0.00123	0.00122	0.00131	0.00128	0.00131	0.00133	0.00143	0.00127	0.00137	0.00135	0.00146
Barium	5E-005 to 0.02	0.0473	0.0702	0.0528	0.0606	0.06	0.0443	0.0474	0.0454	0.0463	0.0476	0.0488	0.051	0.0698	0.0661	0.0645
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.022	0.026	0.025	0.021	0.022	0.023	0.024	0.026	0.02	0.02	0.03	0.021	0.026	0.023	0.028
Cadmium	1E-005 to 8.5E-005	<0.00001	0.000043	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000019	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	39.8	52	42.2	53	55.2	54.4	47.3	52.6	51.8	54.6	53.3	54.2	49.1	55.1	58.7
Chromium	0.0001 to 0.005	0.00017	0.0003	0.00039	<0.0001	0.00011	0.00023	0.00015	0.00027	<0.0001	<0.0001	0.00016	0.00016	<0.0001	0.00014	0.0001
Cobalt	0.0001 to 0.0015	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00019	0.0001	<0.0001	<0.0001
Copper	0.0005 to 0.007	<0.0005	0.00086	0.00154	0.00062	0.00115	0.00118	0.0014	0.00106	0.00052	0.00058	0.00374	0.00126	0.00105	0.00069	0.00074
Iron	0.01 to 0.03	<0.03	0.036	0.075	<0.03	<0.03	0.012	0.01	0.011	0.017	<0.01	0.011	0.019	0.016	0.017	<0.01
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00006	<0.00005
Lithium	0.0005 to 0.025	0.00423	0.00588	0.00484	0.00543	0.00537	0.00505	0.00546	0.00538	0.00543	0.00591	0.00595	0.00544	0.0052	0.00537	0.006
Magnesium	0.1	30.4	41.2	32.9	41.6	40.7	34.5	35.9	36.1	39.8	40.5	40.7	36.3	34.8	38.7	40.6
Manganese	5E-005 to 0.0015	0.0173	0.0172	0.0184	0.00356	0.00503	0.00452	0.00334	0.00374	0.0306	0.0222	0.0185	0.00572	0.00517	0.0338	0.00335
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00199	0.00238	0.00235	0.00246	0.00248	0.00228	0.0022	0.00238	0.00212	0.00229	0.00241	0.00239	0.00248	0.00231	0.00253
Nickel	0.0005 to 0.005	0.00057	0.00085	0.00084	0.0007	0.00078	0.00086	0.00069	0.00068	0.00068	0.00069	0.00082	0.00076	0.00073	0.00069	0.00097
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.062	0.09	0.091	<0.05	<0.05	0.133	0.118
Potassium	0.05 to 2	10.1	12.7	10	11.5	11.4	10.3	10.3	10.9	12	13.4	12.2	10.7	11.2	12.4	11.8
Selenium	0.0001 to 0.006	<0.0001	0.00013	0.00013	0.00012	0.00016	0.00019	0.00013	0.00016	0.00014	0.00013	0.00014	0.00016	0.00014	0.00023	0.00016
Silicon	0.05	2.3	3.33	2.72	1.94	2.17	0.938	1.41	2.14	3.24	3.69	3.59	3.99	6.38	5.8	6.2
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	31.2	37.2	30.2	36.6	36.1	32	32.8	34.6	36.7	34.9	39.9	35.3	34.6	33.9	38.7
Strontium	0.0001 to 0.005	0.312	0.391	0.303	0.373	0.383	0.345	0.34	0.339	0.36	0.385	0.384	0.367	0.358	0.357	0.407
Sulphur	0.5									19.8	21.2	21.6	19.6	15.4	17.9	19.2
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extractic	0.00002															
Uranium	1E-005 to 0.001	0.000932	0.0012	0.001	0.00127	0.00127	0.0011	0.00108	0.0011	0.00114	0.00124	0.00116	0.00113	0.001	0.00118	0.00121
Vanadium	0.001 to 0.03	0.0015	0.002	0.0018	0.002	0.0022	0.0023	0.0021	0.0022	0.002	0.0021	0.0025	0.0025	0.0028	0.0025	0.0026
Zinc	0.003 to 0.006	0.0295	0.059	0.0261	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0133	<0.003	0.0035	<0.003	<0.003
Organics																
Carbon Organic (Dissolved)	0.5 to 5	10.4	15.6	13.2	15	14.3	13.8	13.8	14.7	11.6	13.5	13.2	13.4	15.1	13.8	14.1
Carbon Organic (Total)	0.5 to 5	10.7	15.8	13.7	14.8	14.4	14.2	14	14.4	12.3	13.9	13.3	12.7	15.1	13.4	13.9
Nitrogen Organic (Dissolved)	0.05 to 0.26	0.41	0.92	0.711	0.816	0.679	0.568	0.862	0.902	0.59		0.77		1.97		
Nitrogen Organic (Total)	0.05 to 0.3	0.571	0.9	0.834	0.693	0.775	0.819	0.832	0.798	0.822	0.863	0.888		0.964		
ALS LAB ID		**L1103104**	**L1114029**	**L1122039**	**L1140194**	**L1143149**	**L1177597**	**L1191600**	**L1206738**	**l1234688**	**L1256679**	**L1266846**	**L1299444**	**L1358222**	**L1389979**	**L1410216**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes	MDL	JACL-S 28-Apr-14	JACL-S 13-May-14	JACL-S 26-May-14	JACL-S 10-Jun-14	JACL-S 27-Jun-14	JACL-S 8-Jul-14	JACL-S 22-Jul-14	JACL-S 7-Aug-14	JACL-S 20-Aug-14	JACL-S 14/Sep/2014	JACL-S 30-Sep-14
In Situ Parameters												
Conductivity µS/cm	...	426	542	542	558	588	641	600	620	622	556	934
Oxygen Dissolved %	...	12.4	69.2	69.2			95.1	86.6	64.4	79.5	90.7	67.9
Oxygen Dissolved	...	13.2	7.15	7.15			8.17	7.78	5.58	6.88	9.12	6.99
pH (unitless)	...	8.55	8.55	8.55	8.8	8.84	8.65	8.66	8.41	8.99	8.58	8.42
Redox Potential mV	...	102	112	112	-21.3	-37.4	18.4	-23.3	71.7	-34.3	72.5	161
Salinity ppt	...	0.3	0.34	0.34	0.31	0.32	0.32	0.32	0.32	0.32	0.34	0.6
Specific Conductivity µS/cm	...	624	690	690	644	656	667	657	661	660	687	1182
Temperature °C	...	8.37	13.8	13.8	18	19.6	23	20.5	22.5	21.9	15	14
Total Dissolved Solids	...	405	449	449	418	426	434	427	430	429	446	778
Turbidity NTU	...	2.1	-0.4	-0.4	2.9	11.7	1.1	1.2	1	0.5	1.3	-11.4
Physical Tests												
Acidity to pH 8.3 (as CaCO3)	1											
Alkalinity (Total as CaCO3)	1 to 2	230	230	220	234	236	237	230	235	229	242	215
Bicarbonate Alkalinity	1 to 2	221	218	212	207	213	219	212	217	213	229	206
Carbonate Alkalinity	1 to 2	8.5	12	8.3	27.4	23.1	17.5	18.1	17.7	15.7	12.6	8.8
Color TCU	5											
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	287	289	284	283	282	292	281	283	281	289	285
Hydroxide Alkalinity	1 to 2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1	8.44	8.63	8.39	8.71	8.64	8.58	8.54	8.58	8.56	8.55	8.43
Specific Conductivity µS/cm	2	645	663	652	651	636	645	632	655	652	664	665
Total Dissolved Solids	1 to 2	344	350	387	402	398	407	419	407	406	420	403
Total Suspended Solids	3	3	<3	4.4	3.2	7.9	<3	<3	3.4	<3	<3	<3
Turbidity NTU	0.1	1.17	0.54	2.56	1.46	13.3	1.62	1.78	0.7	1.73	0.95	1.73
Dissolved Anions												
Bromide	0.05 to 2.495	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.25	<0.05	<0.05	<0.05	<0.05
Chloride	0.5 to 1	53.8	54.5	51.7	52.1	52.7	52.9	53.1	54.6	54	55.7	55.9
Fluoride	0.02 to 0.4	0.201	0.217	0.217	0.211	0.199	0.222	0.223	0.22	0.225	0.235	0.232
Sulphate	0.5 to 1	51.9	50.4	45.9	45.6	43.8	44.8	44.6	46.3	45.5	47.8	48
Nutrients												
Ammonia (Total)	0.005 to 0.05	0.0064	0.0591	0.0143	0.0181	0.0106	0.0478	0.0207	0.0259	0.0283	0.0147	0.0174
Nitrate (as N)	0.005 to 0.1	<0.005	<0.005	<0.005	<0.005	<0.025	0.0178	<0.025	0.0092	<0.005	0.0109	<0.005
Nitrite (as N)	0.001 to 0.02	<0.001	<0.001	<0.001	<0.001	<0.005	0.0064	0.0064	0.0023	0.0011	0.0028	0.0021
Nitrogen (Dissolved)	0.05 to 0.1											
Nitrogen (Total)	0.0025 to 0.11	0.831										
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.955	0.93	1.01	0.983	1.32	0.861	0.909	0.921	0.961	0.89	0.881
Orthophosphate (Dissolved)	0.001 to 0.01	0.0132	0.0122	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	0.0011	0.0013	<0.001
Phosphorus - Dissolved	0.002 to 0.02	0.0542	0.0293	0.0139	0.0146	0.0149	0.0155	0.015	0.0125	0.0141	0.0135	0.0131
Phosphorus - Total	0.002 to 0.02	0.0329	0.0353	0.0379	0.0294	0.033	0.0232	0.0211	0.0165	0.0195	0.0184	0.0156
Cyanide												
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals												
Aluminum	0.001 to 0.025	<0.001	0.0011	0.0011	0.0014	0.0093	<0.001	0.0015	0.0017	0.0018	0.0013	0.0013
Antimony	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	0.00011	<0.0001	0.00011	0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00118	0.0012	0.00121	0.00128	0.00121	0.00131	0.00135	0.0014	0.00137	0.00139	0.00131
Barium	5E-005 to 0.02	0.0619	0.0595	0.0545	0.0515	0.0547	0.0566	0.0556	0.0463	0.0415	0.054	0.0591
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.021	0.019	0.019	0.02	0.02	0.021	0.021	0.021	0.02	0.021	0.021
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	56	59	58.1	57.3	58.1	57.1	55	55.1	53	53.7	53.3
Chromium	0.0001 to 0.018	<0.0001	<0.0001	<0.0001	0.00027	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	0.0002 to 0.006	0.00059	0.00132	0.00136	0.00159	0.00106	0.00099	0.00092	0.00091	0.00094	0.00092	0.00073
Dissolved Cadmium (by saltwater extr	0.00002											
Iron	0.01 to 0.03	<0.01	<0.01	0.013	0.023	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00559	0.00536	0.00482	0.00508	0.00462	0.00486	0.00517	0.0053	0.00541	0.00556	0.00498
Magnesium	0.1	35.8	34.4	33.7	33.9	33.4	36.2	34.8	35.4	36.2	37.7	36.9
Manganese	5E-005 to 0.0015	0.00083	0.00363	0.0061	0.00413	0.00332	0.00301	0.00165	0.00113	0.00138	0.00111	0.000736
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00226	0.0024	0.00239	0.00246	0.00232	0.00241	0.00246	0.00254	0.00241	0.0024	0.00251
Nickel	0.0005 to 0.005	0.00064	0.00118	0.00072	0.00077	0.00064	0.00065	0.0007	0.00066	0.00064	0.00061	0.00062
Phosphorus	0.05 to 0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	0.05 to 2	10.8	10.8	9.23	9.95	9.9	10.4	9.95	11.8	11.4	11	10.9
Selenium	0.0001 to 0.006	0.00012	0.00016	0.00017	0.00014	0.00015	0.00014	0.00015	0.00015	0.00016	0.00015	0.00011
Silicon	0.05	3.98	4.74	4.8	5.46	5.84	6.16	6.13	6.59	6.77	6.48	6.23
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	33.7	32.5	31.6	31.3	31.9	32.4	33.8	34.2	34.1	35.6	34.8
Strontium	0.0001 to 0.005	0.37	0.365	0.35	0.364	0.355	0.362	0.365	0.357	0.349	0.349	0.363
Sulphur	0.5	17.1	16.2	15.5	15.6	14.6	15.9	15.3	15.8	15.6	16.3	16.2
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00111	0.00116	0.00104	0.00104	0.00105	0.00102	0.001	0.00107	0.00101	0.00107	0.00111
Vanadium	0.001 to 0.03	0.0022	0.0025	0.0025	0.0026	0.0025	0.0026	0.0027	0.0029	0.0028	0.0028	0.0028
Zinc	0.001 to 0.006	<0.001	<0.001	0.001	0.0012	<0.001	<0.001	<0.001	<0.001	0.0011	<0.001	0.001
Total Metals												
Aluminum	0.003 to 0.025	0.0079	0.0048	0.0057	0.0067	0.0069	0.0033	0.0069	0.0047	0.0061	0.0053	0.0058
Antimony	0.0001 to 0.0025	0.0001	<0.0001	0.00013	0.00011	0.00012	0.00013	0.00014	0.00013	0.0001	0.00011	0.0001
Arsenic	0.0001 to 0.0025	0.00119	0.00117	0.00118	0.00134	0.00128	0.00135	0.00143	0.00136	0.00137	0.0014	0.00135
Barium	5E-005 to 0.02	0.0617	0.0583	0.0528	0.0522	0.0536	0.0583	0.059	0.0443	0.0425	0.0534	0.0551
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.022	0.02	0.021	0.022	0.023	0.027	0.025	0.022	0.02	0.026	0.025
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	56.3	57.1	56.7	56.3	57.5	55.2	57.1	52	52.3	52.2	50.2
Chromium	0.0001 to 0.005	<0.0001	<0.0001	0.00011	0.00072	0.00012	0.0001	0.00012	<0.0001	0.00014	<0.0003	0.00015
Cobalt	0.0001 to 0.0015	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	0.0005 to 0.007	0.00097	0.00096	0.00127	0.0013	0.00156	0.00226	0.0011	0.00104	0.0011	0.00101	0.00089
Iron	0.01 to 0.03	0.017	0.014	0.024	0.027	0.018	0.013	0.014	0.011	0.011	0.012	0.012
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.0055	0.00475	0.00396	0.00482	0.00467	0.0045	0.00564	0.00484	0.0051	0.00587	0.00483
Magnesium	0.1	35.2	33.2	32.6	33.4	32.5	34.1	36.6	34	36.1	34.6	34.7
Manganese	5E-005 to 0.0015	0.00446	0.00432	0.00781	0.00792	0.00684	0.0048	0.00364	0.00265	0.00311	0.00196	0.0017
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00245	0.00255	0.0025	0.00252	0.00248	0.00253	0.00271	0.00255	0.00241	0.0025	0.00267
Nickel	0.0005 to 0.005	0.00073	0.00072	0.00078	0.00106	0.0007	0.00071	0.0008	0.00071	0.00073	0.00073	0.00066
Phosphorus	0.05 to 0.3	0.073	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	0.05 to 2	10.9	10.3	9.45	9.75	9.71	10.5	10.2	11.5	11.3	10.4	10.2
Selenium	0.0001 to 0.006	0.00013	0.00016	0.00016	0.00014	0.00016	0.00013	0.00015	0.00014	0.00016	0.00014	0.0001
Silicon	0.05	4.07	4.56	4.79	5.48	5.73	5.92	6.4	6.31	6.74	6.28	5.94
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	33.7	31.6	30.6	31.8	31.3	32.3	35.2	33.3	35.7	34.4	32.6
Strontium	0.0001 to 0.005	0.398	0.368	0.346	0.363	0.359	0.373	0.389	0.352	0.338	0.356	0.368
Sulphur	0.5	17.1	16	15.8	15.8	14.4	15.4	16.5	15.2	16	16	15.5
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extractic	0.00002											
Uranium	1E-005 to 0.001	0.00116	0.00121	0.00117	0.00118	0.00117	0.0011	0.00117	0.00111	0.00105	0.00109	0.00118
Vanadium	0.001 to 0.03	0.0023	0.0026	0.0026	0.0028	0.0027	0.0028	0.0031	0.003	0.0031	0.0032	0.0028
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	0.0047	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics												
Carbon Organic (Dissolved)	0.5 to 5	13	12.7	12.2	12.6	13.7	14.1	14.3	13.7	14.2	14.4	13.8
Carbon Organic (Total)	0.5 to 5	14.4	12.3	12.6	12.8	14.4	14.3	14.8	13.8	15.5	14.9	14.5
Nitrogen Organic (Dissolved)	0.05 to 0.26											
Nitrogen Organic (Total)	0.05 to 0.3											
ALS LAB ID		L1448657	L1454705	L1461081	L1469099	L1478913	L1483419	L1490937	L1499202	L1506521	L1518246	L1526071

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes		MDL	JC03 28-Apr-08	JC03 7-Jul-08	JC03 3-Jun-10	JC03 29-Mar-11	JC03 14-Apr-11	JC03 21-Apr-11	JC03 28-Apr-11	JC03 5-May-11	JC03 12-May-11	JC03 1-Jun-11	JC03 28-Jun-11	JC03 28-Jul-11	JC03 1-Sep-11	JC03 27-Sep-11
In Situ Parameters																
Conductivity µS/cm		...	598	519	500	482	511	574	600	675	345	351	430	525	522	
Oxygen Dissolved %	...		82.2	81.5	75.3	75.5	80.8	80.7	71.4	83.4	85.8	77.7	85.2	81.1	96.2	58.2
Oxygen Dissolved	...		9.18	8.56	7.99	10.5	11.3	13.1	9.48	9.71	10.3	8.56	8.88	8.74	12.3	6.67
pH (unitless)		...		7.8	8.17	8.11	7.92	7.95	8.08	8.21	7.88	8.27	8.17	8.13	8	7.89
Redox Potential mV		...		-86.1	-305	113	175	88.4	126	110	149	-144	149	96.3	93.3	218
Salinity ppt		...						0.59	0.5	0.49	0.25	0.23	0.27	0.34	0.42	
Specific Conductivity µS/cm		...	830	675	652	872	930	1320	1024	984	519	480	551	699	855	850
Temperature °C		...	10.4	13	12.8	1.62	1.56	4.76	3.32	8.55	7.39	11	13.4	11.9	4.64	9.27
Total Dissolved Solids		...				507	604	859	666	639	338	312	359	455	556	
Turbidity NTU		...											6.7	5.1	2.6	0.1
Physical Tests																
Acidity to pH 8.3 (as CaCO3)		1												<1		
Alkalinity (Total as CaCO3)		1 to 2	306	295	261	308	306	333	295	272	205	215	228	292	351	370
Bicarbonate Alkalinity		1 to 2			261			333								
Carbonate Alkalinity		1 to 2			<2			<2								
Color TCU		5	20	27.4	69	40.2	18.5	16.2	14.8	18.2	37.5	48.9	28.7	26.4	16.1	24.1
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	383	306	302	385	421	438	446	421	236	234	245	317	385	384
Hydroxide Alkalinity		1 to 2			<2			<2								
pH (unitless)		0.01 to 0.1	8.2	8.4	8.24	8.16	8.26	8.24	8.29	8.37		8.28	8.35	8.3	8.24	8.22
Specific Conductivity µS/cm		2	842	665	655	831	881	954	955	946	527	504	512	673	794	811
Total Dissolved Solids		1 to 2	516	397	419	524	536	584	609	588	334	315	325	404	497	497
Total Suspended Solids		3	89.8	12.5	35.8	35	19.4	6.5	47.4	80.5	116	39.2	21.1	12.1	10.4	<3
Turbidity NTU		0.1	66.7	8.04	10.3	7.61	10.1	4.06	19.8	40.1	45.8	11.6	7.95	4.99	2.72	1.53
Dissolved Anions																
Bromide		0.05 to 2.495	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.25	<0.05	<0.05	<0.5	<0.5
Chloride		0.5 to 1	71.4	31.7	40.1	64	97.3	99.3	123	122	40.9	27.4	29.6	40.4	45.5	46.5
Fluoride		0.02 to 0.4	0.167	0.22	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.142	0.19	0.168	0.217	<0.2	0.21
Sulphate		0.5 to 1	47.8	24	30.9	52	47	54.7	50.2	53.3	26.7	20.6	17.8	22	36	35.4
Nutrients																
Ammonia (Total)		0.005 to 0.05	0.079	0.075	0.026	0.119	0.0279	0.0212	0.0248	0.021	0.0261	0.0231	0.0135	0.0182	0.0383	0.0183
Nitrate (as N)		0.005 to 0.1	0.0717	0.056	<0.05	0.134	0.14	0.172	0.098	<0.05	0.04	0.029	0.0311	0.0688	<0.05	<0.05
Nitrite (as N)		0.001 to 0.02	0.0042	0.0036	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.005	<0.001	<0.001	<0.01	<0.01
Nitrogen (Dissolved)		0.05 to 0.1							0.51	0.51	0.57	0.74	0.48	0.52	0.59	0.41
Nitrogen (Total)		0.0025 to 0.11			0.99	1.38	0.601	0.32	1.07	0.39	1.09	1.1	0.54	0.57	0.59	0.531
Nitrogen Kjeldahl (Total)		0.05 to 0.2	2.24	0.516	0.994	1.25	0.461	0.148	0.975	0.39	1.15	1.07	0.509	0.501	0.461	0.531
Orthophosphate (Dissolved)		0.001 to 0.01	0.0645	0.119	0.196	0.126						0.12	0.0578	0.0806		
Phosphorus - Dissolved		0.002 to 0.02					0.0539	0.0555	0.192	0.0508	0.0759	0.122	0.0643	0.0909	0.0681	0.099
Phosphorus - Total		0.002 to 0.02	0.435	0.161	0.261	0.254	0.0865	0.0715	0.181	0.23	0.259	0.197	0.092	0.11	0.0872	0.119
Cyanide																
Cyanide (Free)		0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005
Cyanide (Total)		0.005	0.0134	0.0081	0.0127	0.0055		<0.005	0.0051	0.0077	0.0136	0.0082	0.0079	0.0065		0.0057
Cyanide (WAD)		0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005
Dissolved Metals																
Aluminum		0.001 to 0.025	0.0064	<0.005	<0.005	<0.005	<0.01	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01
Antimony		0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Arsenic		0.0001 to 0.0025	0.00108	0.00164	0.00226	0.00139	<0.001	0.0011	<0.001	<0.001	0.00084	0.00143	0.0011	0.00145	0.00112	0.0012
Barium		5E-005 to 0.02	0.089	0.075	0.074	0.065	0.085	0.087	0.098	0.096	0.056	0.059	0.069	0.073	0.09	0.084
Beryllium		0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002
Bismuth		0.0005 to 0.2				<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Boron		0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium		1E-005 to 8.5E-005	<0.000017	<0.000017	<0.000017	<0.000017	<0.000034	<0.000034	<0.000034	<0.000034	<0.000017	0.000021	<0.000017	<0.000017	<0.000017	<0.000034
Calcium		0.05 to 0.1	95.2	78.1	66.1	89	109	109	117	114	62.3	57.9	65	80.9	93.4	93.2
Chromium		0.0001 to 0.018	0.0011	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002
Cobalt		0.0001 to 0.0015	<0.0003	<0.0003	<0.0003	0.00032	<0.0006	<0.0006	<0.0006	<0.0006	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0006
Copper		0.0002 to 0.006	0.002	0.0017	0.0045	0.0016	<0.002	<0.002	<0.002	<0.002	0.0024	0.003	0.0018	0.0015	0.0011	<0.002
Dissolved Cadmium (by saltwater extr		0.00002														
Iron		0.01 to 0.03	0.04	0.119	0.038	0.109	0.043	0.049	<0.03	<0.03	0.039	0.059	0.049	0.066	0.053	0.114
Lead		5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Lithium		0.0005 to 0.025	<0.005	<0.005	<0.005	<0.005	<0.01	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	0.0054	<0.01
Magnesium		0.1	35.4	26.9	33.3	39.6	36	40.3	37.2	33.4	19.5	21.7	20.1	27.9	36.8	36.7
Manganese		5E-005 to 0.0015	0.0748	0.0581	0.0256	0.104	0.0283	0.0404	0.0323	0.0257	0.0343	0.0206	0.0233	0.0329	0.144	0.115
Mercury		1E-005 to 5E-005	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.0017	0.0018	0.0038	0.0022	<0.002	<0.002	<0.002	<0.002	0.0017	0.0018	0.0014	0.0017	0.0021	<0.002
Nickel		0.0005 to 0.005	<0.001	0.0012	0.0019	0.0015	<0.002	<0.002	<0.002	<0.002	<0.001	0.001	<0.001	<0.001	0.0022	<0.002
Phosphorus		0.05 to 0.3				<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium		0.05 to 2	9.3	9.2	11.7	11.6	8.6	9.2	8.7	8.5	7.1	7.2	6.4	8.1	11.7	12
Selenium		0.0001 to 0.006	<0.001	<0.001	<0.001	0.001	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002
Silicon		0.05				8.85	8.57	8.75	8.3	7.73	7.35	9.1	8.57	9.48	10.8	11.4
Silver		1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00004	<0.00004	<0.00004	<0.00004	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00004
Sodium		0.05 to 2	33	25.9	31.6	36	37.5	40.6	43.8	43.9	23.4	21.6	21.7	28.8	33.6	34.5
Strontium		0.0001 to 0.005				0.391	0.41	0.441	0.444	0.42	0.235	0.264	0.259	0.338	0.412	0.437
Sulphur		0.5														
Thallium		1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0004	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004
Tin		0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.013	<0.01
Uranium		1E-005 to 0.001	0.00135	0.00093	0.00142	0.00229	0.00186	0.00167	0.00158	0.00168	0.00088	0.00072	0.00056	0.00071	0.00109	0.00094
Vanadium		0.001 to 0.03	0.003	0.0027	0.0044	0.0025	0.0024	0.0023	0.0023	0.0024	0.0024	0.0028	0.0019	0.0018	0.0016	<0.002
Zinc		0.001 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Metals																
Aluminum		0.003 to 0.025	1.7	0.157	0.599	0.455	0.228	0.123	1.1	1.17	2.22	0.328	0.369	0.175	0.418	<0.03
Antimony		0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Arsenic		0.0001 to 0.0025	0.00153	0.00163	0.00238	0.00142	0.001	0.0011	0.001	0.0011	0.0013	0.0013	0.00112	0.00136	0.00121	0.0012
Barium		5E-005 to 0.02	0.115	0.075	0.08	0.072	0.085	0.086	0.119	0.112	0.087	0.061	0.068	0.078	0.101	0.086
Beryllium		0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002
Bismuth		0.0005 to 0.2				<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Boron		0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium		1E-005 to 8.5E-005	0.000027	<0.000017	0.000018	0.000028	<0.000034	<0.000034	<0.000034	<0.000034	0.000028	0.000075	<0.000017	<0.000017	<0.000017	<0.000034
Calcium		0.05 to 0.1	99.4	74.2	66.5	87.9	103	103	121	111	65.8	55	64.1	81.9	96.2	93.6
Chromium		0.0001 to 0.005	0.0047	<0.001	0.0019	0.0013	<0.002	<0.002	0.0024	0.0028	0.0056	0.0011	0.0012	<0.001	0.0012	<0.002
Cobalt		0.0001 to 0.0015	0.0017	<0.0003	0.00077	0.00062	<0.0006	<0.0006	0.00079	0.00094	0.00167	0.00039	0.00041	<0.0003	0.00059	<0.0006
Copper		0.0005 to 0.007	0.0151	0.0032	0.0084	0.0046	0.0033	0.0025	0.0071	0.0079	0.014	0.005	0.0041	0.0026	0.0037	<0.002
Iron		0.01 to 0.03	2.89	0.382	0.849	0.851	0.37	0.244	1.63	1.78	3.27	0.517	0.58	0.347	0.698	0.246
Lead		5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Lithium		0.0005 to 0.025	0.0058	<0.005	<0.005	<0.005	<0.01	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	0.0061	0.0058	<0.01
Magnesium		0.1	35.7	26.6	32.8	39.2	33.8	38.7	38.9	32.6	20.2	20.7	19.3	28.3	38	36.8
Manganese		5E-005 to 0.0015	0.179	0.0723	0.0579	0.13	0.04	0.0455	0.086	0.0959	0.166	0.0412	0.0575	0.0561	0.203	0.127
Mercury		1E-005 to 5E-005	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.0016	0.0021	0.0043	0.0024	<0.002	<0.002	<0.002	<0.002	0.002	0.0021	0.0017	0.0019	0.0022	0.002
Nickel		0.0005 to 0.005	0.0055	0.0018	0.0036	0.0023	<0.002	<0.002	0.0027	0.0035	0.005	0.0016	0.0016	<0.001	0.0032	0.0021
Phosphorus		0.05 to 0.3				<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium		0.05 to 2	9.5	8.7	11.1	11.5	8.3	8.8	9.3	8.4	7.4	6.8	6.2	8.3	12.2	12.2
Selenium		0.0001 to 0.006	<0.001	<0.001	<0.001	0.001	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002
Silicon		0.05				9.99	8.53	8.51	11.8	10.5	12.9	9.42	9.04	9.9	12.1	11.5
Silver		1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00004	<0.00004	<0.00004	<0.00004	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00004
Sodium		0.05 to 2	31.7	24.3	30	35.5	35.6	38.8	45.6	42.3	23	20.5	20.8	29.1	34.9	34.9
Strontium		0.0001 to 0.005				0.391	0.391	0.427	0.47	0.417	0.25	0.253	0.249	0.344	0.43	0.445
Sulphur		0.5														
Thallium		1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0004	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004
Tin		0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Titanium		0.01	0.072	0.012	0.026	0.029	0.016	0.011	0.075	0.058	0.093	0.02	0.02	0.016	0.036	<0.01
Total Cadmium (by saltwater extractio		0.00002														
Uranium		1E-005 to 0.001	0.00149	0.00097	0.00158	0.00261	0.00193	0.00164	0.00172	0.00165	0.00104	0.00078	0.00064	0.00082	0.00116	0.00094
Vanadium		0.001 to 0.03	0.0089	0.0035	0.0063	0.004	0.0031	0.0027	0.0053	0.0058	0.0088	0.0039	0.0032	0.0026	0.0029	<0.002
Zinc		0.003 to 0.006	0.0076	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0057	0.0077	<0.005	<0.005	<0.005	<0.005	<0.005
Organics																
Carbon Organic (Dissolved)		0.5 to 5	9.19	11.2	16.4	14.3	7.92	7.83	6.72	8.56	14.3	13.3	12.4	11.3	10.7	12.2
Carbon Organic (Total)		0.5 to 5					8.05	7.8	6.68	9.09	14.7	13.5	12.9	11.9	10.6	12.3
Nitrogen Organic (Dissolved)		0.05 to 0.26							0.387	0.489	0.504	0.688	0.435	0.433	0.552	0.392
Nitrogen Organic (Total)		0.05 to 0.3					0.433		0.95	0.369	1.13	1.05	0.495	0.483	0.552	0.432
ALS LAB ID			**L623545**	**L653575**	**L894163**	**L990459**	**L995583**	**L997645**	**L999654**	**L1002049**	**L1005044**	**L1012627**	**L1025075**	**L1038168**	**L1053400**	**L1065234**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes		MDL	JC03 10-Apr-12	JC03 25-Apr-12	JC03 2-May-12	JC03 10-May-12	JC03 16-May-12	JC03 24-May-12	JC03 10-Jul-12	JC03 6-Sep-12	JC03 7-Nov-12	JC03 9-Jan-13	JC03 6-Feb-13	JC03 5-Mar-13	JC03 4-Apr-13	JC03 7-May-13
In Situ Parameters																
Conductivity µS/cm		...	643	645	248	257	293	393	480	198	558	596	585	498	576	396
Oxygen Dissolved %	...		64	84.8	85.2	88.8	83	80.1	87.8	91.3	69.4	61.9	57.1	67		83.4
Oxygen Dissolved	...		7.92	9.32	10.7	11.1	9.41	9.13	8.32	9.64	8.97	8.61	7.95	9.36		8.78
pH (unitless)		...	7.5	8.16	8.5	8.1	8.21	8.01	8.06	7.92	7.83	7.91	7.59	7.85	8.38	8.09
Redox Potential mV		...	91.8	82.6	91.8	140	144	134	202	38.5	21.5	102	67	76.9	103	177
Salinity ppt		...	0.5	0.44	0.19	0.2	0.2	0.27		0.12	0.45	0.52	0.52	0.44	0.47	0.25
Specific Conductivity µS/cm		...	1007	880	395	409	412	558	557	260	919	1068	1058	902	951	514
Temperature °C		...	6.09	11	5.46	5.6	9.79	9.49	17.8	12.9	4.43	1.88	1.61	1.52	4.39	13
Total Dissolved Solids		...	654	572	257	266	269	362		167	598	694	688	586	618	335
Turbidity NTU		...		66	10	10.2	58.9	21.8	8.2	3.8	2.8	0.6	0.7	6.1	36	18
Physical Tests																
Acidity to pH 8.3 (as CaCO3)		1														
Alkalinity (Total as CaCO3)		1 to 2	417	254	151	168	177	335	231	373	410	427	439	379	252	197
Bicarbonate Alkalinity		1 to 2	417	254	151	168	177	326	223	365	410	427	439	379		197
Carbonate Alkalinity		1 to 2	<1	<1	<1	<1	<1	8.1	8	7.6	<2	<2	<2	<2		<1
Color TCU		5	38.7	20.3	38.3	30	41.6	52.5	26.4	15.7	27.4	27.7	32.8	34.7	13.5	40.5
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	470	390	184	188	186	368	259	416	462	512	493	458	368	219
Hydroxide Alkalinity		1 to 2	<1	<1	<1	<1	<1	<1	<1	<1	<2	<2	<2	<2		<1
pH (unitless)		0.01 to 0.1	8.4	8.4	8.19	8.41	8.33	8.29	8.37	8.35	8.19	8.06	7.97	8.28	8.4	8.39
Specific Conductivity µS/cm		2	997	862	388	415	399	767	528	816	905	1020	978	959	871	478
Total Dissolved Solids		1 to 2	635	570	255	255	258	501	340	546		650	649	589	536	293
Total Suspended Solids		3	34	101	7.7	8	90.2	10.7	16.9	37.1	3.1	3.7	<3	10.7	58.3	15.3
Turbidity NTU		0.1	13	47.3	6.98	4.13	37.1	5.53	6.11	7.98	1	1.21	1.32	8.36	27.2	21.4
Dissolved Anions																
Bromide		0.05 to 2.495	<0.5	<0.5	<0.05	<0.05	<0.05	<0.25	<0.05	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.05
Chloride		0.5 to 1	66	109	25.6	25.7	20.8	41.5	34	53.5	57	65.8	64.7	71.6	116	34
Fluoride		0.02 to 0.4	<0.2	<0.2	0.148	0.144	0.174	0.22	0.186	<0.2	<0.4	0.36	<0.2	0.31	<0.2	0.19
Sulphate		0.5 to 1	67.1	64.6	21.1	20.3	19.3	55.7	20.4	42.1	47	73.7	59.5	68.4	56.2	22.4
Nutrients																
Ammonia (Total)		0.005 to 0.05	0.139	0.0228	<0.005	0.0068	0.0146	0.0329	0.0138	0.0209	0.0115	0.043	0.0346	0.0598	0.031	0.0126
Nitrate (as N)		0.005 to 0.1	0.077	0.096	0.0123	<0.005	0.0412	1.04	0.0374	<0.05	<0.1	<0.05	<0.05	0.168	0.138	0.0198
Nitrite (as N)		0.001 to 0.02	<0.01	<0.01	<0.001	<0.001	0.0012	0.0085	<0.001	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	0.0011
Nitrogen (Dissolved)		0.05 to 0.1	1.01	0.43	0.37	0.29	0.48	2.1	0.47	0.49	0.62	0.674	0.652	0.857	0.364	
Nitrogen (Total)		0.0025 to 0.11	1.4	1.14	0.511	0.317	0.738	2.09	0.459	0.468	0.61	0.685	0.676	1.14	0.695	0.636
Nitrogen Kjeldahl (Total)		0.05 to 0.2	1.33	1.05	0.499	0.317	0.696	1.04	0.421	0.468	0.606	0.721	0.705	1.08	0.558	0.6
Orthophosphate (Dissolved)		0.001 to 0.01														
Phosphorus - Dissolved		0.002 to 0.02	0.0507	0.0538	0.0432	0.0315	0.0716	0.206	0.07	0.0636	0.0618	0.0368	0.0311	0.138	0.0469	0.0721
Phosphorus - Total		0.002 to 0.02	0.169	0.207	0.0615	0.0464	0.234	0.233	0.103	0.116	0.0696	0.0447	0.0387	0.178	0.169	0.144
Cyanide																
Cyanide (Free)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)		0.005	0.0113	<0.005	0.0097	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																
Aluminum		0.001 to 0.025	<0.003	<0.003	0.0057	0.004	0.0044	0.0028	0.008	0.0016	0.002	0.0014	0.0024	0.0018	0.0013	0.0059
Antimony		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00012	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic		0.0001 to 0.0025	0.00114	0.00098	0.00075	0.00067	0.00089	0.00221	0.00134	0.00125	0.00104	0.001	0.00106	0.00139	0.00073	0.00104
Barium		5E-005 to 0.02	0.104	0.0967	0.0468	0.0512	0.0517	0.0803	0.0732	0.0938	0.0936	0.103	0.089	0.078	0.0884	0.0483
Beryllium		0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	0.01	<0.01	<0.01	<0.01	<0.01	0.013	<0.01	0.016	0.011	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium		1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium		0.05 to 0.1	104	107	51.6	53.5	52.6	80	71.8	104	107	118	113	102	97.4	55.2
Chromium		0.0001 to 0.018	0.00024	<0.0001	0.00017	0.00041	0.00014	0.00019	<0.0001	0.00011	0.00021	0.00017	0.00018	0.00015	<0.0001	<0.0001
Cobalt		0.0001 to 0.0015	0.00062	0.00015	<0.0001	<0.0001	0.00011	0.00029	0.00013	0.00022	0.00025	0.00051	0.00054	0.00036	0.00011	0.00014
Copper		0.0002 to 0.006	0.00213	0.0018	0.00299	0.00261	0.00333	0.0047	0.00205	0.00155	0.00116	0.00126	0.00111	0.00143	0.00125	0.00287
Dissolved Cadmium (by saltwater extr		0.00002														
Iron		0.01 to 0.03	0.242	<0.03	0.034	<0.03	<0.03	0.083	0.039	0.028	0.074	0.153	0.195	0.125	0.016	0.036
Lead		5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium		0.0005 to 0.025	0.006	0.005	0.00231	0.00262	0.00295	0.00345	0.00386	0.00562	0.00512	0.00589	0.00551	0.00508	0.00463	0.00284
Magnesium		0.1	50.9	29.8	13.4	13.2	13.3	40.9	19.3	38	47.2	52.9	51.3	49	30.4	19.7
Manganese		5E-005 to 0.0015	0.235	0.0454	0.0124	0.0153	0.0161	0.0561	0.0321	0.124	0.0873	0.147	0.144	0.0975	0.0361	0.0241
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.00267	0.00215	0.00159	0.00158	0.00193	0.00364	0.00173	0.00249	0.0033	0.00381	0.0026	0.00261	0.00156	0.00211
Nickel		0.0005 to 0.005	0.00261	0.00092	0.00075	0.00087	0.00099	0.00199	0.00113	0.0023	0.00225	0.0025	0.00246	0.00151	0.0008	0.00088
Phosphorus		0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.068	<0.05	<0.05	0.153	<0.05	0.074
Potassium		0.05 to 2	13.8	8.71	4.77	4.64	5.41	12.8	6.59	11.9	13.2	14.2	13.2	14.4	7.87	6.82
Selenium		0.0001 to 0.006	0.00022	0.00049	0.00044	0.0003	0.00027	0.00039	0.00018	0.00014	0.00016	0.00023	0.00023	0.00037	0.00037	0.00034
Silicon		0.05	11.3	7.37	6.56	6.66	7.88	11	8.26	11.1	11.7	11.4	12.1	10.5	7.35	8.34
Silver		1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	41.5	35.2	14.2	14.6	13.6	34.7	19.5	30.9	34.4	42.3	42.6	38.8	35.6	20.3
Strontium		0.0001 to 0.005	0.5	0.379	0.164	0.176	0.201	0.379	0.265	0.422	0.416	0.507	0.459	0.467	0.374	0.232
Sulphur		0.5									15.7	24.7	20.3	22.4	18.8	7.68
Thallium		1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium		1E-005 to 0.001	0.00408	0.00157	0.000632	0.000633	0.000623	0.00151	0.000659	0.00111	0.00378	0.00752	0.00521	0.00296	0.00139	0.000835
Vanadium		0.001 to 0.03	0.003	0.0031	0.0021	0.002	0.0028	0.004	0.0026	0.0021	0.0016	0.0017	0.0017	0.0027	0.0021	0.003
Zinc		0.001 to 0.006	0.0082	<0.003	0.0088	0.0036	0.0031	0.004	0.0312	0.0023	0.0014	0.0013	0.0085	0.0018	<0.001	0.0018
Total Metals																
Aluminum		0.003 to 0.025	0.665	2.21	0.262	0.187	1.33	0.2	0.311	0.357	0.0607	0.0131	0.0113	0.51	1.08	1.02
Antimony		0.0001 to 0.0025	<0.0001	0.00012	0.0001	<0.0001	0.00012	0.00016	<0.0001	0.00021	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic		0.0001 to 0.0025	0.0015	0.00157	0.00079	0.00077	0.00126	0.00211	0.00136	0.00138	0.00121	0.00104	0.00107	0.00163	0.00112	0.00126
Barium		5E-005 to 0.02	0.112	0.124	0.048	0.0516	0.0683	0.079	0.0754	0.0983	0.0956	0.108	0.0917	0.0867	0.103	0.0654
Beryllium		0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	0.014	0.011	<0.01	<0.01	0.013	0.017	0.013	0.019	0.013	0.01	0.01	<0.01	<0.01	0.013
Cadmium		1E-005 to 8.5E-005	0.000011	0.00002	<0.00001	<0.00001	0.000015	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000011
Calcium		0.05 to 0.1	104	111	51	52.4	54.4	78.5	70.8	100	108	117	113	106	98	54.5
Chromium		0.0001 to 0.005	0.00184	0.00571	0.00083	<0.0007	0.00332	0.00071	0.00102	0.00107	0.00036	0.00021	0.00022	0.00143	0.00265	0.00258
Cobalt		0.0001 to 0.0015	0.00105	0.00176	0.00027	0.00021	0.00105	0.00041	0.00033	0.00051	0.00032	0.00056	0.00058	0.00076	0.00096	0.00082
Copper		0.0005 to 0.007	0.00635	0.0141	0.00538	0.00364	0.0116	0.00593	0.00407	0.00378	0.00183	0.0018	0.00156	0.00502	0.00857	0.00917
Iron		0.01 to 0.03	1.47	3.09	0.406	0.283	1.98	0.38	0.424	0.621	0.218	0.198	0.234	0.939	1.59	1.53
Lead		5E-005 to 0.0025	0.000145	0.000469	0.000069	<0.00005	0.000332	0.000056	0.00007	0.000088	<0.00005	<0.00005	<0.00005	0.00012	0.000228	0.000214
Lithium		0.0005 to 0.025	0.00527	0.00561	0.00246	0.00256	0.00376	0.00328	0.00392	0.00562	0.00538	0.0062	0.00548	0.00574	0.00496	0.0034
Magnesium		0.1	50.4	30.6	12.9	13.2	13.6	38.2	19.4	36.7	47.3	53.1	50.5	48.4	28.9	19.4
Manganese		5E-005 to 0.0015	0.24	0.143	0.0235	0.023	0.0886	0.067	0.0478	0.161	0.108	0.152	0.15	0.118	0.0919	0.0731
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.00285	0.00246	0.00169	0.0016	0.00202	0.00408	0.00174	0.00246	0.00346	0.00392	0.00259	0.00292	0.00165	0.00203
Nickel		0.0005 to 0.005	0.00394	0.00588	0.00136	0.00114	0.00396	0.00235	0.00177	0.00314	0.00238	0.00272	0.00259	0.00274	0.00343	0.00301
Phosphorus		0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.078	<0.05	<0.05	0.223	0.137	0.154
Potassium		0.05 to 2	13.5	8.84	4.71	4.5	5.6	12.3	6.2	11.7	13.4	14.1	12.9	14.8	8.04	6.56
Selenium		0.0001 to 0.006	0.00027	0.00065	0.00042	0.00031	0.00034	0.0004	0.00019	0.00014	0.00018	0.00023	0.00018	0.00037	0.00037	0.00031
Silicon		0.05	12.7	12.9	7.04	7	10.8	10.9	8.83	11.4	12	11.4	11.9	12.1	9.64	10.5
Silver		1E-005 to 0.0001	<0.00001	0.000015	<0.00001	<0.00001	0.000016	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	<0.00001
Sodium		0.05 to 2	40.1	34.5	14.2	14.3	13.6	33.2	18.9	30.1	36.1	45	44	39.6	35.9	20.9
Strontium		0.0001 to 0.005	0.442	0.388	0.174	0.175	0.211	0.372	0.263	0.421	0.429	0.517	0.429	0.489	0.372	0.22
Sulphur		0.5									16.2	25.5	21	23.9	18.9	7.53
Thallium		1E-005 to 0.001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01	0.033	0.091	0.017	<0.01	0.055	0.012	0.018	0.021	<0.01	<0.01	<0.01	0.017	0.035	0.038
Total Cadmium (by saltwater extractio		0.00002														
Uranium		1E-005 to 0.001	0.00364	0.00172	0.000663	0.000654	0.000693	0.00157	0.000669	0.00113	0.00383	0.00762	0.00535	0.00314	0.00148	0.000796
Vanadium		0.001 to 0.03	0.0053	0.0094	0.0027	0.0025	0.0065	0.0046	0.0035	0.0031	0.0019	0.002	0.0019	0.0047	0.0052	0.006
Zinc		0.003 to 0.006	0.005	0.0084	0.0048	<0.003	0.0067	0.0032	0.0032	<0.003	<0.003	<0.003	<0.003	0.0034	0.0048	0.0054
Organics																
Carbon Organic (Dissolved)		0.5 to 5	15.4	8.86	13.6	9.1	13.1	16.5	10.1	9.45	12.6	12	11.7	12	6.8	12.4
Carbon Organic (Total)		0.5 to 5	16.8	15.1	14.2	9.46	16.3	17.9	9.99	9.29	12.6	12.4	12.1	12.2	7.5	12.4
Nitrogen Organic (Dissolved)		0.05 to 0.26	0.794	0.311	0.353	0.283	0.423	1.02	0.419	0.469	0.609				0.196	
Nitrogen Organic (Total)		0.05 to 0.3	1.19	1.02	0.499	0.31	0.681	1.01	0.407	0.447	0.594	0.678	0.67	1.02	0.527	
ALS LAB ID			**L1133342**	**L1140194**	**L1142492**	**L1146570**	**L1148880**	**L1152500**	**L1176520**	**L1206738**	**L1235306**	**L1256679**	**L1265999**	**L1275746**	**L1286585**	**L1298960**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes		MDL	JC03 3-Jul-13
In Situ Parameters			
Conductivity µS/cm		...	417
Oxygen Dissolved %	...		85.9
Oxygen Dissolved	...		8.69
pH (unitless)		...	8.14
Redox Potential mV		...	113
Salinity ppt		...	0.26
Specific Conductivity µS/cm		...	517
Temperature °C		...	14.8
Total Dissolved Solids		...	336
Turbidity NTU		...	9.4
Physical Tests			
Acidity to pH 8.3 (as CaCO3)		1	
Alkalinity (Total as CaCO3)		1 to 2	219
Bicarbonate Alkalinity		1 to 2	205
Carbonate Alkalinity		1 to 2	14.5
Color TCU		5	44
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	223
Hydroxide Alkalinity		1 to 2	<1
pH (unitless)		0.01 to 0.1	8.48
Specific Conductivity µS/cm		2	498
Total Dissolved Solids		1 to 2	337
Total Suspended Solids		3	23.7
Turbidity NTU		0.1	6.28
Dissolved Anions			
Bromide		0.05 to 2.495	<0.05
Chloride		0.5 to 1	24.3
Fluoride		0.02 to 0.4	0.234
Sulphate		0.5 to 1	12.8
Nutrients			
Ammonia (Total)		0.005 to 0.05	0.0225
Nitrate (as N)		0.005 to 0.1	0.0559
Nitrite (as N)		0.001 to 0.02	0.0012
Nitrogen (Dissolved)		0.05 to 0.1	
Nitrogen (Total)		0.0025 to 0.11	0.568
Nitrogen Kjeldahl (Total)		0.05 to 0.2	0.511
Orthophosphate (Dissolved)		0.001 to 0.01	
Phosphorus - Dissolved		0.002 to 0.02	0.127
Phosphorus - Total		0.002 to 0.02	0.177
Cyanide			
Cyanide (Free)		0.005	<0.005
Cyanide (Total)		0.005	<0.005
Cyanide (WAD)		0.005	<0.005
Dissolved Metals			
Aluminum		0.001 to 0.025	0.003
Antimony		0.0001 to 0.0025	<0.0001
Arsenic		0.0001 to 0.0025	0.00182
Barium		5E-005 to 0.02	0.0594
Beryllium		0.0001 to 0.005	<0.0001
Bismuth		0.0005 to 0.2	<0.0005
Boron		0.01 to 0.1	0.012
Cadmium		1E-005 to 8.5E-005	<0.00001
Calcium		0.05 to 0.1	53
Chromium		0.0001 to 0.018	0.00016
Cobalt		0.0001 to 0.0015	0.00015
Copper		0.0002 to 0.006	0.00248
Dissolved Cadmium (by saltwater extr		0.00002	
Iron		0.01 to 0.03	0.073
Lead		5E-005 to 0.0025	<0.00005
Lithium		0.0005 to 0.025	0.00191
Magnesium		0.1	22
Manganese		5E-005 to 0.0015	0.0341
Mercury		1E-005 to 5E-005	<0.00001
Molybdenum		5E-005 to 0.005	0.00208
Nickel		0.0005 to 0.005	0.00106
Phosphorus		0.05 to 0.3	0.136
Potassium		0.05 to 2	6.64
Selenium		0.0001 to 0.006	0.00022
Silicon		0.05	9.98
Silver		1E-005 to 0.0001	<0.00001
Sodium		0.05 to 2	21.7
Strontium		0.0001 to 0.005	0.231
Sulphur		0.5	4.55
Thallium		1E-005 to 0.001	<0.00001
Tin		0.0001 to 0.0025	<0.0001
Titanium		0.01	<0.01
Uranium		1E-005 to 0.001	0.000579
Vanadium		0.001 to 0.03	0.0029
Zinc		0.001 to 0.006	0.0013
Total Metals			
Aluminum		0.003 to 0.025	0.514
Antimony		0.0001 to 0.0025	0.00011
Arsenic		0.0001 to 0.0025	0.00191
Barium		5E-005 to 0.02	0.0653
Beryllium		0.0001 to 0.005	<0.0001
Bismuth		0.0005 to 0.2	<0.0005
Boron		0.01 to 0.1	0.015
Cadmium		1E-005 to 8.5E-005	<0.00001
Calcium		0.05 to 0.1	49.9
Chromium		0.0001 to 0.005	0.00141
Cobalt		0.0001 to 0.0015	0.00054
Copper		0.0005 to 0.007	0.00546
Iron		0.01 to 0.03	0.815
Lead		5E-005 to 0.0025	0.000128
Lithium		0.0005 to 0.025	0.0022
Magnesium		0.1	20.7
Manganese		5E-005 to 0.0015	0.0725
Mercury		1E-005 to 5E-005	<0.00001
Molybdenum		5E-005 to 0.005	0.0021
Nickel		0.0005 to 0.005	0.00215
Phosphorus		0.05 to 0.3	0.164
Potassium		0.05 to 2	6.23
Selenium		0.0001 to 0.006	0.00028
Silicon		0.05	10.5
Silver		1E-005 to 0.0001	<0.00001
Sodium		0.05 to 2	20.3
Strontium		0.0001 to 0.005	0.227
Sulphur		0.5	4.41
Thallium		1E-005 to 0.001	<0.00001
Tin		0.0001 to 0.0025	<0.0001
Titanium		0.01	0.018
Total Cadmium (by saltwater extractio		0.00002	
Uranium		1E-005 to 0.001	0.000587
Vanadium		0.001 to 0.03	0.0043
Zinc		0.003 to 0.006	<0.003
Organics			
Carbon Organic (Dissolved)		0.5 to 5	16.2
Carbon Organic (Total)		0.5 to 5	17
Nitrogen Organic (Dissolved)		0.05 to 0.26	
Nitrogen Organic (Total)		0.05 to 0.3	
ALS LAB ID			**L1327102**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C2.24 - KC03
PAGE 1 OF 1

Analytes		MDL	KC03 5-Feb-14	KC03 21-Mar-14	KC03 10-Apr-14	KC03 24-Apr-14	KC03 7-May-14	KC03 23-May-14	KC03 4-Jun-14
In Situ Parameters									
Conductivity µS/cm		...		829	939	828	963	997	993
Oxygen Dissolved %	...			52.3	58.5	70.8	78.4	61.5	35.6
Oxygen Dissolved	...			7.02	7.4	9.27	9.8	7.44	4.37
pH (unitless)		...		7.91	7.94	8.03	8.12	7.99	7.87
Redox Potential mV		...		75.2	-38	150	216	74.5	214
Salinity ppt		...		0.71	0.76	0.69	0.77	0.77	0.78
Specific Conductivity µS/cm		...		1434	1511	1386	1537	1534	1542
Temperature °C		...		2.93	5.18	3.92	5.5	6.68	6.34
Total Dissolved Solids		...		932	982	901	1001	997	1003
Turbidity NTU		...							
Physical Tests									
Acidity to pH 8.3 (as CaCO3)		1							
Alkalinity (Total as CaCO3)		1 to 2		533	610	501	553	565	576
Bicarbonate Alkalinity		1 to 2		533	610	473	525	565	576
Carbonate Alkalinity		1 to 2		<1	<20	27.2	28	<20	<1
Color TCU		5					32.6		
Hardness as CaCO3 (Dissolved)		0.5 to 1.1		684	706	628	694	713	739
Hydroxide Alkalinity		1 to 2		<1	<20	<1	<1	<20	<1
pH (unitless)		0.01 to 0.1		8.43	8.24	8.43	8.31	8.25	8.33
Specific Conductivity µS/cm		2		1460	1500	1370	1490	1490	1480
Total Dissolved Solids		1 to 2		979	1010	963	1060	1010	988
Total Suspended Solids		3		<3	<3	3.8	<3	<3	15.1
Turbidity NTU		0.1		0.6	0.44	0.43	0.42	0.37	3.76
Dissolved Anions									
Bromide		0.05 to 2.495		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride		0.5 to 1		17.1	16.1	17.8	19.1	17.2	21
Fluoride		0.02 to 0.4		0.3	0.3	0.26	0.27	0.29	0.26
Sulphate		0.5 to 1		351	344	308	348	336	320
Nutrients									
Ammonia (Total)		0.005 to 0.05		0.01	0.0059	0.0104	0.0078	0.0092	0.0073
Nitrate (as N)		0.005 to 0.1		0.092	0.198	0.162	0.113	0.067	<0.05
Nitrite (as N)		0.001 to 0.02		<0.01	<0.01	<0.01	<0.01	<0.01	0.01
Nitrogen (Dissolved)		0.05 to 0.1							
Nitrogen (Total)		0.0025 to 0.11							
Nitrogen Kjeldahl (Total)		0.05 to 0.2		0.726	0.691	0.874	0.678	0.689	0.588
Orthophosphate (Dissolved)		0.001 to 0.01		0.129	0.0912	0.19	0.134	0.106	0.0956
Phosphorus - Dissolved		0.002 to 0.02		0.163	0.0963	0.223	0.16	0.124	0.097
Phosphorus - Total		0.002 to 0.02		0.18	0.0967	0.209	0.164	0.124	0.145
Cyanide									
Cyanide (Free)		0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)		0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)		0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals									
Aluminum		0.001 to 0.025		0.0012	<0.001	0.0019	0.0012	0.0012	<0.001
Antimony		0.0001 to 0.0025		0.00017	0.00016	0.00019	0.0002	0.0002	0.00018
Arsenic		0.0001 to 0.0025		0.00676	0.00618	0.0054	0.00573	0.00547	0.00542
Barium		5E-005 to 0.02		0.0724	0.0764	0.0659	0.0738	0.0752	0.079
Beryllium		0.0001 to 0.005		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1		0.104	0.105	0.1	0.116	0.133	0.119
Cadmium		1E-005 to 8.5E-005		<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001
Calcium		0.05 to 0.1		70.8	74.3	65.9	72.1	71.9	74.4
Chromium		0.0001 to 0.018		0.00052	0.00044	0.00044	0.00049	0.00046	0.00041
Cobalt		0.0001 to 0.0015		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper		0.0002 to 0.006		0.0068	0.0057	0.00606	0.00574	0.00537	0.0049
Dissolved Cadmium (by saltwater extr		0.00002							
Iron		0.01 to 0.03		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead		5E-005 to 0.0025		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium		0.0005 to 0.025		0.0125	0.0121	0.0123	0.0136	0.0143	0.0132
Magnesium		0.1		123	126	113	125	129	134
Manganese		5E-005 to 0.0015		0.000301	0.000188	0.00059	0.00017	0.000208	0.000217
Mercury		1E-005 to 5E-005		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005		0.0138	0.0112	0.0131	0.0138	0.0136	0.012
Nickel		0.0005 to 0.005		0.00168	0.00145	0.00171	0.0015	0.00146	0.00147
Phosphorus		0.05 to 0.3		0.142	0.1	0.188	0.152	0.102	0.11
Potassium		0.05 to 2		21.8	22	21.6	21.8	22.7	22.9
Selenium		0.0001 to 0.006		0.00767	0.00833	0.00563	0.00649	0.0058	0.00437
Silicon		0.05		9.58	9.82	9.03	9.29	9.79	9.65
Silver		1E-005 to 0.0001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2		97.3	101	91.6	98.7	98.5	98.9
Strontium		0.0001 to 0.005		1.18	1.18	1.13	1.26	1.26	1.26
Sulphur		0.5		109	114	99.1	116	111	110
Thallium		1E-005 to 0.001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium		1E-005 to 0.001		0.00544	0.00518	0.00488	0.00581	0.0056	0.00525
Vanadium		0.001 to 0.03		0.0074	0.0075	0.0065	0.0073	0.0071	0.0066
Zinc		0.001 to 0.006		<0.001	<0.001	<0.001	<0.001	0.0011	<0.001
Total Metals									
Aluminum		0.003 to 0.025		0.0044	0.0073	0.0047	0.0034	0.0043	0.0356
Antimony		0.0001 to 0.0025		0.0002	0.00017	0.00021	0.00019	0.0002	0.00019
Arsenic		0.0001 to 0.0025		0.00612	0.00557	0.00512	0.00499	0.00533	0.00483
Barium		5E-005 to 0.02		0.0708	0.0772	0.0673	0.0695	0.0743	0.0759
Beryllium		0.0001 to 0.005		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1		0.104	0.11	0.1	0.099	0.129	0.122
Cadmium		1E-005 to 8.5E-005		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium		0.05 to 0.1		69.8	72.8	65.8	69.3	70.9	70.5
Chromium		0.0001 to 0.005		0.0006	0.0006	0.00042	0.0005	0.0005	0.00056
Cobalt		0.0001 to 0.0015		<0.0001	<0.0001	<0.0001	<0.0001	0.00026	<0.0001
Copper		0.0005 to 0.007		0.0074	0.00589	0.00652	0.00568	0.00546	0.0055
Iron		0.01 to 0.03		0.012	0.01	<0.01	<0.01	<0.01	0.045
Lead		5E-005 to 0.0025		0.00012	0.000059	<0.00005	<0.00005	<0.00005	<0.00005
Lithium		0.0005 to 0.025		0.0119	0.012	0.0125	0.012	0.0132	0.0135
Magnesium		0.1		118	123	111	114	128	129
Manganese		5E-005 to 0.0015		0.000509	0.000675	0.00101	0.00024	0.000376	0.00388
Mercury		1E-005 to 5E-005		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005		0.0141	0.0127	0.0143	0.0129	0.0138	0.0124
Nickel		0.0005 to 0.005		0.0018	0.00154	0.00178	0.00145	0.00154	0.00164
Phosphorus		0.05 to 0.3		0.147	0.092	0.201	0.136	0.114	0.13
Potassium		0.05 to 2		21.4	21.3	21.6	20.6	22.6	21.7
Selenium		0.0001 to 0.006		0.00859	0.00687	0.00469	0.00538	0.00495	0.00366
Silicon		0.05		9.52	9.8	9.04	8.82	9.78	9.42
Silver		1E-005 to 0.0001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2		99.4	100	94	95.3	95.9	95
Strontium		0.0001 to 0.005		1.15	1.23	1.17	1.11	1.23	1.25
Sulphur		0.5		113	116	103	117	113	108
Thallium		1E-005 to 0.001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extractio		0.00002							
Uranium		1E-005 to 0.001		0.00557	0.0052	0.00517	0.00533	0.00606	0.00531
Vanadium		0.001 to 0.03		0.0077	0.0078	0.0068	0.0072	0.0073	0.0067
Zinc		0.003 to 0.006		<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics									
Carbon Organic (Dissolved)		0.5 to 5		14.2	12.6	17.5	13.8	12.3	11.6
Carbon Organic (Total)		0.5 to 5		14.2	12.9	18.2	14.7	12.1	11.7
Nitrogen Organic (Dissolved)		0.05 to 0.26							
Nitrogen Organic (Total)		0.05 to 0.3							
ALS LAB ID				**L1435186**	**L1442672**	**L1447300**	**L1452368**	**L1459728**	**L1465478**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C2.25 - MAKAOO-01
PAGE 1 OF 1

Analytes	MDL	MAKAOO-01 5-Jun-14	MAKAOO-01 18-Jun-14	MAKAOO-01 4-Jul-14	MAKAOO-01 15-Jul-14	MAKAOO-01 28-Jul-14	MAKAOO-01 13-Aug-14	MAKAOO-01 2-Sep-14
In Situ Parameters								
Conductivity µS/cm	...	1217	1356	5259	1595	1758	2025	
Oxygen Dissolved %	...			84.9		108		
Oxygen Dissolved	...			6.92		9.53		
pH (unitless)	...	8.56	9.24	9.57	9.67	9.89	9.78	9.94
Redox Potential mV	...	132	58.6	-63.7	-61.7	67.8	-10.1	
Salinity ppt	...	0.67	0.77	2.87	0.84	0.96	1.02	
Specific Conductivity µS/cm	...	1342	1528	5272	1657	1891	2013	
Temperature °C	...	20.1	19.1	24.6	23.1	21.3	25.3	15.6
Total Dissolved Solids	...	872	993	3459	1077	1229	1310	
Turbidity NTU	...	1.7						
Physical Tests								
Acidity to pH 8.3 (as CaCO3)	1	1.1						
Alkalinity (Total as CaCO3)	1 to 2	160	179	208	205	204	181	197
Bicarbonate Alkalinity	1 to 2	160	167	162	105	85	55.1	73.6
Carbonate Alkalinity	1 to 2	<2	12.6	45.7	99.4	119	126	124
Color TCU	5							
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	566	675	746	806	866	891	891
Hydroxide Alkalinity	1 to 2	<2	<1	<1	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1	8.23	8.53	8.97	9.53	9.68	9.81	9.62
Specific Conductivity µS/cm	2	1330	1530	1690	1770	1930	1980	2040
Total Dissolved Solids	1 to 2	979	1150	1250	982	1520	1770	1680
Total Suspended Solids	3	14	3.3	3.1	8	5.4	6	9.7
Turbidity NTU	0.1	1.98	1.52	1.14	1.48	1.5	1.8	2.3
Dissolved Anions								
Bromide	0.05 to 2.495	<0.5	<0.5	<0.5	<1	<1	<1	<1
Chloride	0.5 to 1	8.4	11	10	12	13	15	14
Fluoride	0.02 to 0.4	0.039	0.043	0.053	0.036	0.053	0.051	0.054
Sulphate	0.5 to 1	616	739	818	917	972	1030	1100
Nutrients								
Ammonia (Total)	0.005 to 0.05	0.0566	0.0985	0.0222	0.0357	0.029	0.0284	0.0314
Nitrate (as N)	0.005 to 0.1	<0.05	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Nitrite (as N)	0.001 to 0.02	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02
Nitrogen (Dissolved)	0.05 to 0.1							
Nitrogen (Total)	0.0025 to 0.11							
Nitrogen Kjeldahl (Total)	0.05 to 0.2	1.79	1.76	1.93	1.63	1.76	2.21	1.92
Orthophosphate (Dissolved)	0.001 to 0.01	1.28	1.41	1.5	0.447	0.394	0.199	0.258
Phosphorus - Dissolved	0.002 to 0.02	1.52	1.77	1.48	0.567	0.44	0.306	0.368
Phosphorus - Total	0.002 to 0.02	1.56	1.76	1.53	0.692	0.558	0.304	0.368
Cyanide								
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals								
Aluminum	0.001 to 0.025	0.0108	0.0055	0.0024	0.0016	0.0029	0.0014	<0.001
Antimony	0.0001 to 0.0025	0.00028	0.00027	0.00028	0.00027	0.00033	0.00034	0.00037
Arsenic	0.0001 to 0.0025	0.00292	0.00282	0.00296	0.00286	0.00368	0.00365	0.00338
Barium	5E-005 to 0.02	0.0198	0.0208	0.0221	0.0181	0.0177	0.00809	0.00281
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.064	0.074	0.086	0.086	0.067	0.067	0.063
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	76.8	90	104	106	113	120	114
Chromium	0.0001 to 0.018	<0.0001	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015	0.00024	0.00024	0.00021	0.0002	0.00019	0.00018	0.00015
Copper	0.0002 to 0.006	0.00183	0.00121	0.00097	0.0009	0.00091	0.00117	0.00071
Dissolved Cadmium (by saltwater extr	0.00002							
Iron	0.01 to 0.03	0.08	0.076	0.034	0.014	0.011	<0.01	<0.01
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00099	0.00149	0.00124	0.00151	0.00215	0.00241	0.0021
Magnesium	0.1	90.9	109	118	131	141	144	147
Manganese	5E-005 to 0.0015	0.0786	0.0395	0.0333	0.0118	0.0219	0.0212	0.0153
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00375	0.00304	0.00347	0.00317	0.00379	0.00413	0.00437
Nickel	0.0005 to 0.005	0.00137	0.00135	0.00141	0.0012	0.00134	0.00125	0.00126
Phosphorus	0.05 to 0.3	1.39	1.69	1.51	0.544	0.527	0.321	0.328
Potassium	0.05 to 2	29.3	32.8	41.2	40.5	50.1	45.9	51.2
Selenium	0.0001 to 0.006	0.00021	0.00022	0.00022	0.00023	0.00027	0.00027	0.00027
Silicon	0.05	4.45	1.25	0.16	0.525	0.448	1.65	2.99
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	88.6	102	115	116	134	161	162
Strontium	0.0001 to 0.005	1.04	1.02	1.4	1.32	1.53	1.59	1.65
Sulphur	0.5	199	220	267	285	309	319	349
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.000473	0.000402	0.00052	0.000525	0.000675	0.000719	0.000711
Vanadium	0.001 to 0.03	0.0028	0.0021	0.0023	0.0025	0.003	0.0033	0.0024
Zinc	0.001 to 0.006	0.001	0.0026	<0.001	<0.001	<0.001	0.0011	0.0013
Total Metals								
Aluminum	0.003 to 0.025	0.0579	0.021	0.0108	0.0046	0.0089	0.0148	0.0628
Antimony	0.0001 to 0.0025	0.00031	0.00034	0.00029	0.00028	0.00031	0.00035	0.00037
Arsenic	0.0001 to 0.0025	0.00298	0.00298	0.00305	0.003	0.00347	0.00364	0.00325
Barium	5E-005 to 0.02	0.0204	0.0209	0.0221	0.0181	0.0168	0.00892	0.00369
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.067	0.087	0.098	0.083	0.068	0.074	0.067
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	76.2	89	98.7	104	104	119	109
Chromium	0.0001 to 0.005	0.00028	0.00026	0.00021	0.00013	0.00013	0.00013	0.00022
Cobalt	0.0001 to 0.0015	0.00029	0.00025	0.00022	0.0002	0.00019	0.00022	0.00019
Copper	0.0005 to 0.007	0.00241	0.00147	0.00112	0.001	0.00101	0.00142	0.00117
Iron	0.01 to 0.03	0.161	0.111	0.048	0.022	0.019	0.026	0.078
Lead	5E-005 to 0.0025	0.000066	0.000091	<0.00005	<0.00005	<0.00005	<0.00005	0.000051
Lithium	0.0005 to 0.025	0.00115	0.00152	0.00128	0.00145	0.00184	0.00242	0.00208
Magnesium	0.1	91.8	105	116	127	130	146	140
Manganese	5E-005 to 0.0015	0.0906	0.046	0.044	0.0184	0.0287	0.032	0.02
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00407	0.0037	0.00361	0.00324	0.00364	0.00462	0.00439
Nickel	0.0005 to 0.005	0.00151	0.00147	0.00144	0.00132	0.00138	0.00135	0.00138
Phosphorus	0.05 to 0.3			1.52	0.653	0.553	0.41	0.36
Potassium	0.05 to 2	29.1	31.7	38.4	39.2	43.7	45.9	48.6
Selenium	0.0001 to 0.006	0.00024	0.00023	0.00025	0.00021	0.00025	0.00029	0.00027
Silicon	0.05	4.62	1.32	0.198	0.551	0.421	1.74	3.05
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	91.7	105	116	113	129	163	156
Strontium	0.0001 to 0.005	1.08	1.12	1.39	1.29	1.44	1.64	1.61
Sulphur	0.5	199	222	264	282	283	330	333
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extractic	0.00002							
Uranium	1E-005 to 0.001	0.000501	0.000474	0.000548	0.000554	0.000658	0.000807	0.000742
Vanadium	0.001 to 0.03	0.0029	0.0023	0.0025	0.0026	0.0031	0.0034	0.0025
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics								
Carbon Organic (Dissolved)	0.5 to 5	14.8	16.3	21.3	18.4	20.8	22.3	21.9
Carbon Organic (Total)	0.5 to 5	15.7	16.2	19.9	17.9	20.9	22.7	22.3
Nitrogen Organic (Dissolved)	0.05 to 0.26							
Nitrogen Organic (Total)	0.05 to 0.3							
ALS LAB ID		L1466704	L1473820	L1481825	L1488139	L1494516	L1502299	L1511699

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes		MDL	NSP 31-Aug-10	NSP 28-Sep-11	NSP 25-Apr-12	NSP 2-May-12	NSP 10-Jul-12	NSP 7-Aug-12	NSP 12-Oct-12	NSP 6-Nov-12	NSP 5-Jun-13	NSP 3-Jul-13	NSP 7-Aug-13	NSP 5-Sep-13	NSP 9-Oct-13	NSP 7-Nov-13
In Situ Parameters																
Conductivity µS/cm		...	4343		4458	3914		5200	4123	618	5210	5496	5732		4.36	2375
Oxygen Dissolved %	...		96		94.9	73.3			77.6						66	60
Oxygen Dissolved	...		9.77		8.71	7.51			8.77						7.42	8.07
pH (unitless)		...	8.97	9.21	8.84	9.03		9.22	9.36	9.43	9.16	9.3	9.3	9.15	9.23	9.16
Redox Potential mV		...	-6.4	-112	142	146		58.9	-276	-94.1	94.2	39.7	130	64	-67.5	126
Salinity ppt		...	0.00301		2.73	2.71		2.35	3.22	0.48	3.09	3.14	3.26	3.53	2.33	2.18
Specific Conductivity µS/cm		...	5533	4082	5065	5021		5297	5906	974	5687	5780	5989	6441	3.04	4165
Temperature °C		...	13.7	14.8	18.6	13.4		24	9.2	6.2	20.7	22.4	22.8	18.4	9.8	2.49
Total Dissolved Solids		...	3597		3292	3262		3443	3839	628	3697	3758	3893	4186	2835	2708
Turbidity NTU		...		2.4	23.5	3.5		1.6	6.8	8.4	2.9	0	0.3		9.8	3.7
Physical Tests																
Acidity to pH 8.3 (as CaCO3)		1		<1					<1	<1				<1		
Alkalinity (Total as CaCO3)		1 to 2	1310	1240	1080	1110	1210	1220	1260	1300	1210	1210	1210	1400	1390	1310
Bicarbonate Alkalinity		1 to 2		775	727	777	749	617	642	714	661	617	603	723	890	864
Carbonate Alkalinity		1 to 2		465	357	330	456	601	615	588	550	591	610	676	503	447
Color TCU		5	47.7	36.8	50.1	47.4	35.8	34.6	35.4	35.6	35.2	31.2	29.6	29.1	33.9	
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	2550	2480	2350	2310	2540	2490	2790	2710	2580	2590	2720	3000	3030	2970
Hydroxide Alkalinity		1 to 2		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
pH (unitless)		0.01 to 0.1	8.93	9.11	9.01	8.94	9.11	9.28	9.22	9.2	9.16	9.28	9.29	9.28	9.09	8.94
Specific Conductivity µS/cm		2	5280	5430	4920	4970	5130	5160	5640	5770	5630	5600	5770	6160	6510	6320
Total Dissolved Solids		1 to 2	4760	4460	4570	4740	4990	4860	5160	5590	5250	5180	5330	6090	5890	5970
Total Suspended Solids		3	24.5	6.7	19.3	7.7	6.2	8.5	4.8	91	18.9	9	11	12.6	15.3	4.7
Turbidity NTU		0.1	8.81		3.71	1.28	1.07	1.35	1.84	21.7	3.53	0.78	0.67	0.99	6.1	2.88
Dissolved Anions																
Bromide		0.05 to 2.495	<2.5	<2.5	<1	<1	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	1.5	<2.5	<2.5
Chloride		0.5 to 1	43	48	49	50	49	49	54	55	50	59	54	72	61	61
Fluoride		0.02 to 0.4	<1	<1	<0.4	<0.4	<1	<1	<1	<1	1.2	<1	<1	<0.4	1	<1
Sulphate		0.5 to 1	2530	2700	2460	2490	2640	2690	3010	3060	2970	2910	3200	3310	3500	3280
Nutrients																
Ammonia (Total)		0.005 to 0.05	0.084	0.178	0.348	0.75	0.0849	0.0734	0.136	0.049	0.12	0.0883	0.101	0.114	0.843	2.17
Nitrate (as N)		0.005 to 0.1	<0.25	<0.25	0.12	<0.1	<0.25	<0.25	<0.25	0.33	<0.25	<0.25	<0.25	0.12	<0.25	<0.25
Nitrite (as N)		0.001 to 0.02	<0.05	<0.05	<0.02	0.034	<0.05	<0.05	<0.05	0.052	<0.05	<0.05	<0.05	0.036	<0.05	0.06
Nitrogen (Dissolved)		0.05 to 0.1		4.82	4.55	4.84	5.07	6.04	5.25	4.25			4.78			
Nitrogen (Total)		0.0025 to 0.11	4.97	4.92	5.63	5.47	4.28	4.39	5.26	6.56	4.82	0.95	4.92	20.8	7.05	7.57
Nitrogen Kjeldahl (Total)		0.05 to 0.2	4.67	4.92	5.51	5.43	4.28	4.39	5.26	6.18	1.01	0.947	5.27	5.36	7.13	8.98
Orthophosphate (Dissolved)		0.001 to 0.01	0.904	0.305	0.49				0.0376	0.0148	0.322	0.183		0.0952	0.381	0.551
Phosphorus - Dissolved		0.002 to 0.02	0.975	0.438	0.611	0.689	0.827	0.551	0.141	0.13	0.515	0.317	0.276	0.276	0.572	0.716
Phosphorus - Total		0.002 to 0.02	1.1	0.441	0.662	0.911	0.838	0.572	0.175	0.319	0.502	0.345	0.298	0.273	0.606	0.732
Cyanide																
Cyanide (Free)		0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005
Cyanide (Total)		0.005	0.014	0.0174	<0.005	0.012	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005
Cyanide (WAD)		0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005
Dissolved Metals																
Aluminum		0.001 to 0.025	<0.05	<0.05	<0.015	<0.015	<0.005	<0.005	<0.005	<0.005	0.0069	<0.005	<0.005	<0.005	<0.005	<0.005
Antimony		0.0001 to 0.0025	<0.005	<0.005	<0.0005	<0.0005	0.00057	0.00084	0.00073	0.00074	0.0008	0.00085	0.00124	0.00136	0.00136	0.00125
Arsenic		0.0001 to 0.0025	0.0103	0.0106	0.00775	0.00798	0.0087	0.0109	0.0113	0.0125	0.0115	0.0126	0.0156	0.016	0.0186	0.0161
Barium		5E-005 to 0.02	0.208	0.098	0.0503	0.0574	0.0282	0.0183	0.0138	0.019	0.0404	0.0181	0.0272	0.0203	0.0325	0.0334
Beryllium		0.0001 to 0.005	<0.01	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Bismuth		0.0005 to 0.2		<0.2	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Boron		0.01 to 0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Cadmium		1E-005 to 8.5E-005	<0.00017	0.00036	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Calcium		0.05 to 0.1	54.1	26.6	22.2	23.5	33.3	31.1	21.4	19.1	24.4	28.3	25.6	24.5	25.4	24.7
Chromium		0.0001 to 0.018	<0.01	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Cobalt		0.0001 to 0.0015	<0.003	<0.003	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Copper		0.0002 to 0.006	<0.01	<0.01	<0.0025	<0.0025	0.001	<0.001	<0.001	<0.001	0.0013	<0.001	0.001	<0.001	<0.001	<0.001
Dissolved Cadmium (by saltwater extr		0.00002														
Iron		0.01 to 0.03	<0.03	<0.03	<0.03	0.031	<0.05	<0.05	<0.05	0.014	0.014	<0.01	<0.02	<0.02	0.024	0.019
Lead		5E-005 to 0.0025	<0.005	<0.005	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025
Lithium		0.0005 to 0.025	<0.05	<0.05	<0.0025	0.003	0.0032	0.0028	0.004	0.003	0.0036	<0.0025	0.0026	0.0038	0.004	0.0027
Magnesium		0.1	586	586	557	546	596	586	664	648	611	613	646	715	719	707
Manganese		5E-005 to 0.0015	0.0654	0.0665	0.138	0.165	0.0113	0.0446	0.0879	0.0935	0.0872	0.0101	0.0299	0.0627	0.0878	0.0896
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.021	0.025	0.022	0.022	0.0239	0.0226	0.0233	0.0223	0.017	0.0179	0.0175	0.0166	0.0209	0.0195
Nickel		0.0005 to 0.005	<0.01	<0.01	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Phosphorus		0.05 to 0.3		0.4	0.63	0.69	0.71	0.57	<0.3	0.153	0.481	0.325	0.3	0.24	0.511	0.677
Potassium		0.05 to 2	105	106	92.1	89.3	101	113	121	122	115	110	117	131	137	127
Selenium		0.0001 to 0.006	<0.01	<0.01	0.00089	0.00088	0.00083	0.00095	0.00057	0.0009	0.00106	0.0009	0.001	0.00086	0.00106	0.00099
Silicon		0.05		0.383	2.3	2.74	0.556	1.06	2.57	3.06	4.42	5.16	4.77	4.94	6.3	6.36
Silver		1E-005 to 0.0001	<0.0002	<0.0002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Sodium		0.05 to 2	578	630	549	530	586	635	696	747	613	631	754	744	752	689
Strontium		0.0001 to 0.005		3.63	3.07	3.06	3.41	3.76	3.93	3.69	3.54	3.45	3.92	3.99	4.23	4.03
Sulphur		0.5								0.913	844	839	982	1050	1030	961
Thallium		1E-005 to 0.001	<0.002	<0.002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Tin		0.0001 to 0.0025	<0.005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Uranium		1E-005 to 0.001	0.0068	0.0067	0.00582	0.00579	0.00606	0.00576	0.00568	0.00533	0.00512	0.005	0.00509	0.00496	0.00561	0.00573
Vanadium		0.001 to 0.03	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Zinc		0.001 to 0.006	<0.005	<0.005	<0.015	<0.015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Metals																
Aluminum		0.003 to 0.025	0.067	<0.05	0.078	0.066	0.016	0.022	0.068	0.115	0.08	<0.015	0.133	<0.015	0.218	0.075
Antimony		0.0001 to 0.0025	<0.005	<0.005	<0.0005	<0.0005	0.00058	0.00107	0.00081	0.00076	0.00084	0.00101	0.00132	0.00141	0.00142	0.0012
Arsenic		0.0001 to 0.0025	0.0107	0.0103	0.00801	0.00796	0.00869	0.011	0.0112	0.0124	0.0118	0.0138	0.016	0.0159	0.0175	0.0161
Barium		5E-005 to 0.02	0.184	0.088	0.0535	0.0617	0.028	0.0196	0.0154	0.0215	0.0421	0.0194	0.0291	0.0238	0.0355	0.0353
Beryllium		0.0001 to 0.005	<0.01	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Bismuth		0.0005 to 0.2		<0.2	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Boron		0.01 to 0.1	<0.1	<0.1	<0.05	0.057	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Cadmium		1E-005 to 8.5E-005	<0.00017	0.0003	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Calcium		0.05 to 0.1	55.3	26.4	22.5	23.3	33.6	30.9	22	19.3	24.3	28.6	27.5	25.6	24.8	24.2
Chromium		0.0001 to 0.005	<0.01	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Cobalt		0.0001 to 0.0015	<0.003	<0.003	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Copper		0.0005 to 0.007	<0.01	<0.01	<0.0025	<0.0025	<0.0025	<0.0025	0.0036	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Iron		0.01 to 0.03	0.063	<0.03	0.089	0.082	<0.05	<0.05	0.078	0.095	0.077	0.014	0.103	<0.02	0.212	0.081
Lead		5E-005 to 0.0025	<0.005	<0.005	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025
Lithium		0.0005 to 0.025	<0.05	<0.05	<0.0025	0.0029	0.0035	0.0028	0.004	0.0032	0.0044	0.0027	0.0028	0.0046	0.0041	0.0028
Magnesium		0.1	590	580	561	528	590	584	668	654	604	624	675	741	694	669
Manganese		5E-005 to 0.0015	0.0914	0.0689	0.146	0.179	0.0203	0.0516	0.096	0.105	0.0984	0.0158	0.0372	0.0683	0.105	0.0987
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.022	0.025	0.0229	0.0232	0.0234	0.0228	0.0244	0.0267	0.0177	0.019	0.0181	0.0172	0.0212	0.0196
Nickel		0.0005 to 0.005	<0.01	<0.01	<0.0025	<0.0025	<0.0025	<0.0025	0.0026	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Phosphorus		0.05 to 0.3		0.41	0.65	0.72	0.7	0.57	<0.3	0.208	0.479	0.34	0.35	0.26	0.527	0.672
Potassium		0.05 to 2	105	105	92.9	90.9	98.4	110	120	120	109	110	126	135	128	120
Selenium		0.0001 to 0.006	<0.01	<0.01	0.00099	0.00092	0.0008	0.00095	0.00068	0.00098	0.001	0.0009	0.00098	0.00086	0.00097	0.00108
Silicon		0.05		0.417	2.57	2.78	0.572	1.1	2.81	3.37	4.67	5.36	5.43	5.24	6.64	6.4
Silver		1E-005 to 0.0001	<0.0002	<0.0002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Sodium		0.05 to 2	580	624	555	540	583	645	689	760	617	691	761	782	759	688
Strontium		0.0001 to 0.005		3.59	3.19	3.18	3.36	3.83	4.05	3.83	3.58	3.87	4.16	4.09	4.37	4.07
Sulphur		0.5								941	873	885	1050	1120	1050	982
Thallium		1E-005 to 0.001	<0.002	<0.002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Tin		0.0001 to 0.0025	<0.005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Total Cadmium (by saltwater extractio		0.00002														
Uranium		1E-005 to 0.001	0.0071	0.0067	0.00612	0.00612	0.00573	0.0058	0.00587	0.00588	0.00531	0.00529	0.00523	0.00523	0.00593	0.00574
Vanadium		0.001 to 0.03	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Zinc		0.003 to 0.006	<0.005	0.0062	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Organics																
Carbon Organic (Dissolved)		0.5 to 5	57.4	12.2	53.4	54.4	54.6	54.9	64	59.9	64.8	64.8	27.2	62.8	48.7	65.8
Carbon Organic (Total)		0.5 to 5		12.1	53.1	54.7	53.8	55	65	59.8	62.1	64.5	28.1	63.7	55	67.9
Nitrogen Organic (Dissolved)		0.05 to 0.26		4.64	4.08	4.06	4.99	5.97	5.11	3.82						
Nitrogen Organic (Total)		0.05 to 0.3		4.74	5.16	4.69	4.19	4.32	5.13	6.13						
ALS LAB ID				**L927439**	**L1066047**	**L1140194**	**L1142492**	**L1176520**	**L1190914**	**L1223406**	**I1234688**	**L1312719**	**L1327102**	**L1344180**	**L1358626**	**L1375698**	**L1389979**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes		MDL	NSP 8-Jan-14	NSP 4-Feb-14	NSP 10-Apr-14	NSP 8-May-14	NSP 5-Jun-14	NSP 2-Jul-14	NSP 28-Jul-14	NSP 2-Sep-14
In Situ Parameters										
Conductivity µS/cm		...	3969	4485	2058	2932	3693	4504	4654	
Oxygen Dissolved %	...		6.62	8	18.4		27.6	86.4	8.92	107
Oxygen Dissolved	...		47.1	1.07	2.63		2.83	8.28	7.72	9.29
pH (unitless)		...	9.05	8.98	9.42	9.48	9.5	9.43	9.3	9.16
Redox Potential mV		...	-195	-47.6	-42.2	83.4	55.6	57.9	125	
Salinity ppt		...	4.09	3.67	1.5	2.01	2.36	2.57	2.69	
Specific Conductivity µS/cm		...	7629	6904	2878	3785	400	4796	5008	
Temperature °C		...	-0.1	-0.44	10.9	13.2	16.6	21.8	21.3	16.9
Total Dissolved Solids		...	4956	4481	1871	2457	2860	3117	3255	
Turbidity NTU		...	3.7							
Physical Tests										
Acidity to pH 8.3 (as CaCO3)		1								
Alkalinity (Total as CaCO3)		1 to 2	1510	1520	546	708	883	989	1060	1120
Bicarbonate Alkalinity		1 to 2	1040	1210	322	353	444	518	578	721
Carbonate Alkalinity		1 to 2	477	306	224	355	439	471	483	398
Color TCU		5	35.4							
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	3480	3610	1230	1590	1910	2130	2220	2210
Hydroxide Alkalinity		1 to 2	<1	<1	<1	<1	<1	<1	<1	<1
pH (unitless)		0.01 to 0.1	8.85	8.87	9.32	9.21	9.25	9.27	9.22	8.99
Specific Conductivity µS/cm		2	7170	7400	2830	3740	4190	4610	5060	5150
Total Dissolved Solids		1 to 2	7200	7290	2540	3390	3940	4160	4590	4750
Total Suspended Solids		3	<3	8.7	17	9.1	3.4	9	9.2	10.5
Turbidity NTU		0.1	2.78	24.8	7.45	1.22	0.68	3.1	1.18	4.2
Dissolved Anions										
Bromide		0.05 to 2.495	<2.5	<2.5	<1	<1	1.1	1.2	1.6	<2.5
Chloride		0.5 to 1	89	95	30	34	38	41	50	47
Fluoride		0.02 to 0.4	<1	<1	<0.4	<0.4	0.056	0.058	0.065	0.07
Sulphate		0.5 to 1	3970	4010	1360	1870	2160	2390	2680	2710
Nutrients										
Ammonia (Total)		0.005 to 0.05	2.72	3.68	0.0382	0.0913	0.0985	0.0814	0.0994	0.064
Nitrate (as N)		0.005 to 0.1	<0.25	0.34	<0.1	<0.1	<0.1	<0.1	4.32	<0.25
Nitrite (as N)		0.001 to 0.02	<0.05	<0.05	<0.02	<0.02	<0.02	<0.02	0.027	<0.05
Nitrogen (Dissolved)		0.05 to 0.1								
Nitrogen (Total)		0.0025 to 0.11								
Nitrogen Kjeldahl (Total)		0.05 to 0.2	8.95	12.5	15.3	3.25	3.5	4.25	4.3	5.15
Orthophosphate (Dissolved)		0.001 to 0.01	0.701	0.751	0.24	0.257	0.218	0.208	0.301	0.382
Phosphorus - Dissolved		0.002 to 0.02	0.827	1	0.331	0.401	0.332	0.332	0.408	0.602
Phosphorus - Total		0.002 to 0.02	0.883	1.06	0.613	0.43	0.347	0.35	0.422	0.602
Cyanide										
Cyanide (Free)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals										
Aluminum		0.001 to 0.025	<0.005	<0.005	0.0172	<0.002	<0.002	0.0023	<0.002	0.0034
Antimony		0.0001 to 0.0025	0.001	0.00117	0.00048	0.00064	0.0008	0.00102	0.00124	0.00133
Arsenic		0.0001 to 0.0025	0.0168	0.0169	0.00697	0.00966	0.0108	0.013	0.0164	0.0151
Barium		5E-005 to 0.02	0.0399	0.0422	0.0271	0.037	0.0398	0.0438	0.0521	0.0563
Beryllium		0.0001 to 0.005	<0.0005	<0.0005	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Bismuth		0.0005 to 0.2	<0.0025	<0.0025	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001
Boron		0.01 to 0.1	<0.05	<0.05	0.029	0.032	0.021	0.021	0.021	0.048
Cadmium		1E-005 to 8.5E-005	<0.00005	<0.00005	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Calcium		0.05 to 0.1	29.8	31.1	23.5	32.5	33.8	34	34.7	35.3
Chromium		0.0001 to 0.018	<0.0005	<0.0005	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Cobalt		0.0001 to 0.0015	<0.0005	<0.0005	0.00016	0.00021	0.00023	0.00025	<0.0002	<0.0002
Copper		0.0002 to 0.006	<0.001	<0.001	0.00226	0.00278	0.00208	0.00153	0.00109	0.00074
Dissolved Cadmium (by saltwater extr		0.00002				<0.00002	<0.00002	<0.00002	<0.00002	
Iron		0.01 to 0.03	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead		5E-005 to 0.0025	<0.00025	<0.00025	<0.00005	<0.0001	<0.0001	<0.0001	<0.0001	0.0001
Lithium		0.0005 to 0.025	0.0059	0.0041	0.00246	0.0024	0.0028	0.0037	0.0029	0.0033
Magnesium		0.1	827	858	284	366	442	498	517	514
Manganese		5E-005 to 0.0015	0.112	0.113	0.0452	0.0365	0.00885	0.0247	0.0416	0.106
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.0177	0.0156	0.00973	0.0126	0.0131	0.014	0.0143	0.0122
Nickel		0.0005 to 0.005	<0.0025	<0.0025	0.0009	<0.001	0.0011	0.0011	0.001	<0.001
Phosphorus		0.05 to 0.3	0.79	0.84	0.337	0.452	0.343	0.341	0.435	0.453
Potassium		0.05 to 2	143	147	52.4	68.3	79.6	90.8	96.4	97.1
Selenium		0.0001 to 0.006	0.00077	0.00163	0.00144	0.0019	0.00154	0.00147	0.00186	0.00135
Silicon		0.05	7.25	7.5	4.48	4.66	4.1	3.33	5.53	7.01
Silver		1E-005 to 0.0001	<0.00005	<0.00005	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium		0.05 to 2	846	876	295	395	445	527	588	1030
Strontium		0.0001 to 0.005	4.86	5.1	1.82	2.36	2.72	3.02	3.43	3.29
Sulphur		0.5	1220	1370	443	553	658	723	751	799
Thallium		1E-005 to 0.001	<0.00005	<0.00005	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Tin		0.0001 to 0.0025	<0.0005	<0.0005	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Titanium		0.01	<0.05	<0.05	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02
Uranium		1E-005 to 0.001	0.00629	0.00662	0.00264	0.0035	0.00398	0.00431	0.00437	0.00379
Vanadium		0.001 to 0.03	<0.005	<0.005	0.0031	0.0036	0.0036	0.0035	0.0024	<0.002
Zinc		0.001 to 0.006	<0.005	<0.005	0.0012	<0.002	<0.002	<0.002	<0.002	<0.002
Total Metals										
Aluminum		0.003 to 0.025	<0.015	<0.015	0.0534	0.0247	0.02	0.0476	0.0202	0.0163
Antimony		0.0001 to 0.0025	0.00109	0.00131	0.00047	0.00066	0.00085	0.00108	0.00127	0.00135
Arsenic		0.0001 to 0.0025	0.0172	0.0181	0.00684	0.00889	0.0109	0.0128	0.0142	0.0164
Barium		5E-005 to 0.02	0.0402	0.0414	0.0273	0.0369	0.0418	0.0443	0.0499	0.059
Beryllium		0.0001 to 0.005	<0.0005	<0.0005	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Bismuth		0.0005 to 0.2	<0.0025	<0.0025	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001
Boron		0.01 to 0.1	<0.05	0.055	0.033	0.035	0.024	0.026	0.021	0.05
Cadmium		1E-005 to 8.5E-005	<0.00005	<0.00005	0.000012	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Calcium		0.05 to 0.1	30.8	32.4	22.5	32.5	34.1	34	34.7	38
Chromium		0.0001 to 0.005	<0.0005	<0.0005	0.00023	<0.0002	<0.0002	0.00021	<0.0002	<0.0002
Cobalt		0.0001 to 0.0015	<0.0005	<0.0005	0.00025	0.00024	0.00026	0.00026	<0.0002	<0.0002
Copper		0.0005 to 0.007	<0.0025	<0.0025	0.0034	0.003	0.0026	0.0021	0.0015	<0.001
Iron		0.01 to 0.03	0.031	0.041	0.062	0.023	0.043	0.046	0.024	0.016
Lead		5E-005 to 0.0025	<0.00025	<0.00025	<0.00005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Lithium		0.0005 to 0.025	0.0048	0.0045	0.00236	0.0026	0.0027	0.0039	0.0027	0.0042
Magnesium		0.1	866	883	259	367	445	500	518	553
Manganese		5E-005 to 0.0015	0.114	0.119	0.0722	0.0408	0.0156	0.0289	0.0443	0.119
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.0178	0.0186	0.00915	0.0131	0.0139	0.0145	0.0137	0.0131
Nickel		0.0005 to 0.005	<0.0025	<0.0025	0.00113	0.001	0.0011	0.0011	0.0011	<0.001
Phosphorus		0.05 to 0.3	0.86	0.9	0.502	0.417	0.343	0.326	0.42	0.56
Potassium		0.05 to 2	148	155	49.5	67.6	79.8	86.4	94.7	103
Selenium		0.0001 to 0.006	0.00091	0.00077	0.00153	0.0017	0.00162	0.00164	0.00168	0.00164
Silicon		0.05	7.5	7.88	4.43	4.67	4.15	3.5	5.59	7.62
Silver		1E-005 to 0.0001	<0.00005	<0.00005	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium		0.05 to 2	857	905	285	393	473	524	541	586
Strontium		0.0001 to 0.005	4.75	5.51	1.73	2.4	2.86	3.08	3.22	3.75
Sulphur		0.5	1280	1340	412	560	665	767	796	858
Thallium		1E-005 to 0.001	<0.00005	<0.00005	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Tin		0.0001 to 0.0025	<0.0005	<0.0005	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Titanium		0.01	<0.05	<0.05	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02
Total Cadmium (by saltwater extractio		0.00002				<0.00002	<0.00002	<0.00002	<0.00002	
Uranium		1E-005 to 0.001	0.00647	0.00699	0.00214	0.00354	0.00432	0.00438	0.00429	0.0042
Vanadium		0.001 to 0.03	<0.005	<0.005	0.0035	0.0037	0.0039	0.0036	0.0023	<0.002
Zinc		0.003 to 0.006	<0.015	<0.015	<0.003	<0.006	<0.006	<0.006	<0.006	<0.006
Organics										
Carbon Organic (Dissolved)		0.5 to 5	74.5	85.4	31.8	38.6	47.2	47.5	54	55.4
Carbon Organic (Total)		0.5 to 5	75.2	79.9	32.8	42.9	48.2	47.6	53.3	54.7
Nitrogen Organic (Dissolved)		0.05 to 0.26								
Nitrogen Organic (Total)		0.05 to 0.3								
ALS LAB ID			**L1410216**	**L1418933**	**L1442672**	**L1453031**	**L1466627**	**L1481215**	**L1494516**	**L1511703**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C2.27 - PC02
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Analytes		MDL	PC02 28-Apr-08	PC02 7-Jul-08	PC02 6-Sep-08	PC02 29-Mar-11	PC02 14-Apr-11	PC02 21-Apr-11	PC02 28-Apr-11	PC02 5-May-11	PC02 12-May-11	PC02 30-May-11	PC02 28-Jun-11	PC02 28-Jul-11	PC02 30-Aug-11	PC02 28-Sep-11	PC02 25-Oct-11
In Situ Parameters																	
Conductivity µS/cm		...	1376	1118	969	968	1095	1226	1192	1316	1089	961	916	990	792		1225
Oxygen Dissolved %	...		92.4	90.7	85.5	77.2	70.5	73.2	64.7	74.3	85.7	63.6	81.7	77.1		67.7	48.7
Oxygen Dissolved	...		10.7	9.52	9.41	10	9.45	10.3	8.45	8.91	10.1	6.77	8.3	8.09		7.37	5.66
pH (unitless)		...		8.08	7.79	7.89	7.34	7.67	7.57	7.58	7.69	7.14	7.88	7.91	8.05	7.64	7.31
Redox Potential mV		...		-102	-70.3	122	154	65.8	106	128	62.8	326	183	104	138	25.9	76.5
Salinity ppt		...						1.15	1.01	1.02	0.82	0.64	0.57	0.65	0.52		0.91
Specific Conductivity µS/cm		...	1993	1451	1326	1608	1896	2276	2000	1997	1618	1266	1146	1284	1041	1913	1786
Temperature °C		...	8.79	13	10.9	4.14	2.89	1.07	3.84	7.14	7.87	12.4	14.5	13	12.5	11.3	8.54
Total Dissolved Solids		...				1050	1230	1476	1300	1298	1050	823	745	835	678		1163
Turbidity NTU		...										37.9	45	15.1		4.9	
Physical Tests																	
Acidity to pH 8.3 (as CaCO3)		1												4		4.5	7.2
Alkalinity (Total as CaCO3)		1 to 2	421	413	446	395	448	448	437	430	394	327	333	370	328	449	468
Bicarbonate Alkalinity		1 to 2						448								449	468
Carbonate Alkalinity		1 to 2						<2								<2	<2
Color TCU		5	7.7	22	8.3	15.1	8.7	8.1	6.6	6.3	22.3	23.2	31.7	26.3	36.8	10	9.6
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	931	654	780	753	866	880	914	917	1040	540	486	537	439	803	821
Hydroxide Alkalinity		1 to 2						<2								<2	<2
pH (unitless)		0.01 to 0.1	8.12	8.33	8.3	8.12	8.2	8.11	8.1	8.22		8.18	8.33	8.21	8.4	8.19	8.12
Specific Conductivity µS/cm		2	1990	1450	1850	1580	1880	1880	1880	1920	2230	1230	1070	1240	1020	1850	1900
Total Dissolved Solids		1 to 2	1420	999	1320	1120	1370	1410	1380	1370	1710	782	714	832	644	1280	1240
Total Suspended Solids		3	19.3	15.3	4.7	<3	3.2	4.7	<3	3.3	7	99.5	14.4	38.1	62.7	8.7	7.1
Turbidity NTU		0.1	0.71	5.64	2.29	1.19	1.08	2.07	0.75	1.2	2.81		5.65	14.7	15.4		2.42
Dissolved Anions																	
Bromide		0.05 to 2.495	<0.5	0.067	0.077	<2.1	<2.5	<1	<1	<1	<1	<1	<0.5	<0.5	<0.5	<1	<1
Chloride		0.5 to 1	125	80.1	113	86.5	132	133	130	142	129	78	65.1	78.1	62.7	129	122
Fluoride		0.02 to 0.4	0.24	0.243	0.244	<0.2	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	0.33	0.42	0.23	<0.4	<0.4
Sulphate		0.5 to 1	582	324	476	422	499	523	485	507	775	256	192	232	138	444	433
Nutrients																	
Ammonia (Total)		0.005 to 0.05	0.021	0.021	0.041	0.0248	0.0197	0.0196	0.0233	0.0178	0.0163	0.0344	0.0269	0.0207	0.0184	0.028	0.0199
Nitrate (as N)		0.005 to 0.1	0.442	0.0931	0.167	0.408	0.47	0.36	0.37	0.37	0.36	<0.1	<0.05	0.116	<0.05	<0.1	0.15
Nitrite (as N)		0.001 to 0.02	0.019	0.0011	0.0036	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.02	0.028
Nitrogen (Dissolved)		0.05 to 0.1							0.81	0.58	1.25	0.79	0.97	0.75	1.15	0.55	0.34
Nitrogen (Total)		0.0025 to 0.11				0.916	0.797	0.46	0.751	0.69	1.34	0.79	1.01	0.85	1.14	0.55	0.595
Nitrogen Kjeldahl (Total)		0.05 to 0.2	0.563	0.637	0.365	0.508	0.331	<0.1	0.382	0.359	0.856	0.79	1.01	0.734	0.917	0.55	0.42
Orthophosphate (Dissolved)		0.001 to 0.01	0.0277	0.073		0.0646						0.0548	0.0896	0.105			
Phosphorus - Dissolved		0.002 to 0.02					0.0323	0.0353	0.0376	0.03	0.125	0.0628	0.092	0.105	0.0915	0.0463	0.0374
Phosphorus - Total		0.002 to 0.02	0.0326	0.08		0.0794	0.0369	0.0415	0.0354	0.0365	0.141	0.217	0.117	0.151	0.144	0.0724	0.0627
Cyanide																	
Cyanide (Free)		0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005
Cyanide (Total)		0.005	<0.005	0.0071		<0.005		<0.005	<0.005	<0.005	<0.005	0.0086	0.0081	0.0081		<0.005	<0.005
Cyanide (WAD)		0.005	<0.005	<0.005	<0.005	0.0073		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	0.0078
Dissolved Metals																	
Aluminum		0.001 to 0.025	<0.025	<0.01	<0.025	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.01	<0.003
Antimony		0.0001 to 0.0025	<0.0025	<0.001	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.0001
Arsenic		0.0001 to 0.0025	<0.0025	0.0025	<0.0025	0.0019	0.0017	0.0018	<0.002	0.0017	0.0027	0.0019	0.00287	0.00261	0.00242	0.0016	0.00145
Barium		5E-005 to 0.02	0.065	0.056	0.056	0.053	0.057	0.058	0.057	0.059	0.074	0.053	0.056	0.048	0.047	0.063	0.0638
Beryllium		0.0001 to 0.005	<0.005	<0.002	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.002	<0.0001
Bismuth		0.0005 to 0.2				<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0005
Boron		0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.077
Cadmium		1E-005 to 8.5E-005	<0.000085	0.000052	<0.000085	0.000201	0.000039	0.000064	<0.000034	<0.000034	0.000045	0.000045	<0.00003	<0.000017	<0.000017	<0.000034	<0.00001
Calcium		0.05 to 0.1	147	102	132	116	142	141	149	147	148	86.1	78.9	88.7	73.2	129	134
Chromium		0.0001 to 0.018	<0.005	<0.002	<0.005	<0.002	<0.002	<0.003	<0.018	<0.002	<0.002	<0.002	<0.003	<0.001	<0.001	<0.002	0.00011
Cobalt		0.0001 to 0.0015	<0.0015	<0.0006	<0.0015	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0003	<0.0003	<0.0003	<0.0006	0.00024
Copper		0.0002 to 0.006	<0.005	0.0028	<0.005	0.0027	0.0021	<0.006	0.002	0.002	<0.006	0.0028	0.0024	0.0017	0.0027	<0.002	0.00165
Dissolved Cadmium (by saltwater extr		0.00002															
Iron		0.01 to 0.03	0.031	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.038	<0.03	<0.03	0.036	0.039	0.033	0.035	0.061
Lead		5E-005 to 0.0025	<0.0025	<0.001	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.00005
Lithium		0.0005 to 0.025	<0.025	<0.01	<0.025	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0073	0.0086	0.0072	0.01	0.00867
Magnesium		0.1	137	96.7	110	112	124	128	132	133	163	78.9	70.2	76.6	62.1	116	118
Manganese		5E-005 to 0.0015	0.0589	0.0432	0.117	0.0444	0.107	0.112	0.0984	0.102	0.021	0.189	0.0628	0.0805	0.0519	0.165	0.174
Mercury		1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.011	0.0147	0.0121	0.011	0.0092	0.0086	0.0081	0.0084	0.0138	0.0126	0.0105	0.0103	0.0137	0.0104	0.0091
Nickel		0.0005 to 0.005	<0.005	0.0029	0.0054	0.0029	0.0044	0.0036	0.0036	0.0039	0.0022	0.0021	0.0029	0.0021	0.0025	0.0043	0.00425
Phosphorus		0.05 to 0.3				<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium		0.05 to 2	20.4	19	20.4	17.7	20.1	20	20.6	20.7	24.8	16.8	16.1	17.3	17	22.2	22.1
Selenium		0.0001 to 0.006	<0.005	<0.002	<0.005	<0.002	0.0024	0.0029	<0.006	<0.002	<0.002	<0.002	0.0011	<0.001	<0.001	<0.002	0.00021
Silicon		0.05				7.89	8.36	8.15	8.71	8.59	8.22	5.94	6.79	8.39	8.02	10.4	10.3
Silver		1E-005 to 0.0001	<0.0001	<0.00004	<0.0001	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00002	<0.00002	<0.00002	<0.00004	<0.00001
Sodium		0.05 to 2	109	83.7	101	86.5	108	108	111	114	154	73	66	74.3	56.1	114	108
Strontium		0.0001 to 0.005				1.08	1.24	1.3	1.3	1.34	1.47	0.766	0.712	0.786	0.646	1.2	1.17
Sulphur		0.5															
Thallium		1E-005 to 0.001	<0.001	<0.0004	<0.001	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002	<0.0004	<0.00001
Tin		0.0001 to 0.0025	<0.0025	<0.001	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.0001
Titanium		0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium		1E-005 to 0.001	0.0038	0.00234	0.0035	0.00271	0.00325	0.00308	0.00311	0.00329	0.00439	0.00219	0.00158	0.00143	0.00137	0.0035	0.00306
Vanadium		0.001 to 0.03	<0.005	0.0037	<0.005	0.0031	0.0039	0.0035	<0.006	0.0034	0.0038	0.0033	0.003	0.0027	0.0036	0.0029	0.0026
Zinc		0.001 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.003
Total Metals																	
Aluminum		0.003 to 0.025	<0.025	0.174	0.043	0.044	0.042	0.072	0.02	0.02	0.146	2.04	0.277	0.576	1.05	0.081	0.0395
Antimony		0.0001 to 0.0025	<0.0025	<0.001	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.0001
Arsenic		0.0001 to 0.0025	<0.0025	0.0026	<0.0025	0.0017	0.0016	0.0016	<0.0018	0.0016	0.0026	0.0025	0.00246	0.00248	0.00251	0.0018	0.00141
Barium		5E-005 to 0.02	0.065	0.054	0.057	0.053	0.059	0.06	0.059	0.062	0.075	0.081	0.055	0.055	0.062	0.065	0.065
Beryllium		0.0001 to 0.005	<0.005	<0.002	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.002	<0.0001
Bismuth		0.0005 to 0.2				<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0005
Boron		0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.089
Cadmium		1E-005 to 8.5E-005	<0.000085	0.000058	<0.000085	0.000183	0.000047	0.000072	<0.000034	0.000037	0.000053	0.000071	<0.00004	<0.000017	<0.000017	0.000046	0.000013
Calcium		0.05 to 0.1	146	100	132	114	140	141	146	150	144	85.2	79.6	87.5	73.1	132	139
Chromium		0.0001 to 0.005	<0.005	<0.002	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.0055	0.0015	0.0021	0.003	<0.002	0.00039
Cobalt		0.0001 to 0.0015	<0.0015	<0.0006	<0.0015	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	0.00187	0.00046	0.00054	0.00093	<0.0006	0.00029
Copper		0.0005 to 0.007	<0.005	0.0045	<0.005	0.0036	0.003	<0.006	0.0027	0.0027	<0.007	0.0119	0.0042	0.0047	0.0072	0.0031	0.00269
Iron		0.01 to 0.03	0.05	0.249	0.099	0.1	0.089	0.131	0.066	0.079	0.211	2.67	0.43	0.855	1.32	0.212	0.16
Lead		5E-005 to 0.0025	<0.0025	<0.001	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.00005
Lithium		0.0005 to 0.025	<0.025	<0.01	<0.025	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0065	0.0069	0.0077	0.011	0.00964
Magnesium		0.1	137	94.1	112	110	128	132	133	137	160	79.1	71.4	76	62.9	119	122
Manganese		5E-005 to 0.0015	0.0603	0.0702	0.123	0.0488	0.121	0.127	0.109	0.114	0.0353	0.375	0.0997	0.114	0.119	0.181	0.178
Mercury		1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.011	0.0147	0.0119	0.0116	0.0096	0.0093	0.0086	0.0092	0.0144	0.0129	0.0113	0.0108	0.0149	0.0107	0.00962
Nickel		0.0005 to 0.005	<0.005	0.0043	0.0056	0.003	0.0047	0.0043	0.004	0.0041	0.0026	0.0102	0.0045	0.0044	0.0066	0.0049	0.00468
Phosphorus		0.05 to 0.3				<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium		0.05 to 2	20.5	18.9	20.6	17.3	20.7	20.3	21.1	21.7	24.6	17.3	16.2	17.2	17.5	22.6	22.8
Selenium		0.0001 to 0.006	<0.005	<0.002	<0.005	<0.002	0.0021	0.0026	<0.006	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.002	0.0002
Silicon		0.05				7.8	8.5	8.41	8.77	8.89	8.46	11.6	7.8	9.94	11.1	10.8	10.7
Silver		1E-005 to 0.0001	<0.0001	<0.00004	<0.0001	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00002	<0.00002	<0.00002	<0.00004	<0.00001
Sodium		0.05 to 2	109	82.6	104	84.9	111	110	113	118	152	73.7	66.8	73.1	56.7	117	113
Strontium		0.0001 to 0.005				1.06	1.28	1.32	1.34	1.39	1.46	0.795	0.723	0.789	0.659	1.23	1.22
Sulphur		0.5															
Thallium		1E-005 to 0.001	<0.001	<0.0004	<0.001	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002	<0.0004	<0.00001
Tin		0.0001 to 0.0025	<0.0025	<0.001	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.0001
Titanium		0.01	<0.01	0.012	0.012	<0.01	<0.01	0.01	0.011	0.012	0.015	0.098	0.021	0.035	0.055	<0.01	<0.01
Total Cadmium (by saltwater extractic		0.00002															
Uranium		1E-005 to 0.001	0.0038	0.00237	0.0034	0.00279	0.00349	0.0034	0.00334	0.00352	0.00459	0.00235	0.00172	0.0016	0.0015	0.00356	0.00323
Vanadium		0.001 to 0.03	<0.005	0.0044	<0.005	0.0033	0.0044	0.004	<0.006	0.0036	0.0043	0.0088	0.004	0.0045	0.0061	0.0034	0.0029
Zinc		0.003 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0095	<0.005	<0.005	<0.005	<0.005	<0.003
Organics																	
Carbon Organic (Dissolved)		0.5 to 5	6.93	11.2	6.44	9.05	6.52	6.61	5.87	6.83	15.7	13.4	15.7	13.2	15.9	9.42	8.96
Carbon Organic (Total)		0.5 to 5					6.52	6.7	5.89	6.62	15.4	13.7	15.9	14.3	17.6	9.23	9.78
Nitrogen Organic (Dissolved)		0.05 to 0.26							0.42	0.19	0.877	0.756	0.943	0.613	1.13	0.522	0.145
Nitrogen Organic (Total)		0.05 to 0.3					0.311		0.359	0.3	0.839	0.756	0.983	0.713	1.12	0.522	0.165
ALS LAB ID				**L623545**	**L652819**	**L679672**	**L990459**	**L995583**	**L997645**	**L999654**	**L1002049**	**L1005044**	**L1011001**	**L1025075**	**L1038168**	**L1052387**	**L1066047**	**L1076994**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes	MDL	PC02 5-Dec-11	PC02 9-Jan-12	PC02 13-Feb-12	PC02 6-Mar-12	PC02 10-Apr-12	PC02 25-Apr-12	PC02 2-May-12	PC02 9-May-12	PC02 16-May-12	PC02 24-May-12	PC02 10-Jul-12	PC02 7-Aug-12	PC02 5-Sep-12	PC02 11-Oct-12	PC02 5-Nov-12
In Situ Parameters																
Conductivity µS/cm	...	1124	1017	1055	559	1042	1138	704	1187	994	1006	972	820	1211	1163	1136
Oxygen Dissolved %	...	64.5	65.8	70.8	73.9	77	85.9	83	82.9	82.1	77.6	78	85.5	83.1	65.1	65.5
Oxygen Dissolved	...	8.59	8.43	9.42	10.3	9.54	10.1	10.1	9.83	9.02	8.98	7.59	8.15	8.86	7.35	7.51
pH (unitless)	...	7.57	7.54	7.31	8.05	7.6	7.47	7.78	7.81	8.24	7.93	8.06	8.05	7.79	7.55	7.53
Redox Potential mV	...	48.2	8.2	69.9	96.9	140	118	145	135	191	83.2	201	81.7	49.2	-243	-0.2
Salinity ppt	...	0.97	0.84	0.91	0.5	0.83	0.85	0.54	0.94	0.68	0.74		0.47	0.81	0.83	0.83
Specific Conductivity µS/cm	...	1925	1665	1816	1030	1637	1679	1085	1850	1357	1459	1161	956	1601	1643	1634
Temperature °C	...	3.22	4.66	3.05	1.05	5.98	8.15	6.59	6.24	11	8.72	16.5	17.5	12.3	9.71	9.03
Total Dissolved Solids	...	1251	1081	1181	670	1064	1091	705	1203	882	949		622	1041	1068	1062
Turbidity NTU	...	3.3	0.7	0.1	4.8		0.6	8	1.7	73.7	4.8	7.1	12.7	4	2.6	1.4
Physical Tests																
Acidity to pH 8.3 (as CaCO3)	1													<1		
Alkalinity (Total as CaCO3)	1 to 2	458	444	447	254	414	409	410	418	429	413	363	346	441	463	468
Bicarbonate Alkalinity	1 to 2		444	447	254	395	409	410	418	429	401	360	336	441	463	468
Carbonate Alkalinity	1 to 2		<2	<2	<2	18.9	<2	<1	<2	<1	12.4	3.4	10.5	<1	<2	<2
Color TCU	5	9	7	6.7	63.6	7.5	7	12	12.1	43.7	17.6	27.5	36.1	9.8	9	9.8
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	816	774	785	423	757	762	803	853	662	666	517	434	690	748	706
Hydroxide Alkalinity	1 to 2		<2	<2	<2	<1	<2	<1	<2	<1	<1	<1	<1	<1	<2	<2
pH (unitless)	0.01 to 0.1	8.32	8.16	8.14	7.94	8.41	8.26	8.2	8.29	8.4	8.32	8.49	8.35	8.39	8.1	8.26
Specific Conductivity µS/cm	2	1800	1820	1730	956	1640	1630	1670	1820	1400	1430	1090	956	1560	1570	1610
Total Dissolved Solids	1 to 2	1240	1320	1240	646	1160	1150	1230	1360	990	1030	784	636	1100	1140	1130
Total Suspended Solids	3	<3	6.7	6	8	<3	<3	<3	3.8	245	11.8	16.2	53.5	4.1	<3	<3
Turbidity NTU	0.1	2.76	2.31	0.98	5.52	0.59	1.03	1.34	1.01	75.7	4	5.71	14.5	2.01	1.2	0.82
Dissolved Anions																
Bromide	0.05 to 2.495	<1	<1	<1	<0.5	<1	<0.5	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1
Chloride	0.5 to 1	125	130	126	54.2	113	123	101	110	76.2	80.1	67.5	59.8	106	112	110
Fluoride	0.02 to 0.4	<0.4	<0.4	<0.4	<0.2	<0.4	0.24	<0.4	<0.4	<0.2	0.23	0.24	0.26	0.25	<0.4	0.51
Sulphate	0.5 to 1	427	438	412	203	380	406	469	535	315	353	187	133	347	361	359
Nutrients																
Ammonia (Total)	0.005 to 0.05	0.019	0.022	<0.05	0.0577	0.0213	0.0157	0.0087	0.0179	0.0227	0.0141	0.0165	0.0164	0.0283	0.0168	0.0152
Nitrate (as N)	0.005 to 0.1	0.18	0.43	0.6	0.34	0.63	0.483	0.73	0.38	0.138	0.155	0.091	0.062	0.104	<0.1	0.13
Nitrite (as N)	0.001 to 0.02	<0.02	<0.02	<0.02	<0.01	<0.02	0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	0.012	0.029	<0.02
Nitrogen (Dissolved)	0.05 to 0.1		0.68	1.05	1.26	0.94	0.73	0.95	0.83	1.09	0.61	0.83	0.82	0.5	0.45	0.44
Nitrogen (Total)	0.0025 to 0.11	0.49	0.91	0.956	1.52	0.951	0.888	1.2	0.87	1.81	0.708	0.815	0.883		0.45	0.5
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.434	0.483	0.35	1.18	0.318	0.394	0.467	0.49	1.67	0.553	0.724	0.821	0.411	0.42	0.373
Orthophosphate (Dissolved)	0.001 to 0.01														0.0432	
Phosphorus - Dissolved	0.002 to 0.02	0.0427	0.0328	0.0307	0.348	0.0344	0.0303	0.081	0.0802	0.124	0.0745	0.114	0.121	0.0524	0.046	0.0504
Phosphorus - Total	0.002 to 0.02	0.0562	0.0516	0.041	0.436	0.0404	0.0372	0.0897	0.0847	0.648	0.091	0.139	0.195	0.0613	0.0539	0.0568
Cyanide																
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	0.015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																
Aluminum	0.001 to 0.025	<0.003	<0.003	<0.003	0.0032	<0.006	<0.003	<0.006	0.0136	<0.003	0.001	0.0019	0.0018	0.0013	<0.001	<0.001
Antimony	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	0.00012	0.00015	0.00012	0.00011	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00154	0.00124	0.00122	0.00184	0.0014	0.00152	0.00211	0.00218	0.00271	0.00226	0.00259	0.00275	0.00197	0.0015	0.00154
Barium	5E-005 to 0.02	0.0625	0.0545	0.0554	0.0362	0.0541	0.0522	0.0601	0.0653	0.0529	0.0509	0.0434	0.0436	0.0552	0.054	0.0607
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.079	0.074	0.065	0.037	0.065	0.063	0.052	0.059	0.035	0.044	0.05	0.046	0.09	0.095	0.092
Cadmium	1E-005 to 8.5E-005	<0.00001	0.000011	0.000016	0.00001	0.00002	0.000014	<0.00002	0.000012	0.000014	<0.00001	0.000019	<0.00001	0.000012	<0.00001	<0.00001
Calcium	0.05 to 0.1	129	122	124	67.4	114	120	118	126	102	102	83.9	70.4	112	119	115
Chromium	0.0001 to 0.018	<0.0001	0.00011	<0.0001	0.00014	<0.0002	0.00018	<0.0002	0.00029	0.00015	0.00016	<0.0001	0.00013	0.00016	0.00012	<0.0001
Cobalt	0.0001 to 0.0015	0.00028	0.00024	0.00027	0.00028	<0.0002	0.00018	<0.0002	0.00012	0.00027	0.00015	0.00016	0.00016	0.00021	0.00019	0.00022
Copper	0.0002 to 0.006	0.00119	0.0015	0.00173	0.00397	0.0021	0.0021	0.0027	0.00278	0.00275	0.00236	0.0022	0.00199	0.00134	0.00176	0.00181
Dissolved Cadmium (by saltwater extr	0.00002															
Iron	0.01 to 0.03	0.043	0.04	0.049	0.107	0.033	<0.03	<0.03	<0.03	0.035	0.016	0.02	0.038	0.025	0.029	0.037
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.0108	0.00931	0.00892	0.00461	0.0088	0.00877	0.009	0.0107	0.00786	0.0065	0.00753	0.00679	0.0104	0.00977	0.00917
Magnesium	0.1	120	114	115	62	115	112	124	130	98.6	99.7	74.6	62.8	99.8	110	101
Manganese	5E-005 to 0.0015	0.229	0.106	0.0932	0.102	0.0908	0.087	0.0327	0.0345	0.138	0.0475	0.0414	0.0394	0.168	0.14	0.148
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00865	0.00832	0.00863	0.00995	0.00984	0.00862	0.0123	0.0125	0.0119	0.0137	0.011	0.00923	0.0121	0.0102	0.00886
Nickel	0.0005 to 0.005	0.00398	0.00378	0.00424	0.00297	0.0038	0.00389	0.0027	0.00273	0.00305	0.00273	0.00272	0.00272	0.00428	0.00438	0.00436
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.3	0.38	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.059	<0.3	<0.3
Potassium	0.05 to 2	25.3	20.7	20.1	16.8	18.3	19.3	19.4	19.8	19.5	17.2	15.3	15.1	21.9	20.5	22.7
Selenium	0.0001 to 0.006	0.00022	0.00041	0.00063	0.0005	0.00162	0.00229	0.00159	0.00148	0.00042	0.00083	0.00028	0.00023	0.00026	0.0002	0.00022
Silicon	0.05	9.76	8.93	8.92	6.01	8.59	8.21	7.84	7.94	7.53	7.47	7.33	7.8	9.85	10.2	10.1
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	122	109	101	46.3	92	101	95.1	117	77.7	80.9	60.5	53.1	104	102	105
Strontium	0.0001 to 0.005	1.35	1.16	1.14	0.577	1.07	0.967	1.11	1.16	0.928	0.915	0.706	0.627	1.01	1.04	1.06
Sulphur	0.5															
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	0.013	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00293	0.00292	0.00311	0.00158	0.00318	0.00268	0.00344	0.00345	0.00204	0.00231	0.00132	0.000839	0.00271	0.00262	0.00249
Vanadium	0.001 to 0.03	0.0024	0.0023	0.0028	0.0029	0.0036	0.0034	0.0035	0.0037	0.0042	0.0031	0.0026	0.0023	0.0033	0.0026	0.0021
Zinc	0.001 to 0.006	0.0033	<0.003	<0.003	<0.003	<0.006	<0.003	<0.006	0.0037	<0.003	0.0032	0.001	0.0028	0.0019	<0.001	<0.001
Total Metals																
Aluminum	0.003 to 0.025	0.0777	0.0562	0.0258	0.288	0.0171	0.01	0.0786	0.0787	3.45	0.196	0.302	0.534	0.102	0.0517	0.0234
Antimony	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	0.00013	<0.0002	0.00018	0.00024	0.00014	0.00012	0.00011	0.00011	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00149	0.00131	0.00131	0.00198	0.00156	0.0016	0.00216	0.00228	0.004	0.0023	0.00263	0.00285	0.00202	0.0015	0.00145
Barium	5E-005 to 0.02	0.0606	0.0566	0.0604	0.039	0.0557	0.0533	0.0592	0.0673	0.106	0.0516	0.0459	0.0487	0.0567	0.0549	0.0532
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.08	0.081	0.074	0.044	0.071	0.079	0.057	0.058	0.046	0.05	0.055	0.048	0.095	0.104	0.105
Cadmium	1E-005 to 8.5E-005	<0.00001	0.000011	0.00002	0.000015	0.000022	0.000017	<0.00002	<0.00001	0.000059	0.000012	0.000016	0.000019	0.000017	0.000014	<0.00001
Calcium	0.05 to 0.1	124	127	124	67.7	117	120	115	129	101	104	83.3	68	110	114	110
Chromium	0.0001 to 0.005	0.00034	0.00035	0.00032	0.00088	0.00024	0.00029	0.00068	0.00056	0.011	0.00083	0.00118	0.00169	0.00058	0.0003	0.00018
Cobalt	0.0001 to 0.0015	0.00033	0.00031	0.0003	0.00045	<0.0002	0.00018	<0.0002	0.00018	0.00335	0.00031	0.0004	0.00062	0.00031	0.00023	0.00021
Copper	0.0005 to 0.007	0.00207	0.00238	0.00248	0.00579	0.0029	0.00291	0.0038	0.00349	0.0204	0.00359	0.00406	0.00496	0.0032	0.00274	0.00229
Iron	0.01 to 0.03	0.165	0.185	0.114	0.404	0.078	0.072	0.128	0.127	4.88	0.294	0.412	0.739	0.192	0.129	0.087
Lead	5E-005 to 0.0025	<0.00005	<0.00005	0.000086	0.00009	<0.0001	<0.00005	<0.0001	<0.00005	0.00128	0.000086	0.00011	0.000196	0.000066	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.0106	0.00923	0.00884	0.00467	0.0088	0.00957	0.0091	0.00952	0.0101	0.00686	0.0074	0.0068	0.0105	0.00977	0.00945
Magnesium	0.1	119	125	119	62.9	117	114	120	134	99.6	96.8	73	59.9	99.6	107	98.7
Manganese	5E-005 to 0.0015	0.23	0.131	0.102	0.116	0.0944	0.0905	0.0366	0.0419	0.62	0.0648	0.086	0.103	0.187	0.143	0.14
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00881	0.00911	0.00901	0.0111	0.0104	0.0102	0.0122	0.0133	0.0131	0.0144	0.0111	0.00917	0.0127	0.0103	0.0097
Nickel	0.0005 to 0.005	0.00422	0.00435	0.00464	0.00411	0.0039	0.00406	0.003	0.00307	0.0197	0.00365	0.00411	0.00508	0.00496	0.0045	0.00401
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.3	0.44	<0.3	<0.3	<0.3	<0.3	0.38	<0.3	<0.3	<0.3	0.071	<0.3	<0.3
Potassium	0.05 to 2	24.4	21.6	21.1	17.6	18.8	19.5	19.1	20.2	19.4	16.9	14.7	14.5	22	20.1	20.4
Selenium	0.0001 to 0.006	0.00021	0.00037	0.00068	0.00049	0.0016	0.00219	0.0015	0.00145	0.00059	0.00076	0.00028	0.00024	0.00021	0.00025	0.00027
Silicon	0.05	9.77	9.81	9.15	6.66	8.84	8.35	7.89	8.34	16.1	8.1	7.99	9	10.1	10.1	9.77
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00002	<0.00001	0.000045	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	118	115	107	48.3	94.7	102	94.8	110	76.2	80.6	59.5	52	107	97.7	98.2
Strontium	0.0001 to 0.005	1.34	1.23	1.16	0.59	1.09	1.12	1.11	1.19	1.01	0.917	0.696	0.607	1.06	1.01	1.03
Sulphur	0.5															
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00002	<0.00001	0.000023	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	0.015	0.015	<0.01	0.014	<0.01	<0.01	0.013	<0.01	0.14	0.013	0.019	0.031	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extractic	0.00002															
Uranium	1E-005 to 0.001	0.00292	0.00314	0.00315	0.00167	0.00324	0.00311	0.00337	0.00366	0.0024	0.00243	0.00134	0.000839	0.00269	0.00268	0.00259
Vanadium	0.001 to 0.03	0.0026	0.0027	0.0031	0.0036	0.0037	0.0036	0.0038	0.004	0.0134	0.0039	0.0035	0.0038	0.0041	0.0028	0.0021
Zinc	0.003 to 0.006	<0.003	<0.003	0.004	0.0048	<0.006	<0.003	<0.006	<0.003	0.0182	<0.003	0.0036	0.0038	0.0035	<0.003	<0.003
Organics																
Carbon Organic (Dissolved)	0.5 to 5	8.3	7.09	7.29	16.7	6.96	6.44	8.3	8.82	16.9	10.2	11.9	14.2	7.94	8.15	7.82
Carbon Organic (Total)	0.5 to 5	8.34	6.99	7.36	19.6	6.66	6.21	8.28	8.91	24.7	10.8	12.4	14.7	8.15	8.36	7.93
Nitrogen Organic (Dissolved)	0.05 to 0.26		0.23	0.42	0.862	0.28	0.22	0.21	0.43	0.929	0.44	0.723	0.741	0.356	0.404	0.294
Nitrogen Organic (Total)	0.05 to 0.3	0.288	0.461	0.35	1.12	0.296	0.379	0.459	0.472	1.65	0.539	0.707	0.805	0.383	0.403	0.357
ALS LAB ID		**L1092368**	**L1102695**	**L1114029**	**L1122039**	**L1133342**	**L1140194**	**L1142492**	**L1145681**	**L1148880**	**L1152500**	**L1176520**	**L1190914**	**L1205273**	**L1222966**	**L1233797**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes	MDL	PC02 4-Dec-12	PC02 8-Jan-13	PC02 5-Feb-13	PC02 6-Mar-13	PC02 2-Apr-13	PC02 7-May-13	PC02 5-Jun-13	PC02 2-Jul-13	PC02 7-Aug-13	PC02 4-Sep-13	PC02 9-Oct-13	PC02 6-Nov-13	PC02 4-Dec-13	PC02 8-Jan-14	PC02 4-Feb-14
In Situ Parameters																
Conductivity µS/cm	...	714	921	0.532	916	1166	801	725	856	794		1.69	1029	972	986	908
Oxygen Dissolved %	...	60.5	73.8	73	88		84.7	77.5	87.2	68.5	67.8	77.5	55	68.1	75.2	73.5
Oxygen Dissolved	...	7.6	9.89	9.42	12.4		8.8	7.84	7.61	6.73	7.15	9.27	6.86	9.43	1.15	10.6
pH (unitless)	...	7.66	8.21	7.8	7.79	7.72	8.26	8.22	8.25	8.15	7.6	7.58	7.66	7.75	7.69	7.3
Redox Potential mV	...	21.1	73.8	47.4	17.4	43.3	115	70.3	104	286	177	46.7	30.8	-7.2	4.5	-61.3
Salinity ppt	...	0.57	0.8	0.43	0.76	0.88	0.51	0.45	0.45	0.47	0.85	0.85	0.82	0.87	0.86	0.85
Specific Conductivity µS/cm	...	1138	1592	875	1525	1724	1025	902	908	955	1678	1.12	1633	1747	1725	1714
Temperature °C	...	5.5	2.94	4.49	4.08	8.03	13.5	14.7	22.1	16.2	12.7	7.38	5.65	1.75	2.55	0.39
Total Dissolved Solids	...	740	1035	569	991	1121	666	586	590	621	1091	1096	1061	1134	1121	1114
Turbidity NTU	...	0	4.5	1.5	0.5	0.4	12.1	7.8	7	6.4		2.5	0.6	3.8	2.2	
Physical Tests																
Acidity to pH 8.3 (as CaCO3)	1												3			
Alkalinity (Total as CaCO3)	1 to 2	467	481	446	451	433	317	283	287	322	432	475	459	466	448	455
Bicarbonate Alkalinity	1 to 2	467	481	446	451	433	311	279	272	317	432	475	459	466	448	455
Carbonate Alkalinity	1 to 2	<2	<2	<2	<1	<1	5.9	4	15.3	5.1	<2	<2	<2	<2	<2	<2
Color TCU	5	8	6.2	6.8	6.1	6.5	27.6	27	35.6	33.5	9.7	8.6	9.3	7.9	7.3	
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	742	711	718	730	745	433	393	410	435	712	759	715	740	746	760
Hydroxide Alkalinity	1 to 2	<2	<2	<2	<1	<1	<1	<1	<1	<1	<2	<2	<2	<2	<2	<2
pH (unitless)	0.01 to 0.1	8.19	8.14	8.14	8.32	8.13	8.49	8.42	8.43	8.37	8.14	8.18	8.17	7.97	8.12	8.17
Specific Conductivity µS/cm	2	1600	1560	1590	1650	1680	963	877	912	937	1610	1660	1670	1630	1650	1710
Total Dissolved Solids	1 to 2	1120	1070	1240	1100	1150	628	553	599	603	1100	1100	1130	1110	1130	1000
Total Suspended Solids	3	<3	8.3	<3	4.3	3.3	20	12.9	23.5	11.5	16.7	9.3	<3	7	9.8	<3
Turbidity NTU	0.1	0.59	3.23	1.34	0.45	1.03	13.3	7.8	3.5	2.05	9.36	6.09	1	4.15	4.68	0.67
Dissolved Anions																
Bromide	0.05 to 2.495	<1	<1	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	<1
Chloride	0.5 to 1	112	114	118	124	125	63.9	57.4	57.9	61	113	117	120	129	133	137
Fluoride	0.02 to 0.4	<0.4	0.4	<0.4	<0.4	0.45	0.31	0.35	0.24	0.4	0.44	0.67	<0.4	<0.4	<0.4	<0.4
Sulphate	0.5 to 1	361	345	341	351	392	157	121	126	132	337	357	373	376	378	380
Nutrients																
Ammonia (Total)	0.005 to 0.05	0.0276	0.0209	0.0159	0.0174	0.0146	0.0119	0.01	0.0177	0.0189	0.0328	0.0207	0.013	0.0244	0.0221	0.0201
Nitrate (as N)	0.005 to 0.1	0.31	0.76	1.17	1.14	0.96	<0.05	<0.05	<0.05	0.069	<0.1	0.11	<0.1	0.31	0.76	1.18
Nitrite (as N)	0.001 to 0.02	0.028	<0.02	<0.02	<0.02	0.031	<0.01	<0.01	<0.01	<0.01	0.021	<0.02	0.035	<0.02	<0.02	0.025
Nitrogen (Dissolved)	0.05 to 0.1	0.678	1.13	1.34	1.19	1.3				0.773	0.92					
Nitrogen (Total)	0.0025 to 0.11	0.76	1.06	1.34	1.29	1.39	0.953	0.815	0.907	0.826	0.597	0.487	0.429			
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.424	0.482	0.423	0.475	0.4	0.815	0.699	0.907	0.964	0.572	0.44	0.417	0.382	0.417	0.375
Orthophosphate (Dissolved)	0.001 to 0.01											0.0385	0.0327	0.0296	0.0273	0.0212
Phosphorus - Dissolved	0.002 to 0.02	0.0422	0.0586	0.0282	0.0256	0.0329	0.0724	0.062	0.122	0.123	0.0899	0.0427	0.0347	0.0314	0.0293	0.0246
Phosphorus - Total	0.002 to 0.02	0.0488		0.0346	0.0295	0.0318	0.124	0.0895	0.0909	0.146		0.0614	0.0432	0.0489	0.0475	0.0292
Cyanide																
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																
Aluminum	0.001 to 0.025	<0.001	<0.001	<0.001	<0.001	<0.001	0.0015	0.0018	0.0044	0.002	0.0013	0.001	<0.001	<0.001	0.0011	<0.001
Antimony	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	0.00013	<0.0001	0.00012	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00119	0.00124	0.00121	0.0012	0.00165	0.00188	0.00166	0.0023	0.00273	0.00185	0.00167	0.00139	0.00115	0.00121	0.00122
Barium	5E-005 to 0.02	0.0537	0.0499	0.0494	0.0495	0.0548	0.0437	0.0424	0.0486	0.0456	0.061	0.0565	0.0585	0.0552	0.0536	0.0562
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.078	0.075	0.074	0.071	0.072	0.036	0.032	0.038	0.043	0.082	0.098	0.086	0.073	0.079	0.078
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000011	<0.00001
Calcium	0.05 to 0.1	114	111	112	117	120	71.3	68.3	70.5	70.6	111	119	108	114	119	117
Chromium	0.0001 to 0.018	0.00012	<0.0001	0.00014	0.00012	0.00013	0.00014	0.0001	0.00012	0.00013	<0.0001	0.00012	0.00012	<0.0001	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015	0.00023	0.00023	0.00019	0.00019	0.00016	0.00011	0.00011	0.00015	0.00014	0.00024	0.00027	0.00023	0.00026	0.00024	0.00024
Copper	0.0002 to 0.006	0.0014	0.00159	0.00178	0.00195	0.00228	0.00254	0.00227	0.00487	0.0021	0.00152	0.00128	0.00129	0.001	0.00119	0.0015
Dissolved Cadmium (by saltwater extr	0.00002															
Iron	0.01 to 0.03	0.04	0.033	0.032	0.029	0.022	0.019	0.021	0.024	0.029	0.018	0.037	0.046	0.047	0.034	0.039
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00842	0.00887	0.00853	0.0083	0.00896	0.00675	0.00568	0.00603	0.00649	0.0094	0.0111	0.0102	0.00861	0.00963	0.00879
Magnesium	0.1	111	106	106	106	108	62	54	56.8	62.8	105	112	108	111	109	114
Manganese	5E-005 to 0.0015	0.123	0.0836	0.0719	0.0615	0.0645	0.0226	0.0305	0.0337	0.0266	0.251	0.195	0.135	0.166	0.112	0.0853
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00849	0.00907	0.0089	0.00858	0.0107	0.0137	0.007	0.00827	0.00922	0.0114	0.0101	0.00822	0.00791	0.0089	0.00881
Nickel	0.0005 to 0.005	0.0039	0.00406	0.00395	0.00404	0.00397	0.00184	0.00174	0.00209	0.00254	0.00417	0.00577	0.00411	0.00388	0.00413	0.00421
Phosphorus	0.05 to 0.3	<0.05	<0.05	<0.05	<0.05	<0.05	0.063	0.059	0.083	0.123	0.056	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	0.05 to 2	20.9	20.3	19.8	19.9	20.6	15	14	14.7	15.2	23.4	22.2	21.9	21.4	19.4	19.8
Selenium	0.0001 to 0.006	0.0003	0.00073	0.00103	0.00119	0.00267	0.00039	0.00046	0.0003	0.00028	0.00032	0.00027	0.00028	0.00044	0.00097	0.00139
Silicon	0.05	9.72	8.95	8.96	8.72	8.5	5.53	4.06	6.05	8.95	10.5	10.4	10.2	9.45	9.1	9.34
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	104	102	96.9	92.6	97.2	49.7	42.4	46.2	51.3	99.8	98.8	104	95.8	103	103
Strontium	0.0001 to 0.005	1.01	1.1	1.03	0.979	1.08	0.641	0.511	0.58	0.605	1.05	1.1	1.07	1.02	1.09	1.04
Sulphur	0.5	112	110	106	113	117	50.6	38.7	40.4	42.7	106	114	122	116	116	123
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000025	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00249	0.00275	0.00272	0.00272	0.00334	0.00154	0.00108	0.00117	0.000906	0.00258	0.0025	0.00233	0.00235	0.00265	0.00302
Vanadium	0.001 to 0.03	0.0021	0.0025	0.0025	0.0027	0.0047	0.0031	0.0022	0.0028	0.0024	0.0036	0.0027	0.0022	0.0021	0.0024	0.0027
Zinc	0.001 to 0.006	<0.001	<0.001	0.005	<0.001	0.0013	0.0022	0.001	0.0037	0.0012	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Metals																
Aluminum	0.003 to 0.025	0.0139	0.0474	0.0214	0.058	0.0269	0.684	0.335	0.501	0.289	0.605	0.544	0.0459	0.177	0.0787	0.0234
Antimony	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	0.00015	0.00013	0.00015	0.00011	0.00013	0.00015	0.00011	0.0001	0.00013	<0.0001	<0.0001	0.0001
Arsenic	0.0001 to 0.0025	0.00123	0.00131	0.00133	0.00133	0.00161	0.00196	0.00178	0.00241	0.00278	0.00205	0.0017	0.00152	0.00129	0.00132	0.00129
Barium	5E-005 to 0.02	0.0515	0.0497	0.0515	0.0523	0.0558	0.0506	0.0457	0.0531	0.0508	0.0671	0.0616	0.0617	0.0575	0.0542	0.0555
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.081	0.084	0.08	0.082	0.078	0.039	0.033	0.04	0.048	0.088	0.095	0.093	0.082	0.085	0.084
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	0.000012	0.000013	0.000011	0.000012	<0.00001	0.000012	0.000012	0.000012	0.000012	<0.00001	<0.00001	0.000011	0.000012
Calcium	0.05 to 0.1	110	112	113	121	117	69.4	64.2	65.3	73.8	115	119	107	115	125	117
Chromium	0.0001 to 0.005	0.00021	0.00028	0.00033	0.00032	0.00028	0.0021	0.00108	0.00153	0.00101	0.00211	0.00182	0.00035	0.00068	0.00041	0.00027
Cobalt	0.0001 to 0.0015	0.00022	0.00025	0.00022	0.00025	0.00019	0.00071	0.00042	0.00058	0.00037	0.00066	0.00065	0.00028	0.00037	0.00029	0.00025
Copper	0.0005 to 0.007	0.00418	0.00321	0.00268	0.00278	0.00288	0.00647	0.00412	0.00501	0.00374	0.00702	0.00527	0.00222	0.00257	0.00252	0.00241
Iron	0.01 to 0.03	0.078	0.121	0.086	0.133	0.065	0.934	0.483	0.651	0.412	0.9	0.717	0.123	0.294	0.172	0.088
Lead	5E-005 to 0.0025	<0.00005	0.000069	<0.00005	<0.00005	<0.00005	0.000241	0.000131	0.000178	0.000128	0.000203	0.000165	<0.00005	0.000064	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00853	0.00971	0.00864	0.00927	0.00922	0.00707	0.00562	0.00587	0.00698	0.00983	0.0105	0.0102	0.00944	0.00964	0.00924
Magnesium	0.1	106	109	107	107	105	59.1	51.6	54	64.4	105	113	105	109	112	113
Manganese	5E-005 to 0.0015	0.12	0.0872	0.0726	0.0705	0.0675	0.127	0.0907	0.119	0.0795	0.28	0.221	0.168	0.176	0.116	0.0866
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00833	0.00983	0.00896	0.00976	0.0113	0.0141	0.00683	0.00798	0.0101	0.012	0.0107	0.00932	0.00916	0.00934	0.00948
Nickel	0.0005 to 0.005	0.00381	0.00432	0.00405	0.00443	0.00418	0.00478	0.00332	0.00406	0.00391	0.00687	0.00682	0.00436	0.00481	0.0044	0.00454
Phosphorus	0.05 to 0.3	0.056	<0.05	<0.05	<0.05	<0.05	0.109	0.091	0.119	0.153	0.088	0.085	<0.05	<0.05	<0.05	<0.05
Potassium	0.05 to 2	19.6	21	19.7	20.6	21.5	14.5	13.4	14.1	16	23.9	22	22.9	22.4	20.4	19.6
Selenium	0.0001 to 0.006	0.00027	0.00068	0.00102	0.0012	0.00246	0.00041	0.00044	0.00033	0.00028	0.00038	0.00026	0.00025	0.00041	0.00092	0.0013
Silicon	0.05	9.35	9.4	9.06	9.16	8.53	7.17	4.68	6.95	10.1	13.3	11.9	10.4	10.3	9.77	9.54
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000028	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	97.2	103	100	96.8	103	48.6	42.2	45.2	54.4	100	103	106	100	105	103
Strontium	0.0001 to 0.005	0.992	1.16	1.05	1.09	1.07	0.634	0.491	0.549	0.628	1.09	1.19	1.14	1.09	1.13	1.07
Sulphur	0.5	111	117	112	119	119	50.1	37.7	38.9	46.3	114	121	127	125	122	127
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.028	0.015	0.02	0.012	0.029	0.026	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extractic	0.00002															
Uranium	1E-005 to 0.001	0.00247	0.00286	0.00284	0.00304	0.00332	0.00161	0.00105	0.00114	0.001	0.00264	0.00262	0.00251	0.00258	0.0028	0.003
Vanadium	0.001 to 0.03	0.0023	0.0029	0.003	0.0032	0.0049	0.0049	0.0031	0.0042	0.0033	0.0051	0.0043	0.003	0.0027	0.0029	0.003
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	0.0046	0.003	0.0042	0.0032	0.0031	<0.003	<0.003	<0.003	<0.003	<0.003
Organics																
Carbon Organic (Dissolved)	0.5 to 5	7.36	7.58	7.23	7.11	7.35	12	7.26	16.5	14.5	8.69	7.8	8.29	7.6	7.19	7
Carbon Organic (Total)	0.5 to 5	7.4	7.12	7.05	6.97	7.03	12.2	14.3	16.8	15	10	8.18	8.33	7.77	7.61	6.93
Nitrogen Organic (Dissolved)	0.05 to 0.26	0.31			<0.24	0.29					0.87					
Nitrogen Organic (Total)	0.05 to 0.3	0.397	0.461	0.407	<0.26	0.385					0.539					
ALS LAB ID		**L1245799**	**L1256678**	**l1265809**	**L1276517**	**L1285503**	**L1298960**	**L1312719**	**L1326032**	**L1344180**	**L1358222**	**L1375698**	**L1388680**	**L1399806**	**L1410216**	**L1418933**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes	MDL	PC02 12-Mar-14	PC02 19-Mar-14	PC02 26-Mar-14	PC02 2-Apr-14	PC02 9-Apr-14	PC02 23-Apr-14	PC02 06/May/2014	PC02 21-May-14	PC02 3-Jun-14	PC02 18-Jun-14	PC02 3-Jul-14	PC02 16-Jul-14	PC02 30-Jul-14	PC02 12-Aug-14	PC02 4-Sep-14
In Situ Parameters																
Conductivity µS/cm	...	356	719	852	964	929	1302	1067	873	888	807	975	873	821	966	
Oxygen Dissolved %	...	78.8	82.6	70.4	79.4	80.2	86.1	107	93.3	86.8	84	86.4	80.3	72.2	84.7	
Oxygen Dissolved	...	11.2	11.1	9.22	9.96	9.9	10.6	12.3	9.38	8.52	8.85	8.42	7.54	7.44	8.12	
pH (unitless)	...	7.96	7.98	7.83	7.98	7.84	8.12	8.33	8.35	8.31	8.33	8.27	8.53	8.19	8.33	7.95
Redox Potential mV	...	14.4	4	8.5	38.9	-1.1	88.1	195	60.1	166	85.1	84.8	126	126	78.9	
Salinity ppt	...	0.32	0.62	0.71	0.77	0.73	1.04	0.78	0.54	0.53	0.52	0.58	0.5	0.52	0.57	
Specific Conductivity µS/cm	...	658	1243	1429	1533	1454	2031	1540	1079	1070	1049	1666	1001	1043	1135	
Temperature °C	...	0.95	2.92	3.85	5.57	6.08	6.21	8.9	15	16.1	12.9	16.4	18.3	13.8	17.2	11.4
Total Dissolved Solids	...	428	808	929	996	945	1320	1001	702	695	682	758	651	679	738	
Turbidity NTU	...															
Physical Tests																
Acidity to pH 8.3 (as CaCO3)	1															
Alkalinity (Total as CaCO3)	1 to 2	160	319	381	388	367	375	390	286	304	326	428	401	381	388	396
Bicarbonate Alkalinity	1 to 2	160	319	381	388	367	375	390	286	299	312	408	375	381	360	390
Carbonate Alkalinity	1 to 2	<2	<2	<2	<2	<2	<1	<2	<1	4.6	13.6	19.4	25.2	<2	28.1	5.7
Color TCU	5															
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	282	567	691	674	690	911	760	485	478	482	551	507	591	535	580
Hydroxide Alkalinity	1 to 2	<2	<2	<2	<2	<2	<1	<2	<1	<1	<1	<1	<1	<2	<1	<1
pH (unitless)	0.01 to 0.1	7.93	8.19	8.17	8.18	8.14	8.32	8.25	8.36	8.46	8.4	8.54	8.48	8.25	8.45	8.31
Specific Conductivity µS/cm	2	625	1220	1450	1400	1470	2030	1500	1040	1050	1040	1130	1080	1360	1130	1320
Total Dissolved Solids	1 to 2	421	818	1010	1000	1050	1510	1030	697	699	689	732	716	633	781	876
Total Suspended Solids	3	61.4	<3	4.5	<3	<3	4.9	9.8	33.1	14.4	9.9	13.3	11.2	7.8	32.3	7
Turbidity NTU	0.1	29	1.35	0.95	0.67	0.43	2.38	20.4	7.97	4.5	1.23	3.06	2.55	1.88	10	2.47
Dissolved Anions																
Bromide	0.05 to 2.495	0.051	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	0.5 to 1	27.8	67.3	88.9	85	96.6	107	63.3	64.4	62.8	62.3	56.1	60.3	84	65.4	83
Fluoride	0.02 to 0.4	0.105	<0.2	<0.2	0.2	0.21	<0.4	0.23	0.21	0.23	0.257	0.42	0.27	0.265	0.313	0.253
Sulphate	0.5 to 1	141	295	362	363	375	734	442	218	199	183	179	146	280	186	255
Nutrients																
Ammonia (Total)	0.005 to 0.05	0.268	0.1	0.0359	0.0199	0.0155	0.0156	0.0131	0.0118	0.0137	0.0173	0.0242	0.019	0.0363	0.0291	0.026
Nitrate (as N)	0.005 to 0.1	0.381	0.677	0.893	0.697	0.633	0.44	0.067	<0.05	<0.05	<0.05	0.06	0.09	0.149	<0.05	0.099
Nitrite (as N)	0.001 to 0.02	0.0097	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.015	<0.01	0.012
Nitrogen (Dissolved)	0.05 to 0.1															
Nitrogen (Total)	0.0025 to 0.11								0.779							
Nitrogen Kjeldahl (Total)	0.05 to 0.2	1.64	0.695	0.514	0.461	0.387	0.989	1.07	0.803	0.76	0.751	1.01	0.905	0.618	1.32	0.571
Orthophosphate (Dissolved)	0.001 to 0.01	0.432	0.0953	0.0648	0.0553	0.0415	0.178	0.0751	0.0696	0.0736	0.0877	0.106	0.133	0.0933	0.152	0.084
Phosphorus - Dissolved	0.002 to 0.02	0.502	0.115	0.0746	0.0646	0.0503	0.198	0.0855	0.0836	0.0828	0.0914	0.127	0.154	0.0981	0.174	0.0917
Phosphorus - Total	0.002 to 0.02	0.671	0.117	0.0868	0.0708	0.0452	0.22	0.252	0.128	0.104	0.122	0.143	0.172	0.112	0.223	0.0763
Cyanide																
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																
Aluminum	0.001 to 0.025	0.004	0.0021	0.0011	0.0153	<0.001	<0.001	0.0017	0.0016	0.0015	0.0016	0.0015	0.0026	0.0013	0.0019	0.0011
Antimony	0.0001 to 0.0025	<0.0001	0.00011	<0.0001	0.00012	0.00012	0.00016	0.00014	0.00013	0.00012	<0.0001	0.00013	0.0001	<0.0001	0.00014	<0.0001
Arsenic	0.0001 to 0.0025	0.00175	0.00174	0.0017	0.00187	0.00171	0.00303	0.00211	0.00215	0.00226	0.00242	0.00295	0.00304	0.00262	0.00322	0.00236
Barium	5E-005 to 0.02	0.0256	0.0475	0.0527	0.0545	0.0533	0.0567	0.0638	0.0509	0.0507	0.0435	0.0501	0.0479	0.0516	0.0557	0.0505
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.029	0.039	0.05	0.054	0.057	0.043	0.035	0.042	0.036	0.037	0.045	0.047	0.057	0.045	0.067
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	44.9	89.2	104	107	108	111	121	78.1	78.7	77.7	86.7	80.8	91.1	88.6	92.6
Chromium	0.0001 to 0.018	0.00012	0.00015	0.00017	0.00021	0.00022	0.00021	0.00011	0.00014	0.00012	0.00013	0.00013	0.00014	0.00012	0.00015	0.00011
Cobalt	0.0001 to 0.0015	0.00025	0.00018	0.00016	0.00015	0.00013	0.00017	0.00015	0.00012	0.00012	0.00013	0.00018	0.00016	0.00017	0.00021	0.00017
Copper	0.0002 to 0.006	0.00374	0.00257	0.0023	0.00242	0.00218	0.00259	0.00221	0.00269	0.00261	0.00209	0.00295	0.00235	0.00196	0.00224	0.00181
Dissolved Cadmium (by saltwater extr	0.00002															
Iron	0.01 to 0.03	0.073	0.036	0.028	0.061	0.024	0.022	0.018	0.015	0.02	0.019	0.02	0.025	0.023	0.038	0.031
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00307	0.00615	0.00711	0.00801	0.00812	0.00979	0.00701	0.00726	0.0062	0.00588	0.00853	0.00763	0.0087	0.00825	0.00849
Magnesium	0.1	41.2	83.6	105	98.9	102	154	111	70.4	68.4	70	81.1	74.2	88.2	76.2	84.6
Manganese	5E-005 to 0.0015	0.108	0.0793	0.084	0.0796	0.0782	0.0371	0.0689	0.0309	0.0316	0.0298	0.0291	0.0276	0.108	0.0483	0.103
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00835	0.0152	0.0138	0.0137	0.0121	0.0122	0.0147	0.014	0.0116	0.0104	0.0128	0.0116	0.0125	0.0152	0.0119
Nickel	0.0005 to 0.005	0.00218	0.00254	0.00265	0.00263	0.00297	0.00225	0.00233	0.0018	0.00205	0.00228	0.00266	0.00284	0.0032	0.00281	0.00329
Phosphorus	0.05 to 0.3	0.528	0.111	0.079	0.075	0.053	0.19	0.093	0.085	0.085	0.096	0.118	0.151	0.106	0.18	0.099
Potassium	0.05 to 2	13.1	16.2	17.8	16.1	17.4	26.6	18.2	15.1	14.7	14.4	18.7	16.8	20.1	16.8	18.6
Selenium	0.0001 to 0.006	0.00058	0.00101	0.0015	0.00166	0.00211	0.00113	0.00058	0.00041	0.00036	0.00027	0.00031	0.00029	0.00029	0.00029	0.00023
Silicon	0.05	4.5	7.3	8.18	7.53	7.37	7.4	6.89	5.04	5.46	5.93	6.38	7.41	8.67	10.8	9.79
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	29.3	62.3	76.3	78.3	85.9	127	74.2	58.8	52.1	53.3	61.2	58.9	79.9	61.3	79.6
Strontium	0.0001 to 0.005	0.372	0.798	0.889	0.939	1.02	1.24	0.99	0.672	0.675	0.619	0.749	0.715	0.847	0.77	0.807
Sulphur	0.5	46.9	95.2	112	113	119	236	136	74.3	68.8	56.5	58.6	47.7	89.7	59.7	82.8
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.000916	0.00221	0.00269	0.00246	0.00259	0.00379	0.00237	0.00177	0.00156	0.00132	0.00187	0.00139	0.00195	0.00133	0.00187
Vanadium	0.001 to 0.03	0.0026	0.0031	0.0035	0.0037	0.004	0.0033	0.0029	0.0033	0.0028	0.0024	0.003	0.0027	0.0029	0.0035	0.0028
Zinc	0.001 to 0.006	0.0017	0.0033	0.0028	0.0014	0.0018	0.0019	0.0011	0.0014	0.0018	0.0014	0.0012	<0.001	<0.001	0.0012	<0.001
Total Metals																
Aluminum	0.003 to 0.025	1.36	0.0608	0.0443	<0.003	0.0266	0.215	1.63	0.493	0.262	0.203	0.108	0.216	0.0993	0.673	0.198
Antimony	0.0001 to 0.0025	0.00013	0.00012	<0.0001	0.00013	0.00011	0.00018	0.0002	0.00016	0.00014	<0.0001	0.00013	0.00014	0.00011	0.00018	0.00013
Arsenic	0.0001 to 0.0025	0.0022	0.00176	0.00185	0.00174	0.00171	0.00308	0.00264	0.00215	0.00234	0.00237	0.00286	0.0032	0.00247	0.00355	0.00236
Barium	5E-005 to 0.02	0.0416	0.0465	0.0528	0.0547	0.0551	0.0594	0.0802	0.0536	0.0524	0.0449	0.0535	0.0513	0.053	0.0652	0.0528
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.031	0.04	0.051	0.058	0.059	0.046	0.037	0.042	0.04	0.043	0.044	0.051	0.06	0.055	0.068
Cadmium	1E-005 to 8.5E-005	0.000025	<0.00001	<0.00001	<0.00001	<0.00001	0.000012	0.000027	0.000014	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	0.00001	<0.00001
Calcium	0.05 to 0.1	44.3	87.3	103	103	103	114	115	74.5	75.5	75.7	83	80.6	90.4	89.7	91.6
Chromium	0.0001 to 0.005	0.00367	0.00041	0.00029	0.00022	0.00034	0.00084	0.00476	0.00152	0.00088	0.00073	0.00049	0.00074	0.00052	0.00194	0.00067
Cobalt	0.0001 to 0.0015	0.00137	0.00021	0.00019	0.00014	0.00016	0.00034	0.00159	0.00054	0.00038	0.00029	0.00034	0.00036	0.00024	0.0008	0.00034
Copper	0.0005 to 0.007	0.0111	0.00328	0.00287	0.00221	0.00276	0.0039	0.00992	0.00511	0.00414	0.00323	0.0041	0.00369	0.00292	0.00556	0.00326
Iron	0.01 to 0.03	1.87	0.126	0.1	0.02	0.065	0.313	2.24	0.616	0.4	0.28	0.184	0.322	0.158	0.871	0.271
Lead	5E-005 to 0.0025	0.000483	<0.00005	<0.00005	<0.00005	<0.00005	0.000084	0.000611	0.000182	0.000116	0.00007	0.000107	0.000085	<0.00005	0.00025	0.000087
Lithium	0.0005 to 0.025	0.0036	0.00602	0.00728	0.00786	0.00788	0.00995	0.00752	0.00717	0.00612	0.0067	0.00767	0.00781	0.00866	0.00851	0.00815
Magnesium	0.1	40.5	79.5	101	95.6	97.9	157	106	67.3	66	65.6	79.5	75.1	88.5	77.6	84.4
Manganese	5E-005 to 0.0015	0.237	0.082	0.089	0.0786	0.0793	0.0563	0.361	0.0977	0.0802	0.0662	0.0872	0.0781	0.123	0.211	0.133
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	0.000025	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0087	0.0162	0.0148	0.0143	0.012	0.0132	0.0142	0.0141	0.0117	0.0111	0.0127	0.0127	0.013	0.0161	0.0125
Nickel	0.0005 to 0.005	0.00815	0.00284	0.00303	0.00264	0.00307	0.00336	0.00955	0.00382	0.00329	0.00311	0.0036	0.00384	0.00361	0.00577	0.00414
Phosphorus	0.05 to 0.3	0.661	0.129	0.083	0.054	0.056	0.237	0.227	0.113	0.096	0.114	0.145	0.169	0.102	0.247	0.112
Potassium	0.05 to 2	12.7	15.5	17.2	15.5	16.5	27.7	16.9	14.8	14.1	13.6	17.8	17	20.3	17.4	18.6
Selenium	0.0001 to 0.006	0.00064	0.00093	0.00148	0.00162	0.00197	0.00109	0.0006	0.00038	0.00037	0.00026	0.0003	0.00031	0.00025	0.00034	0.00022
Silicon	0.05	7.78	7.18	8.23	7.32	7.12	8.24	10.7	6.07	5.98	6.23	6.53	7.97	8.95	12.4	10.2
Silver	1E-005 to 0.0001	0.000018	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000014	0.000033	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	28.7	59.7	78.8	81.6	83.5	130	71.5	55.5	52.2	52.1	61.3	61.3	80.3	62.7	81.1
Strontium	0.0001 to 0.005	0.381	0.801	0.929	0.902	0.989	1.26	0.979	0.654	0.646	0.634	0.774	0.728	0.878	0.802	0.83
Sulphur	0.5	45.5	96.6	117	111	117	242	140	70.9	67.1	56.1	59.8	49.3	92	62.2	84.2
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	0.051	<0.01	<0.01	<0.01	<0.01	<0.01	0.067	0.02	0.011	<0.01	<0.01	<0.01	<0.01	0.026	<0.01
Total Cadmium (by saltwater extractic	0.00002															
Uranium	1E-005 to 0.001	0.00101	0.00223	0.00287	0.00258	0.00262	0.00399	0.0024	0.00179	0.00162	0.00133	0.00189	0.00155	0.00205	0.00147	0.00197
Vanadium	0.001 to 0.03	0.0061	0.0033	0.0038	0.0036	0.004	0.004	0.0073	0.0049	0.0036	0.0034	0.0035	0.0033	0.0034	0.0054	0.0033
Zinc	0.003 to 0.006	0.0074	<0.003	<0.003	<0.003	<0.003	<0.003	0.0077	0.0035	<0.003	<0.003	<0.003	<0.003	<0.003	0.0051	<0.003
Organics																
Carbon Organic (Dissolved)	0.5 to 5	13.3	8.56	7.61	7.65	7.21	14.6	11.5	12.7	12.7	11.9	14.9	15.3	11.1	18.1	11.6
Carbon Organic (Total)	0.5 to 5	15.3	9.03	7.71	7.53	6.84	17.3	13.9	13.4	12.9	12.2	15	15.6	12.9	19	11.3
Nitrogen Organic (Dissolved)	0.05 to 0.26															
Nitrogen Organic (Total)	0.05 to 0.3															
ALS LAB ID		L1432163	L1434695	L1437439	L1439467	L1441961	L1446462	L1451608	L1458340	L1465108	L1473827	L1481215	L1488886	L1495443	L1502292	L1513418

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes		MDL	PC02 17-Sep-14
In Situ Parameters			
Conductivity µS/cm		...	1154
Oxygen Dissolved %	...		72.5
Oxygen Dissolved	...		7.88
pH (unitless)		...	7.71
Redox Potential mV		...	78.4
Salinity ppt		...	0.079
Specific Conductivity µS/cm		...	1558
Temperature °C		...	11.4
Total Dissolved Solids		...	1013
Turbidity NTU		...	
Physical Tests			
Acidity to pH 8.3 (as CaCO3)		1	
Alkalinity (Total as CaCO3)		1 to 2	439
Bicarbonate Alkalinity		1 to 2	439
Carbonate Alkalinity		1 to 2	<1
Color TCU		5	
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	702
Hydroxide Alkalinity		1 to 2	<1
pH (unitless)		0.01 to 0.1	8.27
Specific Conductivity µS/cm		2	1610
Total Dissolved Solids		1 to 2	1200
Total Suspended Solids		3	6.7
Turbidity NTU		0.1	2.17
Dissolved Anions			
Bromide		0.05 to 2.495	<0.5
Chloride		0.5 to 1	109
Fluoride		0.02 to 0.4	0.23
Sulphate		0.5 to 1	369
Nutrients			
Ammonia (Total)		0.005 to 0.05	0.0248
Nitrate (as N)		0.005 to 0.1	0.113
Nitrite (as N)		0.001 to 0.02	0.013
Nitrogen (Dissolved)		0.05 to 0.1	
Nitrogen (Total)		0.0025 to 0.11	
Nitrogen Kjeldahl (Total)		0.05 to 0.2	0.457
Orthophosphate (Dissolved)		0.001 to 0.01	0.0448
Phosphorus - Dissolved		0.002 to 0.02	0.0509
Phosphorus - Total		0.002 to 0.02	0.0529
Cyanide			
Cyanide (Free)		0.005	<0.005
Cyanide (Total)		0.005	<0.005
Cyanide (WAD)		0.005	<0.005
Dissolved Metals			
Aluminum		0.001 to 0.025	0.0012
Antimony		0.0001 to 0.0025	<0.0001
Arsenic		0.0001 to 0.0025	0.00176
Barium		5E-005 to 0.02	0.0569
Beryllium		0.0001 to 0.005	<0.0001
Bismuth		0.0005 to 0.2	<0.0005
Boron		0.01 to 0.1	0.085
Cadmium		1E-005 to 8.5E-005	<0.00001
Calcium		0.05 to 0.1	112
Chromium		0.0001 to 0.018	0.00012
Cobalt		0.0001 to 0.0015	0.00019
Copper		0.0002 to 0.006	0.00193
Dissolved Cadmium (by saltwater extr		0.00002	
Iron		0.01 to 0.03	0.022
Lead		5E-005 to 0.0025	<0.00005
Lithium		0.0005 to 0.025	0.0105
Magnesium		0.1	103
Manganese		5E-005 to 0.0015	0.196
Mercury		1E-005 to 5E-005	<0.00001
Molybdenum		5E-005 to 0.005	0.0119
Nickel		0.0005 to 0.005	0.0041
Phosphorus		0.05 to 0.3	0.062
Potassium		0.05 to 2	21.1
Selenium		0.0001 to 0.006	0.00023
Silicon		0.05	9.98
Silver		1E-005 to 0.0001	<0.00001
Sodium		0.05 to 2	103
Strontium		0.0001 to 0.005	1.06
Sulphur		0.5	116
Thallium		1E-005 to 0.001	<0.00001
Tin		0.0001 to 0.0025	<0.0001
Titanium		0.01	<0.01
Uranium		1E-005 to 0.001	0.00268
Vanadium		0.001 to 0.03	0.0034
Zinc		0.001 to 0.006	0.0013
Total Metals			
Aluminum		0.003 to 0.025	0.0715
Antimony		0.0001 to 0.0025	<0.0001
Arsenic		0.0001 to 0.0025	0.00185
Barium		5E-005 to 0.02	0.058
Beryllium		0.0001 to 0.005	<0.0001
Bismuth		0.0005 to 0.2	<0.0005
Boron		0.01 to 0.1	0.092
Cadmium		1E-005 to 8.5E-005	0.000011
Calcium		0.05 to 0.1	112
Chromium		0.0001 to 0.005	0.00049
Cobalt		0.0001 to 0.0015	0.00025
Copper		0.0005 to 0.007	0.00331
Iron		0.01 to 0.03	0.138
Lead		5E-005 to 0.0025	<0.00005
Lithium		0.0005 to 0.025	0.0107
Magnesium		0.1	104
Manganese		5E-005 to 0.0015	0.212
Mercury		1E-005 to 5E-005	<0.00001
Molybdenum		5E-005 to 0.005	0.013
Nickel		0.0005 to 0.005	0.00444
Phosphorus		0.05 to 0.3	0.056
Potassium		0.05 to 2	21.3
Selenium		0.0001 to 0.006	0.00028
Silicon		0.05	10.3
Silver		1E-005 to 0.0001	<0.00001
Sodium		0.05 to 2	106
Strontium		0.0001 to 0.005	1.13
Sulphur		0.5	121
Thallium		1E-005 to 0.001	<0.00001
Tin		0.0001 to 0.0025	<0.0001
Titanium		0.01	<0.01
Total Cadmium (by saltwater extractic		0.00002	
Uranium		1E-005 to 0.001	0.00287
Vanadium		0.001 to 0.03	0.0041
Zinc		0.003 to 0.006	<0.003
Organics			
Carbon Organic (Dissolved)		0.5 to 5	8.79
Carbon Organic (Total)		0.5 to 5	8.9
Nitrogen Organic (Dissolved)		0.05 to 0.26	
Nitrogen Organic (Total)		0.05 to 0.3	
ALS LAB ID			**L1519657**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes	MDL	PC02WH 12-Aug-14
In Situ Parameters		
Conductivity µS/cm	...	
Oxygen Dissolved %	...	
Oxygen Dissolved	...	
pH (unitless)	...	
Redox Potential mV	...	
Salinity ppt	...	
Specific Conductivity µS/cm	...	
Temperature °C	...	
Total Dissolved Solids	...	
Turbidity NTU	...	
Physical Tests		
Acidity to pH 8.3 (as CaCO3)	1	
Alkalinity (Total as CaCO3)	1 to 2	383
Bicarbonate Alkalinity	1 to 2	383
Carbonate Alkalinity	1 to 2	<2
Color TCU	5	
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	738
Hydroxide Alkalinity	1 to 2	<2
pH (unitless)	0.01 to 0.1	7.94
Specific Conductivity µS/cm	2	1670
Total Dissolved Solids	1 to 2	1240
Total Suspended Solids	3	90
Turbidity NTU	0.1	83
Dissolved Anions		
Bromide	0.05 to 2.495	<0.5
Chloride	0.5 to 1	127
Fluoride	0.02 to 0.4	0.273
Sulphate	0.5 to 1	418
Nutrients		
Ammonia (Total)	0.005 to 0.05	0.0153
Nitrate (as N)	0.005 to 0.1	0.172
Nitrite (as N)	0.001 to 0.02	<0.01
Nitrogen (Dissolved)	0.05 to 0.1	
Nitrogen (Total)	0.0025 to 0.11	
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.449
Orthophosphate (Dissolved)	0.001 to 0.01	0.0012
Phosphorus - Dissolved	0.002 to 0.02	0.0045
Phosphorus - Total	0.002 to 0.02	0.0325
Cyanide		
Cyanide (Free)	0.005	<0.005
Cyanide (Total)	0.005	<0.005
Cyanide (WAD)	0.005	<0.005
Dissolved Metals		
Aluminum	0.001 to 0.025	0.004
Antimony	0.0001 to 0.0025	0.00014
Arsenic	0.0001 to 0.0025	0.00174
Barium	5E-005 to 0.02	0.0429
Beryllium	0.0001 to 0.005	<0.0001
Bismuth	0.0005 to 0.2	<0.0005
Boron	0.01 to 0.1	0.091
Cadmium	1E-005 to 8.5E-005	0.000016
Calcium	0.05 to 0.1	125
Chromium	0.0001 to 0.018	<0.0001
Cobalt	0.0001 to 0.0015	0.00033
Copper	0.0002 to 0.006	0.00239
Dissolved Cadmium (by saltwater extr	0.00002	
Iron	0.01 to 0.03	0.069
Lead	5E-005 to 0.0025	<0.00005
Lithium	0.0005 to 0.025	0.0106
Magnesium	0.1	103
Manganese	5E-005 to 0.0015	0.00952
Mercury	1E-005 to 5E-005	<0.00001
Molybdenum	5E-005 to 0.005	0.00976
Nickel	0.0005 to 0.005	0.00512
Phosphorus	0.05 to 0.3	<0.05
Potassium	0.05 to 2	19.9
Selenium	0.0001 to 0.006	0.00091
Silicon	0.05	10
Silver	1E-005 to 0.0001	<0.00001
Sodium	0.05 to 2	104
Strontium	0.0001 to 0.005	0.984
Sulphur	0.5	127
Thallium	1E-005 to 0.001	<0.00001
Tin	0.0001 to 0.0025	<0.0001
Titanium	0.01	<0.01
Uranium	1E-005 to 0.001	0.00247
Vanadium	0.001 to 0.03	0.0097
Zinc	0.001 to 0.006	0.0034
Total Metals		
Aluminum	0.003 to 0.025	0.0645
Antimony	0.0001 to 0.0025	0.00023
Arsenic	0.0001 to 0.0025	0.00278
Barium	5E-005 to 0.02	0.0449
Beryllium	0.0001 to 0.005	<0.0001
Bismuth	0.0005 to 0.2	<0.0005
Boron	0.01 to 0.1	0.101
Cadmium	1E-005 to 8.5E-005	0.000061
Calcium	0.05 to 0.1	122
Chromium	0.0001 to 0.005	0.00043
Cobalt	0.0001 to 0.0015	0.00106
Copper	0.0005 to 0.007	0.00917
Iron	0.01 to 0.03	2.69
Lead	5E-005 to 0.0025	0.000737
Lithium	0.0005 to 0.025	0.0108
Magnesium	0.1	103
Manganese	5E-005 to 0.0015	0.0117
Mercury	1E-005 to 5E-005	<0.00001
Molybdenum	5E-005 to 0.005	0.015
Nickel	0.0005 to 0.005	0.013
Phosphorus	0.05 to 0.3	0.066
Potassium	0.05 to 2	19.6
Selenium	0.0001 to 0.006	0.00085
Silicon	0.05	9.98
Silver	1E-005 to 0.0001	<0.00001
Sodium	0.05 to 2	102
Strontium	0.0001 to 0.005	1.04
Sulphur	0.5	132
Thallium	1E-005 to 0.001	0.000014
Tin	0.0001 to 0.0025	<0.0001
Titanium	0.01	<0.01
Total Cadmium (by saltwater extractio	0.00002	
Uranium	1E-005 to 0.001	0.00313
Vanadium	0.001 to 0.03	0.041
Zinc	0.003 to 0.006	0.0123
Organics		
Carbon Organic (Dissolved)	0.5 to 5	7.15
Carbon Organic (Total)	0.5 to 5	7.13
Nitrogen Organic (Dissolved)	0.05 to 0.26	
Nitrogen Organic (Total)	0.05 to 0.3	
ALS LAB ID		**L1502292**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C2.29 - PC02.3
PAGE 1 OF 1

Analytes		MDL	PC02.3 4-Jun-14	PC02.3 18-Jun-14	PC02.3 3-Jul-14	PC02.3 16-Jul-14	PC02.3 30-Jul-14	PC02.3 12-Aug-14	PC02.3 4-Sep-14	PC02.3 17-Sep-14
In Situ Parameters										
Conductivity µS/cm		...	695	709	933	774	783	739		751
Oxygen Dissolved %	...		88.7	89.4	96.3	89.3	79.6	87.5		97.9
Oxygen Dissolved	...		8.62	8.96	9.24	8.26	7.74	8.21		10.9
pH (unitless)		...	8.41	8.48	8.34	8.61	8.74	8.24	8.5	8.38
Redox Potential mV		...	154	96	87.3	134	121	45.4		84.5
Salinity ppt		...	0.41	0.43	0.55	0.43	0.46	0.42		0.52
Specific Conductivity µS/cm		...	827	875	1096	875	933	848		1044
Temperature °C		...	16.7	15.1	17.2	19	16.6	18.3	12.3	10.3
Total Dissolved Solids		...	537	568	713	569	607	551		678
Turbidity NTU		...								
Physical Tests										
Acidity to pH 8.3 (as CaCO3)		1								
Alkalinity (Total as CaCO3)		1 to 2	279	301	449	395	404	282	390	404
Bicarbonate Alkalinity		1 to 2	270	286	428	368	377	265	364	374
Carbonate Alkalinity		1 to 2	8.3	15.7	20.6	27	27.3	16.3	25.4	30.1
Color TCU		5								
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	369	402	527	445	459	375	465	497
Hydroxide Alkalinity		1 to 2	<1	<1	<1	<1	<1	<1	<1	<1
pH (unitless)		0.01 to 0.1	8.48	8.44	8.55	8.54	8.5	8.41	8.5	8.54
Specific Conductivity µS/cm		2	799	855	1060	945	1020	845	1020	1080
Total Dissolved Solids		1 to 2	498	553	641	617	911	580	665	732
Total Suspended Solids		3	7.8	8.6	11.7	11.8	5.5	17.8	3	4.1
Turbidity NTU		0.1	4.7	2.91	2.86	3.29	1.27	5.53	1.38	0.76
Dissolved Anions										
Bromide		0.05 to 2.495	<0.25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride		0.5 to 1	54.4	52.4	49	52.1	54.6	59.9	57	57.5
Fluoride		0.02 to 0.4	0.22	0.235	0.44	0.274	0.277	0.274	0.269	0.25
Sulphate		0.5 to 1	87.4	109	130	80.7	118	108	127	160
Nutrients										
Ammonia (Total)		0.005 to 0.05	0.0099	0.021	0.0219	0.0177	0.0279	0.0191	0.0202	0.014
Nitrate (as N)		0.005 to 0.1	<0.025	<0.05	<0.05	<0.05	0.137	<0.05	0.177	0.137
Nitrite (as N)		0.001 to 0.02	<0.005	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	<0.01
Nitrogen (Dissolved)		0.05 to 0.1								
Nitrogen (Total)		0.0025 to 0.11								
Nitrogen Kjeldahl (Total)		0.05 to 0.2	0.784	0.856	1.09	1.04	0.956	1.16	0.778	0.617
Orthophosphate (Dissolved)		0.001 to 0.01	0.0385	0.0317	0.0824	0.0999	0.108	0.0831	0.105	0.104
Phosphorus - Dissolved		0.002 to 0.02	0.0505	0.0432	0.0975	0.124	0.119	0.105	0.148	0.123
Phosphorus - Total		0.002 to 0.02	0.0734	0.0567	0.13	0.137	0.127	0.141	0.161	0.0945
Cyanide										
Cyanide (Free)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals										
Aluminum		0.001 to 0.025	0.0018	0.0069	0.0017	0.0026	0.0016	0.003	0.002	0.0015
Antimony		0.0001 to 0.0025	0.00011	<0.0001	0.00014	0.00012	<0.0001	0.00014	<0.0001	<0.0001
Arsenic		0.0001 to 0.0025	0.00175	0.00158	0.00224	0.00226	0.0025	0.00207	0.00203	0.00213
Barium		5E-005 to 0.02	0.0519	0.0493	0.0596	0.0527	0.05	0.0535	0.0526	0.0517
Beryllium		0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	0.03	0.029	0.033	0.036	0.033	0.04	0.032	0.035
Cadmium		1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium		0.05 to 0.1	65.2	69.1	83.7	72.3	74.6	67.9	78.2	82.3
Chromium		0.0001 to 0.018	<0.0001	0.00013	0.00012	0.00012	0.00011	0.00013	0.00013	0.00012
Cobalt		0.0001 to 0.0015	0.0001	0.0001	0.00014	0.00013	0.00014	0.00012	0.00014	<0.0001
Copper		0.0002 to 0.006	0.00234	0.00218	0.00332	0.00241	0.00252	0.00221	0.00207	0.00249
Dissolved Cadmium (by saltwater extr		0.00002								
Iron		0.01 to 0.03	0.016	0.018	0.025	0.026	0.012	0.026	0.022	0.017
Lead		5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium		0.0005 to 0.025	0.00561	0.00532	0.00845	0.00668	0.00728	0.00677	0.00664	0.00772
Magnesium		0.1	50	55.7	77.2	64.1	66.3	49.8	65.6	70.8
Manganese		5E-005 to 0.0015	0.00792	0.00799	0.0113	0.00896	0.00903	0.018	0.0293	0.0335
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.00992	0.00923	0.0123	0.0098	0.0147	0.0192	0.0149	0.0184
Nickel		0.0005 to 0.005	0.00168	0.00175	0.00212	0.0021	0.0025	0.00186	0.0023	0.00218
Phosphorus		0.05 to 0.3	0.053	<0.05	0.107	0.118	0.126	0.096	0.115	0.109
Potassium		0.05 to 2	12.7	12.2	18.7	15.3	17.5	12.7	16	16.3
Selenium		0.0001 to 0.006	0.00022	0.0002	0.00038	0.00031	0.00027	0.0002	0.00018	0.00018
Silicon		0.05	4.94	4.33	7.09	8.15	8.07	8.79	10.8	9.64
Silver		1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	39.2	42.1	54.7	50.3	54	44	53.5	56.8
Strontium		0.0001 to 0.005	0.472	0.49	0.669	0.591	0.627	0.526	0.612	0.71
Sulphur		0.5	30.9	34.8	43.2	27	38.2	34.8	41.4	51.6
Thallium		1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium		1E-005 to 0.001	0.00108	0.00106	0.00176	0.00115	0.00132	0.00116	0.00112	0.00127
Vanadium		0.001 to 0.03	0.0027	0.0025	0.0028	0.002	0.003	0.0029	0.0024	0.0026
Zinc		0.001 to 0.006	<0.001	<0.001	<0.001	<0.001	0.0013	<0.001	<0.001	<0.001
Total Metals										
Aluminum		0.003 to 0.025	0.307	0.193	0.131	0.225	0.0823	0.329	0.0612	0.041
Antimony		0.0001 to 0.0025	0.00014	0.00011	0.00014	0.00014	0.00012	0.00017	0.0001	<0.0001
Arsenic		0.0001 to 0.0025	0.00172	0.00166	0.0023	0.00219	0.00232	0.00217	0.00204	0.00217
Barium		5E-005 to 0.02	0.0513	0.0494	0.0615	0.0539	0.0499	0.0565	0.0549	0.0527
Beryllium		0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	0.031	0.033	0.036	0.038	0.036	0.047	0.036	0.04
Cadmium		1E-005 to 8.5E-005	<0.00001	0.000012	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium		0.05 to 0.1	62.1	65	79.8	70.1	73.4	67.4	78.2	82.7
Chromium		0.0001 to 0.005	0.00071	0.00053	0.00041	0.00059	0.0003	0.0008	0.00042	0.0003
Cobalt		0.0001 to 0.0015	0.00032	0.00025	0.00028	0.00033	0.00021	0.0004	0.0002	0.00013
Copper		0.0005 to 0.007	0.00434	0.00376	0.00473	0.00401	0.00329	0.00585	0.0027	0.00311
Iron		0.01 to 0.03	0.403	0.279	0.218	0.366	0.13	0.477	0.113	0.074
Lead		5E-005 to 0.0025	0.000097	0.000053	0.000057	0.000066	<0.00005	0.000102	<0.00005	<0.00005
Lithium		0.0005 to 0.025	0.0054	0.00579	0.00741	0.0066	0.00722	0.00695	0.00646	0.00785
Magnesium		0.1	47.7	51.7	75.2	62.8	66.1	49.2	66	71.5
Manganese		5E-005 to 0.0015	0.0384	0.0277	0.036	0.0479	0.0223	0.0701	0.0458	0.0413
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.00969	0.00955	0.0123	0.0102	0.0153	0.0188	0.0158	0.0204
Nickel		0.0005 to 0.005	0.00236	0.00224	0.00272	0.00265	0.0027	0.00277	0.00269	0.00252
Phosphorus		0.05 to 0.3	0.081	0.068	0.105	0.14	0.128	0.121	0.131	0.111
Potassium		0.05 to 2	11.8	11.5	17.4	14.7	17.7	12.7	15.9	16.3
Selenium		0.0001 to 0.006	0.00024	0.00022	0.00037	0.00026	0.00024	0.00023	0.00018	0.00018
Silicon		0.05	5.39	4.58	7.22	8.4	8.17	9.5	10.9	9.73
Silver		1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	39.2	40.9	57.3	49.3	52.4	43.6	54.2	59.5
Strontium		0.0001 to 0.005	0.448	0.493	0.657	0.589	0.626	0.518	0.636	0.738
Sulphur		0.5	30.2	33.9	43.6	27.1	39	35	42.4	53.8
Thallium		1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01	0.013	0.011	<0.01	<0.01	<0.01	0.013	<0.01	<0.01
Total Cadmium (by saltwater extractio		0.00002								
Uranium		1E-005 to 0.001	0.00111	0.00107	0.00173	0.00123	0.00136	0.0012	0.00123	0.00138
Vanadium		0.001 to 0.03	0.0035	0.0032	0.0034	0.0026	0.0034	0.004	0.0028	0.0032
Zinc		0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics										
Carbon Organic (Dissolved)		0.5 to 5	12.9	13.2	17.1	17.2	15.6	16.9	14.3	11.9
Carbon Organic (Total)		0.5 to 5	13.6	13.2	16.7	17	15.8	17.1	14.3	12.1
Nitrogen Organic (Dissolved)		0.05 to 0.26								
Nitrogen Organic (Total)		0.05 to 0.3								
ALS LAB ID			**L1465478**	**L1473827**	**L1481215**	**L1488886**	**L1495443**	**L1502292**	**L1513418**	**L1519657**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C2.30 - PC02.5
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Analytes		MDL	PC02.5 14-Apr-11	PC02.5 28-Jun-11	PC02.5 30-Aug-11	PC02.5 28-Sep-11	PC02.5 25-Oct-11	PC02.5 5-Dec-11	PC02.5 9-Jan-12	PC02.5 6-Mar-12	PC02.5 10-Apr-12	PC02.5 25-Apr-12	PC02.5 2-May-12	PC02.5 9-May-12	PC02.5 16-May-12	PC02.5 24-May-12
In Situ Parameters																
Conductivity µS/cm		...	718	679	659		756	783	698	205	512	801	786	456	1111	811
Oxygen Dissolved %	...		66.4	74.7	70.8	57.5	46	66.8	64.3	79.9	65.4	65.5	69.3	65.8	76.2	75
Oxygen Dissolved	...		8.97	7.27	7.39	6.48	5.95	9.66	9.24	11.7	9.03	7.07	8.09	7.56	8.17	7.97
pH (unitless)		...	7.58	7.82	7.75	7.78	7.77	7.8	7.76	7.71	7.69	7.66	7.99	7.57	8.08	8.13
Redox Potential mV		...	117	155	146	30.2	154	47.1	30.3	76.4	110	109	133	123	136	51
Salinity ppt		...		0.4			0.62	0.73	0.65	0.19	0.45	0.85	0.58	0.32	0.75	0.53
Specific Conductivity µS/cm		...	1252	809	848	1166	1247	1472	316	394	914	1074	1153	653	1479	1066
Temperature °C		...	2.66	16.6	13.3	9.86	4.37	0.49	0.41	0.05	1.99	11.7	8.34	9.2	12	12.5
Total Dissolved Solids		...	814	526			811	957	857	256	594	698	749	424	961	
Turbidity NTU		...		-0.7	3.2	10.2	12.6	5.8	5.5	13.6		9.5	3.8	6	3.1	1.8
Physical Tests																
Acidity to pH 8.3 (as CaCO3)		1				2.2	1.4									
Alkalinity (Total as CaCO3)		1 to 2	409	277	289	444	489	550	530	131	319	381	413	444	428	365
Bicarbonate Alkalinity		1 to 2				444	489		530	131	312	381	413	444	428	347
Carbonate Alkalinity		1 to 2				<2	<2		<1	<2	7.5	<1	<1	<1	<1	18
Color TCU		5	31.4	37.9	43.1	42.6	38.1	32.2	23.7	100	21.4	32.9	35.3	36.5	48.5	35.7
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	579	340	347	495	574	644	613	157	422	509	541	578	691	482
Hydroxide Alkalinity		1 to 2				<2	<2		<1	<2	<1	<1	<1	<1	<1	<1
pH (unitless)		0.01 to 0.1	8.31	8.27	8.31	8.24	8.27	8.39	8.23	8	8.41	8.32	8.23	8.34	8.38	8.37
Specific Conductivity µS/cm		2	1220	758	832	1140	1280	1370	1360	393	908	1060	1130	1220	1440	1040
Total Dissolved Solids		1 to 2	831	475	508	704	788	868	823	272	588	693	761	804	1050	682
Total Suspended Solids		3	3.2	6.4	7.3	27.3	34.4	5	6.7	14.7	5.3	15.3	49.7	7.8	8.8	3.8
Turbidity NTU		0.1	2.51	1.51	2.25		13.1	4.18	7.22	12.2	3.66	5.41	12.1	5.16	2.71	2.41
Dissolved Anions																
Bromide		0.05 to 2.495	<1.2	<0.25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride		0.5 to 1	52.9	49.4	55.3	66.7	73	77.2	73.1	15.6	40.4	53.7	57	61.4	57.3	58.4
Fluoride		0.02 to 0.4	<0.2	0.27	0.22	0.26	0.28	0.24	0.23	<0.1	<0.2	0.24	0.22	0.23	0.24	0.23
Sulphate		0.5 to 1	241	70.7	77.9	109	139	154	152	51.8	147	176	178	188	371	176
Nutrients																
Ammonia (Total)		0.005 to 0.05	0.0581	0.0204	0.0252	0.0429	0.0243	0.164	0.151	0.108	0.142	0.0455	0.0346	0.0356	0.0198	0.0179
Nitrate (as N)		0.005 to 0.1	0.051	<0.025	<0.05	<0.05	0.062	0.06	<0.05	0.139	<0.05	0.108	0.063	<0.05	0.064	<0.05
Nitrite (as N)		0.001 to 0.02	<0.01	<0.005	<0.01	<0.01	<0.01	0.013	0.012	0.0104	<0.01	0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen (Dissolved)		0.05 to 0.1		1.03	1.21	0.97	0.7		0.66	1.58	0.64	0.84	0.83	0.82	1.11	0.73
Nitrogen (Total)		0.0025 to 0.11	0.802	1.05	1.24	1.02	1.09	0.93	0.834	1.99	0.849	1.21	0.806	0.873	1.15	0.833
Nitrogen Kjeldahl (Total)		0.05 to 0.2	0.751	1.05	0.999	1.02	1.02	1.05	0.822	1.84	0.849	1.09	0.743	0.873	1.09	0.833
Orthophosphate (Dissolved)		0.001 to 0.01		0.035												
Phosphorus - Dissolved		0.002 to 0.02	0.118	0.0529	0.0805	0.237	0.237	0.248	0.166	0.77	0.0779	0.111	0.122	0.135	0.0856	0.0715
Phosphorus - Total		0.002 to 0.02	0.138	0.0661	0.0953	0.289	0.323	0.291	0.234	0.965	0.116	0.152	0.22	0.171	0.094	0.0851
Cyanide																
Cyanide (Free)		0.005		<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)		0.005		0.0085		0.0144	0.0111	0.0071	0.0066	0.019	0.0082	<0.005	0.0056	<0.005	<0.005	<0.005
Cyanide (WAD)		0.005		<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																
Aluminum		0.001 to 0.025	<0.005	<0.005	<0.005	<0.005	<0.003	<0.003	<0.003	0.0092	<0.003	<0.003	<0.003	<0.003	<0.003	0.0016
Antimony		0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	0.0001	0.00011	0.00012	<0.0001
Arsenic		0.0001 to 0.0025	0.00161	0.00159	0.00172	0.00251	0.00235	0.00203	0.00166	0.00136	0.00123	0.00209	0.00213	0.00228	0.00153	0.0014
Barium		5E-005 to 0.02	0.055	0.051	0.05	0.066	0.0632	0.0723	0.0715	0.0233	0.0539	0.0692	0.0642	0.0692	0.0706	0.048
Beryllium		0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.2	<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	0.031	0.029	0.029	0.026	0.023	0.031	0.031	0.034	0.036	0.03
Cadmium		1E-005 to 8.5E-005	0.000033	0.000025	<0.000017	<0.000017	<0.00001	<0.00001	<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	0.000017	<0.00001
Calcium		0.05 to 0.1	94.9	60.4	58.3	81.3	94.9	101	98.2	25.9	65.4	82.7	86.1	95.3	102	77.2
Chromium		0.0001 to 0.018	<0.0015	<0.002	<0.001	<0.001	0.00017	0.00016	0.00014	0.00014	0.0001	<0.0001	0.00012	0.00016	0.00014	0.00013
Cobalt		0.0001 to 0.0015	<0.0003	<0.0003	<0.0003	<0.0003	0.00033	0.00037	0.00031	0.0003	0.00022	0.00019	0.00017	0.0002	0.00018	0.00014
Copper		0.0002 to 0.006	0.0016	0.0021	0.0015	0.0013	0.00116	0.00091	0.00083	0.00489	0.00091	0.00154	0.00186	0.00164	0.00187	0.00195
Dissolved Cadmium (by saltwater extr		0.00002														
Iron		0.01 to 0.03	0.063	0.042	0.043	0.089	0.119	0.129	0.101	0.137	0.105	0.061	0.068	0.07	0.052	0.032
Lead		5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium		0.0005 to 0.025	<0.005	0.0061	0.0061	0.0072	0.00624	0.00828	0.00684	0.00173	0.00474	0.00549	0.00633	0.0073	0.00821	0.00508
Magnesium		0.1	83	46	48.9	71	81.9	94.9	89.4	22.4	62.9	73.4	79.2	82.5	106	70.2
Manganese		5E-005 to 0.0015	0.149	0.0266	0.0416	0.384	0.616	0.826	0.721	0.162	0.423	0.177	0.129	0.178	0.0598	0.0444
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.0087	0.0058	0.0085	0.0051	0.00459	0.00372	0.00469	0.00994	0.0103	0.0104	0.00775	0.0069	0.0218	0.0119
Nickel		0.0005 to 0.005	0.0024	0.0021	0.0015	0.0024	0.00239	0.00221	0.00209	0.00253	0.00168	0.00234	0.00235	0.00248	0.00197	0.00184
Phosphorus		0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.83	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium		0.05 to 2	14.9	12.7	14.8	16.8	16.3	20.8	16.4	15.6	11.8	15.6	16.4	16.6	20.2	14.6
Selenium		0.0001 to 0.006	<0.001	<0.001	<0.001	<0.001	0.00019	0.00017	0.00015	0.00018	0.00012	0.00016	0.00017	0.00017	0.00024	0.00019
Silicon		0.05	8.97	3.87	7.29	13	14.1	12.8	12	4.35	6.7	7.78	8.06	8.8	7.6	4.77
Silver		1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	63.8	44.4	43	62.1	63.4	81.2	70.2	15.2	42.6	55	60.3	68.4	78.2	55.2
Strontium		0.0001 to 0.005	0.75	0.473	0.491	0.696	0.745	0.955	0.818	0.208	0.537	0.647	0.702	0.748	0.925	0.613
Sulphur		0.5														
Thallium		1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.012	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium		1E-005 to 0.001	0.00132	0.00069	0.00077	0.00086	0.001	0.000842	0.000812	0.000405	0.00124	0.00142	0.00127	0.00122	0.00207	0.00103
Vanadium		0.001 to 0.03	0.0024	0.0014	0.0016	0.0022	0.002	0.0016	0.0013	0.0026	0.002	0.0031	0.0027	0.0029	0.0027	0.0021
Zinc		0.001 to 0.006	<0.005	<0.005	<0.005	<0.005	0.0073	<0.003	<0.003	<0.003	<0.003	0.0035	<0.003	<0.003	<0.003	0.0037
Total Metals																
Aluminum		0.003 to 0.025	0.0672	0.059	0.107	0.512	0.5	0.117	0.169	0.512	0.149	0.303	0.126	0.209	0.128	0.0754
Antimony		0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	0.00013	0.00013	0.00014	0.00013	0.00012
Arsenic		0.0001 to 0.0025	0.0014	0.0015	0.00163	0.00253	0.00253	0.00188	0.0016	0.0014	0.00132	0.00213	0.00213	0.00221	0.00158	0.0014
Barium		5E-005 to 0.02	0.057	0.049	0.053	0.067	0.0684	0.0734	0.0717	0.0276	0.0558	0.0715	0.0633	0.0686	0.0721	0.0476
Beryllium		0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.2	<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	0.037	0.031	0.031	0.032	0.028	0.036	0.036	0.037	0.04	0.035
Cadmium		1E-005 to 8.5E-005	<0.000017	0.000026	<0.000017	<0.000017	0.000012	<0.00001	<0.00001	<0.00001	0.000014	<0.00001	<0.00001	0.00001	0.000021	<0.00001
Calcium		0.05 to 0.1	93.8	59.9	57.9	80.3	96.6	96.4	93.5	25.9	66.6	81.6	84.7	89.4	101	73.7
Chromium		0.0001 to 0.005	<0.001	<0.001	<0.001	0.0014	0.00121	0.00037	0.00056	0.0012	0.00048	0.00087	0.00047	0.0007	0.00056	0.00038
Cobalt		0.0001 to 0.0015	<0.0003	<0.0003	<0.0003	0.00064	0.00073	0.00048	0.00044	0.00065	0.00033	0.00044	0.00028	0.00036	0.00029	0.00021
Copper		0.0005 to 0.007	0.0022	0.0027	0.0023	0.0047	0.00468	0.00186	0.0019	0.0084	0.00209	0.00382	0.00364	0.00315	0.00328	0.00264
Iron		0.01 to 0.03	0.183	0.131	0.189	0.841	0.858	0.342	0.375	0.736	0.36	0.527	0.275	0.395	0.227	0.147
Lead		5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	0.000151	<0.00005	0.00006	0.00015	<0.00005	0.000086	<0.00005	0.000076	<0.00005	<0.00005
Lithium		0.0005 to 0.025	0.005	0.0059	0.0062	0.0072	0.00727	0.00749	0.00616	0.00183	0.00449	0.00532	0.00638	0.00682	0.00782	0.00506
Magnesium		0.1	82.7	46.3	49.3	70.2	83.9	93.4	87.6	22.7	63.8	72.7	76.7	77	105	67.1
Manganese		5E-005 to 0.0015	0.168	0.0472	0.0561	0.488	0.797	0.849	0.742	0.182	0.445	0.236	0.161	0.208	0.0893	0.0766
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.01	0.0067	0.0093	0.0054	0.00485	0.00403	0.00459	0.0109	0.0109	0.0111	0.00793	0.0068	0.0213	0.0124
Nickel		0.0005 to 0.005	0.0028	0.0029	0.0018	0.0035	0.00356	0.00246	0.00245	0.00407	0.00212	0.00294	0.00273	0.00295	0.00238	0.00205
Phosphorus		0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	0.37	0.3	<0.3	0.91	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium		0.05 to 2	14.9	12.5	15.4	16.8	16.5	20.1	16.1	15.5	11.9	15.3	16	15.9	20.2	14.1
Selenium		0.0001 to 0.006	<0.001	<0.001	<0.001	<0.001	0.00021	0.00017	0.00016	0.00023	0.00015	0.00018	0.00019	0.00018	0.0003	0.00018
Silicon		0.05	9.09	4.01	7.59	14.1	15.6	12.8	12.1	5.86	7.13	8.5	8.22	8.78	7.71	4.75
Silver		1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	63.6	42.8	45.7	61	64.5	80.5	69.1	15	43	53.5	59.5	65.6	78.3	54.4
Strontium		0.0001 to 0.005	0.754	0.468	0.497	0.694	0.771	0.941	0.771	0.212	0.55	0.649	0.695	0.714	0.88	0.611
Sulphur		0.5														
Thallium		1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01	0.01	<0.01	0.01	0.023	0.025	0.016	0.018	0.027	0.012	0.016	0.013	0.012	<0.01	<0.01
Total Cadmium (by saltwater extractio		0.00002														
Uranium		1E-005 to 0.001	0.00144	0.00076	0.00083	0.0009	0.00105	0.000857	0.000783	0.000444	0.00128	0.00153	0.00129	0.00123	0.0021	0.0011
Vanadium		0.001 to 0.03	0.0027	0.0018	0.0018	0.0035	0.0035	0.0019	0.0018	0.0038	0.0024	0.0039	0.0032	0.0034	0.0031	0.0025
Zinc		0.003 to 0.006	<0.005	<0.005	0.0056	<0.005	0.0055	0.0065	<0.003	0.0049	<0.003	<0.003	0.0032	0.0032	0.0033	0.0039
Organics																
Carbon Organic (Dissolved)		0.5 to 5	12.2	16.6	18.3	17.5	16.9	15	12	25.4	10.3	12.8	14.1	14.6	17.6	15.3
Carbon Organic (Total)		0.5 to 5	12.4	17.1	18.6	18.3	17.2	16	12.8	28.8	10.8	13.8	14.5	15.1	21.2	15.4
Nitrogen Organic (Dissolved)		0.05 to 0.26		1.01	1.18	0.927	0.613		0.497	1.32	0.498	0.677	0.732	0.784	1.03	0.712
Nitrogen Organic (Total)		0.05 to 0.3	0.693	1.03	1.21	0.977	0.583	0.693	0.672	1.73	0.707	1.05	0.709	0.838	1.07	0.816
ALS LAB ID			**L995583**	**L1025075**	**L1052387**	**L1066047**	**L1076994**	**L1092368**	**L1102695**	**L1122039**	**L1133342**	**L1140194**	**L1142492**	**L1145681**	**L1148880**	**L1152500**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes		MDL	PC02.5 10-Jul-12	PC02.5 7-Aug-12	PC02.5 5-Sep-12	PC02.5 4-Dec-12	PC02.5 8-Jan-13	PC02.5 5-Feb-13	PC02.5 6-Mar-13	PC02.5 2-Apr-13	PC02.5 7-May-13	PC02.5 5-Jun-13	PC02.5 2-Jul-13	PC02.5 7-Aug-13	PC02.5 4-Sep-13	PC02.5 9-Oct-13
In Situ Parameters																
Conductivity µS/cm		...	793	726	749	643	644	0.649	572	797	696	629	813	679		671
Oxygen Dissolved %	...		69	58.5	66.9	68.6	66.3	63	79.1		75.4	68.4	100	48.2	61.4	62.6
Oxygen Dissolved	...		6.17	5.31	6.98	9.72	9.66	9.1	11.4		7.7	6.78	8.32	4.52	6.11	7.98
pH (unitless)		...	8.01	7.74	7.92	7.93	8.25	7.84	7.88	8.1	8.01	7.82	8.13	7.73	7.87	7.89
Redox Potential mV		...	171	138	61.8	10.2	45.3	93.7	65.4	103	101	121	110	287	199	76.5
Salinity ppt		...		0.39	0.48	0.58	0.6	0.6	0.53	0.6	0.43	0.38	0.4	0.38	0.59	0.33
Specific Conductivity µS/cm		...	867	803	966	1188	1235	1228	1080	1194	876	764	821	780	1185	415
Temperature °C		...	20.6	20	13.3	0.99	0	0.29	0.4	7.6	14.3	15.7	24.6	18.2	15.4	5.03
Total Dissolved Solids		...		522	628	772	802	799	702	776	570	497	535	507	770	437
Turbidity NTU		...	1.6	2	4.4	1.3	2.1	1.8	3.2	3.2	1.1	1.2	0	2.3		6
Physical Tests																
Acidity to pH 8.3 (as CaCO3)		1			<1											
Alkalinity (Total as CaCO3)		1 to 2	313	305	389	452	430	483	434	386	273	251	278	310	442	475
Bicarbonate Alkalinity		1 to 2	313	305	389	452	430	483	434	386	273	251	265	310	442	475
Carbonate Alkalinity		1 to 2	<2	<1	<1	<1	<20	<1	<1	<1	<1	<1	13	<2	<1	<1
Color TCU		5	41.7	44.6	42	24.7	20.6	19.6	26.5	19.8	27.3	27.9	35.8	38.7	40.9	32.6
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	381	353	422	527	554	588	549	550	358	323	346	334	521	573
Hydroxide Alkalinity		1 to 2	<2	<1	<1	<1	<20	<1	<1	<1	<1	<1	<1	<2	<1	<1
pH (unitless)		0.01 to 0.1	8.26	8.25	8.44	8.32	8.21	8.16	8.35	8.18	8.4	8.3	8.41	8.22	8.28	8.31
Specific Conductivity µS/cm		2	813	786	945	1130	1130	1210	1140	1130	817	736	778	737	1130	1190
Total Dissolved Solids		1 to 2	532	516	597	717	714	745	673	756	295	445	504	462	727	770
Total Suspended Solids		3	4.9	4.9	6.1	<3	4.3	18.6	<3	6.7	<3	<3	3.7	3.9	18.5	16
Turbidity NTU		0.1	1.84	1.65	3.37	2.3	2.62	3.64	1.67	3.64	2.46	1.25	0.71	1.11	11.8	10.4
Dissolved Anions																
Bromide		0.05 to 2.495	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride		0.5 to 1	53.4	52.5	59.9	67.8	65.4	65.9	60.1	52.6	57.4	52.5	51.7	52.6	59.3	66.5
Fluoride		0.02 to 0.4	0.23	0.24	0.28	0.23	0.37	<0.2	0.34	0.31	0.27	0.36	0.23	0.28	0.37	0.36
Sulphate		0.5 to 1	76.7	69.5	65.2	119	122	138	150	208	97.8	63.8	81	55.5	142	151
Nutrients																
Ammonia (Total)		0.005 to 0.05	0.019	0.0253	0.0528	0.0846	0.203	0.185	0.122	0.0415	0.0158	0.01	0.0208	0.0447	0.0893	0.1
Nitrate (as N)		0.005 to 0.1	<0.05	<0.05	0.073	0.1	0.1	0.099	0.095	0.065	<0.05	<0.05	<0.05	<0.05	0.12	0.08
Nitrite (as N)		0.001 to 0.02	<0.01	<0.01	<0.01	0.025	0.018	<0.01	<0.01	0.012	<0.01	<0.01	<0.01	<0.01	0.018	<0.01
Nitrogen (Dissolved)		0.05 to 0.1	1.08	0.89	0.94	0.902	0.836	0.89	0.74	0.65				0.936	2.39	
Nitrogen (Total)		0.0025 to 0.11	0.897	0.947		1	0.95	0.853	0.805	0.827	0.872	0.727	0.861	0.995	1.42	1.61
Nitrogen Kjeldahl (Total)		0.05 to 0.2	0.897	0.947	1.03	0.875	0.863	0.807	0.855	0.749	0.893	0.734	0.861	1.16	1.39	1.64
Orthophosphate (Dissolved)		0.001 to 0.01														0.126
Phosphorus - Dissolved		0.002 to 0.02	0.0746	0.0799	0.112	0.081	0.177	0.134	0.102	0.0646	0.0511	0.0325	0.0665	0.121	0.242	0.189
Phosphorus - Total		0.002 to 0.02	0.0909	0.097	0.129	0.11		0.183	0.125	0.0801	0.0653	0.0389	0.0566	0.144		0.27
Cyanide																
Cyanide (Free)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																
Aluminum		0.001 to 0.025	0.0018	0.0018	0.0024	0.002	0.0018	0.0017	0.0013	0.0016	0.0016	0.0013	0.0019	0.0026	0.0026	0.0025
Antimony		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	0.0001	<0.0001	0.00012	<0.0001	0.00013	0.0001
Arsenic		0.0001 to 0.0025	0.00155	0.0016	0.00194	0.00129	0.00139	0.00125	0.00115	0.00113	0.00129	0.00129	0.00191	0.00196	0.00275	0.00255
Barium		5E-005 to 0.02	0.0492	0.0489	0.0462	0.061	0.0617	0.0658	0.0584	0.061	0.0497	0.0428	0.0502	0.0517	0.0715	0.0712
Beryllium		0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	0.032	0.034	0.027	0.026	0.025	0.025	0.023	0.025	0.033	0.026	0.03	0.034	0.025	0.029
Cadmium		1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium		0.05 to 0.1	64.4	57.7	67.8	86.6	87.8	93.6	85	90.8	61	60.1	62.4	57.6	82	90.7
Chromium		0.0001 to 0.018	<0.0001	<0.0001	0.00018	0.00015	0.00016	0.00016	0.00011	<0.0001	<0.0001	0.00011	0.0001	0.00013	0.00014	0.00014
Cobalt		0.0001 to 0.0015	0.00012	0.00011	0.00017	0.00016	0.00019	0.0002	0.00018	0.0001	<0.0001	<0.0001	0.0001	0.00014	0.0002	0.00022
Copper		0.0002 to 0.006	0.00141	0.00104	0.00066	0.00124	0.00089	0.00082	0.00131	0.00131	0.0019	0.00183	0.00195	0.00111	0.00101	0.00082
Dissolved Cadmium (by saltwater extr		0.00002														
Iron		0.01 to 0.03	0.03	0.037	0.054	0.099	0.095	0.078	0.081	0.036	0.024	0.021	0.021	0.043	0.05	0.089
Lead		5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium		0.0005 to 0.025	0.00619	0.00597	0.0073	0.00667	0.00637	0.00696	0.00585	0.00533	0.00634	0.00515	0.00554	0.00581	0.00756	0.0072
Magnesium		0.1	53.4	50.8	61.5	75.4	81.4	86.1	81.8	78.4	50	41.9	46.1	46.3	76.8	84
Manganese		5E-005 to 0.0015	0.0409	0.039	0.142	0.228	0.408	0.387	0.172	0.0752	0.0355	0.0151	0.0104	0.142	0.255	0.368
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.00495	0.00416	0.0055	0.00648	0.00527	0.00495	0.00648	0.0144	0.0108	0.00477	0.00574	0.00521	0.00806	0.00844
Nickel		0.0005 to 0.005	0.00156	0.00151	0.00201	0.00172	0.00192	0.00194	0.00173	0.00163	0.00124	0.0013	0.0015	0.00152	0.00238	0.00222
Phosphorus		0.05 to 0.3	<0.3	<0.3	0.129	0.122	0.168	0.148	0.115	0.06	0.054	<0.05	0.059	0.122	0.182	0.184
Potassium		0.05 to 2	12.8	13.2	16.7	16.2	15.6	15.2	17.1	15.9	13.3	12.5	13	13.3	19.2	17.5
Selenium		0.0001 to 0.006	0.0002	0.00021	0.0002	0.00013	0.00013	0.00013	0.00015	0.00014	0.00016	0.00017	0.0003	0.00023	0.00023	0.0002
Silicon		0.05	2.71	5.82	8.15	11.5	11.5	12	10.5	7.34	4.34	2.69	5.16	9	13.9	14.5
Silver		1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	43.2	42.2	56.4	60.8	59.6	68.3	53.4	53.5	42.5	36.1	39.9	39.7	61.1	60.1
Strontium		0.0001 to 0.005	0.49	0.478	0.552	0.676	0.762	0.8	0.662	0.691	0.501	0.398	0.462	0.425	0.735	0.747
Sulphur		0.5				39.5	40.4	43.9	49.6	65.1	32.9	20.5	25.5	18.8	46.4	49.1
Thallium		1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium		1E-005 to 0.001	0.000445	0.000295	0.000459	0.000721	0.000654	0.00071	0.000821	0.00158	0.00115	0.000821	0.000826	0.000466	0.000827	0.00103
Vanadium		0.001 to 0.03	0.0012	<0.001	0.0014	0.0016	0.0013	0.0013	0.0019	0.0026	0.0023	0.0017	0.002	0.0011	0.003	0.0027
Zinc		0.001 to 0.006	0.0095	0.0031	0.0016	0.0011	0.0015	0.0063	0.0019	0.001	0.0019	0.0019	0.002	0.0017	<0.001	<0.001
Total Metals																
Aluminum		0.003 to 0.025	0.0637	0.0661	0.151	0.07	0.0421	0.0398	0.0665	0.114	0.0901	0.0409	0.0762	0.0858	0.466	0.396
Antimony		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	0.00011	<0.0001	0.00015	0.00013	0.00015	0.00012
Arsenic		0.0001 to 0.0025	0.00157	0.0017	0.00176	0.00138	0.00137	0.00134	0.00122	0.00119	0.00125	0.00126	0.00192	0.00205	0.00297	0.00248
Barium		5E-005 to 0.02	0.0499	0.0499	0.049	0.0611	0.0631	0.0676	0.0615	0.0617	0.0475	0.043	0.0532	0.0564	0.0816	0.0769
Beryllium		0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	0.037	0.04	0.032	0.028	0.028	0.031	0.026	0.028	0.034	0.028	0.033	0.038	0.029	0.03
Cadmium		1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium		0.05 to 0.1	63	58.2	65.9	83.4	86.2	95.4	87.3	85.7	59.3	58.6	63.2	60.2	82.8	89.7
Chromium		0.0001 to 0.005	0.0004	0.00038	0.0006	0.00038	0.00029	0.0003	0.00028	0.00039	0.00031	0.00025	0.00026	0.00036	0.00128	0.00098
Cobalt		0.0001 to 0.0015	0.00018	0.00017	0.00029	0.00021	0.00023	0.00024	0.00025	0.00021	0.00016	0.00011	0.00017	0.00021	0.00057	0.00052
Copper		0.0005 to 0.007	0.00216	0.00173	0.00229	0.00392	0.00187	0.00183	0.00201	0.00259	0.00295	0.00246	0.0026	0.00201	0.00437	0.00359
Iron		0.01 to 0.03	0.121	0.128	0.264	0.245	0.204	0.19	0.235	0.223	0.15	0.083	0.123	0.174	0.78	0.736
Lead		5E-005 to 0.0025	<0.00005	<0.00005	0.000058	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000141	0.000116
Lithium		0.0005 to 0.025	0.00581	0.00638	0.0072	0.00672	0.00661	0.00722	0.00622	0.00532	0.00621	0.00502	0.00576	0.00606	0.00818	0.00741
Magnesium		0.1	52.7	49.6	59.9	72.4	81.5	86.3	81.1	73.9	48.4	41.1	46.9	47.8	75.2	84.2
Manganese		5E-005 to 0.0015	0.0642	0.0731	0.215	0.252	0.455	0.424	0.207	0.103	0.0486	0.0229	0.0242	0.176	0.36	0.453
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.00503	0.00462	0.00587	0.00651	0.00562	0.00534	0.00713	0.0146	0.0111	0.00484	0.0066	0.00583	0.00883	0.00956
Nickel		0.0005 to 0.005	0.00181	0.00175	0.0023	0.00186	0.00217	0.0021	0.00201	0.00196	0.00149	0.00144	0.00169	0.00188	0.00369	0.00327
Phosphorus		0.05 to 0.3	<0.3	<0.3	0.145	0.148	0.182	0.173	0.14	0.074	0.056	<0.05	0.079	0.152	0.216	0.274
Potassium		0.05 to 2	12.6	13.3	15.9	15.5	15.3	15.3	17.2	15.8	12.8	12.4	13.5	14.8	19.4	17.1
Selenium		0.0001 to 0.006	0.00019	0.00021	0.00017	0.00013	0.00014	0.00015	0.00014	0.00014	0.00016	0.00018	0.00028	0.00023	0.00028	0.00021
Silicon		0.05	2.8	5.99	8.31	11.1	11.5	12.2	10.8	7.48	4.43	2.77	5.47	9.64	15.6	15.8
Silver		1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000094	<0.00001	<0.00001	0.000057	<0.00001
Sodium		0.05 to 2	42.2	44.2	57.6	58.6	61.2	69.2	53	53.8	41.9	36.1	39.1	41.9	63.7	61.7
Strontium		0.0001 to 0.005	0.475	0.475	0.561	0.66	0.799	0.84	0.679	0.696	0.493	0.39	0.514	0.459	0.761	0.803
Sulphur		0.5				39.7	42	46.8	52.1	65.2	32.8	20.8	26.7	20.4	49.2	52
Thallium		1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.021	0.017
Total Cadmium (by saltwater extractio		0.00002														
Uranium		1E-005 to 0.001	0.000452	0.000331	0.000476	0.000725	0.000666	0.000715	0.000887	0.0016	0.00117	0.000816	0.000949	0.000498	0.000911	0.00116
Vanadium		0.001 to 0.03	0.0016	0.0013	0.0021	0.002	0.0016	0.0016	0.0023	0.0029	0.0026	0.0019	0.0022	0.0014	0.0045	0.004
Zinc		0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics																
Carbon Organic (Dissolved)		0.5 to 5	15.8	17	17.1	11.9	11.2	11.9	11.2	10.4	12.7	14.5	16.2	18.1	17.2	16
Carbon Organic (Total)		0.5 to 5	15.8	16.5	17.2	13.5	12.3	11.7	11.6	10.9	12.8	14.6	16.5	19.1	18.6	18.6
Nitrogen Organic (Dissolved)		0.05 to 0.26	1.06	0.865	0.815	0.693			0.523	0.531					2.17	
Nitrogen Organic (Total)		0.05 to 0.3	0.878	0.921	0.975	0.791	0.66	0.622	0.588	0.708					1.31	
ALS LAB ID			**L1176520**	**L1190914**	**L1205273**	**L1245799**	**L1256678**	**l1265809**	**L1276517**	**L1285503**	**L1298960**	**L1312719**	**L1326032**	**L1344180**	**L1358222**	**L1375698**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes	MDL	PC02.5 6-Nov-13	PC02.5 4-Dec-13	PC02.5 13-Mar-14	PC02.5 21-Mar-14	PC02.5 26-Mar-14	PC02.5 2-Apr-14	PC02.5 9-Apr-14	PC02.5 23-Apr-14	PC02.5 6-May-14	PC02.5 21-May-14	PC02.5 04/Jun/2014	PC02.5 18-Jun-14	PC02.5 3-Jul-14	PC02.5 16-Jul-14
In Situ Parameters															
Conductivity µS/cm	...	662	489	257	564	667	774	866	849	1110	688	689	702	958	566
Oxygen Dissolved %	...	72.7	72.4	76.6	66.8	69.2	79.6	80.9	87.4	110	98.9	89.5	74.2	99.5	90.6
Oxygen Dissolved	...	10.1	10.6	11.1	9.6	9.88	10.3	9.57	10.4	12.3	9.48	8.64	7.41	9.4	8.32
pH (unitless)	...	8.06	7.89	7.76	7.74	7.87	8.03	8.08	8.1	8.25	8.25	8.19	8.14	8.1	8.32
Redox Potential mV	...	60	64.9	50.1	180	59.9	47.2	-31.6	97.1	203	75.6	158	104	81	140
Salinity ppt	...	0.59	0.45	0.23	0.52	0.61	0.64	0.65	0.64	0.8	0.4	0.4	0.56	0.55	0.777
Specific Conductivity µS/cm	...	1194	934	491	1060	1249	1277	1288	1269	1573	808	814	861	1107	871
Temperature °C	...	1.68	0.02	0.088	0.51	0.61	4.35	7.86	7.66	10.3	17.2	16.9	15.3	17.9	19.4
Total Dissolved Solids	...	776	609	319	589	812	830	837	825	825	525	529	702	720	430
Turbidity NTU	...	6	1.9												
Physical Tests															
Acidity to pH 8.3 (as CaCO3)	1	<1													
Alkalinity (Total as CaCO3)	1 to 2	442	606	130	321	397	387	413	387	413	263	272	301	458	385
Bicarbonate Alkalinity	1 to 2	442	606	130	321	397	387	413	366	413	263	272	293	436	363
Carbonate Alkalinity	1 to 2	<1	<20	<2	<2	<2	<2	<2	20.2	<2	<1	<1	8.5	21.9	22.8
Color TCU	5	25.9	21.7												
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	544	615	209	504	625	606	641	609	775	358	360	389	524	442
Hydroxide Alkalinity	1 to 2	<1	<20	<2	<2	<2	<2	<2	<1	<2	<1	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1	8.32	8.09	7.93	8.18	8.21	8.22	8.23	8.36	8.23	8.33	8.41	8.35	8.49	8.49
Specific Conductivity µS/cm	2	1200	1260	469	1080	1260	1160	1240	1290	1530	781	781	842	1070	934
Total Dissolved Solids	1 to 2	786	833	306	715	850	821	895	875	1080	496	427	533	692	531
Total Suspended Solids	3	6.6	5.1	20.3	3.2	5.6	<3	3.4	<3	5.9	<3	<3	4.8	5.1	6.2
Turbidity NTU	0.1	6.29	2.18	12.7	1.55	1.16	1.47	1.28	1.99	2.13	0.89	1.61	0.8	0.65	1.35
Dissolved Anions															
Bromide	0.05 to 2.495	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.25	<0.5	<0.5	<0.5
Chloride	0.5 to 1	65.5	70.5	16.1	41	48.4	46.2	50.6	48.1	55.7	55.3	53.6	52	48.2	52.4
Fluoride	0.02 to 0.4	0.26	0.27	0.087	<0.2	<0.2	<0.2	0.21	0.2	0.22	0.21	0.22	0.232	0.42	0.273
Sulphate	0.5 to 1	166	187	94	235	274	270	285	307	442	90.7	80.4	101	127	77.2
Nutrients															
Ammonia (Total)	0.005 to 0.05	0.0598	0.155	0.255	0.298	0.128	0.0523	0.0576	0.0182	0.0139	0.0094	0.0144	0.0167	0.0255	0.0193
Nitrate (as N)	0.005 to 0.1	0.078	0.116	0.186	0.142	0.097	<0.05	0.058	0.056	<0.05	<0.05	<0.025	<0.05	<0.05	<0.05
Nitrite (as N)	0.001 to 0.02	0.014	<0.01	0.0102	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01
Nitrogen (Dissolved)	0.05 to 0.1														
Nitrogen (Total)	0.0025 to 0.11	1.19									0.713				
Nitrogen Kjeldahl (Total)	0.05 to 0.2	1.08	0.92	1.67	1.17	0.851	0.768	0.765	0.753	1.1	0.776	0.83	0.824	1.11	1.05
Orthophosphate (Dissolved)	0.001 to 0.01	0.119	0.104	0.418	0.0935	0.0545	0.035	0.0427	0.0399	0.0495	0.0265	0.0343	0.0283	0.0779	0.0892
Phosphorus - Dissolved	0.002 to 0.02	0.164	0.117	0.511	0.113	0.0739	0.0538	0.0754	0.0538	0.0696	0.0401	0.0467	0.041	0.117	0.111
Phosphorus - Total	0.002 to 0.02	0.223	0.143	0.638	0.146	0.0926	0.0792	0.0609	0.0732	0.122	0.0493	0.0554	0.0488	0.121	0.127
Cyanide															
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals															
Aluminum	0.001 to 0.025	0.0018	0.0119	0.0043	0.0015	0.0011	0.0012	0.0019	0.001	0.0022	0.0012	0.0017	<0.001	0.0016	0.0021
Antimony	0.0001 to 0.0025	<0.0001	<0.0001	0.00011	0.00013	<0.0001	0.00014	0.00015	0.00013	0.00017	<0.0001	0.00011	<0.0001	0.00014	0.00012
Arsenic	0.0001 to 0.0025	0.00197	0.00168	0.00146	0.00147	0.00133	0.00141	0.00152	0.0015	0.00181	0.00151	0.00174	0.00158	0.00212	0.00217
Barium	5E-005 to 0.02	0.0672	0.0751	0.0274	0.0626	0.0691	0.0654	0.0719	0.0601	0.0756	0.0527	0.0523	0.0496	0.0574	0.053
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.027	0.029	0.025	0.031	0.031	0.032	0.031	0.026	0.036	0.027	0.031	0.029	0.036	0.036
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	0.000013	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	81.1	97.8	36.4	79.7	94.4	93	103	97.4	123	65	64.3	67.8	81.5	71.6
Chromium	0.0001 to 0.018	0.00016	0.00019	<0.0001	0.00013	0.00011	0.00012	0.00012	0.0001	0.00017	0.0001	0.00012	0.00012	0.00013	0.00016
Cobalt	0.0001 to 0.0015	0.0002	0.00015	0.00021	0.00022	0.0002	0.00017	0.00016	0.00016	0.00017	<0.0001	0.00011	<0.0001	0.00016	0.00015
Copper	0.0002 to 0.006	0.00098	0.00149	0.00539	0.00236	0.00189	0.00179	0.00185	0.002	0.00266	0.00223	0.00227	0.00191	0.00315	0.00209
Dissolved Cadmium (by saltwater extr	0.00002									<0.00002					
Iron	0.01 to 0.03	0.083	0.095	0.069	0.057	0.046	0.045	0.038	0.034	0.039	0.017	0.023	0.023	0.029	0.029
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00723	0.00699	0.00202	0.00544	0.00582	0.00626	0.0062	0.00649	0.00745	0.00525	0.00564	0.00559	0.00681	0.00695
Magnesium	0.1	82.9	90.1	28.6	74	94.5	90.9	93	88.8	113	47.5	48.3	53.3	77.9	63.8
Manganese	5E-005 to 0.0015	0.295	0.258	0.0809	0.121	0.108	0.0828	0.0705	0.0791	0.0696	0.0134	0.0235	0.0202	0.0343	0.0341
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0069	0.0122	0.0142	0.0304	0.0305	0.03	0.0246	0.0196	0.0468	0.0109	0.00937	0.00873	0.0116	0.00967
Nickel	0.0005 to 0.005	0.0019	0.0024	0.00189	0.0021	0.00224	0.00219	0.00225	0.00216	0.0023	0.00133	0.00157	0.00168	0.00209	0.00201
Phosphorus	0.05 to 0.3	0.167	0.121	0.527	0.127	0.071	<0.05	0.074	<0.05	0.061	<0.05	<0.05	<0.05	0.102	0.115
Potassium	0.05 to 2	16.3	17.2	12.2	15.6	16.5	15.7	16.8	16.6	20.9	11.8	12.1	12.8	18.5	15
Selenium	0.0001 to 0.006	0.00018	0.00023	0.00033	0.00039	0.0003	0.00036	0.00025	0.00032	0.00054	0.0002	0.0002	0.0002	0.00037	0.00028
Silicon	0.05	12.9	11.4	4.34	7.61	8.81	7.62	7.41	6.56	6.56	3.6	4.61	4.07	6.84	7.69
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	61.2	64	18.9	48.2	57.6	58.7	57.8	55.7	76.9	41.3	40.8	41.4	57.8	49.6
Strontium	0.0001 to 0.005	0.768	0.798	0.258	0.644	0.737	0.754	0.841	0.787	0.919	0.375	0.461	0.484	0.675	0.587
Sulphur	0.5	54.2	57.9	31.2	76.3	86.6	85.8	91.6	99	144	32.3	28.7	32.1	41.7	26
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000012	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00105	0.00147	0.000865	0.0031	0.00316	0.00291	0.00283	0.00264	0.00349	0.00109	0.00108	0.00101	0.00181	0.00113
Vanadium	0.001 to 0.03	0.0021	0.0021	0.0027	0.0035	0.003	0.0032	0.0034	0.0029	0.0038	0.003	0.0026	0.0022	0.0027	0.0018
Zinc	0.001 to 0.006	<0.001	<0.001	0.0022	0.0024	<0.001	0.0011	0.0014	0.0015	0.0011	<0.001	<0.001	<0.001	0.0011	0.0012
Total Metals															
Aluminum	0.003 to 0.025	0.11	0.0574	0.465	0.0653	0.0308	0.0497	0.0841	0.102	0.188	0.0762	0.0724	0.0578	0.0195	0.0762
Antimony	0.0001 to 0.0025	0.00012	<0.0001	0.00012	0.00015	0.0001	0.00016	0.00016	0.00013	0.00021	0.00011	0.00012	<0.0001	0.00016	0.00014
Arsenic	0.0001 to 0.0025	0.00223	0.00162	0.00161	0.00148	0.00144	0.00139	0.00151	0.00152	0.00168	0.00155	0.00174	0.00163	0.00218	0.00212
Barium	5E-005 to 0.02	0.0671	0.0788	0.0331	0.0624	0.0713	0.065	0.0703	0.0612	0.0741	0.0536	0.0524	0.0511	0.0582	0.0531
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.031	0.033	0.028	0.031	0.034	0.034	0.035	0.027	0.039	0.041	0.032	0.034	0.036	0.037
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	0.000014	<0.00001	<0.00001	<0.00002	0.000011	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	84.6	101	35.5	78.2	94.9	89.8	98.1	98.8	117	63.5	61.5	67	80	69.1
Chromium	0.0001 to 0.005	0.00052	0.00033	0.00115	0.00028	0.0002	0.00023	0.00083	0.00036	0.00056	0.00032	0.00031	0.00032	0.00019	0.0003
Cobalt	0.0001 to 0.0015	0.00029	0.00019	0.00057	0.00027	0.00023	0.00022	0.00023	0.00028	0.00033	0.00015	0.00017	0.00015	0.00017	0.00023
Copper	0.0005 to 0.007	0.00196	0.002	0.0106	0.00331	0.00269	0.00243	0.00273	0.00331	0.00411	0.00322	0.003	0.00258	0.00354	0.00277
Iron	0.01 to 0.03	0.304	0.173	0.633	0.171	0.138	0.149	0.189	0.193	0.305	0.115	0.116	0.103	0.062	0.15
Lead	5E-005 to 0.0025	0.000052	<0.00005	0.000133	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000062	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00596	0.00771	0.00227	0.00519	0.00642	0.00625	0.00641	0.00625	0.00777	0.00622	0.00557	0.00588	0.00762	0.0068
Magnesium	0.1	82.3	88.6	28.4	70.1	91.2	86.9	87.9	89.2	107	45.6	45.9	51.8	76.8	62.1
Manganese	5E-005 to 0.0015	0.34	0.283	0.107	0.124	0.113	0.0858	0.091	0.0951	0.0906	0.0231	0.0368	0.0341	0.0456	0.061
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00797	0.0132	0.0152	0.0318	0.0339	0.0325	0.0256	0.0199	0.0484	0.0145	0.00948	0.00932	0.013	0.01
Nickel	0.0005 to 0.005	0.00236	0.00262	0.00374	0.00227	0.00244	0.00229	0.00248	0.00266	0.00274	0.0016	0.00187	0.0019	0.00224	0.00221
Phosphorus	0.05 to 0.3	0.219	0.146	0.617	0.149	0.082	0.08	0.082	0.076	0.11	0.054	0.051	0.061	0.114	0.123
Potassium	0.05 to 2	17.6	18.3	11.8	15.1	16.4	15.1	15.7	16.8	19.7	11.7	11.3	12.4	17.9	14.4
Selenium	0.0001 to 0.006	0.0002	0.00018	0.00035	0.00038	0.00034	0.00028	0.00022	0.00031	0.00052	0.00017	0.00022	0.00022	0.00041	0.00028
Silicon	0.05	13.6	12	5.42	7.49	8.91	7.64	7.28	6.96	6.86	3.73	4.57	4.18	6.91	7.59
Silver	1E-005 to 0.0001	0.000013	<0.00001	0.000015	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	64.8	65.2	18.4	47.6	59.2	56.6	56	55.5	75.3	41.2	40.1	41.7	53.8	48.5
Strontium	0.0001 to 0.005	0.768	0.837	0.27	0.641	0.777	0.764	0.832	0.767	0.948	0.48	0.458	0.495	0.69	0.594
Sulphur	0.5	58.9	63	31.2	78.2	90.9	90.2	88.9	102	142	31.7	27.8	32.6	44.1	25.9
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	0.017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extractio	0.00002									<0.00002					
Uranium	1E-005 to 0.001	0.00113	0.00153	0.000917	0.00311	0.00337	0.0031	0.00287	0.0027	0.00345	0.00148	0.00113	0.0011	0.00194	0.00118
Vanadium	0.001 to 0.03	0.0026	0.0024	0.004	0.0037	0.0034	0.0035	0.0037	0.0035	0.0044	0.0038	0.0029	0.0029	0.0029	0.0021
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0033	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics															
Carbon Organic (Dissolved)	0.5 to 5	14.5	13.3	13.3	11.1	11.6	11.2	11.2	12.9	14.5	13.1	13.3	13.6	17.4	17.3
Carbon Organic (Total)	0.5 to 5	15.3	14	14	11.4	10.8	10.9	11.4	12.5	16.6	12.8	13.5	13.6	17.5	17.2
Nitrogen Organic (Dissolved)	0.05 to 0.26														
Nitrogen Organic (Total)	0.05 to 0.3														
ALS LAB ID		**L1388680**	**L1399806**	**L1432163**	**L1434695**	**L1437439**	**L1439467**	**L1441961**	**L1446462**	**L1451608**	**L1458340**	**L1465478**	**L1473827**	**L1481215**	**L1488886**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes	MDL	PC02.5 30-Jul-14	PC02.5 12-Aug-14	PC02.5 4-Sep-14	PC02.5 17-Sep-14
In Situ Parameters					
Conductivity µS/cm	...	816	734		740
Oxygen Dissolved %	...	67.1	70.3		61.6
Oxygen Dissolved	...	6.26	6.55		6.92
pH (unitless)	...	8.26	7.92	8.05	7.9
Redox Potential mV	...	127	75.3		96
Salinity ppt	...	0.46	0.41		0.51
Specific Conductivity µS/cm	...	931	835		1033
Temperature °C	...	18.5	18.7	12.1	10.1
Total Dissolved Solids	...	605	542		672
Turbidity NTU	...				
Physical Tests					
Acidity to pH 8.3 (as CaCO3)	1				
Alkalinity (Total as CaCO3)	1 to 2	420	272	401	450
Bicarbonate Alkalinity	1 to 2	407	266	389	433
Carbonate Alkalinity	1 to 2	13.5	6.5	12.6	17
Color TCU	5				
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	454	367	452	483
Hydroxide Alkalinity	1 to 2	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1	8.3	8.32	8.39	8.42
Specific Conductivity µS/cm	2	1010	827	988	1070
Total Dissolved Solids	1 to 2	626	569	610	735
Total Suspended Solids	3	5.6	4.8	5	13.3
Turbidity NTU	0.1	2.25	2.32	3.08	4.38
Dissolved Anions					
Bromide	0.05 to 2.495	<0.5	<0.5	<0.5	<0.5
Chloride	0.5 to 1	53.6	59.5	55.4	55.7
Fluoride	0.02 to 0.4	0.284	0.273	0.278	0.3
Sulphate	0.5 to 1	94.6	104	94	106
Nutrients					
Ammonia (Total)	0.005 to 0.05	0.0862	0.0318	0.189	0.168
Nitrate (as N)	0.005 to 0.1	0.092	<0.05	0.138	0.211
Nitrite (as N)	0.001 to 0.02	0.012	<0.01	0.043	0.063
Nitrogen (Dissolved)	0.05 to 0.1				
Nitrogen (Total)	0.0025 to 0.11				
Nitrogen Kjeldahl (Total)	0.05 to 0.2	1.15	1.23	1.11	1.17
Orthophosphate (Dissolved)	0.001 to 0.01	0.131	0.0836	0.122	0.172
Phosphorus - Dissolved	0.002 to 0.02	0.149	0.11	0.183	0.197
Phosphorus - Total	0.002 to 0.02	0.167	0.13	0.194	0.248
Cyanide					
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals					
Aluminum	0.001 to 0.025	0.0016	0.0017	0.0015	0.0022
Antimony	0.0001 to 0.0025	0.00011	0.00014	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00249	0.00198	0.00205	0.00212
Barium	5E-005 to 0.02	0.052	0.0547	0.0621	0.0646
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.033	0.037	0.03	0.03
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	74.3	67	76.1	79.6
Chromium	0.0001 to 0.018	0.00013	0.00011	0.00015	0.00017
Cobalt	0.0001 to 0.0015	0.00021	0.00012	0.00018	0.0002
Copper	0.0002 to 0.006	0.00177	0.00195	0.0012	0.00129
Dissolved Cadmium (by saltwater extr	0.00002				
Iron	0.01 to 0.03	0.03	0.036	0.035	0.042
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00721	0.00642	0.00626	0.0072
Magnesium	0.1	65.1	48.5	63.6	69.1
Manganese	5E-005 to 0.0015	0.241	0.0486	0.191	0.335
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0118	0.0185	0.0117	0.0148
Nickel	0.0005 to 0.005	0.00252	0.00174	0.00231	0.00298
Phosphorus	0.05 to 0.3	0.165	0.096	0.151	0.181
Potassium	0.05 to 2	17.6	12.5	15.7	16.5
Selenium	0.0001 to 0.006	0.00032	0.0002	0.00018	0.00021
Silicon	0.05	8.38	8.69	11.9	11.5
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	52	42.4	52.4	58
Strontium	0.0001 to 0.005	0.607	0.497	0.605	0.672
Sulphur	0.5	30.5	34	31.5	34.7
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00113	0.00113	0.00112	0.00133
Vanadium	0.001 to 0.03	0.0026	0.0027	0.0026	0.0028
Zinc	0.001 to 0.006	<0.001	<0.001	<0.001	0.0028
Total Metals					
Aluminum	0.003 to 0.025	0.106	0.0901	0.101	0.274
Antimony	0.0001 to 0.0025	0.00012	0.00016	<0.0001	0.00014
Arsenic	0.0001 to 0.0025	0.00216	0.00206	0.00193	0.00229
Barium	5E-005 to 0.02	0.051	0.0557	0.0633	0.073
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.034	0.044	0.03	0.036
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	69.2	67.1	74.9	82.7
Chromium	0.0001 to 0.005	0.0004	0.00032	0.00039	0.00087
Cobalt	0.0001 to 0.0015	0.0003	0.00021	0.00025	0.0004
Copper	0.0005 to 0.007	0.00268	0.00315	0.00218	0.00371
Iron	0.01 to 0.03	0.188	0.162	0.187	0.457
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	0.000087
Lithium	0.0005 to 0.025	0.00686	0.0068	0.00572	0.00767
Magnesium	0.1	61.6	48.6	63.7	72.2
Manganese	5E-005 to 0.0015	0.274	0.0725	0.23	0.456
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0119	0.0197	0.0105	0.0169
Nickel	0.0005 to 0.005	0.00283	0.00206	0.00261	0.00398
Phosphorus	0.05 to 0.3	0.165	0.126	0.158	0.226
Potassium	0.05 to 2	16.2	12.7	15.7	17.2
Selenium	0.0001 to 0.006	0.00024	0.00022	0.00022	0.00022
Silicon	0.05	8.11	8.95	12.2	12.7
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	51	44.1	50.9	60.4
Strontium	0.0001 to 0.005	0.567	0.52	0.504	0.715
Sulphur	0.5	29.3	34.5	32.3	37.6
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	0.01
Total Cadmium (by saltwater extractio	0.00002				
Uranium	1E-005 to 0.001	0.00117	0.00123	0.000975	0.00149
Vanadium	0.001 to 0.03	0.0029	0.0032	0.003	0.0038
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003
Organics					
Carbon Organic (Dissolved)	0.5 to 5	18.1	16.5	15.7	7.48
Carbon Organic (Total)	0.5 to 5	18.7	16.7	15.9	7.85
Nitrogen Organic (Dissolved)	0.05 to 0.26				
Nitrogen Organic (Total)	0.05 to 0.3				
ALS LAB ID		**L1495443**	**L1502292**	**L1513418**	**L1519657**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C2.31 - PC03
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Analytes	MDL	PC03 2-May-07	PC03 18-Jul-07	PC03 28-Apr-08	PC03 7-Jul-08	PC03 4-Sep-08	PC03 4-Jun-10	PC03 29-Mar-11	PC03 14-Apr-11	PC03 21-Apr-11	PC03 28-Apr-11	PC03 5-May-11	PC03 12-May-11	PC03 30-May-11	PC03 28-Jun-11	PC03 28-Jul-11
In Situ Parameters																
Conductivity µS/cm	...	652	824	1295	823	599	661	645	451	765	783	878	876	624	630	669
Oxygen Dissolved %	...			87.5		60.9	80.2	44	66.1	76.2	54.8	48.1	65.6	91.5	86.9	40.8
Oxygen Dissolved	...	7.87	4.37	9.61		6.22	8.59	6.2	8.57	10.7	6.65	5.43	7.03	8.9	8.29	3.96
pH (unitless)	...	8.09	7.59	8.32	8.11	7.8	8.27	7.71	7.79	8.09	7.92	7.79	7.77	8.07	8.17	7.77
Redox Potential mV	...	-60.8			-106	-71.4	-68.3	112	164	44.8	86.5	118	88.5	407	157	107
Salinity ppt	...									0.7	0.6	0.62	0.59	0.37	0.36	0.36
Specific Conductivity µS/cm	...	929	933	1780	909	782	872	1183	744	1443	1200	1238	1169	744	735	796
Temperature °C	...	9.4	18.9	10.7	20	12.8	12.2	1.18	4.35	0.33	6.79	9.79	11.9	16.6	17.5	16.5
Total Dissolved Solids	...							770	484		780	805	760	484	478	518
Turbidity NTU	...													0.7		0.8
Physical Tests																
Acidity to pH 8.3 (as CaCO3)	1															4.6
Alkalinity (Total as CaCO3)	1 to 2	253	276	471	339	326	241	366	314	340	385	380	374	247	245	270
Bicarbonate Alkalinity	1 to 2						241			340						
Carbonate Alkalinity	1 to 2						<1			<2						
Color TCU	5	21.3	35.2	27.1	44.2	37.3	30.8	25.6	22.2	22.7	27.5	32.2	35.1	22.5	34.7	37.4
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	425	371	880	391	364	385	532	459	510	537	570	582	313	305	323
Hydroxide Alkalinity	1 to 2						<1			<2						
pH (unitless)	0.01 to 0.1	8.25	8.29	8.34	8.37	8.28	8.42	7.94	8.22	8.27	8.23	8.26		8.2	8.34	8.16
Specific Conductivity µS/cm	2	877	855	1790	896	867	863	1120	972	1080	1140	1180	1220	704	685	764
Total Dissolved Solids	1 to 2	572	544	1320	565	528	547	764	664	714	773	791	812	427	433	459
Total Suspended Solids	3	<3	4.6	3.3	4.5	3.3	<3	<3	<3	13.3	5.9	<3	105	<3	5.7	<3
Turbidity NTU	0.1			1.43	0.9	3.54	0.75	1.82	1.9	5.74	3.54	1.06	1.16		1.53	0.97
Dissolved Anions																
Bromide	0.05 to 2.495	<0.05	<0.05	<2.5	<0.05	<0.05	<0.5	<1.3	<1.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5
Chloride	0.5 to 1	60.3	61.6	57	55.8	61.5	55.7	36.3	36.3	39.9	42.1	43.7	43.5	52.9	48.8	51.6
Fluoride	0.02 to 0.4	0.206		1.1	0.236	0.224	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.199	0.39
Sulphate	0.5 to 1	145	92.9	568	99.3	70.6	138	266	213	237	249	245	262	69.6	67.3	76
Nutrients																
Ammonia (Total)	0.005 to 0.05	0.152	0.037	0.025	0.033	0.035	0.015	0.18	0.0668	0.065	0.16	0.326	0.207	0.0209	0.0152	0.0567
Nitrate (as N)	0.005 to 0.1	<0.005	<0.005	0.76	<0.005	0.0546	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.005	<0.05
Nitrite (as N)	0.001 to 0.02	<0.001	<0.001	0.157	<0.001	0.0293	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.01
Nitrogen (Dissolved)	0.05 to 0.1										1.12	0.91	1.12	0.78	1	1.01
Nitrogen (Total)	0.0025 to 0.11						0.88	0.877	0.734	0.37	0.983	0.88	1.21	0.76	1.09	1.03
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.852	1.1	0.836	1.01	0.746	0.878	0.877	0.734	0.37	0.983	0.88	0.908	0.76	1.09	1.03
Orthophosphate (Dissolved)	0.001 to 0.01	0.0067	0.0557	0.0117	0.0353	0.121	0.0069	0.0439						0.0052	0.0066	0.028
Phosphorus - Dissolved	0.002 to 0.02								0.032	0.034	0.0875	0.154	0.095	0.0179	0.0254	0.0489
Phosphorus - Total	0.002 to 0.02	0.0337	0.0847	0.045	0.0701	0.128	0.0282	0.0917	0.0522	0.0617	0.0855	0.186	0.118	0.0259	0.0387	0.0582
Cyanide																
Cyanide (Free)	0.005			<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	0.0067	0.0109	0.0081	0.0101		0.0082	<0.005		0.0059	0.0083	0.0079	0.0078	0.0071	0.0078	0.0083
Cyanide (WAD)	0.005			<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																
Aluminum	0.001 to 0.025	<0.005	<0.01	<0.025	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Antimony	0.0001 to 0.0025	<0.0005	<0.001	<0.0025	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic	0.0001 to 0.0025	0.00136	0.002	<0.0025	0.0021	0.0022	0.00133	0.00093	0.00104	0.00116	0.00147	0.00203	0.00176	0.0012	0.0015	0.00143
Barium	5E-005 to 0.02	0.045	0.04	0.096	0.059	0.062	0.028	0.06	0.056	0.063	0.065	0.075	0.075	0.048	0.05	0.061
Beryllium	0.0001 to 0.005	<0.001	<0.002	<0.005	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth	0.0005 to 0.2							<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	1E-005 to 8.5E-005	0.000023	0.000039	0.000143	0.00004	<0.000034	<0.000017	<0.000017	<0.000017	<0.00007	<0.00006	<0.000017	<0.000017	0.000024	0.000025	<0.000017
Calcium	0.05 to 0.1	69.2	59.7	126	62.6	58.7	57.2	77.7	73.1	79.4	83.7	87.9	88.7	56.2	53.4	55
Chromium	0.0001 to 0.018	<0.003	<0.002	<0.005	<0.002	<0.002	<0.001	<0.001	<0.0015	<0.002	<0.002	<0.0015	<0.001	<0.001	<0.001	<0.001
Cobalt	0.0001 to 0.0015	<0.0003	<0.0006	<0.0015	<0.0006	<0.0006	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.00039	<0.0003	<0.0003	<0.0003	<0.0003
Copper	0.0002 to 0.006	0.0022	<0.002	<0.005	<0.002	<0.002	0.0016	<0.001	<0.001	0.001	0.001	<0.001	<0.002	0.0015	0.0015	<0.001
Dissolved Cadmium (by saltwater extr	0.00002															
Iron	0.01 to 0.03	<0.03	0.068	0.037	0.058	0.035	<0.03	0.1	0.045	0.039	0.079	0.168	0.146	<0.03	0.034	0.034
Lead	5E-005 to 0.0025	<0.0005	<0.001	<0.0025	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Lithium	0.0005 to 0.025	0.0077	<0.01	<0.025	<0.01	<0.01	0.0052	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	<0.005	0.0058
Magnesium	0.1	61.3	53.9	137	57	52.7	58.8	82	67.1	75.6	79.7	85.1	87.5	42	41.7	45.1
Manganese	5E-005 to 0.0015	0.00817	0.062	0.115	0.0676	0.0991	0.008	0.21	0.106	0.107	0.294	0.518	0.401	0.0075	0.0326	0.0491
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.023	0.0095	0.0438	0.0119	0.0111	0.0129	0.0278	0.0214	0.021	0.0184	0.0137	0.0115	0.0058	0.0054	0.0044
Nickel	0.0005 to 0.005	0.0014	<0.002	<0.005	<0.002	<0.002	0.0011	0.0017	0.0016	0.0015	0.0019	0.0021	0.0018	<0.001	0.0012	<0.001
Phosphorus	0.05 to 0.3							<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	13.1	12.2	19.8	16	15.2	15.7	14.3	13.4	14.9	15.7	17.2	17.8	11.9	11.4	12.4
Selenium	0.0001 to 0.006	<0.001	<0.002	<0.005	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon	0.05							7.35	4.98	5.23	5.64	6.73	5.9	1.37	2.77	2.76
Silver	1E-005 to 0.0001	<0.00002	<0.00004	<0.0001	<0.00004	<0.00004	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	0.05 to 2	52.4	48.5	97.4	50.3	48.8	50	57.1	47.9	55.5	58.5	66	66.5	39.7	39.3	40.7
Strontium	0.0001 to 0.005							0.705	0.59	0.676	0.695	0.77	0.801	0.408	0.407	0.442
Sulphur	0.5															
Thallium	1E-005 to 0.001	<0.0002	<0.0004	<0.001	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin	0.0001 to 0.0025	<0.0005	<0.001	<0.0025	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00179	0.00085	0.0031	0.00063	0.00105	0.00126	0.00141	0.0016	0.00164	0.00152	0.00124	0.00114	0.00115	0.00077	0.00043
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.005	<0.002	0.0026	0.0016	0.0014	0.0022	0.0027	0.0029	0.0021	0.0023	0.002	0.0015	0.0011
Zinc	0.001 to 0.006	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Metals																
Aluminum	0.003 to 0.025	0.014	0.012	<0.025	0.012	0.072	0.0102	0.034	0.0449	0.161	0.209	0.126	0.0278	0.0232	0.0873	0.0184
Antimony	0.0001 to 0.0025	<0.0005	<0.001	<0.0025	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic	0.0001 to 0.0025	0.00101	0.0017	<0.0025	0.002	0.002	0.00103	0.00091	0.0009	0.001	0.00125	0.00151	0.00158	0.00117	0.00143	0.00141
Barium	5E-005 to 0.02	0.042	0.039	0.095	0.062	0.062	0.028	0.061	0.061	0.066	0.07	0.079	0.076	0.05	0.055	0.064
Beryllium	0.0001 to 0.005	<0.001	<0.002	<0.005	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth	0.0005 to 0.2							<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	1E-005 to 8.5E-005	<0.000017	0.000035	0.000137	0.000034	0.000053	<0.000017	0.000021	<0.000017	<0.00007	<0.00012	<0.000017	<0.000017	0.000029	0.000029	0.000018
Calcium	0.05 to 0.1	66.9	58.6	128	62.7	55.6	56.9	77.6	72.1	75.7	83.6	86.2	86.6	55.7	53.1	55.7
Chromium	0.0001 to 0.005	<0.001	<0.002	<0.005	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	0.0001 to 0.0015	<0.0003	<0.0006	<0.0015	<0.0006	<0.0006	<0.0003	<0.0003	<0.0003	<0.0003	0.00044	0.00048	0.00031	<0.0003	<0.0003	<0.0003
Copper	0.0005 to 0.007	0.0025	<0.002	<0.005	<0.002	0.0022	0.0018	0.0016	0.0013	0.0026	0.0029	0.0023	<0.003	0.002	0.0025	0.0011
Iron	0.01 to 0.03	0.049	0.086	0.081	0.091	0.125	0.039	0.216	0.117	0.274	0.399	0.353	0.2	0.042	0.162	0.065
Lead	5E-005 to 0.0025	<0.0005	<0.001	<0.0025	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Lithium	0.0005 to 0.025	0.0068	<0.01	<0.025	<0.01	<0.01	0.0061	<0.005	<0.005	0.0052	<0.005	0.006	0.0055	0.0055	<0.005	0.006
Magnesium	0.1	58.7	52.3	137	56.3	50.4	58.2	81.4	67.6	73.5	79.9	84.4	87.8	42.1	41.6	45.9
Manganese	5E-005 to 0.0015	0.0153	0.0675	0.123	0.0715	0.109	0.00965	0.244	0.117	0.121	0.316	0.531	0.414	0.0103	0.0829	0.0665
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0215	0.0094	0.0435	0.0114	0.011	0.0138	0.0303	0.0239	0.0227	0.0197	0.0146	0.0128	0.0069	0.0061	0.005
Nickel	0.0005 to 0.005	0.0015	<0.002	<0.005	<0.002	0.0026	0.0014	0.0021	0.002	0.0025	0.003	0.0026	0.0021	0.0012	0.0017	<0.001
Phosphorus	0.05 to 0.3							<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	12.5	11.8	19.9	15.8	15	15.2	14.2	13.6	14.4	15.9	17.2	17.7	12.1	11.8	12.7
Selenium	0.0001 to 0.006	<0.001	<0.002	<0.005	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon	0.05							7.36	5.12	5.48	6.36	7.03	5.96	1.45	3.04	2.81
Silver	1E-005 to 0.0001	<0.00002	<0.00004	<0.0001	<0.00004	<0.00004	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	0.05 to 2	51.2	47	96.6	49.6	46.7	48.1	57	49	54.1	59.3	65.7	65.8	39.5	40.4	42.7
Strontium	0.0001 to 0.005							0.709	0.602	0.665	0.708	0.773	0.803	0.413	0.419	0.463
Sulphur	0.5															
Thallium	1E-005 to 0.001	<0.0002	<0.0004	<0.001	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin	0.0001 to 0.0025	<0.0005	<0.001	<0.0025	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	0.016	0.013	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extractic	0.00002															
Uranium	1E-005 to 0.001	0.00166	0.00083	0.0031	0.00061	0.00106	0.00135	0.00155	0.00183	0.00181	0.00161	0.00137	0.00128	0.00137	0.0009	0.00054
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.005	<0.002	0.0027	0.0018	0.0017	0.0025	0.0032	0.0036	0.0025	0.0025	0.0023	0.0019	0.0013
Zinc	0.003 to 0.006	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Organics																
Carbon Organic (Dissolved)	0.5 to 5		17	13.5	17.6	17.8	14.4	11.4	9.5	10.4	10.6	13.6	14.5	15	17.1	15.5
Carbon Organic (Total)	0.5 to 5	14.8							9.85	10.4	10.5	13.9	15.3	15	16.5	16.5
Nitrogen Organic (Dissolved)	0.05 to 0.26										0.96	0.58	0.913	0.759	0.985	0.953
Nitrogen Organic (Total)	0.05 to 0.3								0.667		0.823	0.55	0.701	0.739	1.07	0.973
ALS LAB ID		**L501627**	**L532402**	**L623545**	**L652819**	**L678833**	**L894162**	**L990459**	**L995583**	**L997645**	**L999654**	**L1002049**	**L1005044**	**L1011001**	**L1025075**	**L1038168**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes	MDL	PC03 30-Aug-11	PC03 28-Sep-11	PC03 25-Oct-11	PC03 5-Dec-11	PC03 6-Mar-12	PC03 10-Apr-12	PC03 25-Apr-12	PC03 2-May-12	PC03 11-May-12	PC03 16-May-12	PC03 24-May-12	PC03 10-Jul-12	PC03 7-Aug-12	PC03 4-Dec-12	PC03 8-Jan-13
In Situ Parameters																
Conductivity µS/cm	...	598		403	772	1007	606	315	540	135	754	747	767	689	580	633
Oxygen Dissolved %	...	79.9		85.6	23.4	60.7		94.5	88.9	93.7	76	90.3			73.9	17
Oxygen Dissolved	...	8.13		10.9	3.28	8.82	13	9.85	10.2	11.2	7.92	9.27			10.4	2.46
pH (unitless)	...	7.84	7.97	8.45	7.57	7.66	8.14	8.18	8.32	8.7	8.1	8.15	8.71	8.16	7.83	7.94
Redox Potential mV	...	153	-112	-21.7	-21.4	107	18.3	98.3	117	-9.8	107	62.8	144	128		4.6
Salinity ppt	...			0.32	0.71	0.96	0.45	0.2	0.38	0.1	0.48	0.47		0.34	0.52	0.59
Specific Conductivity µS/cm	...	749	895	653	1428	1926	902	413	772	202	969	945	756	708	1056	1216
Temperature °C	...	14.4	12.6	4.95	0.96	0	7.85	13.4	9.27	7.6	13.4	14	25.7	23.6	1.52	-0.08
Total Dissolved Solids	...			424	928	1252	586	263	502	131	630	614		460	688	790
Turbidity NTU	...	1.3	2.4		12.2	65.7		0.9	0.6	0.9	2.4	1.3	0.9	1.2	2.2	13.7
Physical Tests																
Acidity to pH 8.3 (as CaCO3)	1		<1	<1												
Alkalinity (Total as CaCO3)	1 to 2	248	323	345	512	676	291	320	364	383	290	314	263	255	417	468
Bicarbonate Alkalinity	1 to 2		323	334		676	276	314	345	333	290	298	244	245	417	468
Carbonate Alkalinity	1 to 2		<2	10.9		<1	15	6.7	19	49.8	<1	16.2	19.5	10.1	<2	<20
Color TCU	5	28.4	36.9	31.5	30.3	57.7	19.2	27.1	28.2	29.8	28.3	26.4	35.4	33	26.5	27.7
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	301	361	392	625	976	432	481	554	602	419	416	325	303	482	571
Hydroxide Alkalinity	1 to 2		<2	<1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<2	<20
pH (unitless)	0.01 to 0.1	8.21	8.3	8.46	8.1	7.96	8.48	8.5	8.39	8.54	8.38	8.36	8.57	8.36	8.23	8.01
Specific Conductivity µS/cm	2	711	872	947	1370	1940	913	989	1140	1270	947	923	707	688	993	1190
Total Dissolved Solids	1 to 2	439	545	556	829	1420	597	657	767	850	626	601	444	436	633	824
Total Suspended Solids	3	<3	8.7	3.1	12.3	5.3	<3	<3	3.1	<3	4.2	<3	<3	<3	<3	<3
Turbidity NTU	0.1	0.89		1.79	4.39	15.3	1.42	0.66	0.68	0.69	1.09	0.91	1.06	0.98	2.7	4.64
Dissolved Anions																
Bromide	0.05 to 2.495	<0.25	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.25	<0.25	<0.5	<0.5
Chloride	0.5 to 1	51.3	60.1	62.9	66	79	30.2	39.4	43.4	48.1	56.6	57.2	50.4	51.7	61.7	61.3
Fluoride	0.02 to 0.4	0.2	0.22	0.23	0.22	<0.4	<0.2	<0.2	<0.2	<0.2	0.2	0.21	0.2	0.22	<0.2	0.33
Sulphate	0.5 to 1	63.8	67.5	84.8	169	435	193	216	264	303	173	148	69.3	61.6	92	159
Nutrients																
Ammonia (Total)	0.005 to 0.05	0.0177	0.0891	0.093	0.349	2.26	0.0786	0.0259	0.0205	0.0128	0.0243	0.0157	0.0139	0.0225	0.221	1
Nitrate (as N)	0.005 to 0.1	0.028	<0.05	0.067	<0.05	<0.1	<0.05	<0.05	<0.05	0.062	<0.05	<0.05	<0.025	<0.025	0.073	<0.05
Nitrite (as N)	0.001 to 0.02	<0.005	<0.01	<0.01	0.011	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.005	<0.005	<0.01	0.01
Nitrogen (Dissolved)	0.05 to 0.1	1.13	1.18	0.93		3.27	0.68	0.68	0.72	0.84	1.06	0.81	1.03	0.89	1.15	1.91
Nitrogen (Total)	0.0025 to 0.11	1.19	1.19	1.15	1.55	3.37	0.895	0.934	0.783	0.609	0.959	0.908	0.898	0.902	1.32	2.12
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.996	1.19	1.09	1.42	3.37	0.895	0.934	0.783	0.547	0.959	0.908	0.898	0.902	1.24	2.1
Orthophosphate (Dissolved)	0.001 to 0.01															
Phosphorus - Dissolved	0.002 to 0.02	0.0331	0.0703	0.0411	0.0585	0.561	0.0615	0.0424	0.0434	0.0325	0.0336	0.027	0.0344	0.0502	0.0763	0.326
Phosphorus - Total	0.002 to 0.02	0.0421	0.0838	0.0562	0.096	0.647	0.0937	0.0532	0.0528	0.0381	0.0514	0.0396	0.0455	0.06	0.0954	
Cyanide																
Cyanide (Free)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005		0.0069	0.0087	0.01	0.011	0.0055	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																
Aluminum	0.001 to 0.025	<0.005	<0.005	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0018	0.0019	0.0013	0.0013	0.0022
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	<0.0001	<0.0001	0.00011	0.0001	<0.0001	<0.0001	0.00011	0.00015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00147	0.00169	0.00122	0.00136	0.00265	0.00093	0.00139	0.00147	0.00148	0.00129	0.00126	0.00154	0.00158	0.00091	0.00141
Barium	5E-005 to 0.02	0.058	0.066	0.0617	0.112	0.139	0.0618	0.0675	0.079	0.0721	0.053	0.0531	0.0463	0.049	0.0657	0.114
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	0.028	0.034	0.046	0.028	0.035	0.039	0.04	0.036	0.033	0.03	0.028	0.029	0.027
Cadmium	1E-005 to 8.5E-005	<0.000017	<0.000017	<0.00001	<0.00001	<0.00001	0.000023	<0.00001	<0.00001	<0.00001	0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	51.8	57	60.1	95.9	143	64	72	84.1	83.5	62.8	66.2	54.7	49.6	73.7	88.6
Chromium	0.0001 to 0.018	<0.001	<0.001	0.00016	0.00016	0.00023	0.00011	<0.0001	0.00015	0.00013	<0.0001	0.00012	<0.0001	<0.0001	0.00019	0.00024
Cobalt	0.0001 to 0.0015	<0.0003	<0.0003	<0.0001	0.00018	0.0005	0.00013	0.00017	0.00014	0.00016	0.00011	0.00011	<0.0001	<0.0001	0.00013	0.00024
Copper	0.0002 to 0.006	<0.001	<0.001	0.00132	<0.0005	0.00145	0.00079	0.00104	0.00101	0.00105	0.0014	0.00123	0.00114	0.00066	0.00063	<0.0002
Dissolved Cadmium (by saltwater extr	0.00002															
Iron	0.01 to 0.03	<0.03	0.051	<0.03	0.085	0.119	0.044	0.031	<0.03	<0.03	<0.03	0.039	0.03	0.023	0.043	0.243
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.0055	0.0066	0.00561	0.00755	0.00887	0.00411	0.00472	0.00562	0.00542	0.00672	0.0051	0.00601	0.0053	0.00545	0.00565
Magnesium	0.1	41.6	53	58.8	93.7	150	66.1	73.1	83.6	95.5	63.6	60.9	45.7	43.4	72.2	84.9
Manganese	5E-005 to 0.0015	0.0236	0.087	0.0503	1.67	1.11	0.107	0.0823	0.0553	0.0523	0.0359	0.0514	0.0227	0.0437	0.317	1.98
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0062	0.0088	0.0113	0.00384	0.00974	0.017	0.0153	0.0132	0.0131	0.0249	0.0149	0.00585	0.00416	0.00384	0.00166
Nickel	0.0005 to 0.005	0.0011	0.0018	0.00175	0.00153	0.00252	0.00105	0.00153	0.00159	0.00169	0.00127	0.00138	0.00125	0.00106	0.00158	0.0014
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	0.6	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.081	0.317
Potassium	0.05 to 2	12.6	15.5	15	21.4	27.5	11.6	14.5	16.3	16.9	14.4	13.4	11.2	11.8	16.7	16.7
Selenium	0.0001 to 0.006	<0.001	<0.001	0.00017	0.00024	0.00028	0.00014	0.00014	0.00015	0.00017	0.00021	0.00021	0.00021	0.0002	0.00015	0.00017
Silicon	0.05	5.61	5.74	5.24	12.6	13.6	3.9	2.91	3.71	0.998	3.32	2.58	1.79	4.04	10.3	11.9
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	38.2	48.4	51.6	77.8	100	41.7	51.6	58.3	63.7	50.8	48.1	38.6	35.8	52.5	57.3
Strontium	0.0001 to 0.005	0.417	0.487	0.487	0.94	1.19	0.573	0.619	0.757	0.763	0.541	0.52	0.41	0.389	0.636	0.824
Sulphur	0.5														30.2	50.1
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00077	0.00095	0.00113	0.000645	0.00118	0.00105	0.0012	0.00116	0.00127	0.00173	0.00123	0.000576	0.000412	0.000561	0.000368
Vanadium	0.001 to 0.03	0.0018	0.0028	0.003	0.0012	0.0019	0.0017	0.0026	0.0023	0.0023	0.0028	0.0023	0.0014	0.0012	0.0015	<0.001
Zinc	0.001 to 0.006	<0.005	<0.005	0.0083	0.0067	<0.003	<0.003	<0.003	0.0049	0.0034	<0.003	0.0044	0.0022	0.0011	<0.001	0.005
Total Metals																
Aluminum	0.003 to 0.025	0.0199	0.0279	0.0678	0.515	0.0784	0.01	0.005	0.0035	0.0075	0.0169	0.0164	0.0147	0.0366	0.0853	0.0406
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	0.0001	<0.0001	0.00012	<0.0001	<0.0001	0.00011	0.00013	0.00015	0.00013	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00136	0.00156	0.00123	0.00153	0.00262	0.00092	0.00137	0.00137	0.0015	0.00132	0.00125	0.00156	0.00164	0.00095	0.00153
Barium	5E-005 to 0.02	0.057	0.064	0.0625	0.121	0.143	0.0627	0.0658	0.0757	0.0714	0.0533	0.0508	0.0447	0.0519	0.0664	0.118
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	0.035	0.038	0.051	0.033	0.04	0.045	0.046	0.045	0.037	0.034	0.034	0.027	0.03
Cadmium	1E-005 to 8.5E-005	<0.000017	<0.000017	<0.00001	0.000015	0.000014	0.000018	<0.00001	<0.00001	<0.00001	0.000018	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	49.5	55.2	60.3	96	146	64.2	71.4	82.9	85.5	62.5	63.4	53.4	49.5	70.8	88.5
Chromium	0.0001 to 0.005	<0.001	<0.001	0.00043	0.00156	0.00065	0.00019	0.00032	0.00019	<0.0003	0.00025	0.00022	0.00027	0.00028	0.00046	0.00042
Cobalt	0.0001 to 0.0015	<0.0003	<0.0003	0.00016	0.00064	0.00058	0.00014	0.00017	0.00014	0.00017	0.00014	0.00013	0.00012	0.00012	0.00022	0.0003
Copper	0.0005 to 0.007	0.0012	0.0013	0.00194	0.00525	0.00255	0.00085	0.00121	0.00191	0.00143	0.00227	0.00151	0.00165	0.00126	0.0038	0.00181
Iron	0.01 to 0.03	0.046	0.084	0.112	0.797	0.355	0.099	0.043	0.035	<0.03	0.055	0.064	0.055	0.069	0.179	0.345
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.00005	0.000168	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.0054	0.0065	0.00647	0.00722	0.00876	0.00389	0.00456	0.00568	0.00557	0.00721	0.00502	0.00573	0.00567	0.00488	0.00601
Magnesium	0.1	40.3	51.6	58.3	91.5	151	66.5	73.7	82.2	97.6	63.2	57.5	44.6	42.9	69.1	86.3
Manganese	5E-005 to 0.0015	0.0302	0.0879	0.0677	1.92	1.11	0.108	0.0911	0.0598	0.0564	0.0382	0.0528	0.0294	0.0531	0.317	2.04
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0066	0.0095	0.0117	0.00417	0.0116	0.0173	0.0169	0.0137	0.0141	0.0276	0.0153	0.00592	0.00457	0.00378	0.00197
Nickel	0.0005 to 0.005	0.0012	0.0019	0.00211	0.00385	0.00325	0.00116	0.00157	0.00165	0.00175	0.00132	0.00149	0.00134	0.00126	0.00225	0.00177
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	0.67	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.109	0.346
Potassium	0.05 to 2	12.5	15.1	15.2	20.9	27.5	11.4	14	16	16.8	14.5	12.9	10.9	12	16.2	16.9
Selenium	0.0001 to 0.006	<0.001	<0.001	0.00018	0.00024	0.00028	0.00015	0.00015	0.00016	0.00017	0.00022	0.0002	0.00022	0.00021	0.00015	0.00017
Silicon	0.05	5.49	5.61	5.37	13.5	14.2	3.88	2.94	3.66	1.08	3.36	2.49	1.81	4.18	10.2	12.1
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	38.3	47	52.6	74.7	99.4	41	50.3	58.4	64.4	52	46.5	37	37	50.6	59.7
Strontium	0.0001 to 0.005	0.41	0.478	0.492	0.931	1.22	0.568	0.63	0.744	0.79	0.577	0.517	0.397	0.408	0.607	0.854
Sulphur	0.5														29.5	52.9
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00298
Titanium	0.01	<0.01	<0.01	<0.01	0.022	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extractic	0.00002															
Uranium	1E-005 to 0.001	0.00085	0.001	0.00117	0.000672	0.00125	0.0011	0.00134	0.00122	0.00137	0.00193	0.0013	0.000607	0.000459	0.000585	0.0004
Vanadium	0.001 to 0.03	0.0018	0.0029	0.0032	0.0029	0.0021	0.0018	0.0026	0.0023	0.0024	0.003	0.0025	0.0016	0.0016	0.0021	0.0012
Zinc	0.003 to 0.006	<0.005	<0.005	0.0036	0.0222	0.003	<0.003	<0.003	0.0034	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0044
Organics																
Carbon Organic (Dissolved)	0.5 to 5	17.3	17.7	17.5	17	24.5	10	11.5	13.4	13.4	15.8	15	15.2	15.6	12.6	14.2
Carbon Organic (Total)	0.5 to 5	17.7	18.8	18.1	17.9	25.4	10.1	11.4	13.3	13.8	16.1	15.1	15.5	15.9	14.1	13.9
Nitrogen Organic (Dissolved)	0.05 to 0.26	1.08	1.09	0.77		1.01	0.601	0.654	0.7	0.766	1.04	0.794	1.02	0.868	0.853	
Nitrogen Organic (Total)	0.05 to 0.3	1.14	1.1	0.8	1.19	1.1	0.816	0.908	0.762	0.534	0.935	0.893	0.884	0.88	1.02	1.1
ALS LAB ID		**L1052387**	**L1066047**	**L1076994**	**L1092368**	**L1122039**	**L1133342**	**L1140194**	**L1142492**	**L1146570**	**L1148880**	**L1152500**	**L1176520**	**L1190914**	**L1245799**	**L1256678**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes	MDL	PC03 5-Feb-13	PC03 6-Mar-13	PC03 2-Apr-13	PC03 7-May-13	PC03 5-Jun-13	PC03 2-Jul-13	PC03 7-Aug-13	PC03 9-Oct-13	PC03 6-Nov-13	PC03 13-Mar-14	PC03 21-Mar-14	PC03 27-Mar-14	PC03 3-Apr-14	PC03 10-Apr-14	PC03 23-Apr-14
In Situ Parameters																
Conductivity µS/cm	...	0.703	730	777	663	564	667	653	1.32	826	453	806	438	891	513	1174
Oxygen Dissolved %	...	6.9	41.1		81.9	89.9		69.8	80		81.4	53.9	95.7	89.5		108
Oxygen Dissolved	...	1	5.99		8.3	8.83		5.74	10.3		11.8	7.71	12.9	11.3		12.2
pH (unitless)	...	7.56	7.57	8.2	8.21	8.42	8.54	7.98	8.35	8.28	7.93	7.68	7.9	8.13	8.1	8.07
Redox Potential mV	...	-73.6	29.7	-27.6	89.4	155	79.1	281	135	87.7	67.4	58.3	77.5	27.9	-48.2	119
Salinity ppt	...	0.66	0.69	0.51	0.39	0.33	0.33	0.34	0.66	0.73	0.42	0.74	0.37	0.72	0.38	0.84
Specific Conductivity µS/cm	...	1349	1396	1032	789	678	677	703	798	1467	867	1503	757	1435	764	1654
Temperature °C	...	-0.07	0.01	12.1	14.7	16.2	25.8	21.2	4.44	2.13	0.02	0.7	2.89	5.17	7.78	9.82
Total Dissolved Solids	...	877	908	670	513	441	440	457	865	954	563	977	492	932	497	1175
Turbidity NTU	...	25	48.9	1.3	2.8	1.7	0	1.4	0	0.9						
Physical Tests																
Acidity to pH 8.3 (as CaCO3)	1									2						
Alkalinity (Total as CaCO3)	1 to 2	488	700	325	250	243	226	264	401	447	230	445	459	375	410	370
Bicarbonate Alkalinity	1 to 2	488	700	325	247	243	208	264	386	447	230	445	459	367	410	351
Carbonate Alkalinity	1 to 2	<1	<20	<1	2.5	<1	18.3	<2	14.2	<2	<2	<2	<2	8.1	<2	19.3
Color TCU	5	27.9	23.1	19	20.1	23.6	<5	31.1	34.9	23.2						
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	633	748	494	326	307	276	294	645	725	395	762	799	720	722	785
Hydroxide Alkalinity	1 to 2	<1	<20	<1	<1	<1	<1	<2	<1	<2	<2	<2	<2	<1	<2	<1
pH (unitless)	0.01 to 0.1	8	8.25	8.24	8.46	8.39	8.55	8.24	8.41	8.22	7.99	8.26	8.22	8.33	8.23	8.32
Specific Conductivity µS/cm	2	1270	1490	1060	737	699	643	662	1310	1480	832	1500	1570	1330	1440	1650
Total Dissolved Solids	1 to 2	810	1000	707	455	428	384	394	906	1080	547	982	1020	969	1070	1200
Total Suspended Solids	3	3.1	6.3	9.3	<3	<3	<3	4.4	3.5	<3	9.5	3.4	5.1	6.6	5.4	3.5
Turbidity NTU	0.1	6.17	13.6	3.07	0.56	0.85	0.69	0.9	0.94	0.9	4.79	2.11	1.74	2.64	2.92	1.34
Dissolved Anions																
Bromide	0.05 to 2.495	<0.5	<0.5	<0.5	<0.25	<0.5	<0.05	<0.25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
Chloride	0.5 to 1	62.8	60.2	39.2	56.9	51.8	49.4	50	58.8	60.8	25.9	49.1	49.4	42.2	46	53
Fluoride	0.02 to 0.4	<0.2	0.34	0.28	0.23	0.33	0.226	0.25	0.33	0.23	0.34	<0.2	0.2	0.2	0.22	<0.4
Sulphate	0.5 to 1	176	312	247	78.5	58.3	48.9	48	305	399	209	421	441	374	424	548
Nutrients																
Ammonia (Total)	0.005 to 0.05	1.62	1.21	0.031	0.0093	0.0115	0.0217	0.043	0.0681	0.0609	0.404	0.464	0.179	0.149	0.195	0.121
Nitrate (as N)	0.005 to 0.1	<0.05	<0.05	<0.05	<0.025	<0.05	0.0097	0.027	0.125	0.139	0.153	0.131	0.054	0.058	0.065	0.14
Nitrite (as N)	0.001 to 0.02	<0.01	<0.01	<0.01	<0.005	<0.01	0.0013	0.0093	0.033	0.024	0.013	0.011	<0.01	<0.01	0.011	<0.02
Nitrogen (Dissolved)	0.05 to 0.1	2.1	1.89	0.597				0.954								
Nitrogen (Total)	0.0025 to 0.11	2.46	1.98	0.804	0.806	0.819	0.945	1.02	1.25	0.918						
Nitrogen Kjeldahl (Total)	0.05 to 0.2	2.43	2.09	0.804	0.794	0.799	0.934	1.07	1.18	0.817	1.82	1.32	1.16	1.16	1.29	1.01
Orthophosphate (Dissolved)	0.001 to 0.01								0.0277	0.0183	0.171	0.0469	0.0214	0.0111	0.0213	0.016
Phosphorus - Dissolved	0.002 to 0.02	0.35	0.148	0.0245	0.0235	0.0212	0.0422	0.0659	0.0504	0.0283	0.251	0.0702	0.0399	0.0939	0.0434	0.0337
Phosphorus - Total	0.002 to 0.02	0.405	0.215	0.107	0.0295	0.029	0.0321	0.0755	0.0609	0.0359	0.294	0.15	0.0936	0.0333	0.092	0.0622
Cyanide																
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																
Aluminum	0.001 to 0.025	0.0018	0.001	0.0016	0.0014	0.0017	0.0019	0.0013	0.0041	0.0012	0.0036	0.0019	0.0013	0.0012	0.0015	<0.001
Antimony	0.0001 to 0.0025	<0.0001	<0.0001	0.00011	0.0001	<0.0001	0.0001	0.00011	0.00034	0.00011	0.00011	0.00017	0.00011	0.00015	0.00015	0.00015
Arsenic	0.0001 to 0.0025	0.00128	0.00128	0.00094	0.00124	0.00123	0.0017	0.00168	0.00228	0.00127	0.00144	0.00156	0.0013	0.00118	0.00141	0.0013
Barium	5E-005 to 0.02	0.111	0.103	0.0633	0.0484	0.0437	0.0428	0.056	0.0812	0.093	0.0508	0.0772	0.0694	0.0655	0.0792	0.0729
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.031	0.033	0.035	0.025	0.024	0.024	0.034	0.049	0.034	0.035	0.051	0.051	0.041	0.043	0.044
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00003	<0.00002	<0.00001	<0.00004	<0.00002	<0.00003	<0.00003	<0.00003
Calcium	0.05 to 0.1	98.1	115	74.3	57.8	58.2	51.1	51.3	110	108	64.4	112	111	105	107	115
Chromium	0.0001 to 0.018	0.00025	0.00016	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	0.00025	0.00022	0.00016	0.00012	0.00013	0.00013	<0.0001	0.00011
Cobalt	0.0001 to 0.0015	0.00018	0.00021	0.00012	<0.0001	<0.0001	0.00013	0.0001	0.00019	0.00017	0.00036	0.00036	0.00029	0.00024	0.00023	0.00023
Copper	0.0002 to 0.006	<0.0002	0.0003	0.00086	0.0013	0.00147	0.00161	0.00078	0.00306	0.00126	0.00437	0.00184	0.0016	0.00124	0.00125	0.00172
Dissolved Cadmium (by saltwater extr	0.00002												<0.00002	<0.00002	<0.00002	<0.00002
Iron	0.01 to 0.03	0.192	0.128	0.036	0.015	0.018	0.017	0.027	0.026	0.026	0.109	0.065	0.061	0.056	0.046	0.053
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00616	0.00639	0.00437	0.00601	0.00478	0.00472	0.00549	0.00782	0.00796	0.00432	0.00732	0.00785	0.0058	0.00667	0.00779
Magnesium	0.1	94.2	112	74.9	44.2	39.2	36	40.2	90.1	110	56.8	117	127	111	110	121
Manganese	5E-005 to 0.0015	1.45	0.867	0.122	0.0226	0.016	0.0153	0.0439	0.047	0.0868	0.252	0.314	0.18	0.175	0.172	0.153
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00102	0.0106	0.0301	0.00822	0.00423	0.00469	0.00581	0.103	0.0308	0.0273	0.0805	0.0771	0.0687	0.065	0.0705
Nickel	0.0005 to 0.005	0.0013	0.0015	0.00134	0.00093	0.00101	0.00093	0.00118	0.00205	0.00161	0.00156	0.00211	0.00181	0.00167	0.0018	0.0018
Phosphorus	0.05 to 0.3	0.391	0.173	<0.05	<0.05	<0.05	<0.05	0.071	<0.05	<0.05	0.225	0.073	<0.05	<0.05	<0.05	<0.05
Potassium	0.05 to 2	16.8	18.3	14.3	12.1	11.9	11.1	11.7	21.7	19.2	15.1	19.2	18.3	16.3	16.3	19.2
Selenium	0.0001 to 0.006	0.00017	0.00019	0.00019	0.00017	0.00018	0.00019	0.00022	0.00048	0.00023	0.00042	0.00106	0.00079	0.00061	0.0007	0.0006
Silicon	0.05	13.4	11.3	4.55	3.18	2.15	3.91	7.84	9.11	9.01	5.88	9.41	9.4	7.54	7.09	5.92
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	67.8	67.5	49	37.8	33.9	33	35.4	67.1	72.3	36	72.6	76.3	62.9	69.4	77
Strontium	0.0001 to 0.005	0.874	0.916	0.636	0.434	0.364	0.369	0.379	0.878	0.925	0.53	0.919	0.975	0.809	0.944	1
Sulphur	0.5	56.2	98.9	77.2	26.5	19	16.1	16.2	96.7	132	67.2	130	132	125	142	171
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.000286	0.00106	0.00173	0.00121	0.000919	0.000958	0.000758	0.00564	0.0036	0.00188	0.00494	0.0049	0.00445	0.0039	0.00393
Vanadium	0.001 to 0.03	<0.001	0.0012	0.0027	0.0023	0.0019	0.003	0.0021	0.0066	0.003	0.0036	0.0044	0.0039	0.0034	0.0038	0.0036
Zinc	0.001 to 0.006	0.0046	<0.001	0.0035	0.0013	0.0024	0.0013	<0.001	0.001	<0.001	0.0021	0.0013	<0.001	<0.001	<0.001	<0.001
Total Metals																
Aluminum	0.003 to 0.025	0.0358	0.03	0.0375	0.013	0.0283	0.0164	0.0564	0.0141	0.0126	0.243	0.0487	0.0216	0.0451	0.0515	0.0371
Antimony	0.0001 to 0.0025	<0.0001	<0.0001	0.00012	0.00011	0.0001	0.00014	0.00014	0.00034	0.00014	0.00013	0.00018	0.00011	0.00019	0.00016	0.00015
Arsenic	0.0001 to 0.0025	0.00133	0.00144	0.00091	0.00123	0.00134	0.00172	0.00177	0.00211	0.00133	0.00145	0.00142	0.00135	0.00134	0.00139	0.0013
Barium	5E-005 to 0.02	0.109	0.104	0.0633	0.0488	0.0463	0.0435	0.0582	0.0808	0.0985	0.0535	0.0761	0.0693	0.0666	0.0831	0.0752
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.035	0.037	0.037	0.027	0.026	0.026	0.039	0.053	0.031	0.038	0.053	0.052	0.045	0.047	0.047
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00003	<0.00002	0.000012	<0.00004	<0.00002	<0.00003	<0.00003	<0.00003
Calcium	0.05 to 0.1	97.4	118	71.7	57.8	59.4	51.3	53	106	110	64.8	107	106	97.5	110	115
Chromium	0.0001 to 0.005	0.00039	0.00027	0.00024	0.00016	0.00023	0.00016	0.00031	0.00042	0.00028	0.0007	0.00036	0.00022	0.00027	0.00029	0.00027
Cobalt	0.0001 to 0.0015	0.00021	0.00028	0.00015	<0.0001	0.00012	0.00015	0.00017	0.00022	0.0002	0.00058	0.00039	0.00031	0.0003	0.00029	0.00027
Copper	0.0005 to 0.007	0.00079	0.00094	0.00146	0.00175	0.0021	0.00207	0.00156	0.00341	0.00162	0.0087	0.00335	0.00246	0.00242	0.00185	0.00269
Iron	0.01 to 0.03	0.272	0.258	0.105	0.033	0.068	0.041	0.106	0.043	0.058	0.395	0.192	0.146	0.227	0.17	0.138
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000063	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00614	0.0069	0.00432	0.00609	0.005	0.00494	0.00579	0.00861	0.00697	0.00436	0.00722	0.00764	0.00642	0.00683	0.00775
Magnesium	0.1	92.2	112	72.5	43.8	39.2	36.7	40.8	90.3	108	57.1	111	117	103	112	123
Manganese	5E-005 to 0.0015	1.49	0.905	0.122	0.0247	0.0227	0.0213	0.0546	0.0502	0.0916	0.267	0.301	0.181	0.189	0.177	0.158
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00127	0.0131	0.0299	0.00897	0.00442	0.00494	0.00653	0.111	0.0285	0.0294	0.0823	0.0763	0.0747	0.0718	0.0742
Nickel	0.0005 to 0.005	0.00148	0.00163	0.00144	0.00101	0.00117	0.00107	0.00151	0.00218	0.00182	0.00336	0.00226	0.00189	0.00195	0.00199	0.00208
Phosphorus	0.05 to 0.3	0.408	0.226	0.059	<0.05	<0.05	<0.05	0.088	0.058	<0.05	0.303	0.112	0.071	0.095	0.094	0.063
Potassium	0.05 to 2	16.3	18.8	14.4	12.1	12.1	11.6	12.4	21.1	19.1	15.2	18.1	17.2	15.3	17.1	18.9
Selenium	0.0001 to 0.006	0.00016	0.00023	0.00021	0.00018	0.00018	0.00019	0.00023	0.00041	0.00024	0.00044	0.00092	0.00075	0.00061	0.0006	0.00057
Silicon	0.05	13.3	11.8	4.53	3.23	2.25	4.04	8.21	9.21	9.01	6.61	9.14	9.09	7.45	7.69	5.96
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	0.000015	<0.00001	<0.00001	<0.00001	0.000033	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	69.5	68.4	47.4	37.9	36.7	33.9	38.1	69.3	74.8	36.8	71.8	73.5	64.7	71.9	77.6
Strontium	0.0001 to 0.005	0.922	0.961	0.62	0.446	0.377	0.385	0.397	0.919	0.813	0.532	0.924	0.95	0.83	1.01	1.02
Sulphur	0.5	57.1	105	76	27.1	19.6	16.6	17.7	101	138	69.1	132	136	124	148	177
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extractic	0.00002												<0.00002	<0.00002	<0.00002	<0.00002
Uranium	1E-005 to 0.001	0.000267	0.00113	0.00175	0.00129	0.000987	0.00103	0.000833	0.00608	0.00337	0.00197	0.00517	0.00498	0.00459	0.00405	0.00403
Vanadium	0.001 to 0.03	<0.001	0.0015	0.0029	0.0025	0.0022	0.0031	0.0025	0.0071	0.004	0.0045	0.0047	0.0041	0.0042	0.0041	0.0039
Zinc	0.003 to 0.006	0.0038	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics																
Carbon Organic (Dissolved)	0.5 to 5	13.6	12.4	10	12.1	14.7	15.1	17.3	18.1	14.4	14.4	12.7	12.4	12.4	12.1	13.5
Carbon Organic (Total)	0.5 to 5	14.5	12.9	10.7	12.2	14.9	15.8	17.9	18.9	14.5	16.6	13.2	12.9	13.6	12.6	13.7
Nitrogen Organic (Dissolved)	0.05 to 0.26		3.47	0.566												
Nitrogen Organic (Total)	0.05 to 0.3	0.81	0.77	0.773												
ALS LAB ID		l1265809	L1276517	L1285503	L1298960	L1312719	L1326032	L1344180	L1375698	L1388680	L1432661	L1435186	L1437439	L1439655	L1442672	L1446462

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes	MDL	PC03 6-May-14	PC03 21-May-14	PC03 3-Jun-14	PC03 18-Jun-14	PC03 3-Jul-14	PC03 16-Jul-14	PC03 30-Jul-14	PC03 12-Aug-14	PC03 4-Sep-14
In Situ Parameters										
Conductivity µS/cm	...	673	655	831	660	782	782	923	637	
Oxygen Dissolved %	...			55.4					82.9	
Oxygen Dissolved	...			5.38					7.59	
pH (unitless)	...	8.29	8.55	7.81	8.48	8.74	8.74	9.18	8.13	8.52
Redox Potential mV	...	195	77.5	39.6	103	79.5	79.5	126	79.5	
Salinity ppt	...	0.44	0.37	0.49	0.38	0.38	0.38	0.42	0.35	
Specific Conductivity µS/cm	...	884	744	992	775	780	780	863	710	
Temperature °C	...	12.5	18.7	16.5	17.2	25.1	25.1	28.7	19.6	18.4
Total Dissolved Solids	...	572	484	645	504	507	507	561	461	
Turbidity NTU	...									
Physical Tests										
Acidity to pH 8.3 (as CaCO3)	1									
Alkalinity (Total as CaCO3)	1 to 2	271	232	247	267	278	247	343	242	387
Bicarbonate Alkalinity	1 to 2	271	225	231	255	251	233	299	234	360
Carbonate Alkalinity	1 to 2	<2	6.3	16.2	12.1	27	14.5	44	8.2	26.7
Color TCU	5									
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	385	327	312	341	348	309	414	311	500
Hydroxide Alkalinity	1 to 2	<2	<1	<1	<1	<1	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1	8.27	8.37	8.57	8.42	8.72	8.5	8.78	8.37	8.51
Specific Conductivity µS/cm	2	862	725	720	758	753	691	930	707	1060
Total Dissolved Solids	1 to 2	532	450	444	470	441	440	598	470	695
Total Suspended Solids	3	5.9	3.7	3	5.4	8.9	<3	8.9	<3	7.5
Turbidity NTU	0.1	1.76	1.11	1.34	1.58	2.05	1.63	3.95	1.14	3.79
Dissolved Anions										
Bromide	0.05 to 2.495	<0.5	<0.25	<0.05	<0.5	<0.25	<0.25	<0.5	<0.25	<0.5
Chloride	0.5 to 1	58.7	48.5	52.1	52.9	52.3	54.1	56.8	56.3	54.6
Fluoride	0.02 to 0.4	0.2	0.17	0.228	0.214	0.31	0.213	0.231	0.233	0.232
Sulphate	0.5 to 1	132	67.8	68.2	77	78.8	51.9	122	64.6	163
Nutrients										
Ammonia (Total)	0.005 to 0.05	0.0228	0.0098	0.0121	0.0245	0.0231	0.0167	0.194	0.014	0.0408
Nitrate (as N)	0.005 to 0.1	<0.05	<0.025	<0.005	0.064	<0.025	<0.025	<0.05	<0.025	0.065
Nitrite (as N)	0.001 to 0.02	<0.01	<0.005	<0.001	0.018	<0.005	<0.005	0.021	<0.005	0.012
Nitrogen (Dissolved)	0.05 to 0.1									
Nitrogen (Total)	0.0025 to 0.11		0.693							
Nitrogen Kjeldahl (Total)	0.05 to 0.2	1.11	0.763	0.854	0.999	1.12	0.95	1.62	1.04	1.02
Orthophosphate (Dissolved)	0.001 to 0.01	0.0116	0.0073	0.0093	0.0117	0.0265	0.0226	0.153	0.012	0.0339
Phosphorus - Dissolved	0.002 to 0.02	0.0288	0.0239	0.0256	0.0275	0.0487	0.0442	0.191	0.0273	0.0548
Phosphorus - Total	0.002 to 0.02	0.0538	0.0301	0.0419	0.0455	0.0495	0.059	0.208	0.034	0.0476
Cyanide										
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals										
Aluminum	0.001 to 0.025	0.0018	0.0015	0.0019	0.0016	0.0034	0.003	0.0035	0.0019	0.0029
Antimony	0.0001 to 0.0025	0.00019	0.00011	0.00011	<0.0001	0.00012	0.00011	0.00014	0.00013	<0.0001
Arsenic	0.0001 to 0.0025	0.00145	0.00143	0.00165	0.00152	0.00204	0.00173	0.00338	0.00176	0.00184
Barium	5E-005 to 0.02	0.0508	0.0563	0.0508	0.0461	0.0367	0.049	0.0578	0.0528	0.0486
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.032	0.034	0.026	0.027	0.034	0.028	0.037	0.028	0.037
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	65.9	61.5	58.9	62.3	59.4	56.1	65.6	58.9	83.6
Chromium	0.0001 to 0.018	<0.0001	0.0001	<0.0001	0.00011	0.00016	<0.0001	0.00022	<0.0001	0.00018
Cobalt	0.0001 to 0.0015	0.00013	<0.0001	0.00013	0.00014	0.00018	0.00013	0.00029	0.00012	0.00019
Copper	0.0002 to 0.006	0.00187	0.00186	0.00181	0.00131	0.00172	0.00143	0.00144	0.00174	0.00131
Dissolved Cadmium (by saltwater extr	0.00002									
Iron	0.01 to 0.03	0.024	0.016	0.03	0.035	0.04	0.033	0.035	0.029	0.032
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00572	0.00593	0.00532	0.00521	0.00565	0.00517	0.00668	0.00582	0.00599
Magnesium	0.1	53.6	42.1	39.9	45	48.3	41	60.8	39.8	70.7
Manganese	5E-005 to 0.0015	0.0376	0.0103	0.0241	0.0518	0.0753	0.0456	0.282	0.0184	0.0824
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0265	0.0117	0.00825	0.00741	0.00975	0.00534	0.0129	0.0133	0.0142
Nickel	0.0005 to 0.005	0.00119	0.00104	0.00109	0.00116	0.00148	0.00119	0.00208	0.00103	0.00155
Phosphorus	0.05 to 0.3	<0.05	<0.05	<0.05	<0.05	0.053	<0.05	0.19	<0.05	0.056
Potassium	0.05 to 2	12.5	10.9	10.4	11	12.9	11	16.3	10.6	14.1
Selenium	0.0001 to 0.006	0.00042	0.00023	0.00023	0.00025	0.00027	0.00022	0.00046	0.0002	0.00029
Silicon	0.05	4.76	3.19	4.2	4.6	5.61	7.26	12.9	7.25	12.3
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	42.6	37.8	34.8	36.5	39.7	35.8	51.8	36.1	53.5
Strontium	0.0001 to 0.005	0.479	0.414	0.413	0.429	0.439	0.391	0.533	0.395	0.649
Sulphur	0.5	42	26.6	24.2	24.4	26.6	17.7	39.2	21.2	54.1
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00255	0.00132	0.00121	0.00112	0.000994	0.000842	0.00125	0.00127	0.00131
Vanadium	0.001 to 0.03	0.005	0.0034	0.0036	0.0031	0.0046	0.0032	0.0067	0.0036	0.0053
Zinc	0.001 to 0.006	<0.001	0.0012	<0.001	<0.001	<0.001	0.0023	<0.001	<0.001	0.0027
Total Metals										
Aluminum	0.003 to 0.025	0.0806	0.0488	0.0471	0.106	0.0657	0.0268	0.109	0.0319	0.157
Antimony	0.0001 to 0.0025	0.00021	0.00011	0.00011	0.00013	0.00012	0.00019	0.00016	0.00014	0.00012
Arsenic	0.0001 to 0.0025	0.00136	0.00139	0.00164	0.00152	0.00206	0.00186	0.0031	0.0017	0.00199
Barium	5E-005 to 0.02	0.0499	0.055	0.051	0.0445	0.0399	0.0509	0.0595	0.0523	0.0563
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.033	0.036	0.026	0.03	0.037	0.03	0.038	0.035	0.042
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	62.5	59.6	56.5	58.7	58.6	56.5	61	59	83.3
Chromium	0.0001 to 0.005	0.00033	0.00028	0.00026	0.00046	0.00034	0.00023	0.00051	0.00021	0.00066
Cobalt	0.0001 to 0.0015	0.00019	0.00014	0.00016	0.00022	0.00023	0.00017	0.00036	0.00014	0.00032
Copper	0.0005 to 0.007	0.003	0.00261	0.00249	0.00251	0.00265	0.00198	0.00254	0.00241	0.00293
Iron	0.01 to 0.03	0.135	0.077	0.095	0.184	0.137	0.081	0.195	0.073	0.238
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000074	<0.00005	<0.00005	0.000053
Lithium	0.0005 to 0.025	0.00551	0.00577	0.00478	0.00518	0.00556	0.00512	0.00645	0.00517	0.00615
Magnesium	0.1	47.7	40.5	38.3	41.6	47.8	40.2	56.6	39.8	70.8
Manganese	5E-005 to 0.0015	0.0417	0.0131	0.0272	0.0584	0.0849	0.0506	0.325	0.0201	0.0995
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0255	0.0124	0.0078	0.00727	0.0105	0.00566	0.013	0.0134	0.0156
Nickel	0.0005 to 0.005	0.00153	0.00125	0.00128	0.00149	0.0018	0.00137	0.00238	0.00124	0.00224
Phosphorus	0.05 to 0.3	0.055	<0.05	<0.05	<0.05	0.061	0.063	0.187	<0.05	0.073
Potassium	0.05 to 2	11.7	10.6	10.2	10.2	12.9	11.1	15.1	10.6	14
Selenium	0.0001 to 0.006	0.00037	0.0002	0.00022	0.00028	0.00027	0.00024	0.00041	0.0002	0.00034
Silicon	0.05	4.72	3.24	4.2	4.58	5.78	7.46	12.4	7.36	12.8
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	40.4	37.5	34.3	34.3	39.8	36.8	47.9	34.9	54.6
Strontium	0.0001 to 0.005	0.456	0.418	0.393	0.42	0.45	0.401	0.513	0.382	0.665
Sulphur	0.5	41	25.9	23	23.8	27.3	17.9	36.7	21.6	54.9
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000052	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extractic	0.00002									
Uranium	1E-005 to 0.001	0.00253	0.00145	0.00117	0.00112	0.00105	0.000939	0.00128	0.00131	0.00144
Vanadium	0.001 to 0.03	0.0053	0.004	0.0038	0.0036	0.005	0.0033	0.0067	0.0038	0.0062
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics										
Carbon Organic (Dissolved)	0.5 to 5	13.5	12.5	13.3	13.6	15	14.7	20	14.5	16.2
Carbon Organic (Total)	0.5 to 5	13.9	12.6	13.6	12.9	16.4	15	20.9	14.6	16.7
Nitrogen Organic (Dissolved)	0.05 to 0.26									
Nitrogen Organic (Total)	0.05 to 0.3									
ALS LAB ID		**L1451608**	**L1458340**	**L1465108**	**L1473827**	**L1481215**	**L1488886**	**L1495443**	**L1502292**	**L1513418**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes		MDL	PC08 2-May-07	PC08 17-Jul-07	PC08 14-Sep-07	PC08 28-Apr-08	PC08 7-Jul-08	PC08 4-Sep-08	PC08 1-Jun-10	PC08 1-Sep-10	PC08 22-Nov-10	PC08 29-Mar-11	PC08 14-Apr-11	PC08 21-Apr-11	PC08 28-Apr-11	PC08 5-May-11
In Situ Parameters																
Conductivity µS/cm		...	518		621	626	595	610	565	907	542	598	515	608	571	624
Oxygen Dissolved %	...					94.2	85.1	80.2		48.5	53.2	55.8	36.5	94.4	72.5	79.9
Oxygen Dissolved	...		11	9.4	8.02	10.1	7.84	8.44		5.16	6.39	6.85	4.76	10.9	8.6	8.66
pH (unitless)		...	8.6	8.44	7.05	8.26	8.34	8	8.97	6.81	6.82	7.86	7.14	7.81	7.59	7.67
Redox Potential mV		...	-88.4				-119	-75.2	-354	15.8	300	101	132	24.9	89.7	113
Salinity ppt		...								0.45				0.43	0.42	0.41
Specific Conductivity µS/cm		...	969	755	847	826	674	793	687	688	842	928	858	876	854	840
Temperature °C		...	8.01	23.2	11.1	12.3	19.3	12.9	15.7	12.4	6.44	6.38	4.1	8.94	7.65	11.5
Total Dissolved Solids		...								590	547	603	558	570	555	545
Turbidity NTU		...														
Physical Tests																
Acidity to pH 8.3 (as CaCO3)		1														
Alkalinity (Total as CaCO3)		1 to 2	231	238	315	295	220	314		308	308	317	309	292	300	296
Bicarbonate Alkalinity		1 to 2									308			292		
Carbonate Alkalinity		1 to 2									<2			<2		
Color TCU		5	14	16.1	21.7	14.5	20.2	23.7	19.2	24.6	22.4	15.9	15.4	14.4	14.8	14.8
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	342	319	344	370	296	335	286	380	357	393	369	360	388	369
Hydroxide Alkalinity		1 to 2									<2			<2		
pH (unitless)		0.01 to 0.1	8.38	8.45	8.16	8.1	8.43	8.12	8.79	7.73	8.07	7.86	8.1	8.16	8.08	8.2
Specific Conductivity µS/cm		2	725	756	845	845	672	802	668	822	820	866	801	799	801	798
Total Dissolved Solids		1 to 2	455	441	502	515	416	478	432	506	497	531	498	498	496	484
Total Suspended Solids		3	7.5	7.6	18.7	6.8	4	10.8	3	3.4	3.7	3.5	40.9	10.5	4.9	4.5
Turbidity NTU		0.1				6.59	6.63	3.38	1	3.5	8.42	4.84	29.6	10.2	7.59	7.22
Dissolved Anions																
Bromide		0.05 to 2.495	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.25	<0.5	<0.5	<0.5	<0.25	<0.5
Chloride		0.5 to 1	60.7	61	61.2	60.5	52.8	58.7	55.3	59.2	57.6	62.5	58.9	58.7	58.3	58.8
Fluoride		0.02 to 0.4	0.192		0.274	0.237	0.194	0.264	0.174	0.24	0.22	<0.2	<0.2	0.21	0.2	<0.2
Sulphate		0.5 to 1	85	83	54.5	80.2	64.9	51.3	73.2	55.4	58	68.2	64.8	64.1	64.6	61.7
Nutrients																
Ammonia (Total)		0.005 to 0.05	0.029	0.081	0.024	0.02	0.197	0.36	0.08	0.198	0.488	0.0102	0.029	0.0591	0.0385	0.0193
Nitrate (as N)		0.005 to 0.1	<0.005	0.005	<0.005	<0.005	0.0146	<0.005	<0.005	<0.05	<0.025	<0.05	<0.05	<0.05	<0.025	<0.05
Nitrite (as N)		0.001 to 0.02	<0.001	0.0024	<0.001	<0.001	0.0012	0.0014	<0.001	<0.01	<0.005	<0.01	<0.01	<0.01	<0.005	<0.01
Nitrogen (Dissolved)		0.05 to 0.1													0.72	0.48
Nitrogen (Total)		0.0025 to 0.11							0.762	1.36	0.89	0.921	1.06	0.33	0.669	0.46
Nitrogen Kjeldahl (Total)		0.05 to 0.2	1	1.03	0.836	0.842	1.56	1.48	0.762	1.36	0.89	0.921	1.06	0.33	0.669	0.46
Orthophosphate (Dissolved)		0.001 to 0.01	0.0026	0.0027	0.0056	0.0024	<0.001	0.01	<0.001	0.0064	0.0037	<0.001				
Phosphorus - Dissolved		0.002 to 0.02			0.0158					0.0513			0.0059	0.0066	0.0508	0.0069
Phosphorus - Total		0.002 to 0.02	0.0433	0.0302	0.082	0.0435	0.031	0.0598	0.0197	0.0511	0.0629	0.056	0.097	0.0422	0.0462	0.0498
Cyanide																
Cyanide (Free)		0.005				<0.005	<0.005		<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005
Cyanide (Total)		0.005	0.0057	0.006	0.0078	0.0065	0.0077		0.0066	0.0062	0.0059	0.0051		0.006	0.0054	0.0055
Cyanide (WAD)		0.005				<0.005	<0.005		<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005
Dissolved Metals																
Aluminum		0.001 to 0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Antimony		0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic		0.0001 to 0.0025	0.00105	0.00127	0.00158	0.0009	0.00133	0.0018	0.00166	0.00138	0.00118	0.00086	0.00111	0.00077	0.00092	0.00106
Barium		5E-005 to 0.02	0.05	0.043	0.044	0.072	0.048	0.062	<0.02	0.073	0.074	0.079	0.084	0.071	0.075	0.071
Beryllium		0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth		0.0005 to 0.2										<0.2	<0.2	<0.2	<0.2	<0.2
Boron		0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium		1E-005 to 8.5E-005	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000034	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
Calcium		0.05 to 0.1	61.4	53.1	67.4	72.7	51.5	64.7	46.2	73.8	69.5	76.8	74.4	72.4	76.8	73.6
Chromium		0.0001 to 0.018	<0.001	<0.001	<0.001	0.0012	<0.001	<0.002	<0.002	<0.003	<0.001	<0.001	<0.0015	<0.001	<0.002	<0.0015
Cobalt		0.0001 to 0.0015	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0006	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Copper		0.0002 to 0.006	<0.001	<0.001	<0.001	0.0013	<0.001	<0.002	0.0011	<0.001	<0.001	0.0012	<0.001	<0.001	<0.001	<0.001
Dissolved Cadmium (by saltwater extr		0.00002														
Iron		0.01 to 0.03	<0.03	<0.03	0.082	0.073	0.032	0.176	<0.03	0.046	0.751	0.081	0.071	<0.03	<0.03	<0.03
Lead		5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Lithium		0.0005 to 0.025	0.0059	0.0076	0.0063	<0.005	0.0053	<0.01	0.0057	0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Magnesium		0.1	46	45.3	42.7	45.7	40.6	42.2	41.5	47.6	44.5	48.9	44.4	43.5	47.7	45
Manganese		5E-005 to 0.0015	0.00482	0.00425	0.183	0.185	0.0082	0.0955	0.00296	0.141	0.146	0.117	0.23	0.21	0.18	0.157
Mercury		1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.0026	0.0029	0.003	0.0021	0.0024	0.0032	0.0032	0.0036	0.0028	0.0019	0.002	0.0021	0.002	0.002
Nickel		0.0005 to 0.005	<0.001	<0.001	0.0025	0.0017	<0.001	0.0022	<0.001	0.0024	0.0019	0.0019	0.0017	0.0015	0.0016	0.0016
Phosphorus		0.05 to 0.3										<0.3	<0.3	<0.3	<0.3	<0.3
Potassium		0.05 to 2	11.1	10.5	12.1	10.3	12	12.4	11.5	13.6	11.5	10.9	10.2	9.7	11	10.4
Selenium		0.0001 to 0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon		0.05										8.04	8.13	8	8.7	8.28
Silver		1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00004	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium		0.05 to 2	43.5	40.2	45.9	39	35.7	40.1	37.8	46.4	41.4	42.3	38.8	38.4	42.1	39.6
Strontium		0.0001 to 0.005										0.497	0.467	0.454	0.503	0.47
Sulphur		0.5														
Thallium		1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin		0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium		1E-005 to 0.001	0.00122	0.0013	0.0004	0.00056	0.00107	0.00062	0.00137	0.00044	0.00048	0.0007	0.00058	0.00058	0.00059	0.00054
Vanadium		0.001 to 0.03	<0.03	<0.03	<0.03	<0.001	0.0018	<0.002	0.003	0.0012	0.0024	<0.001	0.0014	<0.001	<0.001	<0.001
Zinc		0.001 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Metals																
Aluminum		0.003 to 0.025	0.111	0.0169	0.193	0.0559	0.0354	0.262	0.0233	0.0114	0.0137	0.0087	1.28	0.0806	0.0755	0.12
Antimony		0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic		0.0001 to 0.0025	0.00108	0.00125	0.00191	0.0012	0.00154	0.002	0.00139	0.00136	0.00099	0.00097	0.00164	0.00097	0.00101	0.00114
Barium		5E-005 to 0.02	0.049	0.043	0.057	0.077	0.05	0.071	<0.02	0.074	0.07	0.091	0.103	0.077	0.074	0.078
Beryllium		0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth		0.0005 to 0.2										<0.2	<0.2	<0.2	<0.2	<0.2
Boron		0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium		1E-005 to 8.5E-005	<0.000017	<0.000017	0.000018	<0.000017	<0.000017	<0.000034	<0.000017	<0.000017	<0.000017	0.00002	0.000023	<0.000017	<0.000017	<0.000017
Calcium		0.05 to 0.1	59.8	53.6	64.4	73.8	44.1	65.2	45.3	72.9	68	75.2	72.7	72.5	73.4	71.9
Chromium		0.0001 to 0.005	<0.001	<0.001	<0.001	0.0015	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	0.0031	<0.001	<0.001	<0.001
Cobalt		0.0001 to 0.0015	<0.0003	<0.0003	0.00037	<0.0003	<0.0003	<0.0006	<0.0003	<0.0003	<0.0003	<0.0003	0.00115	0.00033	<0.0003	0.00033
Copper		0.0005 to 0.007	0.0015	<0.001	0.0028	0.0024	0.0015	0.0048	0.0014	<0.001	0.0013	0.0018	0.0093	0.0021	0.0019	0.002
Iron		0.01 to 0.03	0.153	0.04	1.37	1.23	0.078	1.04	0.037	0.867	1.32	0.837	3.38	1.12	0.978	1.11
Lead		5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Lithium		0.0005 to 0.025	0.0057	0.0071	0.0059	<0.005	0.0065	<0.01	0.0067	0.0063	0.0054	0.0055	<0.005	<0.005	<0.005	<0.005
Magnesium		0.1	44.4	46.8	41.3	46	40	42.2	40.9	47.2	44.4	48.2	43.1	44.1	45.2	44.4
Manganese		5E-005 to 0.0015	0.0121	0.00632	0.215	0.188	0.0159	0.102	0.00451	0.171	0.134	0.129	0.271	0.227	0.178	0.168
Mercury		1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.0026	0.0026	0.0029	0.0021	0.0028	0.0031	0.0032	0.0038	0.0027	0.0021	0.0022	0.0024	0.0023	0.0022
Nickel		0.0005 to 0.005	0.0011	<0.001	0.0034	0.0018	<0.001	0.0031	<0.001	0.0025	0.0018	0.0024	0.0044	0.002	0.002	0.0027
Phosphorus		0.05 to 0.3										<0.3	<0.3	<0.3	<0.3	<0.3
Potassium		0.05 to 2	10.9	10.6	11.6	10.2	12.8	12.9	11.3	13.3	11.5	10.8	9.7	9.8	10.1	10.3
Selenium		0.0001 to 0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon		0.05										7.95	11.3	8.37	8.39	8.49
Silver		1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00004	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	0.000032
Sodium		0.05 to 2	42	40.4	44.3	39.1	38.9	38.7	37.2	45.5	41.7	41.9	36.4	39	38.3	39.1
Strontium		0.0001 to 0.005										0.496	0.457	0.459	0.467	0.472
Sulphur		0.5														
Thallium		1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin		0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium		0.01	<0.01	<0.01	0.013	<0.01	<0.01	0.017	<0.01	<0.01	<0.01	<0.01	0.061	<0.01	0.011	0.013
Total Cadmium (by saltwater extractio		0.00002														
Uranium		1E-005 to 0.001	0.00125	0.00114	0.00036	0.00055	0.00126	0.00064	0.00155	0.00047	0.0005	0.0008	0.00067	0.00064	0.00065	0.00061
Vanadium		0.001 to 0.03	<0.03	<0.03	<0.03	0.002	0.0023	0.0032	0.0032	0.0019	0.0027	0.0015	0.0074	0.0023	0.0019	0.002
Zinc		0.003 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Organics																
Carbon Organic (Dissolved)		0.5 to 5		14.8	13.2	11.7	15.9	14.7	13.6	11.6	12.6	12.7	10.8	10.7	9.65	11.4
Carbon Organic (Total)		0.5 to 5	14.9										14.4	10.8	9.68	11.7
Nitrogen Organic (Dissolved)		0.05 to 0.26													0.681	0.461
Nitrogen Organic (Total)		0.05 to 0.3											1.03		0.63	0.441
ALS LAB ID			**L501627**	**L532007**	**L554763**	**L623545**	**L652819**	**L678833**	**L892818**	**L927896**	**L956921**	**L990459**	**L995583**	**L997645**	**L999654**	**L1002049**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes	MDL	PC08 12-May-11	PC08 30-May-11	PC08 28-Jun-11	PC08 28-Jul-11	PC08 30-Aug-11	PC08 28-Sep-11	PC08 25-Oct-11	PC08 5-Dec-11	PC08 9-Jan-12	PC08 10-Apr-12	PC08 25-Apr-12	PC08 2-May-12	PC08 11-May-12	PC08 16-May-12
In Situ Parameters															
Conductivity µS/cm	...	595	563	530	712	558		532	481	453	411	686	313	527	536
Oxygen Dissolved %	...	89.4	91		71.8	68.1		105	49.8	60.7	52.9			69.6	110
Oxygen Dissolved	...	9.47	9.13		6.66	6.7		13.1	6.89	8.13	6.25	13.7	14	8.27	11.4
pH (unitless)	...	7.69	8.04	8.86	7.49	8.04	8.27	7.87	7.42	7.36	7.32	7.96	7.92	7.72	8.71
Redox Potential mV	...	67.3	427	183	140	152	86.7	169	46.4	82.3	37.2	110	117	22.9	131
Salinity ppt	...	0.38	0.34	0.3	0.39	0.33		0.41	0.42	0.38	0.3	0.39	0.21	0.39	0.33
Specific Conductivity µS/cm	...	780	694	622	803	675	812	840	863	786	607	798	426	801	682
Temperature °C	...	12.6	15.1	17.3	19	16	13.5	5.82	1.83	2.87	8.11	17.6	11.1	7.14	13.8
Total Dissolved Solids	...	507	451	404	522	438		546	561	511	394	518	277	520	443
Turbidity NTU	...		2.3	18.4	9.1		7.4	2.3	13.1	15.9		23.3	9.9	12.1	4.3
Physical Tests															
Acidity to pH 8.3 (as CaCO3)	1				7		<1	2.4							
Alkalinity (Total as CaCO3)	1 to 2	283	231	223	295	223	314	328	357	306	314	320	313	305	239
Bicarbonate Alkalinity	1 to 2						305	328		306	302	320	313	305	215
Carbonate Alkalinity	1 to 2						9	<2		<2	12.2	<1	<1	<2	24.5
Color TCU	5	15.5	20.2	25.9	18.4	20.4	18.6	19.9	19	21.3	23	21.9	17.8	16.9	18.8
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	350	291	268	325	268	333	344	362	332	359	370	358	357	288
Hydroxide Alkalinity	1 to 2						<1	<2		<2	<1	<1	<1	<2	<1
pH (unitless)	0.01 to 0.1		8.54	8.61	8.04	8.33	8.37	8.23	8.08	8	8.45	8.4	8.16	8.28	8.56
Specific Conductivity µS/cm	2	777	664	612	770	638	782	809	837	784	787	785	787	802	673
Total Dissolved Solids	1 to 2	471	392	389	460	395	466	457	474	442	486	489	479	470	413
Total Suspended Solids	3	33.8	4.6	11.1	4.8	3.3	6.7	21.7	22	4	4.7	14.7	23.7	13.3	4.8
Turbidity NTU	0.1	19.2		12.4	7.96	2.5		10.8	21.8	9.93	4.8	10.4	11.7	11.9	4.32
Dissolved Anions															
Bromide	0.05 to 2.495	<0.5	<0.25	<0.05	<0.5	<0.05	<0.25	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.25
Chloride	0.5 to 1	58.2	52.6	47.4	55.1	50.4	53.7	56	56.9	55.6	58.8	57.2	57.3	58.3	52.8
Fluoride	0.02 to 0.4	<0.2	0.13	0.201	0.43	0.216	0.31	0.29	0.27	0.25	0.26	0.312	0.25	0.24	0.18
Sulphate	0.5 to 1	69.4	57.7	48.7	46.4	51.3	32.2	35	39.8	40	49.7	47	48.4	50.2	58.7
Nutrients															
Ammonia (Total)	0.005 to 0.05	0.06	0.0295	0.0464	0.347	0.162	0.194	0.181	0.389	0.239	0.0177	0.0093	<0.005	0.0129	0.0175
Nitrate (as N)	0.005 to 0.1	<0.05	<0.025	<0.005	0.06	0.0398	0.066	0.122	<0.05	<0.05	<0.05	<0.005	<0.05	0.062	<0.025
Nitrite (as N)	0.001 to 0.02	<0.01	<0.005	<0.001	<0.01	0.0241	0.015	0.014	0.011	<0.01	0.018	<0.001	<0.01	<0.01	<0.005
Nitrogen (Dissolved)	0.05 to 0.1	0.82	0.77	1.24	1.26	1.39	0.96	0.78		0.73	0.53	0.65	0.49	0.54	0.88
Nitrogen (Total)	0.0025 to 0.11	0.86	0.8	1.87	1.2	1.52	0.9	3.68	1.03	0.886	0.538	0.878	0.391	1.04	1.07
Nitrogen Kjeldahl (Total)	0.05 to 0.2	1.03	0.8	1.87	1.14	1.17	0.819	3.55	1.1	0.886	0.521	0.878	0.391	0.975	1.07
Orthophosphate (Dissolved)	0.001 to 0.01		0.0039	<0.001	0.0042										
Phosphorus - Dissolved	0.002 to 0.02	0.0117	0.0256	0.0141	0.0119	0.0177	0.0123	0.0056	0.0068	0.0146	0.0149	0.014	0.0125	0.0182	0.0192
Phosphorus - Total	0.002 to 0.02	0.0973	0.0321	0.0502	0.0585	0.0279	0.0316	0.0896	0.09	0.0999	0.047	0.0794	0.219	0.106	0.0384
Cyanide															
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	0.0064	0.0074	0.007	0.0066		0.0076	0.0065	0.0064	0.0062	<0.005	<0.005	0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals															
Aluminum	0.001 to 0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00094	0.00121	0.00128	0.00122	0.00135	0.00125	0.00093	0.00107	0.0009	0.00085	0.00137	0.00104	0.00116	0.00116
Barium	5E-005 to 0.02	0.067	0.05	0.059	0.078	0.061	0.063	0.0648	0.0677	0.0517	0.023	0.0259	0.0399	0.0579	0.0548
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.028	0.027	0.023	0.022	0.025	0.024	0.024	0.017
Cadmium	1E-005 to 8.5E-005	<0.000017	<0.000017	<0.000017	0.000149	<0.000017	<0.000017	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	66.7	54	51.3	64.7	49.3	65.7	68.9	70.5	65.9	68	72.8	70.7	68.8	52.4
Chromium	0.0001 to 0.018	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00042	0.00045	0.00045	0.00043	0.00034	0.00033	0.00028	<0.0001
Cobalt	0.0001 to 0.0015	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.00024	0.00038	0.00026	<0.0001	0.00015	0.00016	0.00025	<0.0001
Copper	0.0002 to 0.006	0.0011	0.0012	0.0013	<0.001	<0.001	<0.001	0.00054	<0.0005	0.00071	0.00109	0.00085	0.00089	0.00061	0.00102
Dissolved Cadmium (by saltwater extr	0.00002														
Iron	0.01 to 0.03	0.039	<0.03	<0.03	0.101	<0.03	<0.03	0.078	0.216	0.19	0.241	0.122	0.086	0.17	<0.03
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.0054	<0.005	<0.005	<0.005	0.0051	0.0061	0.00536	0.00591	0.00462	0.00525	0.00481	0.00493	0.00468	0.00562
Magnesium	0.1	44.5	38	34.1	39.7	35.2	41.1	41.8	45.1	40.8	46	45.8	43.9	44.9	38
Manganese	5E-005 to 0.0015	0.105	0.0052	0.00867	0.172	0.00417	0.0942	0.124	0.263	0.213	0.127	0.202	0.163	0.284	0.00399
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0024	0.0023	0.0021	0.0019	0.0025	0.0035	0.00308	0.00253	0.00197	0.00217	0.0023	0.00196	0.00187	0.00216
Nickel	0.0005 to 0.005	0.0011	<0.001	<0.001	<0.001	<0.001	0.0022	0.00234	0.00237	0.00184	0.00186	0.00185	0.00178	0.00177	0.00066
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	11.5	11.2	10.1	11.3	11	11.4	11	11.4	9.82	9.7	10	9.95	9.72	10.9
Selenium	0.0001 to 0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0001	0.00011	0.00011	0.00011	0.00012	0.00013	0.00011	0.00014
Silicon	0.05	5.54	2.45	3.67	8.37	4.32	10.1	9.42	10.2	8.78	9.32	9.49	8.93	8.7	1.79
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	40.8	36.1	33	38.8	34.2	40.5	38.5	43.5	36.1	36.1	37.4	37.4	35.5	34.4
Strontium	0.0001 to 0.005	0.444	0.369	0.337	0.432	0.353	0.441	0.433	0.516	0.412	0.466	0.434	0.444	0.436	0.353
Sulphur	0.5														
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00084	0.00114	0.00102	0.00047	0.00103	0.00056	0.000455	0.000459	0.000433	0.000542	0.00049	0.000488	0.000496	0.00103
Vanadium	0.001 to 0.03	0.0012	0.0022	0.0021	<0.001	0.0024	0.0018	0.0012	0.0013	<0.001	0.0012	0.0016	<0.001	<0.001	0.0022
Zinc	0.001 to 0.006	<0.005	<0.005	<0.005	0.0073	<0.005	<0.005	0.0098	<0.003	<0.003	<0.003	<0.003	0.004	<0.003	0.0042
Total Metals															
Aluminum	0.003 to 0.025	0.191	0.055	0.122	0.145	0.0319	0.109	0.13	0.715	0.0432	0.0158	0.342	0.0615	0.558	0.0532
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	0.0001	0.00011
Arsenic	0.0001 to 0.0025	0.00117	0.00119	0.00124	0.00163	0.00133	0.00138	0.00107	0.00171	0.0012	0.00107	0.00194	0.00134	0.00164	0.00126
Barium	5E-005 to 0.02	0.075	0.051	0.06	0.089	0.062	0.069	0.0661	0.079	0.0566	0.0245	0.0386	0.0451	0.073	0.0572
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.033	0.029	0.027	0.026	0.031	0.03	0.026	0.022
Cadmium	1E-005 to 8.5E-005	<0.000017	<0.000017	0.000018	0.000025	<0.000017	<0.000017	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	68.6	53.9	51.8	67.9	47.9	67	68.4	70.2	65.8	67.3	73	70.7	68.5	53.5
Chromium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	0.0013	0.00099	0.00223	0.00076	0.00069	0.00114	0.00065	0.00167	0.00033
Cobalt	0.0001 to 0.0015	<0.0003	<0.0003	<0.0003	0.00044	<0.0003	0.00033	0.00035	0.00094	0.00029	0.00011	0.00043	0.00022	0.00071	0.00013
Copper	0.0005 to 0.007	0.0026	0.0017	0.0021	0.0019	<0.001	0.0013	0.00143	0.00556	0.00141	0.00151	0.00337	0.00255	0.00527	0.00193
Iron	0.01 to 0.03	1.03	0.078	0.184	1.27	0.051	0.513	0.767	2.71	1.77	1.18	1.8	1.31	2.5	0.084
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	0.000138	<0.00005	<0.00005	0.000072	<0.00005	0.000103	<0.00005
Lithium	0.0005 to 0.025	0.0062	0.0053	<0.005	0.0065	0.005	0.0063	0.00596	0.00582	0.0044	0.00477	0.00486	0.00491	0.00415	0.00547
Magnesium	0.1	45.7	37.9	33.4	41.2	34.9	42	42.1	44	41.2	45.2	46.1	43.5	44.1	38.9
Manganese	5E-005 to 0.0015	0.127	0.00751	0.0162	0.248	0.00664	0.106	0.133	0.283	0.226	0.13	0.223	0.168	0.281	0.00657
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0029	0.0028	0.0025	0.0021	0.0028	0.004	0.00323	0.00258	0.0021	0.00227	0.00394	0.00206	0.00176	0.00229
Nickel	0.0005 to 0.005	0.0017	0.0011	0.0013	0.0014	<0.001	0.0026	0.00277	0.00419	0.00206	0.0019	0.00259	0.00192	0.00326	0.00091
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	11.6	11.3	10.3	12	11.4	11.6	11.1	11.1	10	9.49	9.99	9.69	9.37	11.2
Selenium	0.0001 to 0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00012	0.00012	0.0001	0.00013	0.00013	0.00014	0.00012	0.00017
Silicon	0.05	6.61	2.57	3.96	9.01	4.42	10.5	9.79	11.7	9.02	9.3	10.6	9.07	9.81	1.98
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	41.8	36.4	33.6	40.3	34.5	41.4	39	42.5	37.4	35.5	37.3	36.8	34.2	36.1
Strontium	0.0001 to 0.005	0.462	0.372	0.344	0.461	0.353	0.452	0.435	0.512	0.424	0.454	0.451	0.452	0.401	0.347
Sulphur	0.5														
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	0.014	<0.01	<0.01	0.013	<0.01	<0.01	0.018	0.033	0.01	<0.01	0.023	<0.01	0.027	<0.01
Total Cadmium (by saltwater extractio	0.00002														
Uranium	1E-005 to 0.001	0.001	0.00139	0.00115	0.00057	0.00116	0.0006	0.000487	0.000484	0.000452	0.000535	0.000537	0.0005	0.000474	0.00121
Vanadium	0.001 to 0.03	0.0026	0.0026	0.0026	0.0022	0.0024	0.0027	0.0025	0.0056	0.0023	0.0021	0.0041	0.0023	0.0041	0.0026
Zinc	0.003 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.005	0.0085	<0.003	0.0057	<0.003	<0.003	0.0039	0.0034	0.0042	<0.003
Organics															
Carbon Organic (Dissolved)	0.5 to 5	13.6	14.8	17.4	12.6	16.6	12.5	12.9	12.6	11.8	13.5	14.2	12.9	11.3	14.3
Carbon Organic (Total)	0.5 to 5	13.6	15.2	19.4	12.6	16.9	12.9	13.7	13.2	12.5	14.1	15.9	13.7	12.9	14.6
Nitrogen Organic (Dissolved)	0.05 to 0.26	0.76	0.74	1.19	0.854	1.16	0.685	0.46		0.491	0.495	0.641	0.485	0.465	0.863
Nitrogen Organic (Total)	0.05 to 0.3	0.973	0.77	1.82	0.79	1.29	0.625	0.59	0.63	0.647	0.503	0.869	0.391	0.962	1.05
ALS LAB ID		**L1005044**	**L1011001**	**L1025075**	**L1038168**	**L1052387**	**L1066047**	**L1076994**	**L1092368**	**L1102695**	**L1133342**	**L1140194**	**L1142492**	**L1146570**	**L1148880**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes		MDL	PC08 24-May-12	PC08 10-Jul-12	PC08 7-Aug-12	PC08 4-Dec-12	PC08 9-Jan-13	PC08 6-Feb-13	PC08 2-Apr-13	PC08 7-May-13	PC08 5-Jun-13	PC08 2-Jul-13	PC08 7-Aug-13	PC08 4-Sep-13	PC08 9-Oct-13	PC08 7-Nov-13
In Situ Parameters																
Conductivity µS/cm		...	534	659	600	416	475	0.449	666	568	564	622	603		779	509
Oxygen Dissolved %	...			106		82.9	11.3	77			89.9		54		75.6	93.6
Oxygen Dissolved	...		10.6	9.1		11.2	1.6	10.6			8.83		4.7		9.07	12.3
pH (unitless)		...	8.7	8.59	8.58	7.9	7.45	7.49	8.05	8.56	8.42	8.94	8.27	7.82	7.78	7.91
Redox Potential mV		...	72.4	184	122	71.4	97.4	72	98.5	170	155	100	265	-64.4	96.1	123
Salinity ppt		...	0.34		0.3	0.35	0.43	0.39	0.43	0.35	0.33	0.31	0.31	0.38	0.38	0.42
Specific Conductivity µS/cm		...	683	691	624	721	883	801	866	711	678	633	637	769	415	850
Temperature °C		...	13.6	22.7	22.9	2.82	0.86	2.02	12.9	14.5	16.2	24.1	22.2	18	7.25	3.97
Total Dissolved Solids		...	444		406	468	573	520	563	462	441	412	414	500	506	553
Turbidity NTU		...	1.3	1	4	8.4	47.1	8.9	9.8	2	1.7	20.6	2.9		9.9	28.9
Physical Tests																
Acidity to pH 8.3 (as CaCO3)		1														
Alkalinity (Total as CaCO3)		1 to 2	250	238	221	312	308	311	318	242	236	212	218	301	351	329
Bicarbonate Alkalinity		1 to 2	219	220	202	312	308	311	318	232	228	191	214	301	351	329
Carbonate Alkalinity		1 to 2	31	18	19	<2	<2	<2	<1	9.8	7.7	20.4	3.4	<1	<2	<2
Color TCU		5	17.8	18.8	17.7	22.5	20.4	20.7	19	16	21.9	21.1	21.4	23.2	20.5	
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	296	294	270	333	341	344	357	295	289	266	263	318	351	348
Hydroxide Alkalinity		1 to 2	<1	<1	<1	<2	<2	<2	<1	<1	<1	<1	<1	<1	<2	<2
pH (unitless)		0.01 to 0.1	8.54	8.6	8.55	8.29	7.95	7.94	8.19	8.54	8.5	8.6	8.39	8.38	8.24	8.25
Specific Conductivity µS/cm		2	667	631	610	743	755	743	799	672	656	606	601	716	772	781
Total Dissolved Solids		1 to 2	414	412	407	463	468	474	496	401	410	378	371	406	450	461
Total Suspended Solids		3	3.2	<3	5.7	<3	11.7	5	15.3	3.3	3.5	25.5	6.3	8.5	7.5	6.8
Turbidity NTU		0.1	1.4	1.36	3.28	10.1	27.3	10.5	11.6	1.35	1.62	22.6	1.36	7.48	11.5	10.4
Dissolved Anions																
Bromide		0.05 to 2.495	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5	<0.25	<0.25	<0.05	<0.05	<0.25	<0.5	<0.5
Chloride		0.5 to 1	52.7	49.4	49.7	56.8	57.1	56	60.8	55.5	50.6	48.8	49.7	51.8	54	54.3
Fluoride		0.02 to 0.4	0.209	0.212	0.212	0.27	0.37	0.21	0.4	0.24	0.27	0.204	0.216	0.28	0.43	0.28
Sulphate		0.5 to 1	58.9	51.7	51.6	37.6	35.9	40.4	49.3	55.4	46.9	43.2	41.8	22.6	23.4	25.7
Nutrients																
Ammonia (Total)		0.005 to 0.05	0.0212	0.0235	0.0277	0.165	0.516	0.23	0.0102	0.0244	0.0357	0.0233	0.146	0.0774	0.137	0.229
Nitrate (as N)		0.005 to 0.1	<0.005	<0.005	<0.005	0.05	<0.05	<0.05	<0.05	0.029	<0.025	<0.005	0.0131	<0.025	<0.05	0.067
Nitrite (as N)		0.001 to 0.02	<0.001	0.001	<0.001	0.014	0.011	<0.01	<0.01	<0.005	<0.005	<0.001	0.0116	0.0135	<0.01	0.013
Nitrogen (Dissolved)		0.05 to 0.1	0.77	0.93	0.92	0.881	1.17	0.825	0.535				1.12	1.75		
Nitrogen (Total)		0.0025 to 0.11	0.893	0.833	0.943	0.916	1.45	0.825	0.735	1.05	0.876	1.69	1.2	0.865	0.909	0.931
Nitrogen Kjeldahl (Total)		0.05 to 0.2	0.893	0.832	0.943	0.852	1.45	0.983	0.735	0.88	0.833	1.69	1.19	0.931	0.937	1.01
Orthophosphate (Dissolved)		0.001 to 0.01													0.0059	0.0064
Phosphorus - Dissolved		0.002 to 0.02	0.0185	0.0119	0.0128	0.0109	0.0275	0.0132	0.0111	0.0366	0.0429	0.052	0.0316	0.0714	0.014	0.0104
Phosphorus - Total		0.002 to 0.02	0.0349	0.022	0.0263	0.0603	0.266	0.0696	0.0744	0.0448	0.0526	0.0143	0.0493		0.061	0.0487
Cyanide																
Cyanide (Free)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																
Aluminum		0.001 to 0.025	0.0022	0.0016	0.0019	0.0011	0.0019	0.0018	0.0017	0.0012	0.0027	0.0013	0.0024	0.0023	0.0019	<0.001
Antimony		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	0.00011	<0.0001	<0.0001	<0.0001
Arsenic		0.0001 to 0.0025	0.00117	0.0012	0.00126	0.00088	0.00105	0.00074	0.00106	0.00116	0.0013	0.00131	0.00145	0.00151	0.00105	0.00085
Barium		5E-005 to 0.02	0.0535	0.0434	0.0488	0.0488	0.077	0.0459	0.046	0.046	0.04	0.0445	0.0644	0.0694	0.0561	0.0601
Beryllium		0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	0.016	0.018	0.02	0.03	0.023	0.023	0.025	0.019	0.017	0.02	0.026	0.029	0.032	0.029
Cadmium		1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium		0.05 to 0.1	54.9	56.4	48.2	67.6	66.8	66.3	71	56	58.2	50.8	46.3	59.7	67.8	66.3
Chromium		0.0001 to 0.018	<0.0001	<0.0001	<0.0001	0.00053	0.00053	0.00045	0.0003	0.0001	<0.0001	<0.0001	<0.0001	0.00033	0.00036	0.00047
Cobalt		0.0001 to 0.0015	<0.0001	<0.0001	<0.0001	0.00012	0.00022	0.00013	0.00017	<0.0001	0.0001	<0.0001	<0.0001	0.00016	0.00018	0.00023
Copper		0.0002 to 0.006	0.00093	0.00096	0.00067	0.00074	0.00032	0.00056	0.00122	0.00085	0.00132	0.00115	0.00083	0.0005	0.00044	0.00067
Dissolved Cadmium (by saltwater extr		0.00002														
Iron		0.01 to 0.03	0.015	0.016	0.014	0.142	0.632	0.15	0.16	0.011	0.025	<0.01	0.018	0.079	0.097	0.086
Lead		5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium		0.0005 to 0.025	0.00479	0.00563	0.00509	0.00542	0.00445	0.00455	0.00432	0.00544	0.00425	0.00472	0.00513	0.00553	0.00567	0.00513
Magnesium		0.1	38.6	37.1	36.3	39.7	42.2	43.2	43.7	37.6	34.8	33.8	35.7	41	44.1	44.4
Manganese		5E-005 to 0.0015	0.00374	0.0128	0.00412	0.16	0.25	0.145	0.138	0.00489	0.0112	0.00599	0.00781	0.0739	0.0839	0.132
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.00225	0.00221	0.00213	0.00261	0.00197	0.00217	0.0021	0.00228	0.00203	0.0023	0.00221	0.00287	0.00342	0.00298
Nickel		0.0005 to 0.005	0.00073	0.00079	0.00061	0.00154	0.00155	0.00147	0.00194	0.00066	0.00084	0.00069	0.00065	0.00169	0.00198	0.00199
Phosphorus		0.05 to 0.3	<0.3	<0.3	<0.3	<0.05	0.068	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium		0.05 to 2	10.6	10.5	10.2	10.7	11	10.1	11.6	11	11.3	10.5	11.1	11.9	11.6	11.9
Selenium		0.0001 to 0.006	0.00015	0.00013	0.00014	0.0001	0.00013	0.00011	0.00017	0.00013	0.00016	0.00016	0.00017	0.00013	0.00013	0.00012
Silicon		0.05	1.33	1.31	1.58	9.45	9.39	9.08	9.02	3.63	4.32	4.05	6.12	10.1	9.93	9.87
Silver		1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	34.3	32.9	31.5	37.6	34.1	30.5	36	34.5	30.8	31.2	32	39.3	37.2	35.3
Strontium		0.0001 to 0.005	0.348	0.358	0.324	0.425	0.411	0.4	0.444	0.36	0.319	0.337	0.317	0.417	0.456	0.439
Sulphur		0.5				13	12.6	14	16.2	18.7	15.4	14.1	14.1	8.16	8.39	9.04
Thallium		1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium		1E-005 to 0.001	0.00113	0.000998	0.000912	0.000369	0.000346	0.000445	0.000569	0.00111	0.000985	0.000992	0.000892	0.000435	0.00052	0.000489
Vanadium		0.001 to 0.03	0.0023	0.002	0.0019	0.0014	0.0014	0.0012	0.0013	0.0022	0.0023	0.0024	0.0027	0.0017	0.0014	0.0014
Zinc		0.001 to 0.006	0.0014	0.0032	0.0013	<0.001	<0.001	0.0018	0.0013	0.0017	0.0014	0.0014	0.0018	<0.001	<0.001	<0.001
Total Metals																
Aluminum		0.003 to 0.025	0.0191	0.0232	0.0677	0.126	0.43	0.0834	0.161	0.0694	0.0334	0.0347	0.0755	0.293	0.345	0.232
Antimony		0.0001 to 0.0025	0.00012	<0.0001	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	0.00011	0.00014	0.00015	<0.0001	<0.0001	<0.0001
Arsenic		0.0001 to 0.0025	0.00117	0.00116	0.00133	0.00114	0.0014	0.00118	0.0013	0.00112	0.00135	0.00134	0.00149	0.00185	0.00131	0.00115
Barium		5E-005 to 0.02	0.0517	0.0414	0.0507	0.0534	0.0962	0.0612	0.0491	0.0449	0.0392	0.0452	0.0677	0.0668	0.0613	0.0644
Beryllium		0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	0.02	0.02	0.025	0.032	0.024	0.024	0.028	0.019	0.021	0.023	0.03	0.032	0.033	0.03
Cadmium		1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	0.000035	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium		0.05 to 0.1	54.3	53.4	48.1	66.7	67.1	66.4	68.1	55.3	56.4	51.4	48.6	58	66.2	64.5
Chromium		0.0001 to 0.005	0.00018	0.00027	0.00034	0.00112	0.00166	0.00087	0.0008	0.00034	0.0002	0.0002	0.00032	0.00098	0.00131	0.00146
Cobalt		0.0001 to 0.0015	<0.0001	<0.0001	0.00013	0.00022	0.00061	0.00022	0.00031	0.00013	0.00013	0.00012	0.00016	0.00039	0.00048	0.00043
Copper		0.0005 to 0.007	0.00112	0.00134	0.00133	0.00443	0.00363	0.00181	0.00301	0.00193	0.00165	0.00179	0.00154	0.00288	0.0034	0.00349
Iron		0.01 to 0.03	0.043	0.041	0.115	1.43	2.45	1.43	1.09	0.122	0.077	0.064	0.133	0.869	1.24	1.11
Lead		5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	0.000095	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000058	0.000078	0.000065
Lithium		0.0005 to 0.025	0.00469	0.00472	0.00546	0.00529	0.00476	0.00475	0.00451	0.00551	0.00465	0.00479	0.00532	0.00563	0.00613	0.00498
Magnesium		0.1	36.7	35.4	36	38.4	41.9	43.5	42.2	36.3	34	33.4	36.1	39.6	42	41.2
Manganese		5E-005 to 0.0015	0.00535	0.00689	0.00946	0.16	0.27	0.173	0.138	0.00746	0.0154	0.00999	0.0114	0.0648	0.1	0.14
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.00254	0.00196	0.00224	0.00256	0.00209	0.00221	0.00218	0.00246	0.00225	0.00264	0.00243	0.00301	0.00417	0.00301
Nickel		0.0005 to 0.005	0.00077	0.00077	0.00081	0.00198	0.00276	0.002	0.00234	0.00097	0.00097	0.00098	0.00087	0.00234	0.00292	0.00272
Phosphorus		0.05 to 0.3	<0.3	<0.3	<0.3	0.062	0.192	0.07	0.052	0.066	0.055	0.064	0.056	0.072	<0.05	0.052
Potassium		0.05 to 2	10.2	9.89	10.8	10.5	11.1	10.2	11.6	10.8	11.2	10.7	11.7	12.3	11.1	11.8
Selenium		0.0001 to 0.006	0.00015	0.00013	0.00015	0.00011	0.00012	0.0001	0.00017	0.00015	0.00016	0.00018	0.00017	0.00016	0.00012	0.00017
Silicon		0.05	1.35	1.07	1.79	9.72	10.6	9.26	9.24	3.7	4.35	4.15	6.53	11	10.6	10.1
Silver		1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000013	<0.00001	<0.00001
Sodium		0.05 to 2	33.8	31.1	32.8	36.7	36.9	36	35.4	32.9	32.8	30.9	34.3	38.6	36.2	33
Strontium		0.0001 to 0.005	0.352	0.303	0.332	0.426	0.429	0.411	0.448	0.381	0.34	0.367	0.336	0.404	0.479	0.42
Sulphur		0.5				13.2	12.8	14.7	16	18.6	15.4	14.2	15	8.61	8.68	9
Thallium		1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	0.018	0.01
Total Cadmium (by saltwater extractio		0.00002														
Uranium		1E-005 to 0.001	0.00126	0.000934	0.00105	0.000367	0.000398	0.000455	0.000583	0.0012	0.00102	0.00111	0.00103	0.000463	0.000555	0.000484
Vanadium		0.001 to 0.03	0.0025	0.0021	0.0025	0.0034	0.0044	0.0028	0.0029	0.0025	0.0025	0.0024	0.0032	0.0033	0.0038	0.0039
Zinc		0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics																
Carbon Organic (Dissolved)		0.5 to 5	14.5	13.6	15.5	10.7	12.3	12.4	13.6	11.3	15.1	15.1	17.4	13.6	12.6	12.2
Carbon Organic (Total)		0.5 to 5	14.6	14.1	16.7	10.7	13.8	12.3	14.4	11.5	15.1	18.1	18.1	13.7	13.3	11.9
Nitrogen Organic (Dissolved)		0.05 to 0.26	0.749	0.906	0.892	0.652			0.525					1.66		
Nitrogen Organic (Total)		0.05 to 0.3	0.872	0.809	0.915	0.687	0.932	0.752	0.724					0.853		
ALS LAB ID			**L1152500**	**L1176520**	**L1190914**	**L1245799**	**L1256679**	**L1265999**	**L1285503**	**L1298960**	**L1312719**	**L1326032**	**L1344180**	**L1358222**	**L1375698**	**L1389979**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes		MDL	PC08 8-Jan-14	PC08 4-Feb-14	PC08 13-Mar-14	PC08 21-Mar-14	PC08 27-Mar-14	PC08 3-Apr-14	PC08 10-Apr-14	PC08 24-Apr-14	PC08 6-May-14	PC08 21-May-14	PC08 4-Jun-14	PC08 18-Jun-14	PC08 3-Jul-14	PC08 16-Jul-14
In Situ Parameters																
Conductivity µS/cm		...	290	362	383	481	438	538	513	529	567	549	591	595	633	560
Oxygen Dissolved %	...		26.6	45.5	60.7	91.8	95.7	87.9		73.3	103	106	88.8	89.1	105	108
Oxygen Dissolved	...		3.78	6.3	8.18	11.5	12.9	10.5		8.42	10.9	10.4	8.82	8.26	9.07	9.08
pH (unitless)		...	7.41	8.01	7.38	7.75	7.9	7.8	8.1	7.33	8.26	8.6	7.94	8.74	8.59	8.91
Redox Potential mV		...	18.8	-48	21.9	15.3	77.5	116	-48.2	150	173	101	160	93.1	74.5	110
Salinity ppt		...	0.26	0.31	0.32	0.38	0.37	0.4	0.38	0.37	0.36	0.32	0.35	0.33	0.32	0.28
Specific Conductivity µS/cm		...	535	690	664	767	757	812	764	757	739	662	720	673	664	572
Temperature °C		...	1	0.22	2.95	5.51	2.89	7.37	7.78	9.21	12.8	16.1	15.6	18.9	22.5	23.9
Total Dissolved Solids		...	347	445	431	500	492	527	497	492	481	430	467	437	432	372
Turbidity NTU		...	9.1													
Physical Tests																
Acidity to pH 8.3 (as CaCO3)		1														
Alkalinity (Total as CaCO3)		1 to 2	324	349	259	314	311	316	310	285	251	230	240	239	236	233
Bicarbonate Alkalinity		1 to 2	324	349	259	314	311	316	310	285	242	222	230	224	222	218
Carbonate Alkalinity		1 to 2	<2	<2	<2	<1	<2	<2	<2	<2	8.7	7.8	9.9	15.1	13.6	14.8
Color TCU		5	19.4													
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	357	381	295	369	353	344	339	334	310	291	301	289	290	290
Hydroxide Alkalinity		1 to 2	<2	<2	<2	<1	<2	<2	<2	<2	<1	<1	<1	<1	<1	<1
pH (unitless)		0.01 to 0.1	7.87	8.03	7.86	8.34	8.24	8.26	8.24	8.25	8.43	8.47	8.51	8.51	8.61	8.54
Specific Conductivity µS/cm		2	771	848	632	792	780	754	729	714	701	654	662	662	640	647
Total Dissolved Solids		1 to 2	477	510	371	489	458	466	449	458	406	393	408	409	290	422
Total Suspended Solids		3	10.1	12.3	18.1	10.1	13.7	42.4	10	6.5	13.8	12	4.3	<3	5.1	4.6
Turbidity NTU		0.1	8.9	13	10.5	9.97	10.3	19.1	12.7	4.28	4.68	3.06	5.66	1.76	2.06	2.48
Dissolved Anions																
Bromide		0.05 to 2.495	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.25	<0.25	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloride		0.5 to 1	61.9	65.1	45.8	59.1	56.4	56.6	54.9	57.2	55.7	52.4	52.5	52.9	52.3	53.7
Fluoride		0.02 to 0.4	0.27	0.28	0.242	0.25	0.26	0.27	0.28	0.25	0.229	0.213	0.22	0.215	0.231	0.227
Sulphate		0.5 to 1	30.8	37.8	33.9	45.9	44.2	43.7	42.6	49.1	54.3	46.4	45.5	45.6	44.5	45.2
Nutrients																
Ammonia (Total)		0.005 to 0.05	0.36	0.384	0.126	0.0264	0.0315	0.0104	0.007	0.0057	0.0144	0.0276	0.0195	0.0562	0.0875	0.0578
Nitrate (as N)		0.005 to 0.1	<0.05	<0.05	0.0168	<0.05	<0.05	<0.05	<0.025	<0.025	<0.005	<0.005	<0.005	0.0166	0.0646	0.0265
Nitrite (as N)		0.001 to 0.02	0.016	<0.01	0.0016	<0.01	<0.01	<0.01	<0.005	<0.005	<0.001	<0.001	0.001	0.0057	0.0242	0.0078
Nitrogen (Dissolved)		0.05 to 0.1														
Nitrogen (Total)		0.0025 to 0.11										0.763				
Nitrogen Kjeldahl (Total)		0.05 to 0.2	0.926	0.999	1.27	0.687	0.609	0.737	0.451	0.481	0.963	0.83	0.855	1.1	1.03	1
Orthophosphate (Dissolved)		0.001 to 0.01	0.0061	0.0023	0.022	0.0025	0.005	0.0033	0.0017	0.0029	0.0058	0.0096	<0.001	0.0016	0.0045	0.0016
Phosphorus - Dissolved		0.002 to 0.02	0.0101	0.0087	0.0377	0.0105	0.0094	0.136	0.0066	0.0394	0.021	0.0255	0.013	0.0156	0.0202	0.0176
Phosphorus - Total		0.002 to 0.02	0.0943	0.0759	0.192	0.0587	0.0501	0.008	0.0461	0.0069	0.0569	0.0504	0.0331	0.0308	0.0363	0.04
Cyanide																
Cyanide (Free)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																
Aluminum		0.001 to 0.025	<0.001	0.0013	0.0019	<0.001	0.0016	0.0018	0.002	<0.001	0.0069	0.0015	0.0021	0.0021	0.0019	0.0021
Antimony		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	0.00011	0.0001
Arsenic		0.0001 to 0.0025	0.00089	0.00089	0.00099	0.00083	0.00069	0.00083	0.00075	0.00068	0.0012	0.00132	0.00123	0.00129	0.00131	0.00136
Barium		5E-005 to 0.02	0.0661	0.0692	0.0549	0.0421	0.0351	0.036	0.0222	0.0521	0.0649	0.0586	0.0531	0.0538	0.054	0.0538
Beryllium		0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	0.029	0.03	0.023	0.025	0.024	0.022	0.023	0.021	0.02	0.018	0.019	0.019	0.022	0.02
Cadmium		1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium		0.05 to 0.1	70.5	73.2	58.6	72.3	65.3	66.7	65.7	65.9	59.4	60.6	60	57.9	57.2	55.8
Chromium		0.0001 to 0.018	0.00053	0.00056	0.00032	0.00036	0.00033	0.00033	0.00032	0.00023	<0.0001	<0.0001	0.00012	<0.0001	<0.0001	<0.0001
Cobalt		0.0001 to 0.0015	0.00027	0.00021	0.00052	0.00028	0.0002	0.00016	0.00014	0.00017	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	<0.0001
Copper		0.0002 to 0.006	0.00047	0.00042	0.00164	0.00099	0.00085	0.00103	0.00118	0.00109	0.00099	0.00112	0.00134	0.00112	0.00117	0.00092
Dissolved Cadmium (by saltwater extr		0.00002														
Iron		0.01 to 0.03	0.343	0.305	0.358	0.066	0.169	0.159	0.229	0.092	0.045	0.014	0.051	0.015	0.023	0.019
Lead		5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium		0.0005 to 0.025	0.0051	0.00527	0.00447	0.00476	0.00483	0.00442	0.00444	0.00494	0.00489	0.00494	0.00481	0.00453	0.00556	0.00495
Magnesium		0.1	44	48.1	36.1	45.7	46.2	43.2	42.5	41.2	39.2	33.8	36.8	35	35.8	36.6
Manganese		5E-005 to 0.0015	0.223	0.193	0.215	0.178	0.151	0.131	0.11	0.122	0.0321	0.00635	0.0289	0.00723	0.0106	0.00857
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.00215	0.00254	0.00246	0.00253	0.00253	0.00277	0.00236	0.00244	0.00253	0.0021	0.00246	0.00241	0.0025	0.00246
Nickel		0.0005 to 0.005	0.0017	0.00165	0.00195	0.00202	0.00179	0.00187	0.0018	0.00181	0.00091	0.00073	0.00107	0.00077	0.00074	0.00068
Phosphorus		0.05 to 0.3	<0.05	<0.05	0.058	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium		0.05 to 2	10.9	11.1	11.1	10.8	10.1	9.63	9.77	9.98	10.5	10.1	10.2	10	10.8	10.3
Selenium		0.0001 to 0.006	0.00011	0.00012	0.00013	0.00015	0.0001	<0.0001	0.00011	0.00014	0.00016	0.00017	0.00015	0.00016	0.00016	0.00016
Silicon		0.05	9.53	10.5	7.52	8.93	8.75	8.25	8.6	8	4.92	5.01	5.59	5.18	5.71	6.27
Silver		1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	36	39.1	27.9	36	35.1	35.5	34.8	35.3	35.2	33.5	32.8	29.9	31.2	32.7
Strontium		0.0001 to 0.005	0.455	0.486	0.378	0.454	0.447	0.427	0.426	0.457	0.351	0.305	0.353	0.337	0.348	0.354
Sulphur		0.5	11	13.7	11.4	15.6	14.8	15.2	15	17	18.1	15.6	15.8	14.6	15.1	15.2
Thallium		1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium		1E-005 to 0.001	0.000474	0.000519	0.000515	0.000609	0.000615	0.000611	0.000542	0.000594	0.00112	0.000965	0.00103	0.0011	0.000989	0.001
Vanadium		0.001 to 0.03	0.0013	0.0015	0.0014	0.0011	0.0012	0.0014	0.0013	0.001	0.0023	0.0027	0.0025	0.0026	0.0028	0.0029
Zinc		0.001 to 0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0016	<0.001	<0.001
Total Metals																
Aluminum		0.003 to 0.025	0.123	0.26	0.571	0.177	0.194	0.565	0.235	0.0421	0.198	0.142	0.0408	0.0342	0.0393	0.0972
Antimony		0.0001 to 0.0025	<0.0001	<0.0001	0.00012	<0.0001	<0.0001	0.00013	<0.0001	<0.0001	0.00015	<0.0001	0.00012	0.0001	0.0001	0.00011
Arsenic		0.0001 to 0.0025	0.00116	0.00125	0.00151	0.00112	0.00105	0.00144	0.00109	0.00077	0.00122	0.00131	0.0013	0.00135	0.00129	0.00149
Barium		5E-005 to 0.02	0.0702	0.0809	0.0642	0.0463	0.0416	0.047	0.0267	0.0529	0.0662	0.0582	0.0568	0.0535	0.0544	0.0538
Beryllium		0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	0.03	0.031	0.026	0.028	0.024	0.025	0.027	0.021	0.022	0.018	0.023	0.023	0.022	0.022
Cadmium		1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium		0.05 to 0.1	68.7	71	59.6	69.4	66.3	67.7	65.1	64.1	58.1	59.2	60.2	57.7	54.8	55.1
Chromium		0.0001 to 0.005	0.00104	0.00127	0.00147	0.0008	0.00091	0.00174	0.00095	0.00036	0.00064	0.00058	0.00026	0.00023	0.00023	0.0004
Cobalt		0.0001 to 0.0015	0.00039	0.00042	0.00103	0.00045	0.0004	0.00064	0.00033	0.00021	0.00025	0.00019	0.00015	0.00012	0.00014	0.00019
Copper		0.0005 to 0.007	0.0017	0.00285	0.00704	0.00299	0.00264	0.00548	0.00327	0.00209	0.00273	0.00223	0.0017	0.00141	0.00151	0.00161
Iron		0.01 to 0.03	1.84	1.76	1.79	1.24	1.51	2.1	1.55	0.76	0.536	0.208	0.261	0.074	0.103	0.171
Lead		5E-005 to 0.0025	<0.00005	0.000054	0.000104	<0.00005	<0.00005	0.000117	0.000054	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium		0.0005 to 0.025	0.0047	0.0049	0.00471	0.00491	0.00477	0.00471	0.00446	0.00482	0.00521	0.00484	0.00513	0.00487	0.00458	0.00498
Magnesium		0.1	43.3	46.1	37	43.1	44.2	44	41.7	40.6	35.8	33.6	37	34	34.2	35.6
Manganese		5E-005 to 0.0015	0.226	0.214	0.237	0.184	0.168	0.159	0.128	0.113	0.0376	0.0108	0.0476	0.0107	0.0112	0.016
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.0022	0.00254	0.00274	0.0031	0.00301	0.00324	0.00256	0.00249	0.00257	0.00219	0.0026	0.00255	0.00254	0.00261
Nickel		0.0005 to 0.005	0.00209	0.00238	0.00348	0.00267	0.00247	0.00341	0.00233	0.00174	0.00145	0.00131	0.00117	0.00087	0.00094	0.00107
Phosphorus		0.05 to 0.3	0.111	0.06	0.182	0.061	<0.05	0.076	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium		0.05 to 2	10.5	10.5	11.2	10.3	9.99	9.8	9.57	9.71	10.1	10.1	10.5	9.92	10.7	10.2
Selenium		0.0001 to 0.006	0.0001	0.00014	0.00016	0.00011	0.00011	0.00012	0.00012	0.00013	0.00017	0.00014	0.00015	0.00016	0.00015	0.00016
Silicon		0.05	9.77	10.8	9.2	9.01	9.26	10.1	9.28	8	5.18	5.29	6.09	5.31	5.69	6.43
Silver		1E-005 to 0.0001	<0.00001	<0.00001	0.000031	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	35.9	40.4	29.2	36	35.8	35.4	34.1	33.2	33.3	33	33.9	30.4	31.8	32.9
Strontium		0.0001 to 0.005	0.443	0.466	0.421	0.485	0.442	0.438	0.441	0.46	0.375	0.299	0.372	0.354	0.343	0.359
Sulphur		0.5	11.2	13.7	11.9	15.6	15.3	15.9	15.1	17.1	18	15.5	16.3	14.9	14.9	15.2
Thallium		1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	0.012	0.024	<0.01	<0.01	0.026	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extractio		0.00002														
Uranium		1E-005 to 0.001	0.000485	0.000516	0.00056	0.000655	0.000643	0.000688	0.000576	0.000622	0.00116	0.00101	0.00109	0.00118	0.00103	0.00108
Vanadium		0.001 to 0.03	0.0031	0.004	0.0042	0.0031	0.0033	0.0055	0.0033	0.0018	0.0033	0.0036	0.0027	0.0031	0.0031	0.0033
Zinc		0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics																
Carbon Organic (Dissolved)		0.5 to 5	12.2	13.1	12.7	11.7	11.9	12.1	12.3	10.9	12.7	12.5	12.8	13.4	13.3	14.1
Carbon Organic (Total)		0.5 to 5	13.3	13.5	14.9	12.2	11.6	13.5	13	11.4	13.5	13.3	12.8	13.8	13.6	13.9
Nitrogen Organic (Dissolved)		0.05 to 0.26														
Nitrogen Organic (Total)		0.05 to 0.3														
ALS LAB ID			**L1410216**	**L1418933**	**L1432661**	**L1435186**	**L1437439**	**L1439655**	**L1442672**	**L1447300**	**L1451608**	**L1458340**	**L1465478**	**L1473827**	**L1481215**	**L1488886**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes		MDL	PC08 30-Jul-14	PC08 12-Aug-14
In Situ Parameters				
Conductivity µS/cm		...	577	610
Oxygen Dissolved %	...			93.1
Oxygen Dissolved	...			8.15
pH (unitless)		...	8.71	8.65
Redox Potential mV		...	119	79.4
Salinity ppt		...	0.3	0.32
Specific Conductivity µS/cm		...	618	649
Temperature °C		...	21.5	21.8
Total Dissolved Solids		...	402	422
Turbidity NTU		...		
Physical Tests				
Acidity to pH 8.3 (as CaCO3)		1		
Alkalinity (Total as CaCO3)		1 to 2	254	231
Bicarbonate Alkalinity		1 to 2	244	215
Carbonate Alkalinity		1 to 2	10.2	16.1
Color TCU		5		
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	290	283
Hydroxide Alkalinity		1 to 2	<1	<1
pH (unitless)		0.01 to 0.1	8.42	8.58
Specific Conductivity µS/cm		2	676	645
Total Dissolved Solids		1 to 2	311	416
Total Suspended Solids		3	4.5	<3
Turbidity NTU		0.1	2.87	1.79
Dissolved Anions				
Bromide		0.05 to 2.495	<0.25	<0.05
Chloride		0.5 to 1	54.3	54.9
Fluoride		0.02 to 0.4	0.228	0.237
Sulphate		0.5 to 1	41.1	46.1
Nutrients				
Ammonia (Total)		0.005 to 0.05	0.0414	0.0352
Nitrate (as N)		0.005 to 0.1	<0.025	0.0087
Nitrite (as N)		0.001 to 0.02	0.0078	0.002
Nitrogen (Dissolved)		0.05 to 0.1		
Nitrogen (Total)		0.0025 to 0.11		
Nitrogen Kjeldahl (Total)		0.05 to 0.2	0.798	1.03
Orthophosphate (Dissolved)		0.001 to 0.01	0.01	<0.001
Phosphorus - Dissolved		0.002 to 0.02	0.021	0.0175
Phosphorus - Total		0.002 to 0.02	0.0422	0.024
Cyanide				
Cyanide (Free)		0.005	<0.005	<0.005
Cyanide (Total)		0.005	<0.005	<0.005
Cyanide (WAD)		0.005	<0.005	<0.005
Dissolved Metals				
Aluminum		0.001 to 0.025	0.0017	0.0023
Antimony		0.0001 to 0.0025	<0.0001	0.00011
Arsenic		0.0001 to 0.0025	0.00129	0.00136
Barium		5E-005 to 0.02	0.059	0.0425
Beryllium		0.0001 to 0.005	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005
Boron		0.01 to 0.1	0.021	0.021
Cadmium		1E-005 to 8.5E-005	<0.00001	<0.00001
Calcium		0.05 to 0.1	54.2	54.3
Chromium		0.0001 to 0.018	0.00014	<0.0001
Cobalt		0.0001 to 0.0015	0.00015	<0.0001
Copper		0.0002 to 0.006	0.00083	0.00085
Dissolved Cadmium (by saltwater extr		0.00002		
Iron		0.01 to 0.03	0.13	<0.01
Lead		5E-005 to 0.0025	<0.00005	<0.00005
Lithium		0.0005 to 0.025	0.00539	0.00544
Magnesium		0.1	37.5	35.8
Manganese		5E-005 to 0.0015	0.0242	0.00258
Mercury		1E-005 to 5E-005	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.00271	0.00258
Nickel		0.0005 to 0.005	0.00131	0.00065
Phosphorus		0.05 to 0.3	<0.05	<0.05
Potassium		0.05 to 2	11.8	10.4
Selenium		0.0001 to 0.006	0.00014	0.00016
Silicon		0.05	6.53	6.65
Silver		1E-005 to 0.0001	<0.00001	<0.00001
Sodium		0.05 to 2	33.5	33.7
Strontium		0.0001 to 0.005	0.368	0.348
Sulphur		0.5	13.8	15.5
Thallium		1E-005 to 0.001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01
Uranium		1E-005 to 0.001	0.000786	0.00106
Vanadium		0.001 to 0.03	0.0024	0.003
Zinc		0.001 to 0.006	<0.001	<0.001
Total Metals				
Aluminum		0.003 to 0.025	0.0566	0.0317
Antimony		0.0001 to 0.0025	<0.0001	0.00011
Arsenic		0.0001 to 0.0025	0.00137	0.00141
Barium		5E-005 to 0.02	0.0603	0.0425
Beryllium		0.0001 to 0.005	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005
Boron		0.01 to 0.1	0.024	0.026
Cadmium		1E-005 to 8.5E-005	<0.00001	<0.00001
Calcium		0.05 to 0.1	52.2	52.3
Chromium		0.0001 to 0.005	0.00029	0.00015
Cobalt		0.0001 to 0.0015	0.00019	0.00011
Copper		0.0005 to 0.007	0.00145	0.00112
Iron		0.01 to 0.03	0.415	0.049
Lead		5E-005 to 0.0025	<0.00005	<0.00005
Lithium		0.0005 to 0.025	0.00523	0.00549
Magnesium		0.1	36.7	34.9
Manganese		5E-005 to 0.0015	0.0275	0.00497
Mercury		1E-005 to 5E-005	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.00288	0.00265
Nickel		0.0005 to 0.005	0.00151	0.00077
Phosphorus		0.05 to 0.3	<0.05	<0.05
Potassium		0.05 to 2	11.5	10
Selenium		0.0001 to 0.006	0.00016	0.00015
Silicon		0.05	6.51	6.48
Silver		1E-005 to 0.0001	<0.00001	<0.00001
Sodium		0.05 to 2	33.2	34.6
Strontium		0.0001 to 0.005	0.368	0.351
Sulphur		0.5	13.8	15.3
Thallium		1E-005 to 0.001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01
Total Cadmium (by saltwater extractio		0.00002		
Uranium		1E-005 to 0.001	0.000826	0.00115
Vanadium		0.001 to 0.03	0.0033	0.0033
Zinc		0.003 to 0.006	<0.003	<0.003
Organics				
Carbon Organic (Dissolved)		0.5 to 5	12.8	14
Carbon Organic (Total)		0.5 to 5	13.5	14.4
Nitrogen Organic (Dissolved)		0.05 to 0.26		
Nitrogen Organic (Total)		0.05 to 0.3		
ALS LAB ID			**L1495443**	**L1502292**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C2.33 - PC10
PAGE 1 OF 1

Analytes		MDL	PC10 13-Mar-14	PC10 21-Mar-14	PC10 28-Mar-14	PC10 3-Apr-14	PC10 9-Apr-14	PC10 24-Apr-14	PC10 7-May-14	PC10 23-May-14	PC10 4-Jun-14	PC10 18-Jun-14	PC10 3-Jul-14	PC10 16-Jul-14	PC10 30-Jul-14
In Situ Parameters															
Conductivity µS/cm		...	439	499	524	557	540	491	446	413	310	451	527	495	486
Oxygen Dissolved %	...		60.1	63.4	59.6	61.6	90.2	79.9	88.2	104	76.3	78	74	62.5	79.5
Oxygen Dissolved	...		8.66	8.8	7.91	8.33	11.5	9.52	9.39	11.8	8.46	8.32	7.51	6.2	8.16
pH (unitless)		...	7.83	7.77	7.73	7.85	8.14	8.07	8.17	8.27	8.06	8.13	7.81	8.18	8.36
Redox Potential mV		...	30.3	71.5	1.2	-17.7	-48.7	105	59.9	63.4	171	93.1	88.4	145	118
Salinity ppt		...	0.4	0.4	0.44	0.48	0.43	0.36	0.29	0.29	0.21	0.29	0.32	0.29	0.3
Specific Conductivity µS/cm		...	827	897	890	971	880	733	585	577	427	596	657	601	606
Temperature °C		...	0.42	1.75	3.44	2.7	4.8	7.72	12.5	10.2	10.7	12.3	14.7	15.8	14.6
Total Dissolved Solids		...	537	583	579	631	572	479	380	375	278	387	427	391	394
Turbidity NTU		...													
Physical Tests															
Acidity to pH 8.3 (as CaCO3)		1													
Alkalinity (Total as CaCO3)		1 to 2	286	338	344	342	287	215	206	243	254	259	285	286	286
Bicarbonate Alkalinity		1 to 2	286	338	344	342	287	213	206	243	254	250	278	278	277
Carbonate Alkalinity		1 to 2	<2	<1	<2	<2	<2	1.9	<2	<2	<1	8.8	6.2	7.6	9.5
Color TCU		5							30.7						
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	359	429	426	429	401	314	231	262	293	274	306	310	302
Hydroxide Alkalinity		1 to 2	<2	<1	<2	<2	<2	<1	<2	<2	<1	<1	<1	<1	<1
pH (unitless)		0.01 to 0.1	8	8.34	8.14	8.26	8.19	8.35	8.29	8.26	8.37	8.37	8.43	8.36	8.34
Specific Conductivity µS/cm		2	809	906	901	890	833	720	556	567	609	587	640	651	659
Total Dissolved Solids		1 to 2	519	577	538	587	571	470	372	381	331	381	364	413	388
Total Suspended Solids		3	4.5	<3	<3	3.4	5.4	19.1	13.3	17.6	17.7	13.9	<3	7.8	4.8
Turbidity NTU		0.1	1.54	0.98	1	0.66	3.04	7.42	6.83	7.26	8.64	5.85	1.34	3.62	1.76
Dissolved Anions															
Bromide		0.05 to 2.495	<0.5	<0.5	<0.5	<0.5	<0.5	<0.25	<0.05	<0.05	<0.05	<0.05	<0.05	0.051	<0.05
Chloride		0.5 to 1	51.6	70.9	64	69	84.5	79.1	47.2	36.9	38.2	33	38.6	36.6	40.7
Fluoride		0.02 to 0.4	0.31	<0.2	<0.2	<0.2	<0.2	0.14	0.191	0.235	0.216	0.24	0.251	0.268	0.242
Sulphate		0.5 to 1	84.7	75	80	80.5	66.7	48.5	30.2	27.2	27.6	20.2	25.9	26.5	27.7
Nutrients															
Ammonia (Total)		0.005 to 0.05	0.44	0.0963	0.0436	0.033	0.0313	0.0127	0.0073	0.0186	0.0209	0.0166	0.0116	0.0235	0.0129
Nitrate (as N)		0.005 to 0.1	0.254	0.258	0.174	0.173	0.184	0.051	0.03	0.0332	0.0334	0.038	0.0586	0.0671	0.0665
Nitrite (as N)		0.001 to 0.02	0.014	<0.01	<0.01	<0.01	<0.01	<0.005	<0.001	<0.001	0.0011	0.0013	0.0014	0.0028	0.0017
Nitrogen (Dissolved)		0.05 to 0.1													
Nitrogen (Total)		0.0025 to 0.11													
Nitrogen Kjeldahl (Total)		0.05 to 0.2	1.77	0.603	0.504	0.508	0.417	0.572	0.463	0.792	0.767	0.629	0.451	0.613	0.496
Orthophosphate (Dissolved)		0.001 to 0.01	0.309	0.0779	0.0666	0.0592	0.0608	0.0436	0.0342	0.135	0.155	0.0948	0.0903	0.0974	0.104
Phosphorus - Dissolved		0.002 to 0.02	0.413	0.0991	0.0804	0.0763	0.0829	0.0884	0.0455	0.161	0.165	0.113	0.0972	0.116	0.119
Phosphorus - Total		0.002 to 0.02	0.451	0.138	0.086	0.0697	0.0676	0.0519	0.0691	0.178	0.212	0.146	0.113	0.146	0.127
Cyanide															
Cyanide (Free)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals															
Aluminum		0.001 to 0.025	0.0023	<0.001	<0.001	0.0016	0.0016	0.0015	0.0029	0.0036	0.0095	0.0018	0.0017	0.0029	0.0023
Antimony		0.0001 to 0.0025	0.00015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic		0.0001 to 0.0025	0.00203	0.00149	0.00135	0.00129	0.0011	0.00097	0.00103	0.00179	0.00168	0.00165	0.00171	0.00177	0.00172
Barium		5E-005 to 0.02	0.064	0.0781	0.0814	0.0765	0.0791	0.0711	0.058	0.0616	0.0662	0.061	0.0643	0.0631	0.0638
Beryllium		0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	0.022	0.013	0.012	0.012	0.01	<0.01	<0.01	0.015	0.015	0.012	0.016	0.017	0.015
Cadmium		1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium		0.05 to 0.1	73.5	99.2	96.3	98.7	97.8	81.2	58.6	60.5	64.8	60.9	71.2	70.3	67.9
Chromium		0.0001 to 0.018	0.00012	0.00011	<0.0001	0.00011	0.00011	<0.0001	0.00011	0.00014	0.00015	0.00012	0.0001	<0.0001	0.00261
Cobalt		0.0001 to 0.0015	0.00027	0.00017	0.00015	0.00015	0.00011	0.0001	<0.0001	0.00017	0.00021	0.00014	0.00012	0.00011	0.00011
Copper		0.0002 to 0.006	0.00591	0.00274	0.0027	0.00244	0.0018	0.0022	0.00294	0.00358	0.00324	0.00241	0.0023	0.00216	0.00216
Dissolved Cadmium (by saltwater extr		0.00002													
Iron		0.01 to 0.03	0.07	0.027	0.026	0.032	0.017	0.02	0.022	0.042	0.056	0.045	0.037	0.036	0.044
Lead		5E-005 to 0.0025	0.00009	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium		0.0005 to 0.025	0.00469	0.00449	0.00445	0.0048	0.00476	0.00421	0.00312	0.00303	0.00343	0.00327	0.00446	0.00418	0.00408
Magnesium		0.1	42.6	44	45.1	44.3	38.1	27	20.7	27	31.8	29.6	31.2	32.7	32.2
Manganese		5E-005 to 0.0015	0.0403	0.0322	0.0263	0.0249	0.023	0.0132	0.0107	0.0212	0.055	0.0281	0.0198	0.0169	0.011
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.00358	0.0027	0.00261	0.00274	0.00233	0.00216	0.00201	0.00302	0.00268	0.00224	0.00218	0.00263	0.00241
Nickel		0.0005 to 0.005	0.0015	0.00129	0.00123	0.00122	0.00108	0.00089	0.00081	0.00133	0.00131	0.00113	0.00116	0.00126	0.00223
Phosphorus		0.05 to 0.3	0.364	0.093	0.075	0.069	0.08	<0.05	<0.05	0.15	0.176	0.106	0.099	0.132	0.125
Potassium		0.05 to 2	16.8	10.7	11	10.1	9.03	8.01	6.06	7.81	9.16	7.27	9.15	9.34	9.97
Selenium		0.0001 to 0.006	0.00142	0.00042	0.00028	0.00029	0.00035	0.00038	0.00032	0.00025	0.0002	0.00017	0.00016	0.00016	0.00018
Silicon		0.05	8.2	9.43	9.5	9.02	8.38	7.72	7.29	10.4	10.1	9.49	10.3	11	10
Silver		1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	34.6	36.5	36.1	38.2	35.8	33.1	24.7	24.1	26.6	23.7	29	29.8	29
Strontium		0.0001 to 0.005	0.477	0.471	0.482	0.486	0.461	0.357	0.273	0.321	0.344	0.298	0.319	0.379	0.345
Sulphur		0.5	28.5	24.2	26.9	26.9	22.3	17	10.6	9.72	9.98	6.65	8.87	8.96	9.29
Thallium		1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium		1E-005 to 0.001	0.00201	0.0019	0.00188	0.00195	0.00172	0.00138	0.000897	0.000884	0.000884	0.000831	0.000785	0.000757	0.00081
Vanadium		0.001 to 0.03	0.0039	0.0027	0.0026	0.0024	0.0026	0.0025	0.003	0.0034	0.0028	0.0029	0.003	0.0029	0.0033
Zinc		0.001 to 0.006	0.0021	<0.001	0.002	<0.001	0.001	<0.001	<0.001	0.0011	0.0012	<0.001	<0.001	<0.001	0.0014
Total Metals															
Aluminum		0.003 to 0.025	0.103	0.0651	0.0065	0.0088	0.129	0.379	0.256	0.352	0.699	0.399	0.0284	0.252	0.105
Antimony		0.0001 to 0.0025	0.00015	<0.0001	<0.0001	0.00011	<0.0001	<0.0001	<0.0001	0.00013	0.00012	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic		0.0001 to 0.0025	0.00197	0.00142	0.00135	0.00128	0.00114	0.00103	0.00101	0.00188	0.00183	0.00172	0.00166	0.00182	0.00168
Barium		5E-005 to 0.02	0.0645	0.0771	0.0804	0.0774	0.0806	0.0754	0.0565	0.0633	0.077	0.0654	0.0641	0.0649	0.0623
Beryllium		0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	0.022	0.015	0.013	0.012	0.013	<0.01	<0.01	0.016	0.017	0.016	0.014	0.019	0.016
Cadmium		1E-005 to 8.5E-005	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium		0.05 to 0.1	71	95.6	94.6	94.2	95.9	78.6	58.4	58.1	62.9	59.2	66.4	68	64.9
Chromium		0.0001 to 0.005	0.00037	0.00032	0.00013	0.00016	0.00043	0.00096	0.00071	0.00102	0.00186	0.00117	0.00019	0.00074	0.00049
Cobalt		0.0001 to 0.0015	0.00037	0.00022	0.00015	0.00016	0.00021	0.00037	0.00025	0.00044	0.00077	0.00043	0.00014	0.0003	0.00017
Copper		0.0005 to 0.007	0.00691	0.0036	0.00308	0.00277	0.00277	0.00489	0.00434	0.00572	0.00765	0.0049	0.00257	0.00404	0.00293
Iron		0.01 to 0.03	0.226	0.139	0.042	0.045	0.215	0.59	0.393	0.572	1.14	0.656	0.082	0.451	0.199
Lead		5E-005 to 0.0025	<0.00005	<0.00005	0.000543	<0.00005	<0.00005	0.000087	<0.00005	0.000097	0.000155	0.000081	<0.00005	0.000073	<0.00005
Lithium		0.0005 to 0.025	0.0045	0.00424	0.0046	0.00486	0.00469	0.00397	0.0031	0.00293	0.00368	0.00337	0.00364	0.00422	0.00405
Magnesium		0.1	38.4	41.8	43.2	43.6	37.2	26.7	20.9	26.2	30.3	28.4	29.3	31.9	31.1
Manganese		5E-005 to 0.0015	0.0465	0.0397	0.0263	0.0258	0.0311	0.0356	0.0226	0.0444	0.11	0.0589	0.0224	0.0335	0.0179
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.0038	0.00287	0.0029	0.00283	0.00249	0.00223	0.0019	0.00306	0.0028	0.00228	0.00209	0.00266	0.00242
Nickel		0.0005 to 0.005	0.00175	0.00146	0.00127	0.00131	0.00144	0.00171	0.00123	0.00204	0.00332	0.00201	0.00124	0.00177	0.00142
Phosphorus		0.05 to 0.3	0.387	0.108	0.077	0.082	0.097	0.076	0.058	0.174	0.236	0.143	0.105	0.148	0.133
Potassium		0.05 to 2	15.9	10.3	10.9	9.57	8.8	7.88	6.11	7.77	8.93	6.99	8.62	9.19	9.48
Selenium		0.0001 to 0.006	0.00128	0.00038	0.00031	0.00032	0.00037	0.00039	0.0003	0.00026	0.00024	0.00021	0.00016	0.00017	0.00017
Silicon		0.05	7.89	9.21	9.34	8.66	8.68	8.33	7.77	11	11.5	10.1	9.78	11.5	9.88
Silver		1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	34.5	35.9	36.9	39	35.8	33.7	23.1	23	26.5	24.4	27.4	29.1	28.4
Strontium		0.0001 to 0.005	0.465	0.446	0.512	0.478	0.463	0.34	0.236	0.317	0.35	0.31	0.301	0.385	0.335
Sulphur		0.5	27.4	24.5	27.5	27.3	22.5	16.9	10.7	9.48	9.71	6.71	8.64	8.91	9.13
Thallium		1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.015	<0.01	0.015	0.025	0.014	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extractio		0.00002													
Uranium		1E-005 to 0.001	0.00199	0.00198	0.002	0.00203	0.00176	0.00145	0.000823	0.000919	0.000905	0.000875	0.000719	0.000858	0.000827
Vanadium		0.001 to 0.03	0.0044	0.003	0.0027	0.0027	0.0031	0.0037	0.0037	0.0044	0.0049	0.0044	0.0031	0.0038	0.0037
Zinc		0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0041	<0.003	<0.003	<0.003	<0.003
Organics															
Carbon Organic (Dissolved)		0.5 to 5	16.4	9.01	9.02	10.3	7.96	10.5	11.4	13.2	12.9	11.3	10	10.8	11.2
Carbon Organic (Total)		0.5 to 5	17.1	8.87	9.1	10.1	7.99	10.8	11.8	14	13.7	12.2	10.1	10.8	11.7
Nitrogen Organic (Dissolved)		0.05 to 0.26													
Nitrogen Organic (Total)		0.05 to 0.3													
ALS LAB ID			**L1435532**	**L1435186**	**L1437642**	**L1439655**	**L1441961**	**L1447300**	**L1452368**	**L1459728**	**L1465478**	**L1473827**	**L1481215**	**L1488886**	**L1495443**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID	PC-EF-04	PC-EF-04	PC-EF-04	PC-EF-04
Date/Time Sampled	5-Jun-10	2-Sep-10	30-Aug-11	25-Oct-11
In Situ Parameters				
Conductivity (In Situ) µS/cm		1917	987	1268
Oxygen Dissolved %	...	67.2		164
Oxygen Dissolved	...	7.39		20.2
pH (In Situ) pH		8.1	8.42	8.27
Redox Potential (In Situ) mV		7.8	117	56.8
Secchi Depth m				
Specific Conductivity (In Situ) µS/cm		1399	1309	1992
Temperature (In Situ) °C		10.9	12.1	6.02
Total Dissolved Solids (In Situ)				1295
Turbidity (In Situ) NTU				
Physical Tests				
Acidity to pH 8.3 (as CaCO3)	<1			<1
Alkalinity (Total as CaCO3)	<1	398	363	409
Bicarbonate Alkalinity	<1			397
Carbonate Alkalinity	<1			11.8
Color TCU	32.6	15.4	34.9	12.9
Hardness as CaCO3 (Dissolved)	658	825	567	868
Hydroxide Alkalinity	<1			<1
pH pH	8.54	8.3	8.57	8.37
Specific Conductivity µS/cm	1400	1860	1310	1970
Total Dissolved Solids	1000	1270	837	1350
Total Suspended Solids	11.5	<5	40	4.4
Turbidity NTU	2.71	0.43	18.7	0.97
Dissolved Anions				
Bromide (Dissolved)	<0.5	<0.5	<0.5	<1
Chloride (Dissolved)	97.1	142	88.3	157
Fluoride (Dissolved)	<0.2	<0.2	0.24	<0.4
Sulphate (Dissolved)	338	456	247	508
Nutrients				
Ammonia (Total)	0.015	<0.005	0.0138	0.0112
Nitrate (as N)	0.141	0.425	0.266	0.85
Nitrite (as N)	<0.01	<0.01	<0.01	0.028
Nitrogen (Dissolved)			1.35	1.06
Nitrogen (Total)	0.8	1.12	1.7	1.37
Nitrogen Kjeldahl (Total)	0.656	0.691	0.796	0.497
Orthophosphate (Dissolved)	0.0554	0.0673		
Phosphorus (Nutrient) Dissolved	0.0837	0.0694	0.105	0.0693
Phosphorus (Nutrient) Total		0.0695	0.174	0.0739
Cyanide				
Cyanide (Free)	<0.005	<0.005		<0.005
Cyanide (Total)	0.0213	<0.005		0.0053
Cyanide (WAD)	<0.005	<0.005		<0.005
Dissolved Metals				
Aluminum (Dissolved)	<0.01	<0.01	<0.005	<0.003
Antimony (Dissolved)	<0.001	<0.001	<0.0005	0.00014
Arsenic (Dissolved)	0.0022	<0.004	0.00322	0.00296
Barium (Dissolved)	0.052	0.076	0.048	0.0692
Beryllium (Dissolved)	<0.002	<0.002	<0.001	<0.0001
Bismuth (Dissolved)			<0.2	<0.0005
Boron (Dissolved)	<0.1	<0.1	<0.1	0.066
Cadmium (Dissolved)	0.000049	0.000045	<0.000017	<0.00001
Calcium (Dissolved)	100	120	91.3	132
Chromium (Dissolved)	<0.002	<0.006	<0.001	0.00023
Cobalt (Dissolved)	<0.0006	<0.0006	<0.0003	0.0001
Copper (Dissolved)	0.0032	0.0023	0.0037	0.00227
Dissolved Cadmium (by saltwater extra				
Iron (Dissolved)	<0.03	<0.03	<0.03	<0.03
Lead (Dissolved)	<0.001	<0.001	<0.0005	<0.00005
Lithium (Dissolved)	<0.01	0.013	0.0089	0.0106
Magnesium (Dissolved)	99	128	82.4	131
Manganese (Dissolved)	0.00517	0.0394	0.0121	0.0247
Mercury (Dissolved)	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Dissolved)	0.0183	0.0122	0.0149	0.0126
Nickel (Dissolved)	0.0032	0.003	0.0034	0.00262
Phosphorus (Metal) Dissolved			<0.3	<0.3
Potassium (Dissolved)	21.6	22.8	20.3	21.8
Selenium (Dissolved)	<0.002	<0.005	<0.001	0.00218
Silicon (Dissolved)			8.73	8.38
Silver (Dissolved)	<0.00004	<0.00004	<0.00002	<0.00001
Sodium (Dissolved)	86.2	112	77.9	111
Strontium (Dissolved)			0.88	1.37
Sulphur (Dissolved)				
Thallium (Dissolved)	<0.0004	<0.0004	<0.0002	<0.00001
Tin (Dissolved)	<0.001	<0.001	<0.0005	<0.0001
Titanium (Dissolved)	<0.01	<0.01	<0.01	<0.01
Uranium (Dissolved)	0.00261	0.00337	0.00214	0.00387
Vanadium (Dissolved)	0.0042	0.0038	0.0046	0.0031
Zinc (Dissolved)	<0.005	<0.005	0.0051	0.0037
Total Metals				
Aluminum (Total)	0.191	0.014	0.903	0.0154
Antimony (Total)	<0.001	<0.001	<0.0005	0.00013
Arsenic (Total)	0.0023	<0.004	0.00342	0.00272
Barium (Total)	0.054	0.068	0.06	0.0682
Beryllium (Total)	<0.002	<0.002	<0.001	<0.0001
Bismuth (Total)			<0.2	<0.0005
Boron (Total)	<0.1	<0.1	<0.1	0.075
Cadmium (Total)	0.000056	0.000045	0.000019	<0.00001
Calcium (Total)	99.4	123	89.9	132
Chromium (Total)	<0.002	<0.002	0.0033	0.00057
Cobalt (Total)	<0.0006	<0.0006	0.001	0.00012
Copper (Total)	0.0043	0.0024	0.0074	0.00234
Iron (Total)	0.27	0.037	1.32	0.038
Lead (Total)	<0.001	<0.001	<0.0005	<0.00005
Lithium (Total)	<0.01	0.014	0.0092	0.012
Magnesium (Total)	97.8	130	81.7	130
Manganese (Total)	0.0199	0.0462	0.0896	0.0254
Mercury (Total)	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Total)	0.0191	0.0136	0.0158	0.0131
Nickel (Total)	0.0045	0.0034	0.0073	0.00265
Phosphorus (Metal) Total			<0.3	<0.3
Potassium (Total)	20.6	23.3	20.5	22.1
Selenium (Total)	<0.002	<0.005	<0.001	0.00194
Silicon (Total)			11.3	8.38
Silver (Total)	<0.00004	<0.00004	<0.00002	<0.00001
Sodium (Total)	82.8	114	77.2	114
Strontium (Total)			0.885	1.39
Sulphur (Total)				
Thallium (Total)	<0.0004	<0.0004	<0.0002	<0.00001
Tin (Total)	<0.001	<0.001	<0.0005	<0.0001
Titanium (Total)	<0.01	<0.01	0.053	<0.01
Total Cadmium (by saltwater extraction				
Uranium (Total)	0.00276	0.00371	0.00222	0.00408
Vanadium (Total)	0.0049	0.004	0.0075	0.0032
Zinc (Total)	<0.005	<0.005	0.0061	<0.003
Organics				
Carbon Organic (Dissolved)	12.3	7.78	16.6	8.66
Carbon Organic (Total)			16.7	8.69
Nitrogen Organic (Dissolved)			1.07	<0.21
Nitrogen Organic (Total)			1.42	<0.21
Lab ID	L894378	L927930	L1052387	L1076994

Notes:
(a) Units are mg/L/ unless otherwise stated
(b) BCWQG - BCWQG: Drinking Water (Max) - BC Water Quality Guidelines for Raw Drinking Water (Ma
(c) HC - HC: Drinking Water Quality - Guidelines for Canadian Drinking Water Quality - FPT Committee o
alue exceeds the limits of BCWQG: Drinking Water (Max)
value exceeds the limits of HC: Drinking Water Quality
he limits of BCWQG: Drinking Water (Max) HC: Drinking Water Quality
(g) Detection limit values displayed with less than symbol (<); statistics calculated using the detection limi

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes	MDL	PP01 2-May-07	PP01 18-Jul-07	PP01 17-Sep-07	PP01 29-Apr-08	PP01 7-Jul-08	PP01 6-Sep-08
In Situ Parameters							
Conductivity µS/cm	...	14466		23104		16536	27240
Oxygen Dissolved %	...				94.4		107
Oxygen Dissolved	...	8.68		6.89	9.47		9.23
pH (unitless)	...	8.42		8.43	7.82	8.58	8.63
Redox Potential mV	...					-133	-115
Salinity ppt	...						
Specific Conductivity µS/cm	...	19018		27261	24329	17411	32588
Temperature °C	...	12.4		17.1	11	22.4	16.4
Total Dissolved Solids	...						
Turbidity NTU	...						
Physical Tests							
Acidity to pH 8.3 (as CaCO3)	1				7.7		
Alkalinity (Total as CaCO3)	1 to 2	274	295	391	415	475	283
Bicarbonate Alkalinity	1 to 2				415		
Carbonate Alkalinity	1 to 2				<2		
Color TCU	5	9.5	9.9	16.1	8.4	10.4	11.2
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	9510	14500	17300	14100	16800	19400
Hydroxide Alkalinity	1 to 2				<2		
pH (unitless)	0.01 to 0.1	8.2	8.36	8.39	8.23	8.65	8.53
Specific Conductivity µS/cm	2	17800	26000	28000	25100	29300	33000
Total Dissolved Solids	1 to 2	23300	30300	37100	33300	40900	42400
Total Suspended Solids	3	22	10.8	19.6	51.6	32.7	41.3
Turbidity NTU	0.1				3.81	1.41	3.09
Dissolved Anions							
Bromide	0.05 to 2.495	<5	<25	<25	<5	<5	<25
Chloride	0.5 to 1	1500	2040	2300	1970	2450	2850
Fluoride	0.02 to 0.4	6.5		<10	2.1	<2	15
Sulphate	0.5 to 1	13000	18500	21800	17900	22700	27200
Nutrients							
Ammonia (Total)	0.005 to 0.05	0.063	0.026	0.009	0.063	<0.02	0.025
Nitrate (as N)	0.005 to 0.1	1.81	3	<2.5	<0.5	<0.5	<2.5
Nitrite (as N)	0.001 to 0.02	<0.1	1.33	<0.5	0.4	<0.1	1.17
Nitrogen (Dissolved)	0.05 to 0.1						
Nitrogen (Total)	0.0025 to 0.11						
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.902	2.83	2.73	1.58	1.84	2.8
Orthophosphate (Dissolved)	0.001 to 0.01	<0.001	<0.001	0.0014	<0.001	<0.001	
Phosphorus - Dissolved	0.002 to 0.02						
Phosphorus - Total	0.002 to 0.02	0.0553	0.065	0.065	0.0707	0.0515	
Cyanide							
Cyanide (Free)	0.005				<0.005	<0.005	<0.005
Cyanide (Total)	0.005	0.0055	0.0102	0.0123	0.0088	0.0077	
Cyanide (WAD)	0.005				<0.005	<0.005	<0.005
Dissolved Metals							
Aluminum	0.001 to 0.025	<0.25	<0.25	<0.5	<0.5	<0.5	<0.5
Antimony	0.0001 to 0.0025	<0.025	<0.025	<0.05	<0.05	<0.05	<0.05
Arsenic	0.0001 to 0.0025	<0.025	<0.025	<0.05	<0.05	<0.05	<0.05
Barium	5E-005 to 0.02	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2
Beryllium	0.0001 to 0.005	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Bismuth	0.0005 to 0.2						
Boron	0.01 to 0.1	1.43	2.2	2.5	2.1	2.7	3
Cadmium	1E-005 to 8.5E-005	<0.00085	<0.00085	<0.0017	<0.0017	<0.0017	<0.0017
Calcium	0.05 to 0.1	469	568	613	513	583	638
Chromium	0.0001 to 0.018	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Cobalt	0.0001 to 0.0015	<0.015	<0.015	<0.03	<0.03	<0.03	<0.03
Copper	0.0002 to 0.006	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Dissolved Cadmium (by saltwater extr	0.00002						
Iron	0.01 to 0.03	<0.15	<0.3	<0.3	<0.3	<0.3	<0.3
Lead	5E-005 to 0.0025	<0.025	<0.025	<0.05	<0.05	<0.05	<0.05
Lithium	0.0005 to 0.025	<0.25	<0.25	<0.5	<0.5	<0.5	<0.5
Magnesium	0.1	2020	3170	3830	3110	3710	4310
Manganese	5E-005 to 0.0015	0.051	0.015	0.045	0.089	<0.03	<0.03
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Molybdenum	5E-005 to 0.005	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Nickel	0.0005 to 0.005	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Phosphorus	0.05 to 0.3						
Potassium	0.05 to 2	196	310	340	283	342	394
Selenium	0.0001 to 0.006	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Silicon	0.05						
Silver	1E-005 to 0.0001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002
Sodium	0.05 to 2	2700	4280	4880	4200	5000	5850
Strontium	0.0001 to 0.005						
Sulphur	0.5						
Thallium	1E-005 to 0.001	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02
Tin	0.0001 to 0.0025	<0.025	<0.025	<0.05	<0.05	<0.05	<0.05
Titanium	0.01	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1
Uranium	1E-005 to 0.001	0.01	0.012	<0.02	<0.02	<0.02	<0.02
Vanadium	0.001 to 0.03	<0.15	<0.3	<0.3	<0.1	<0.1	<0.1
Zinc	0.001 to 0.006	<0.25	<0.25	<0.5	<0.05	<0.05	<0.1
Total Metals							
Aluminum	0.003 to 0.025	<0.25	<0.25	<0.5	<0.5	0.7	<0.5
Antimony	0.0001 to 0.0025	<0.025	<0.025	<0.05	<0.05	<0.05	<0.05
Arsenic	0.0001 to 0.0025	<0.025	<0.025	<0.05	<0.05	<0.05	<0.05
Barium	5E-005 to 0.02	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2
Beryllium	0.0001 to 0.005	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Bismuth	0.0005 to 0.2						
Boron	0.01 to 0.1	1.46	2.1	2.5	2.1	2.7	2.9
Cadmium	1E-005 to 8.5E-005	<0.00085	<0.00085	<0.0017	<0.0017	<0.0017	<0.0017
Calcium	0.05 to 0.1	464	574	626	494	609	628
Chromium	0.0001 to 0.005	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Cobalt	0.0001 to 0.0015	<0.015	<0.015	<0.03	<0.03	<0.03	<0.03
Copper	0.0005 to 0.007	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Iron	0.01 to 0.03	<0.15	<0.3	<0.3	<0.3	<0.3	<0.3
Lead	5E-005 to 0.0025	<0.025	<0.025	<0.05	<0.05	<0.05	<0.05
Lithium	0.0005 to 0.025	<0.25	<0.25	<0.5	<0.5	<0.5	<0.5
Magnesium	0.1	1970	3220	3900	3000	3660	4170
Manganese	5E-005 to 0.0015	0.094	0.054	0.083	0.087	<0.03	0.043
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Molybdenum	5E-005 to 0.005	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Nickel	0.0005 to 0.005	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Phosphorus	0.05 to 0.3						
Potassium	0.05 to 2	191	309	344	274	341	383
Selenium	0.0001 to 0.006	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Silicon	0.05						
Silver	1E-005 to 0.0001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002
Sodium	0.05 to 2	2620	4260	4910	3980	4960	5680
Strontium	0.0001 to 0.005						
Sulphur	0.5						
Thallium	1E-005 to 0.001	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02
Tin	0.0001 to 0.0025	<0.025	<0.025	<0.05	<0.05	<0.05	<0.05
Titanium	0.01	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1
Total Cadmium (by saltwater extractic	0.00002						
Uranium	1E-005 to 0.001	0.01	0.012	<0.02	<0.02	<0.02	<0.02
Vanadium	0.001 to 0.03	<0.15	<0.3	<0.3	<0.1	<0.1	<0.1
Zinc	0.003 to 0.006	<0.25	<0.25	<0.5	<0.05	<0.05	<0.1
Organics							
Carbon Organic (Dissolved)	0.5 to 5		30.1	30.3	26	33.2	35.8
Carbon Organic (Total)	0.5 to 5	21.5					
Nitrogen Organic (Dissolved)	0.05 to 0.26						
Nitrogen Organic (Total)	0.05 to 0.3						
ALS LAB ID		**L501627**	**L532402**	**L555226**	**L624228**	**L652819**	**L679672**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Analytes	MDL	S. CATCHMENT 10-Oct-13	S. CATCHMENT 14-Apr-14	S. CATCHMENT 2-Jul-14	S. CATCHMENT 2-Sep-14
In Situ Parameters					
Conductivity µS/cm	...		1756	3114	
Oxygen Dissolved %	...				
Oxygen Dissolved	...				
pH (unitless)	...		9.12	9.69	8.89
Redox Potential mV	...		12.3	52.6	
Salinity ppt	...		1.33	1.72	
Specific Conductivity µS/cm	...		2559	3282	
Temperature °C	...		8.56	22.4	17.5
Total Dissolved Solids	...		1662	2136	
Turbidity NTU	...		4.9		
Physical Tests					
Acidity to pH 8.3 (as CaCO3)	1				
Alkalinity (Total as CaCO3)	1 to 2	1180	812	1080	1080
Bicarbonate Alkalinity	1 to 2	823	543	536	672
Carbonate Alkalinity	1 to 2	354	268	546	404
Color TCU	5	16.7			
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	1860	1350	1750	1740
Hydroxide Alkalinity	1 to 2	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1	9.01	9.02	9.34	9.05
Specific Conductivity µS/cm	2	3470	2490	3130	3290
Total Dissolved Solids	1 to 2	3120	2150	2760	2810
Total Suspended Solids	3	8	12.5	45.7	23.9
Turbidity NTU	0.1	2.12	2.83	47.1	6.97
Dissolved Anions					
Bromide	0.05 to 2.495	<1	<1	<1	<1
Chloride	0.5 to 1	27	25	34	26
Fluoride	0.02 to 0.4	<0.4	<0.4	0.088	0.088
Sulphate	0.5 to 1	1400	1010	1320	1380
Nutrients					
Ammonia (Total)	0.005 to 0.05	0.262	0.0244	0.0428	0.115
Nitrate (as N)	0.005 to 0.1	<0.1	<0.1	<0.1	<0.1
Nitrite (as N)	0.001 to 0.02	<0.02	<0.02	<0.02	<0.02
Nitrogen (Dissolved)	0.05 to 0.1				
Nitrogen (Total)	0.0025 to 0.11	3.1			
Nitrogen Kjeldahl (Total)	0.05 to 0.2	3.1	2.73	3.38	2.42
Orthophosphate (Dissolved)	0.001 to 0.01	0.0098	<0.001	0.0013	0.0021
Phosphorus - Dissolved	0.002 to 0.02	0.0499	0.104	0.0369	0.0334
Phosphorus - Total	0.002 to 0.02	0.0645	0.0381	0.127	0.073
Cyanide					
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals					
Aluminum	0.001 to 0.025	0.003	<0.002	0.0024	<0.002
Antimony	0.0001 to 0.0025	0.00095	0.00048	0.00066	0.00079
Arsenic	0.0001 to 0.0025	0.0148	0.00951	0.0118	0.0149
Barium	5E-005 to 0.02	0.0109	0.012	0.00402	0.00891
Beryllium	0.0001 to 0.005	<0.0002	<0.0002	<0.0002	<0.0002
Bismuth	0.0005 to 0.2	<0.001	<0.001	<0.001	<0.001
Boron	0.01 to 0.1	0.594	0.368	0.482	0.557
Cadmium	1E-005 to 8.5E-005	<0.00002	<0.00003	<0.00005	<0.00002
Calcium	0.05 to 0.1	12	15.8	11.1	9.76
Chromium	0.0001 to 0.018	<0.0002	<0.0002	<0.0002	<0.0002
Cobalt	0.0001 to 0.0015	<0.0002	<0.0002	<0.0002	<0.0002
Copper	0.0002 to 0.006	<0.0004	0.00051	0.001	<0.0004
Dissolved Cadmium (by saltwater extr	0.00002		<0.00002	<0.00002	
Iron	0.01 to 0.03	0.021	0.016	<0.01	0.018
Lead	5E-005 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001
Lithium	0.0005 to 0.025	0.0095	0.0069	0.0091	0.0097
Magnesium	0.1	445	319	418	417
Manganese	5E-005 to 0.0015	0.0121	0.00997	0.00295	0.015
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0777	0.0517	0.0593	0.0597
Nickel	0.0005 to 0.005	0.0014	0.0012	0.0014	0.0011
Phosphorus	0.05 to 0.3	<0.05	<0.05	<0.05	0.053
Potassium	0.05 to 2	81.2	56.4	78.3	75
Selenium	0.0001 to 0.006	0.00087	0.00059	0.0008	0.00066
Silicon	0.05	5.89	4.68	2.38	4.6
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	0.05 to 2	300	189	274	275
Strontium	0.0001 to 0.005	0.159	0.25	0.121	0.113
Sulphur	0.5	435	302	427	410
Thallium	1E-005 to 0.001	<0.00002	<0.00002	<0.00002	<0.00002
Tin	0.0001 to 0.0025	<0.0002	<0.0002	<0.0002	<0.0002
Titanium	0.01	<0.02	<0.02	<0.02	<0.02
Uranium	1E-005 to 0.001	0.00437	0.00272	0.00331	0.00346
Vanadium	0.001 to 0.03	0.005	0.0033	0.0048	0.0041
Zinc	0.001 to 0.006	<0.002	0.003	<0.002	<0.002
Total Metals					
Aluminum	0.003 to 0.025	0.0315	0.0797	1.21	0.349
Antimony	0.0001 to 0.0025	0.00101	0.00046	0.0008	0.00081
Arsenic	0.0001 to 0.0025	0.0151	0.00865	0.0264	0.0135
Barium	5E-005 to 0.02	0.0121	0.0141	0.046	0.0115
Beryllium	0.0001 to 0.005	<0.0002	<0.0002	<0.0002	<0.0002
Bismuth	0.0005 to 0.2	<0.001	<0.001	<0.001	<0.001
Boron	0.01 to 0.1	0.6	0.354	0.505	0.557
Cadmium	1E-005 to 8.5E-005	<0.00002	<0.00003	<0.00005	<0.00002
Calcium	0.05 to 0.1	11.9	15.7	22.8	9.99
Chromium	0.0001 to 0.005	0.00026	0.00031	0.00255	0.00075
Cobalt	0.0001 to 0.0015	<0.0002	<0.0002	0.00087	0.00025
Copper	0.0005 to 0.007	<0.001	0.0013	0.0053	0.0015
Iron	0.01 to 0.03	0.048	0.099	1.32	0.317
Lead	5E-005 to 0.0025	<0.0001	<0.0001	0.00039	<0.0001
Lithium	0.0005 to 0.025	0.009	0.0065	0.0107	0.0103
Magnesium	0.1	438	296	407	412
Manganese	5E-005 to 0.0015	0.0143	0.0213	0.0866	0.0242
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0842	0.0533	0.0818	0.0607
Nickel	0.0005 to 0.005	0.0015	0.0016	0.004	0.0017
Phosphorus	0.05 to 0.3	0.062	0.096	0.426	0.054
Potassium	0.05 to 2	77.4	53.9	77	73
Selenium	0.0001 to 0.006	0.00083	0.00058	0.0011	0.00065
Silicon	0.05	6.01	4.65	6.17	5.3
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	0.05 to 2	312	187	238	261
Strontium	0.0001 to 0.005	0.177	0.255	0.489	0.125
Sulphur	0.5	448	304	427	425
Thallium	1E-005 to 0.001	<0.00002	<0.00002	<0.00002	<0.00002
Tin	0.0001 to 0.0025	<0.0002	<0.0002	<0.0002	<0.0002
Titanium	0.01	<0.02	<0.02	0.044	<0.02
Total Cadmium (by saltwater extractio	0.00002		<0.00002	<0.00002	
Uranium	1E-005 to 0.001	0.00469	0.00291	0.00416	0.00357
Vanadium	0.001 to 0.03	0.0055	0.0041	0.0065	0.0046
Zinc	0.003 to 0.006	<0.006	<0.006	<0.006	<0.006
Organics					
Carbon Organic (Dissolved)	0.5 to 5	32.9	25.2	32.7	33.3
Carbon Organic (Total)	0.5 to 5	32.2	26.9	36.1	33.9
Nitrogen Organic (Dissolved)	0.05 to 0.26				
Nitrogen Organic (Total)	0.05 to 0.3				
ALS LAB ID		**L1376790**	**L1443519**	**L1481215**	**L1511703**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID	WALL	WALL	WALL	WALL
Date/Time Sampled	14-Apr-11	3-Apr-13	5-Jun-13	7-Nov-13
In Situ Parameters				
Conductivity (In Situ) µS/cm	25765	44890	71500	
Oxygen Dissolved %	...			68.2
Oxygen Dissolved	...			4.05
pH (In Situ) pH	8.92	9.34	8.94	
Redox Potential (In Situ) mV	-50.4	78.6	-175	
Secchi Depth m				
Specific Conductivity (In Situ) µS/cm	37682	51800	65390	
Temperature (In Situ) °C	8.42	17.9	29.8	
Total Dissolved Solids (In Situ)	2450	33660	42570	
Turbidity (In Situ) NTU		14.2	31.6	
Physical Tests				
Acidity to pH 8.3 (as CaCO3)				
Alkalinity (Total as CaCO3)	555	1420	832	171
Bicarbonate Alkalinity			501	171
Carbonate Alkalinity			331	<2
Color TCU	36	42.1	52.8	
Hardness as CaCO3 (Dissolved)	14800	21400	27700	3380
Hydroxide Alkalinity			<1	<2
pH pH	9.24	8.91	8.79	7.92
Specific Conductivity µS/cm	35800	49400	63000	12300
Total Dissolved Solids	47900	74200	111000	11500
Total Suspended Solids	57.9	30.7	203	46.2
Turbidity NTU	15.5	8.37	72.7	13.2
Dissolved Anions				
Bromide (Dissolved)	<150	<5	5.7	<2.5
Chloride (Dissolved)	1850	2490	2900	725
Fluoride (Dissolved)	0.061	<0.3	<0.3	<1
Sulphate (Dissolved)	30500	45300	63600	6950
Nutrients				
Ammonia (Total)	0.0881	0.2	0.138	1.25
Nitrate (as N)	<0.5	<0.5	<0.5	<0.25
Nitrite (as N)	<0.1	<0.1	<0.1	0.132
Nitrogen (Dissolved)		16.9		
Nitrogen (Total)	14.7	19	23.8	5.48
Nitrogen Kjeldahl (Total)	14.7	19	24.6	5.5
Orthophosphate (Dissolved)	0.191		0.557	0.324
Phosphorus (Nutrient) Dissolved	0.733	1.16	1.92	0.411
Phosphorus (Nutrient) Total	1.54	1.66	2.65	0.509
Cyanide				
Cyanide (Free)		<0.005	<0.005	<0.005
Cyanide (Total)		<0.005	<0.005	<0.005
Cyanide (WAD)		<0.005	<0.005	<0.005
Dissolved Metals				
Aluminum (Dissolved)	<0.5	<0.05	<0.1	<0.01
Antimony (Dissolved)	<0.05	<0.005	<0.01	<0.001
Arsenic (Dissolved)	<0.05	0.0203	0.034	0.0071
Barium (Dissolved)	<0.4	0.0161	0.0265	0.00249
Beryllium (Dissolved)	<0.1	<0.005	<0.01	<0.001
Bismuth (Dissolved)	<4	<0.025	<0.05	<0.005
Boron (Dissolved)	2.5	3.73	4.7	0.54
Cadmium (Dissolved)	<0.0017	<0.0005	<0.001	<0.0001
Calcium (Dissolved)	374	436	375	58
Chromium (Dissolved)	<0.1	<0.005	<0.01	<0.001
Cobalt (Dissolved)	<0.03	<0.005	<0.01	<0.001
Copper (Dissolved)	<0.15	0.017	<0.02	<0.002
Dissolved Cadmium (by saltwater extra				
Iron (Dissolved)	<0.6	<0.2	<0.2	<0.05
Lead (Dissolved)	<0.05	<0.0025	<0.005	<0.0005
Lithium (Dissolved)	<0.5	<0.025	<0.05	<0.005
Magnesium (Dissolved)	3360	4930	6490	786
Manganese (Dissolved)	0.053	0.0686	0.149	0.00791
Mercury (Dissolved)	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Dissolved)	<0.1	0.0672	0.027	0.00288
Nickel (Dissolved)	<0.1	<0.025	<0.05	<0.005
Phosphorus (Metal) Dissolved	<6	1.3	1.8	0.54
Potassium (Dissolved)	436	572	744	160
Selenium (Dissolved)	<0.1	0.01	<0.01	<0.001
Silicon (Dissolved)	<1	<1	<1	<0.25
Silver (Dissolved)	<0.002	<0.0005	<0.001	<0.0001
Sodium (Dissolved)	8990	13600	18500	2530
Strontium (Dissolved)	10.5	13.1	14.2	1.73
Sulphur (Dissolved)		15200	19900	2620
Thallium (Dissolved)	<0.02	<0.0005	<0.001	<0.0001
Tin (Dissolved)	<0.05	<0.005	<0.01	<0.001
Titanium (Dissolved)	<0.2	<0.5	<1	<0.1
Uranium (Dissolved)	<0.02	0.0093	0.0087	0.00067
Vanadium (Dissolved)	<0.1	<0.05	<0.1	<0.01
Zinc (Dissolved)	<0.1	0.069	<0.1	<0.01
Total Metals				
Aluminum (Total)	<0.5	<0.15	<0.3	0.074
Antimony (Total)	<0.05	<0.005	<0.01	<0.001
Arsenic (Total)	<0.05	0.0211	0.034	0.0072
Barium (Total)	<0.4	0.0177	0.024	0.0034
Beryllium (Total)	<0.1	<0.005	<0.01	<0.001
Bismuth (Total)	<4	<0.025	<0.05	<0.005
Boron (Total)	2.6	3.52	4.2	0.53
Cadmium (Total)	<0.0017	<0.0005	<0.001	<0.0001
Calcium (Total)	380	434	357	57.6
Chromium (Total)	<0.1	<0.005	<0.01	<0.001
Cobalt (Total)	<0.03	<0.005	<0.01	<0.001
Copper (Total)	<0.15	<0.025	<0.05	<0.005
Iron (Total)	<0.6	<0.2	0.37	0.119
Lead (Total)	<0.05	<0.0025	<0.005	<0.0005
Lithium (Total)	<0.5	<0.025	<0.05	<0.005
Magnesium (Total)	3410	4930	6170	781
Manganese (Total)	0.063	0.0796	0.183	0.0157
Mercury (Total)	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Total)	<0.1	0.0767	0.0241	0.00333
Nickel (Total)	<0.1	<0.025	<0.05	<0.005
Phosphorus (Metal) Total	<6	1.4	2.1	0.64
Potassium (Total)	442	574	706	156
Selenium (Total)	<0.1	<0.005	<0.01	<0.001
Silicon (Total)	<1	<1	<1	0.52
Silver (Total)	<0.002	<0.0005	<0.001	<0.0001
Sodium (Total)	9120	15200	16800	2420
Strontium (Total)	10.9	15.6	13	1.76
Sulphur (Total)		15200	18900	2590
Thallium (Total)	<0.02	<0.0005	<0.001	<0.0001
Tin (Total)	<0.05	<0.005	<0.01	<0.001
Titanium (Total)	<0.2	<0.5	<1	<0.1
Total Cadmium (by saltwater extraction				
Uranium (Total)	<0.02	0.00958	0.0084	0.00075
Vanadium (Total)	<0.1	<0.05	<0.1	<0.01
Zinc (Total)	<0.1	<0.15	<0.3	<0.03
Organics				
Carbon Organic (Dissolved)	98.9	176	253	21.7
Carbon Organic (Total)	104	177	271	25.6
Nitrogen Organic (Dissolved)		16.7		
Nitrogen Organic (Total)	14.7	18.8		
Lab ID	L995583	L1286585	L1312719	L1389979

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C2.38 - WR-SEEP
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Analytes	MDL	WR-SEEP 28-Mar-11	WR-SEEP 10-Apr-12	WR-SEEP 25-Apr-12	WR-SEEP 24-May-12	WR-SEEP 11-Jul-12	WR-SEEP 7-Aug-12	WR-SEEP 7-May-13	WR-SEEP 5-Jun-13	WR-SEEP 3-Jul-13	WR-SEEP 7-Nov-13	WR-SEEP 10-Apr-14	WR-SEEP 8-May-14	WR-SEEP 4-Jun-14	WR-SEEP 3-Jul-14	WR-SEEP 28-Jul-14
In Situ Parameters																
Conductivity µS/cm	...	1674	1113	1480	1930		1250	2898	11220	3426		853	1180	1548	2812	3539
Oxygen Dissolved %	...	13.9	95.3	39	76.2		84.2	99.3		89.2		95.3	68.1	102	105	90.6
Oxygen Dissolved	...	1.56	10.1	3.86	7.75		7.04	9.35		7.87		9.9	7.12	9.15	7.85	7.07
pH (unitless)	...	7.26	8.38	7.6	8.24		7.73	8.16	8.83	8.36		8.4	8.46	8.52	8.52	8.64
Redox Potential mV	...	8	84.7	116	114		167	168	191	72.7		-60	58.7	85.7	79.6	89.7
Salinity ppt	...		0.74	0.92	1.26		0.63	1.77	7.18	1.96		0.54	0.77	0.84	1.33	1.75
Specific Conductivity µS/cm	...	2363	1460	1804	2420		1270	3336	12500	3709		1092	1520	1669	2603	3366
Temperature °C	...	9.73	12.6	15.6	14.3		24.2	17.2	19.6	21		13.6	13.3	21.8	29.9	27.7
Total Dissolved Solids	...	1540	949	1173	1579		825	2186	8120	2411		709	988	1085	1693	2188
Turbidity NTU	...			1.9	2.8		3.3	19.1	4.6	3.3						
Physical Tests																
Acidity to pH 8.3 (as CaCO3)	1															
Alkalinity (Total as CaCO3)	1 to 2		206	247	386	228	204	182	123	135	97.7	105	143	99.3	144	98.2
Bicarbonate Alkalinity	1 to 2		199	247	366	152	204	182	123	128	97.7	105	143	94.9	133	89.8
Carbonate Alkalinity	1 to 2		7.7	<2	20.4	76.4	<1	<2	<2	7.1	<2	<2	<2	4.4	10.6	8.4
Color TCU	5	566	29.3	32.4	30.1	36.5	27.2	12.7	11.3	17.2						
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	522	715	900	1230		609	1730	1970	2090	2400	516	705	840	1190	1560
Hydroxide Alkalinity	1 to 2		<1	<2	<1	<1	<1	<2	<2	<1	<2	<2	<2	<1	<1	<1
pH (unitless)	0.01 to 0.1	7.52	8.42	8.22	8.37	8.96	8.15	8.25	8.17	8.39	7.86	8.26	8.21	8.33	8.48	8.75
Specific Conductivity µS/cm	2	2380	1460	1760	2380	2430	1260	3410	3990	4270	3860	1090	1470	1750	2410	3310
Total Dissolved Solids	1 to 2	2100	1130	1460	2060	2160	1020	3020	3770	2960	3570	862	1220	1450	2030	2990
Total Suspended Solids	3	18.7	11.3	<3	<3	10	3.9	15.3	11.6	13.7	7.7	5.4	4.5	<3	6.1	10.2
Turbidity NTU	0.1		3.15	1.87	3.48	16	3.59	17.7	2.12	1.56	1.96	5.51	2.35	2.17	2.71	3.36
Dissolved Anions																
Bromide	0.05 to 2.495		<0.5	<0.5	<1	<1	<0.5	<1	1.2	1	<1	<0.5	<0.5	<0.5	<1	<1
Chloride	0.5 to 1		9.9	13.1	17	22	8.4	165	202	219	174	29.9	43.8	62.1	102	155
Fluoride	0.02 to 0.4		<0.2	<0.2	<0.4	<0.4	<0.2	<0.4	0.42	<0.4	<0.4	<0.2	<0.2	0.18	0.21	0.217
Sulphate	0.5 to 1		635	844	1200	1380	557	2010	2340	2390	2240	475	669	839	1280	1860
Nutrients																
Ammonia (Total)	0.005 to 0.05		0.0375	0.102	0.128	0.0735	0.0649	0.0181	0.016	0.0219	0.63	0.0083	0.0144	0.0097	0.019	0.0184
Nitrate (as N)	0.005 to 0.1		4.13	1.39	0.18	<0.1	0.394	<0.1	<0.1	<0.1	1.92	<0.05	<0.05	<0.05	<0.1	0.1
Nitrite (as N)	0.001 to 0.02		0.062	0.071	<0.02	<0.02	0.034	<0.02	<0.02	<0.02	0.091	<0.01	<0.01	<0.01	<0.02	<0.02
Nitrogen (Dissolved)	0.05 to 0.1		5.13	2.72	1.8		1.28									
Nitrogen (Total)	0.0025 to 0.11		5.27	3.07	2	2.62	1.44	1.35	1.37	1.61	5.29					
Nitrogen Kjeldahl (Total)	0.05 to 0.2		1.08	1.6	1.83	2.62	1.01	1.4	1.38	1.61	2.85	0.505	0.802	1.05	1.99	1.92
Orthophosphate (Dissolved)	0.001 to 0.01	2.47							<0.001	<0.001	0.0029	<0.001	0.0019	<0.001	<0.001	<0.001
Phosphorus - Dissolved	0.002 to 0.02		0.0187	0.0245	0.0336	0.0321	0.012	0.0177	0.0152	0.0127	0.0157	0.0091	0.0146	0.0108	0.0175	0.0144
Phosphorus - Total	0.002 to 0.02	3.16	0.0472	0.0377	0.0489	0.066	0.037	0.0644	0.0264	0.0211	0.032	0.0237	0.0193	0.017	0.0312	0.0425
Cyanide																
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	0.0215	0.0077	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																
Aluminum	0.001 to 0.025	<0.01	<0.003	0.0031	0.0035		0.0016	0.0043	0.0029	0.0024	0.057	0.0027	0.006	0.0058	0.0071	0.0032
Antimony	0.0001 to 0.0025	<0.001	0.00143	0.00147	0.00108		0.00121	0.00067	0.0006	0.00046	0.00162	0.00048	0.0006	0.00062	0.00054	0.00047
Arsenic	0.0001 to 0.0025	<0.001	0.00285	0.00369	0.00483		0.00325	0.00178	0.00172	0.00236	0.00295	0.00112	0.00127	0.00151	0.0033	0.00334
Barium	5E-005 to 0.02	0.053	0.0211	0.0256	0.0315		0.0684	0.0665	0.0488	0.0483	0.0258	0.0357	0.0425	0.0378	0.0426	0.0449
Beryllium	0.0001 to 0.005	<0.002	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.2	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.17	0.155	0.214	0.35		0.223	0.317	0.338	0.375	0.165	0.082	0.153	0.183	0.313	0.302
Cadmium	1E-005 to 8.5E-005	<0.0005	<0.0003	<0.0011	<0.00038		<0.00075	<0.00005	<0.00004	<0.00005	<0.00025	<0.00002	<0.00003	<0.00004	<0.00005	<0.00005
Calcium	0.05 to 0.1	43.8	92.8	113	134		82.9	285	290	265	331	116	148	133	173	183
Chromium	0.0001 to 0.018	<0.002	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0002	<0.0002	0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015	<0.0006	0.0001	0.00021	0.00045		0.00015	0.00021	<0.0002	<0.0002	0.00051	<0.0001	<0.0001	<0.0001	0.00011	0.00015
Copper	0.0002 to 0.006	0.0086	0.0135	0.0189	0.0127		0.0137	0.0141	0.0124	0.0175	0.0637	0.0126	0.0133	0.0126	0.0194	0.0176
Dissolved Cadmium (by saltwater extr	0.00002											<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Iron	0.01 to 0.03	0.03	<0.03	0.035	0.162		0.014	0.028	0.017	0.024	0.085	<0.01	0.013	0.023	0.027	0.016
Lead	5E-005 to 0.0025	<0.001	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	<0.01	0.00796	0.00975	0.0139		0.00734	0.0669	0.0787	0.0955	0.0779	0.0136	0.0235	0.03	0.0577	0.0903
Magnesium	0.1	100	117	150	218		97.6	248	302	347	383	54.9	81.7	123	185	268
Manganese	5E-005 to 0.0015	0.923	0.00404	0.02	0.0337		0.0145	0.076	0.0173	0.0182	0.131	0.00137	0.00518	0.00393	0.00742	0.0119
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.14	0.981	1.35	2.03		0.952	0.195	0.166	0.12	0.525	0.0554	0.102	0.13	0.131	0.114
Nickel	0.0005 to 0.005	0.0022	0.00202	0.00355	0.00696		0.00268	0.00289	0.0025	0.0029	0.0058	0.00107	0.00142	0.00161	0.0023	0.00231
Phosphorus	0.05 to 0.3	2.12	<0.3	<0.3	<0.3		<0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	0.05 to 2	86.3	24.9	31.1	41.6		21.2	56.2	58.1	69	64.6	17.1	23.4	31.8	48.9	63.5
Selenium	0.0001 to 0.006	<0.002	0.0272	0.0264	0.0149		0.0194	0.00231	0.00152	0.00145	0.0381	0.00197	0.0023	0.00158	0.0015	0.00154
Silicon	0.05	12.3	6.71	4.09	2.21		3.54	0.248	0.237	1.01	3.6	3.62	3.89	4.71	3.32	0.474
Silver	1E-005 to 0.0001	<0.00004	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	113	73.7	93.3	145		56.1	212	263	276	293	39	61.3	89.1	139	208
Strontium	0.0001 to 0.005	0.877	1.19	1.48	2.02		1.32	4.95	5.58	5.12	6.56	1.69	2.23	2.58	3.54	4.56
Sulphur	0.5							580	725	725	821	160	207	281	425	575
Thallium	1E-005 to 0.001	<0.0004	<0.00001	<0.00001	<0.00001		<0.00001	0.000014	<0.00002	<0.00002	0.000031	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00094	0.00535	0.00711	0.0111		0.00353	0.0121	0.0071	0.00511	0.0237	0.00461	0.00657	0.00582	0.00605	0.00461
Vanadium	0.001 to 0.03	<0.002	0.0035	0.0037	0.0056		0.0037	<0.001	<0.002	<0.002	<0.002	0.001	0.0011	0.0025	0.0017	0.0013
Zinc	0.001 to 0.006	<0.005	0.0144	<0.003	0.0035		0.0017	0.0016	<0.002	<0.002	<0.002	<0.001	<0.001	0.0019	<0.001	0.0011
Total Metals																
Aluminum	0.003 to 0.025	<0.01	0.121	0.0355	0.0402	0.268	0.0479	0.471	0.0408	0.0167	<0.006	0.171	0.0981	0.0458	0.0465	0.0913
Antimony	0.0001 to 0.0025	<0.001	0.00146	0.00143	0.00105	0.00145	0.00121	0.00066	0.0006	0.00048	0.00131	0.00049	0.00061	0.00061	0.00049	0.0005
Arsenic	0.0001 to 0.0025	0.001	0.00281	0.00364	0.00481	0.00813	0.0034	0.00203	0.00176	0.00223	0.00249	0.0012	0.00137	0.00157	0.0033	0.00343
Barium	5E-005 to 0.02	0.053	0.0219	0.0266	0.0308	0.0267	0.0685	0.07	0.0476	0.0483	0.023	0.0359	0.0434	0.0376	0.0413	0.0455
Beryllium	0.0001 to 0.005	<0.002	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.18	0.166	0.214	0.369	0.279	0.229	0.31	0.331	0.403	0.147	0.086	0.169	0.191	0.291	0.308
Cadmium	1E-005 to 8.5E-005	<0.0003	<0.0003	<0.0012	<0.00038	<0.0003	<0.00075	<0.00005	<0.00004	<0.00005	<0.00025	<0.00003	<0.00004	<0.00004	<0.0001	<0.00005
Calcium	0.05 to 0.1	43.4	92.5	112	130	42.8	79.9	274	291	261	302	111	146	132	160	177
Chromium	0.0001 to 0.005	<0.002	0.00066	0.00039	0.00037	0.00155	0.00031	0.00102	<0.0002	0.00022	0.00036	0.00041	0.00027	0.00016	0.00029	0.00031
Cobalt	0.0001 to 0.0015	<0.0006	0.00022	0.00024	0.00047	0.00073	0.00024	0.00056	<0.0002	<0.0002	0.00039	0.00018	0.00013	0.00011	0.00016	0.00023
Copper	0.0005 to 0.007	0.0123	0.0164	0.0209	0.0145	0.0312	0.0161	0.0202	0.0137	0.0182	0.0503	0.0152	0.0152	0.0136	0.0203	0.0195
Iron	0.01 to 0.03	0.032	0.166	0.083	0.264	0.468	0.1	0.666	0.071	0.051	<0.01	0.225	0.123	0.083	0.081	0.118
Lead	5E-005 to 0.0025	<0.001	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	0.000107	<0.0001	<0.0001	<0.0001	0.000056	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	<0.01	0.00777	0.00938	0.0145	0.0156	0.00725	0.0645	0.0798	0.1	0.0612	0.0135	0.0241	0.0305	0.0495	0.0888
Magnesium	0.1	103	117	151	205	252	95.3	246	303	349	321	52.3	81.3	123	176	265
Manganese	5E-005 to 0.0015	0.908	0.0175	0.0242	0.0346	0.0264	0.0512	0.104	0.0193	0.0303	0.12	0.00801	0.0113	0.0169	0.0236	0.0196
Mercury	1E-005 to 5E-005	0.000015	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.153	1.08	1.33	2.01	1.49	0.936	0.194	0.167	0.119	0.434	0.057	0.102	0.134	0.116	0.112
Nickel	0.0005 to 0.005	0.003	0.00255	0.00374	0.00696	0.0078	0.00287	0.00408	0.0029	0.0031	0.0045	0.0024	0.0017	0.00166	0.00237	0.00266
Phosphorus	0.05 to 0.3	2.55	<0.3	<0.3	<0.3	<0.3	<0.3	0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	0.05 to 2	90.9	24.7	31.8	39.2	38.1	21.1	53	57.7	68.1	57	15.8	23.6	30.7	45	62.7
Selenium	0.0001 to 0.006	<0.002	0.0245	0.0256	0.0146	0.0181	0.0186	0.00214	0.00153	0.00152	0.0327	0.00193	0.00192	0.00143	0.00138	0.00164
Silicon	0.05	12.7	6.89	4.13	2.2	4.25	3.55	1.29	0.32	1.04	3.03	3.84	4.05	4.76	3.29	0.636
Silver	1E-005 to 0.0001	<0.00004	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	0.000011	<0.00002	<0.00002	<0.00002	0.000012	<0.00001	0.00007	<0.00001	<0.00001
Sodium	0.05 to 2	119	72.6	96.4	138	172	55.2	206	268	282	242	37.7	63.1	92	137	214
Strontium	0.0001 to 0.005	0.882	1.29	1.46	1.98	0.704	1.32	4.97	5.49	5.02	5.85	1.69	2.21	2.64	2.99	4.48
Sulphur	0.5							606	707	727	731	155	206	279	405	571
Thallium	1E-005 to 0.001	<0.0004	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	0.000017	<0.00002	<0.00002	0.000026	<0.00001	0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	0.013	<0.01	<0.01	0.014	0.011	0.023	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extractic	0.00002											<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Uranium	1E-005 to 0.001	0.00102	0.00596	0.00717	0.0113	0.00477	0.00351	0.0116	0.0072	0.00513	0.0186	0.00457	0.00661	0.00593	0.00549	0.00456
Vanadium	0.001 to 0.03	<0.002	0.004	0.0041	0.0061	0.0139	0.0044	0.0028	<0.002	<0.002	<0.002	0.0017	0.0015	0.0027	0.0022	0.0019
Zinc	0.003 to 0.006	<0.005	0.0128	0.0043	0.0033	<0.006	0.0037	<0.003	<0.006	<0.006	<0.006	<0.003	<0.003	<0.003	<0.003	<0.003
Organics																
Carbon Organic (Dissolved)	0.5 to 5		10.4	13.2	18.3		9.81	16.1	17.4	26.3	14.6	10.2	10.6	13.9	23.6	27.6
Carbon Organic (Total)	0.5 to 5		11.4	13.9	17.9	24.1	10.1	16.5	17.7	27.5	22.6	10.4	10.7	14.1	23.4	28.4
Nitrogen Organic (Dissolved)	0.05 to 0.26		<1	1.15	1.49		0.79									
Nitrogen Organic (Total)	0.05 to 0.3		1.04	1.5	1.7	2.54	0.949									
ALS LAB ID		L990458	L1133342	L1140194	L1152500	L1177597	L1190914	L1298960	L1312719	L1327102	L1389979	L1442672	L1453031	L1465478	L1481215	L1494516

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

APPENDIX C3

AGRICULTURE GUIDELINES

(Pages C3-1 to C3-79)

TABLE C3.1 -IRRIGATION AND LIVESTOCK

Analytes	BCWQG-Irrigation[3]	BCWQG-Livestock[4]	CEQG-Irrigation[5]	CEQG-Livestock[6]
Physical Tests				
Color (TCU)				
Conductivity (µS/cm)	700	1400		
Total Dissolved Solids	500	1000	500	3000
Turbidity (NTU)	10	5		
Dissolved Anions				
Chlorate		3		
Chloride	100	600	100	
Fluoride	1 / 2[16]	1	1	1[20]
Sulphate		1000		1000
Nutrients				
Nitrate (as N)		100		
Dissolved Nitrate+Nitrite				100
Nitrite (as N)		10		10
Metals				
Aluminum	5	5	5	5
Arsenic	0.1	0.025	0.1	0.025
Beryllium	0.1	0.1	0.1	0.1
Boron	0.5	5	0.5	5
Cadmium	0.0051	0.08	0.0051	0.08
Calcium		1000		1000
Chromium				
Chromium III	0.0049	0.05	0.0049	0.05
Chromium VI	0.008		0.008	0.05
Cobalt	0.05	1	0.05	1
Copper	0.2	0.3	0.2[17]	1
Iron			5	
Lead	0.2	0.1	0.2	0.1
Lithium	0.75[18]		2.5	
Manganese	0.2		0.2	
Mercury	0.0002	0.0003		0.003
Molybdenum	0.02[19]	0.05	0.01	0.5
Nickel	0.2	1	0.2	1
Selenium	0.01	0.03	0.02	0.05
Uranium	0.01	0.2	0.01	0.2
Vanadium	0.1	0.1	0.1	0.1
Zinc	1	2	1	50

M:\1\01\00246\31\A\Report\3 - Baseline Water Quality - GW SW\Rev0\Appendix\Appendix C - SWQ Data Tables Rev0\[C3 - Agricultural Guidelines - Rev0.xlsx]C3.1 -IRRIGATION AND LIVESTOCK

NOTES:

1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. DETECTION LIMIT VALUES ARE DISPLAYED WITH LESS THAN SYMBOL (<).
3. BCWQG-Irrigation: BC WATER QUALITY GUIDELINES FOR IRRIGATION.
4. BCWQG-Livestock: BC WATER QUALITY GUIDELINES FOR LIVESTOCK.
5. CEQG-Irrigation: CCME GUIDELINES FOR IRRIGATION.
6. CEQG-Livestock CCME GUIDELINES FOR IRRIGATION.
7. THIS SHADING INDICATES THE VALUE EXCEEDS THE LIMITS OF BCWQG-Irrigation.
8. THIS SHADING INDICATES THE VALUE EXCEEDS THE LIMITS OF BCWQG-Livestock.
9. THIS SHADING INDICATES THE VALUE EXCEEDS THE LIMITS OF BCWQG-Irrigation AND BCWQG-Livestock.
10. **GREEN BOLD TEXT INDICATES THE VALUE EXCEEDS THE LIMITS OF CCME-Irrigation.**
11. **GREY BOLD TEXT INDICATES THE VALUE EXCEEDS THE LIMITS OF CCME-Livestock.**
12. **RED BOLD TEXT INDICATES THE VALUE EXCEEDS THE LIMITS OF CCME-Irrigation AND CCME-Livestock.**
13. GUIDELINE APPLIES TO THE DISSOLVED CONCENTRATION ONLY.
14. GUIDELINE APPLIES TO THE TOTAL CONCENTRATION ONLY.
15. DETECTION LIMIT VALUES ARE DISPLAYED WITH LESS THAN SYMBOL (<).
16. GUIDELINE IS 1 mg/L FOR CHRONIC EXPOSURE (AVERAGE OVER 30 DAYS) AND 2 mg/L FOR SHORT-TERM EXPOSURE (SINGLE SAMPLES).
17. GUIDELINE IS CROP-DEPENDENT; THE MOST CONSERVATIVE VALUE IS FOR CEREALS.
18. GUIDELINE IS CROP-DEPENDENT; THE MOST CONSERVATIVE VALUE IS FOR CITRUS.
19. GUIDELINE IS FOR POORLY DRAINED SOIL WITH A RATIO OF Cu : Mo GREATER THAN 2 : 1.
20. GUIDELINE IS FOR FEED WATER CONTAINING FLUORIDE.

TABLE C3.2 - AC02
PAGE 1 OF 3

Site ID			AC02	AC02	AC02	AC02	AC02	AC02	AC02	AC02	AC02	AC02	AC02	AC02
Analytes		MDL	1-May-07	18-Jul-07	17-Sep-07	29-Apr-08	7-Jul-08	4-Sep-08	31-May-11	10-May-12	16-May-12	24-May-12	12-Jul-12	8-Aug-12
In Situ Parameters														
Conductivity µS/cm		...	395		697	806	648	655	390	409	481	571	374	756
Oxygen Dissolved %	...					95.6	70.7	58.2	87.4	91.5	80.4	90	64.5	42.2
Oxygen Dissolved	...		11	5.98	9.14	10.6	6.5	6.27	9.12	10.4	8.91	9.04	6.14	3.33
pH (unitless)		...	8.24	8.02	8.1	8.65	7.91	7.82	7.35	8.3	8.21	8.17	8.22	7.94
Redox Potential mV		...	-69.3				-94.4	-72	246	47.5	91.6	107	75.9	25.5
Salinity ppt		...							0.24	0.28	0.32	0.35		0.35
Specific Conductivity µS/cm		...	551	1018	934	1114	727	876	502	581	661	704	434	726
Temperature °C		...	10.1	17.2	11.7	10.5	19.3	11.8	13.3	9.5	10.7	15.1	17.7	27.2
Total Dissolved Solids		...							326	378	430	458		472
Turbidity NTU		...							0.3	1.3	1.3	1.7	1.9	4.2
Physical Tests														
Acidity to pH 8.3 (as CaCO3)		1				<1								
Alkalinity (Total as CaCO3)		1 to 2	227	355	370	390	351	389	220	273	302	327	320	373
Bicarbonate Alkalinity		1 to 2				378				273	300	309	320	357
Carbonate Alkalinity		1 to 2				12.5				<1	2.6	17.4	<2	15.9
Color TCU		5	35.7	34.7	29.4	16.6	34.7	31.1	58.6	39.1	36.4	33.7	32.6	34.6
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	257	387	385	567	345	381	243	278	317	331	310	336
Hydroxide Alkalinity		1 to 2				<1				<1	<1	<1	<2	<1
pH (unitless)		0.01 to 0.1	8.38	8.32	8.39	8.31	8.41	8.3	8.29	8.43	8.43	8.4	8.27	8.45
Specific Conductivity µS/cm		2	522	877	933	1160	711	886	536	581	667	685	629	704
Total Dissolved Solids		1 to 2	345	594	613	752	465	573	358	378	449	455	449	453
Total Suspended Solids		3	<3	33.6	42.2	<3	3.5	92.3	<3	<3	<3	<3	5.3	6.3
Turbidity NTU		0.1				1.49	1.91	28.7	0.82	1.2	1.43	1.67	3.32	4.28
Dissolved Anions														
Bromide		0.05 to 2.495	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.05	<0.05	<0.05	<0.25
Chloride		0.5 to 1	8.92	11.5	11.2	26.7	5.87	7.6	16	7.56	10.5	9.94	6.38	10.8
Fluoride		0.02 to 0.4	0.216		0.174	0.17	0.231	0.21	0.23	0.219	0.237	0.234	0.244	0.24
Sulphate		0.5 to 1	47.5	117	144	230	64.4	113	46.8	53.1	74.1	76.8	47.9	60.5
Nutrients														
Ammonia (Total)		0.005 to 0.05	0.021	0.045	0.064	0.025	0.039	0.052	0.0213	0.0115	0.0209	0.0281	0.0414	0.0844
Nitrate (as N)		0.005 to 0.1	0.0115	0.0491	0.1	<0.005	<0.005	0.0684	<0.025	<0.005	<0.005	0.0096	0.0088	0.067
Nitrite (as N)		0.001 to 0.02	0.0012	0.0012	0.0045	<0.001	<0.001	0.0042	0.0069	<0.001	<0.001	0.0012	0.001	0.0438
Nitrogen (Dissolved)		0.05 to 0.1							0.79	0.51	0.57	0.52	0.24	0.76
Nitrogen (Total)		0.0025 to 0.11							0.76	0.498	0.619	0.667		0.992
Nitrogen Kjeldahl (Total)		0.05 to 0.2	0.529	1.3	1.3	0.644	0.775	1.19	0.753	0.498	0.619	0.656	0.876	0.881
Orthophosphate (Dissolved)		0.001 to 0.01	0.144	0.45	0.175	0.0639	0.21	0.13	0.157					
Phosphorus - Dissolved		0.002 to 0.02								0.147	0.168	0.155	0.194	0.208
Phosphorus - Total		0.002 to 0.02	0.164	0.63	0.235	0.0983	0.22	0.302	0.179	0.153	0.176	0.177	0.216	0.264
Cyanide														
Cyanide (Free)		0.005				<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)		0.005	0.0093	0.0188	0.0105	<0.005	0.0091		0.0099	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)		0.005	<0.005			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals														
Aluminum		0.001 to 0.025	<0.005	<0.01	<0.005	<0.01	<0.005	<0.01	<0.005	<0.003	<0.003	0.0017	0.002	0.0029
Antimony		0.0001 to 0.0025	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	0.00012	0.00013	0.00012	0.0001	0.00013
Arsenic		0.0001 to 0.0025	0.00284	0.0043	0.00285	0.0028	0.00413	0.0034	0.0025	0.00281	0.00321	0.00354	0.00347	0.00434
Barium		5E-005 to 0.02	0.041	0.028	0.043	0.06	0.026	0.045	0.042	0.0432	0.048	0.0463	0.0406	0.0525
Beryllium		0.0001 to 0.005	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2							<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.034	0.049	0.048	0.05	0.073
Cadmium		1E-005 to 8.5E-005	<0.000017	<0.000034	<0.000017	<0.000034	<0.000017	<0.000034	<0.000017	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium		0.05 to 0.1	53.6	56.8	53.8	103	64.1	55.1	49.6	55.8	62.3	64.4	61.7	53.3
Chromium		0.0001 to 0.018	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001	0.00014	<0.0001	0.00013	0.00011	0.00011
Cobalt		0.0001 to 0.0015	<0.0003	<0.0006	<0.0003	<0.0006	<0.0003	<0.0006	<0.0003	0.00011	0.00011	0.00012	0.00013	0.00016
Copper		0.0002 to 0.006	0.0041	<0.002	<0.001	0.0026	0.0023	<0.002	0.0042	0.00413	0.0039	0.00366	0.00204	0.00097
Dissolved Cadmium (by saltwater extraction)		0.00002												
Iron		0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	0.034	<0.03	0.064	<0.03	<0.03	0.022	0.028	0.061
Lead		5E-005 to 0.0025	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium		0.0005 to 0.025	<0.005	0.012	0.0108	<0.01	0.0095	0.011	<0.005	0.00444	0.00661	0.00538	0.00673	0.00998
Magnesium		0.1	29.9	59.5	60.8	75.2	44.8	59.2	29	33.7	39.2	41.4	37.8	49.3
Manganese		5E-005 to 0.0015	0.0189	0.116	0.0778	0.043	0.25	0.0816	0.0107	0.018	0.0355	0.0432	0.173	0.339
Mercury		1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.0021	<0.002	0.0019	0.0028	0.0025	<0.002	0.0019	0.0025	0.003	0.00279	0.00217	0.00251
Nickel		0.0005 to 0.005	0.0012	<0.002	<0.001	<0.002	0.0013	<0.002	0.0012	0.00132	0.00141	0.00146	0.0015	0.00128
Phosphorus		0.05 to 0.3							<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium		0.05 to 2	8.6	13.1	11.9	12.1	11.3	11.2	8.1	8.03	9.55	9.39	8.84	10.8
Selenium		0.0001 to 0.006	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001	0.00016	0.00015	0.00016	0.00015	0.00018
Silicon		0.05							10.4	11.1	11.5	11.5	11.7	8.25
Silver		1E-005 to 0.0001	<0.00002	<0.00004	<0.00002	<0.00004	<0.00002	<0.00004	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	25.5	58.5	64.8	57.7	38.7	51.5	27.2	23.8	31.1	33.3	30.6	41.8
Strontium		0.0001 to 0.005							0.382	0.356	0.509	0.459	0.442	0.476
Sulphur		0.5												
Thallium		1E-005 to 0.001	<0.0002	<0.0004	<0.0002	<0.0004	<0.0002	<0.0004	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium		1E-005 to 0.001	0.00078	0.00071	0.00093	0.00239	0.00087	0.00077	0.00054	0.000831	0.00103	0.000899	0.000639	0.000867
Vanadium		0.001 to 0.03	<0.03	<0.03	<0.03	0.0057	0.0045	0.0029	0.0044	0.0055	0.0054	0.0054	0.004	0.0045
Zinc		0.001 to 0.006	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.003	<0.003	0.0059	0.0021	0.0028
Total Metals														
Aluminum		0.003 to 0.025	0.0625	0.107	0.318	0.012	0.024	0.196	0.0285	0.044	0.0536	0.0478	0.159	0.151
Antimony		0.0001 to 0.0025	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	0.00014	0.00015	0.00013	0.00013	0.00015
Arsenic		0.0001 to 0.0025	0.00291	0.0037	0.00293	0.0028	0.00411	0.0032	0.00225	0.00274	0.00342	0.00336	0.00349	0.00401
Barium		5E-005 to 0.02	0.042	0.036	0.073	0.06	0.028	0.06	0.04	0.0424	0.0492	0.0457	0.0431	0.0531
Beryllium		0.0001 to 0.005	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2							<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.039	0.058	0.051	0.057	0.073
Cadmium		1E-005 to 8.5E-005	<0.000017	<0.000034	<0.000017	<0.000034	<0.000017	<0.000034	<0.000017	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium		0.05 to 0.1	53.4	54.5	53	104	66.1	56.8	46.5	55.2	63.3	62.8	64.1	52.6
Chromium		0.0001 to 0.005	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001	<0.0004	0.00027	0.00025	0.00047	0.00038
Cobalt		0.0001 to 0.0015	<0.0003	<0.0006	0.00039	<0.0006	<0.0003	<0.0006	<0.0003	0.00013	0.00013	0.00014	0.00026	0.00025
Copper		0.0005 to 0.007	0.0044	<0.002	0.0032	0.003	0.0026	<0.002	0.0047	0.00459	0.00495	0.00413	0.00328	0.00236
Iron		0.01 to 0.03	0.108	0.179	0.572	0.034	0.069	0.311	0.089	0.082	0.086	0.088	0.252	0.273
Lead		5E-005 to 0.0025	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.00005	<0.00005	<0.00005	0.000057	<0.00005
Lithium		0.0005 to 0.025	<0.005	0.012	0.0114	<0.01	0.0093	0.012	<0.005	0.00438	0.0069	0.00518	0.00664	0.00927
Magnesium		0.1	29.6	56.2	60.7	75.6	45	60.2	27.2	33.1	40	38.8	38.8	48.8
Manganese		5E-005 to 0.0015	0.0254	0.743	1.03	0.0514	0.271	0.434	0.017	0.0227	0.0441	0.0555	0.236	0.377
Mercury		1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	0.000041	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.0021	<0.002	0.0021	0.0028	0.0024	<0.002	0.0022	0.00271	0.00327	0.00299	0.0025	0.00268
Nickel		0.0005 to 0.005	0.0013	<0.002	<0.002	<0.002	0.0015	<0.002	0.0012	0.00135	0.00155	0.00151	0.00177	0.00159
Phosphorus		0.05 to 0.3							<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium		0.05 to 2	8.6	12	11.7	12.3	11.1	12.2	7.7	7.73	9.81	9.21	8.94	11.1
Selenium		0.0001 to 0.006	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001	0.00016	0.00017	0.00017	0.0002	0.00016
Silicon		0.05							9.84	11	11.7	11.1	12.4	8.7
Silver		1E-005 to 0.0001	<0.00002	<0.00004	<0.00002	<0.00004	<0.00002	<0.00004	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	25.4	51.9	63.5	58.2	38.2	57.8	25.6	23.4	32.5	32.6	31.5	42.1
Strontium		0.0001 to 0.005							0.365	0.359	0.523	0.462	0.463	0.463
Sulphur		0.5												
Thallium		1E-005 to 0.001	<0.0002	<0.0004	<0.0002	<0.0004	<0.0002	<0.0004	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	0.012	<0.01	<0.01	0.011	<0.01	<0.01	<0.01	<0.01	0.011	<0.01
Total Cadmium (by saltwater extraction)		0.00002												
Uranium		1E-005 to 0.001	0.00076	0.00072	0.00105	0.00221	0.00081	0.0008	0.00058	0.000862	0.00109	0.000949	0.000723	0.00094
Vanadium		0.001 to 0.03	<0.03	<0.03	<0.03	0.0058	0.0046	0.0039	0.0048	0.0056	0.0058	0.0054	0.0049	0.0052
Zinc		0.003 to 0.006	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.003	<0.003	<0.003	0.0035	<0.003
Organics														
Carbon Organic (Dissolved)		0.5 to 5		18.2	17.9	12.3	17.2	16.6	19.1	13.2	14.9	15.8	14.7	14.6
Carbon Organic (Total)		0.5 to 5	16.3						19.6	13.6	14.9	15.5	15.4	15.1
Nitrogen Organic (Dissolved)		0.05 to 0.26							0.762	0.499	0.549	0.481	0.189	0.565
Nitrogen Organic (Total)		0.05 to 0.3							0.732	0.486	0.598	0.628	0.835	0.797
ALS LAB ID			**L501128**	**L532402**	**L555226**	**L624228**	**L652819**	**L678833**	**L1011500**	**L1146570**	**L1148880**	**L1152500**	**L1178283**	**L1191600**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID			AC02	AC02	AC02	AC02	AC02	AC02	AC02	AC02	AC02	AC02	AC02	AC02
Analytes		MDL	8-Jan-13	5-Feb-13	5-Mar-13	2-Apr-13	6-May-13	4-Jun-13	2-Jul-13	7-Aug-13	3-Sep-13	8-Oct-13	6-Nov-13	4-Dec-13
In Situ Parameters														
Conductivity µS/cm		...	517	519	598	821	397	566	640	628		700	320	550
Oxygen Dissolved %	...		70.5	71.2	84.5		86.5	108	109	58.2	67.9	77.2	83.1	85.5
Oxygen Dissolved	...		10.3	10.3	11.6		8.64	10.5	9.56	5.7	6.33	8.85	11.2	12.4
pH (unitless)		...	8.48	8.09	8.19	8.37	8.02	8.29	8.34	8.09	8.18	8.33	8.27	8.2
Redox Potential mV		...	133	171	122	123	180	116	74.8	275	213	129	163	110
Salinity ppt		...	0.48	0.48	0.52	0.58	0.24	0.33	0.33	0.37	0.38	0.394	0.27	0.52
Specific Conductivity µS/cm		...	992	986	1058	1165	486	676	686	753	769	489	557	1067
Temperature °C		...	0.07	0.18	2.19	9.54	15.4	16.4	21.5	16.3	18.6	9.18	2.76	0.01
Total Dissolved Solids		...	645	642	688	757	316	439	445	490	500	455	362	693
Turbidity NTU		...	2.1	2.5	2.7	6.9	9.6	3.5	6.3	12.7		2.8	9.5	3.6
Physical Tests														
Acidity to pH 8.3 (as CaCO3)		1											<1	
Alkalinity (Total as CaCO3)		1 to 2	474	446	394	377	217	291	308	328	359	387	416	431
Bicarbonate Alkalinity		1 to 2	474	446	367	369	217	283	290	328	349		405	431
Carbonate Alkalinity		1 to 2	<2	<2	27.3	7.9	<1	7.5	18	<1	9.7		10.9	<2
Color TCU		5	14.6	13.8	24.1	17.6	63.8	46.8	51.3	28.9	31.8	24	21.9	14.9
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	468	466	553	561	215	299	306	348	337	397	406	487
Hydroxide Alkalinity		1 to 2	<2	<2	<1	<1	<1	<1	<1	<1	<1		<1	<2
pH (unitless)		0.01 to 0.1	8.26	8.27	8.39	8.29	8.43	8.43	8.49	8.35	8.46	8.51	8.38	8.17
Specific Conductivity µS/cm		2	916	927	1130	1130	450	644	657	712	738	772	865	990
Total Dissolved Solids		1 to 2	570	584	754	778	309	415	458	458	469	482	457	686
Total Suspended Solids		3	3.7	19.3	5.3	8	3.3	4.4	6.3	5.8	16.3	14.8	9.9	5.3
Turbidity NTU		0.1	3.02	5.55	3.35	7.71	10.4	2.84	2.93	1.27	9.14	8.08	9.49	3.66
Dissolved Anions														
Bromide		0.05 to 2.495	<0.5	<0.5	<0.5	<0.5	<0.05	<0.25	<0.05	<0.5	<0.25	<0.5	<0.5	<0.5
Chloride		0.5 to 1	9.8	10.6	40.3	<5	4.85	13.4	13.7	13	12.3	24.5	10.9	37.2
Fluoride		0.02 to 0.4	0.35	<0.2	0.26	<0.2	0.225	0.27	0.244	0.27	0.24	0.32	0.2	<0.2
Sulphate		0.5 to 1	124	121	215	<5	33.1	64	46.9	61	61.5	122	81	127
Nutrients														
Ammonia (Total)		0.005 to 0.05	0.134	0.264	0.119	0.0363	0.0134	0.0175	0.0084	0.02	0.0763	0.0861	0.0656	0.19
Nitrate (as N)		0.005 to 0.1	0.106	0.131	0.219	<0.05	0.0057	<0.025	0.0051	<0.05	0.031	0.116	<0.05	<0.05
Nitrite (as N)		0.001 to 0.02	0.013	<0.01	<0.01	<0.01	0.0012	<0.005	<0.001	<0.01	<0.005	0.027	0.012	<0.01
Nitrogen (Dissolved)		0.05 to 0.1	0.662	0.99	0.871	0.619				0.609	0.897			
Nitrogen (Total)		0.0025 to 0.11	0.716	0.922	1.03	0.674	0.842	0.674	0.847	0.736	1.04	0.939	0.949	
Nitrogen Kjeldahl (Total)		0.05 to 0.2	0.671	0.822	0.883	0.674	0.86	0.745	0.842	0.673	0.958	0.952	0.97	0.699
Orthophosphate (Dissolved)		0.001 to 0.01										0.0644	0.0883	0.132
Phosphorus - Dissolved		0.002 to 0.02	0.168	0.141	0.163	0.0946	0.231	0.241	0.247	0.128	0.133		0.122	0.144
Phosphorus - Total		0.002 to 0.02		0.221	0.185	0.137	0.292	0.259	0.223	0.148	0.172	0.158	0.176	0.165
Cyanide														
Cyanide (Free)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals														
Aluminum		0.001 to 0.025	0.0012	0.0013	0.0013	0.0012	0.0047	0.0021	0.0034	0.0015	0.0026	0.0025	<0.001	0.001
Antimony		0.0001 to 0.0025	<0.0001	<0.0001	0.00012	0.00012	0.00011	0.00011	0.00012	0.00013	0.00011	0.00011	<0.0001	<0.0001
Arsenic		0.0001 to 0.0025	0.00261	0.00231	0.00278	0.00302	0.00318	0.00281	0.00326	0.00332	0.00347	0.00297	0.00308	0.00271
Barium		5E-005 to 0.02	0.059	0.0583	0.0631	0.0714	0.0365	0.0419	0.045	0.0455	0.0362	0.0388	0.0567	0.0738
Beryllium		0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	0.058	0.058	0.041	0.054	0.042	0.046	0.047	0.066	0.069	0.065	0.065	0.055
Cadmium		1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium		0.05 to 0.1	81.5	83.1	98.1	102	44.8	58.3	62.2	57.9	46.4	58.2	69.2	87.7
Chromium		0.0001 to 0.018	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	0.00016	0.00016	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt		0.0001 to 0.0015	0.00012	0.00011	0.00017	0.00014	0.00014	0.00016	0.00016	0.00011	0.00015	0.00013	0.00014	<0.0001
Copper		0.0002 to 0.006	0.00132	0.00116	0.00315	0.0019	0.00572	0.00368	0.00295	0.00168	0.00115	0.0011	0.00147	0.00107
Dissolved Cadmium (by saltwater extraction)		0.00002												
Iron		0.01 to 0.03	0.046	0.025	0.038	0.012	0.076	0.064	0.069	0.019	0.024	0.018	0.024	0.018
Lead		5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium		0.0005 to 0.025	0.00985	0.00994	0.00876	0.00823	0.00416	0.00439	0.00498	0.00881	0.00948	0.00972	0.00985	0.01
Magnesium		0.1	64.1	62.8	74.7	74.3	25.1	37.2	36.5	49.5	53.7	61.1	56.5	65
Manganese		5E-005 to 0.0015	0.439	0.258	0.117	0.108	0.0255	0.0441	0.0498	0.0768	0.11	0.0283	0.128	0.371
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.00268	0.00242	0.00339	0.00323	0.00195	0.0018	0.00188	0.00293	0.00268	0.00327	0.00305	0.00275
Nickel		0.0005 to 0.005	0.00102	0.00107	0.00136	0.00106	0.00151	0.00165	0.00178	0.00138	0.00127	0.00134	0.00135	0.0015
Phosphorus		0.05 to 0.3	0.156	0.16	0.174	0.099	0.238	0.218	0.241	0.135	0.138	0.096	0.109	0.141
Potassium		0.05 to 2	12	10.7	14.7	12.5	9.06	8.92	10.4	11.1	12.2	11.6	12.9	11.3
Selenium		0.0001 to 0.006	<0.0001	<0.0001	0.00038	0.00016	0.00019	0.00019	0.00018	0.00015	0.00015	0.00011	0.00013	0.00012
Silicon		0.05	11.4	11	10.4	9.61	11.8	11.7	12.3	11.1	9.42	9.34	11.9	12.2
Silver		1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	46.6	51.2	59.2	56.2	19.9	32.3	35.1	39.5	44.3	44.5	43.6	45.8
Strontium		0.0001 to 0.005	0.707	0.738	0.756	0.774	0.305	0.4	0.426	0.487	0.425	0.52	0.616	0.728
Sulphur		0.5	41.1	38.7	69.3	79.9	11.2	20.4	15.2	20.3	20.3	23	27.2	39.5
Thallium		1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium		1E-005 to 0.001	0.00153	0.00155	0.00253	0.0019	0.000462	0.000748	0.000645	0.000968	0.000938	0.00107	0.00126	0.00132
Vanadium		0.001 to 0.03	0.0027	0.0025	0.0055	0.0059	0.0063	0.0038	0.0043	0.0033	0.0036	0.0035	0.0033	0.0029
Zinc		0.001 to 0.006	0.0012	0.0012	<0.001	<0.001	0.0016	<0.001	0.0028	0.0011	<0.001	0.0016	0.001	<0.001
Total Metals														
Aluminum		0.003 to 0.025	0.0554	0.0435	0.0683	0.268	0.536	0.172	0.142	0.121	0.429	0.255	0.275	0.149
Antimony		0.0001 to 0.0025	0.0001	0.00011	0.00013	0.00013	0.00013	0.00014	0.00016	0.00018	0.00014	0.00014	0.00016	<0.0001
Arsenic		0.0001 to 0.0025	0.00271	0.0024	0.00279	0.00299	0.00322	0.00285	0.00322	0.00333	0.00336	0.00292	0.00306	0.00275
Barium		5E-005 to 0.02	0.0604	0.0607	0.0661	0.0732	0.0411	0.0441	0.0475	0.0493	0.04	0.043	0.0644	0.074
Beryllium		0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	0.064	0.065	0.044	0.057	0.043	0.051	0.05	0.071	0.074	0.076	0.075	0.056
Cadmium		1E-005 to 8.5E-005	<0.00001	0.000014	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium		0.05 to 0.1	82.7	86.7	98.8	102	44.3	59.4	60.2	60	46.9	59.5	72.1	89.6
Chromium		0.0001 to 0.005	0.0002	0.00025	0.00018	0.00045	0.00102	0.00047	0.00038	0.00033	0.00087	0.00048	0.00044	0.0003
Cobalt		0.0001 to 0.0015	0.00017	0.00015	0.00022	0.00028	0.0005	0.00028	0.00026	0.0002	0.00044	0.0003	0.00031	0.00018
Copper		0.0005 to 0.007	0.00259	0.00222	0.00416	0.00369	0.009	0.00491	0.00382	0.00263	0.00507	0.00253	0.00293	0.00204
Iron		0.01 to 0.03	0.117	0.105	0.135	0.411	0.768	0.299	0.315	0.194	0.655	0.361	0.368	0.22
Lead		5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	0.000059	0.000121	0.00005	<0.00005	<0.00005	0.000114	0.000066	0.000077	<0.00005
Lithium		0.0005 to 0.025	0.0103	0.00995	0.00902	0.00817	0.00439	0.0048	0.00517	0.00888	0.0111	0.00962	0.0108	0.00983
Magnesium		0.1	63.8	63.1	72.5	73.5	24.7	37	35.6	49.4	50.1	60.1	58.4	62.3
Manganese		5E-005 to 0.0015	0.469	0.271	0.125	0.127	0.0692	0.0704	0.0783	0.107	0.2	0.0777	0.172	0.389
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.00288	0.00261	0.00369	0.00327	0.002	0.0021	0.00204	0.00317	0.00305	0.0035	0.00348	0.00298
Nickel		0.0005 to 0.005	0.00115	0.00128	0.00146	0.00145	0.00215	0.00209	0.00195	0.00163	0.00191	0.00172	0.00177	0.00169
Phosphorus		0.05 to 0.3	0.168	0.178	0.195	0.142	0.281	0.248	0.251	0.154	0.34	0.13	0.163	0.152
Potassium		0.05 to 2	12.2	11.2	14.4	12.2	8.88	9.2	10.5	11.7	12.1	11.5	15	12
Selenium		0.0001 to 0.006	<0.0001	<0.0001	0.00037	0.00016	0.00019	0.00019	0.00018	0.00015	0.00017	0.00013	0.00012	0.0001
Silicon		0.05	11.8	11.7	10.6	10.7	12.8	12.6	12.6	11.7	10.2	10.5	13.3	12.9
Silver		1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000014	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	48.4	52	57.1	54	18.8	33.7	34.9	41.5	44.7	46.5	45.9	46.5
Strontium		0.0001 to 0.005	0.742	0.74	0.78	0.772	0.32	0.46	0.443	0.503	0.46	0.531	0.661	0.72
Sulphur		0.5	43	41.3	71.8	85.8	11.3	21.4	15.4	21.5	20.6	24.1	30.3	41.2
Thallium		1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	0.016	<0.01	<0.01	<0.01	0.011	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)		0.00002												
Uranium		1E-005 to 0.001	0.0016	0.00161	0.00269	0.00192	0.000472	0.000802	0.000691	0.00102	0.000994	0.00121	0.00143	0.00137
Vanadium		0.001 to 0.03	0.0033	0.0029	0.006	0.0067	0.0079	0.0045	0.0047	0.0038	0.0052	0.0044	0.0049	0.0035
Zinc		0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	0.0032	<0.003	<0.003	<0.003	0.0034	<0.003	<0.003	<0.003
Organics														
Carbon Organic (Dissolved)		0.5 to 5	8.93	8.76	11.8	11	18.1	17.7	19.3	14.7	16.2	12.5	11.9	11.9
Carbon Organic (Total)		0.5 to 5	9.19	8.99	11.9	11.2	17.6	19.5	19.1	17.3	16.5	13.5	12.9	12.6
Nitrogen Organic (Dissolved)		0.05 to 0.26				0.583								
Nitrogen Organic (Total)		0.05 to 0.3	0.537	0.557	0.765	0.638								
ALS LAB ID			L1256678	I1265809	L1275746	L1285503	L1298960	L1311741	L1326032	L1344180	L1357647	L1376311	L1388680	L1399806

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		AC02	AC02
Analytes	**MDL**	**15-Apr-14**	**10-Sep-14**
In Situ Parameters			
Conductivity µS/cm	...		793
Oxygen Dissolved %	...		84.5
Oxygen Dissolved	...		8.84
pH (unitless)	...		8.3
Redox Potential mV	...		93.8
Salinity ppt	...		
Specific Conductivity µS/cm	...		1023
Temperature °C	...		13.2
Total Dissolved Solids	...		510
Turbidity NTU	...		
Physical Tests			
Acidity to pH 8.3 (as CaCO3)	1		
Alkalinity (Total as CaCO3)	1 to 2	385	430
Bicarbonate Alkalinity	1 to 2	385	407
Carbonate Alkalinity	1 to 2	<2	23.2
Color TCU	5		
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	594	494
Hydroxide Alkalinity	1 to 2	<2	<1
pH (unitless)	0.01 to 0.1	8.29	8.46
Specific Conductivity µS/cm	2	1210	1060
Total Dissolved Solids	1 to 2	**844**	**704**
Total Suspended Solids	3	8.7	3.2
Turbidity NTU	0.1	4.11	1.37
Dissolved Anions			
Bromide	0.05 to 2.495	<0.5	<0.5
Chloride	0.5 to 1	56.8	53.3
Fluoride	0.02 to 0.4	<0.2	0.197
Sulphate	0.5 to 1	299	131
Nutrients			
Ammonia (Total)	0.005 to 0.05	0.0412	0.0452
Nitrate (as N)	0.005 to 0.1	<0.05	<0.05
Nitrite (as N)	0.001 to 0.02	<0.01	0.023
Nitrogen (Dissolved)	0.05 to 0.1		
Nitrogen (Total)	0.0025 to 0.11		
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.96	0.923
Orthophosphate (Dissolved)	0.001 to 0.01	0.0849	0.0992
Phosphorus - Dissolved	0.002 to 0.02	0.129	
Phosphorus - Total	0.002 to 0.02	0.103	0.206
Cyanide			
Cyanide (Free)	0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005
Dissolved Metals			
Aluminum	0.001 to 0.025	0.002	0.001
Antimony	0.0001 to 0.0025	0.00012	0.00012
Arsenic	0.0001 to 0.0025	0.00275	0.00324
Barium	5E-005 to 0.02	0.0761	0.0508
Beryllium	0.0001 to 0.005	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005
Boron	0.01 to 0.1	0.055	0.068
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001
Calcium	0.05 to 0.1	105	86.8
Chromium	0.0001 to 0.018	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015	0.00012	0.0001
Copper	0.0002 to 0.006	0.00173	0.00126
Dissolved Cadmium (by saltwater extraction)	0.00002		
Iron	0.01 to 0.03	0.018	0.016
Lead	5E-005 to 0.0025	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.0084	0.00992
Magnesium	0.1	80.3	67.3
Manganese	5E-005 to 0.0015	0.131	0.0482
Mercury	1E-005 to 5E-005	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00292	0.00347
Nickel	0.0005 to 0.005	0.00144	0.00159
Phosphorus	0.05 to 0.3	0.108	0.125
Potassium	0.05 to 2	12.4	12.9
Selenium	0.0001 to 0.006	0.00015	0.00014
Silicon	0.05	8.93	11.4
Silver	1E-005 to 0.0001	<0.00001	<0.00001
Sodium	0.05 to 2	57.8	57
Strontium	0.0001 to 0.005	0.908	0.713
Sulphur	0.5	92.5	43.4
Thallium	1E-005 to 0.001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00176	0.00148
Vanadium	0.001 to 0.03	0.0048	0.0042
Zinc	0.001 to 0.006	0.0011	<0.001
Total Metals			
Aluminum	0.003 to 0.025	0.149	0.151
Antimony	0.0001 to 0.0025	0.00012	0.00016
Arsenic	0.0001 to 0.0025	0.00272	0.00316
Barium	5E-005 to 0.02	0.0761	0.0532
Beryllium	0.0001 to 0.005	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005
Boron	0.01 to 0.1	0.057	0.072
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001
Calcium	0.05 to 0.1	105	83.6
Chromium	0.0001 to 0.005	0.00031	0.00031
Cobalt	0.0001 to 0.0015	0.00021	0.00021
Copper	0.0005 to 0.007	0.00316	0.0022
Iron	0.01 to 0.03	0.243	0.211
Lead	5E-005 to 0.0025	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00823	0.00942
Magnesium	0.1	75.6	65.4
Manganese	5E-005 to 0.0015	0.151	0.0889
Mercury	1E-005 to 5E-005	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00296	0.00347
Nickel	0.0005 to 0.005	0.00153	0.0018
Phosphorus	0.05 to 0.3	0.135	0.144
Potassium	0.05 to 2	12.5	12.4
Selenium	0.0001 to 0.006	0.00015	0.00013
Silicon	0.05	9.2	11.4
Silver	1E-005 to 0.0001	<0.00001	<0.00001
Sodium	0.05 to 2	57	56.6
Strontium	0.0001 to 0.005	0.871	0.713
Sulphur	0.5	93.9	43.7
Thallium	1E-005 to 0.001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002		
Uranium	1E-005 to 0.001	0.00176	0.00151
Vanadium	0.001 to 0.03	0.0055	0.0048
Zinc	0.003 to 0.006	<0.003	<0.003
Organics			
Carbon Organic (Dissolved)	0.5 to 5	11.3	15
Carbon Organic (Total)	0.5 to 5	14	15.4
Nitrogen Organic (Dissolved)	0.05 to 0.26		
Nitrogen Organic (Total)	0.05 to 0.3		
ALS LAB ID		**L1443519**	**L1516193**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C3.3 - AJWE-D
PAGE 1 OF 1

Site ID			AJWE-D	AJWE-D	AJWE-D	AJWE-D	AJWE-D	AJWE-D	AJWE-D	AJWE-D	AJWE-D	AJWE-D	AJWE-D
Analytes	**MDL**		**3-May-07**	**17-Jul-07**	**18-Sep-07**	**29-Apr-08**	**7-Jul-08**	**6-Sep-08**	**9-May-12**	**11-Jul-12**	**6-Nov-12**	**1-May-14**	**24-Sep-14**
In Situ Parameters													
Conductivity µS/cm	...		1871	1989	2037	1715	1820	1906	1837	2000	1939	13	2050
Oxygen Dissolved %	...					79.9	66.3	77.8	85.8	93.8		90.1	
Oxygen Dissolved	...		11.2	11.5	9.29	10.2	7.94	8.85	10.7	10.9		10.3	
pH (unitless)	...		8.01	8.05	8.25	8.19	8.19	8.11	8.51	8.38	8.37	8.01	8.42
Redox Potential mV	...			-75.8			-107		247	237	130	82.2	115
Salinity ppt	...			1.43					1.52		1.45	0.01	1.48
Specific Conductivity µS/cm	...		2669	2748	2771	2798	2763	2720	2927	2929	2779	18	2806
Temperature °C	...		9.34	10.4	11.2	4.73	7.13	9.35	5.5	8.38	9.18	9.81	10.9
Total Dissolved Solids	...			1788					1903		1806	12	1837
Turbidity NTU	...								0.1		0.2	-2.4	-0.1
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1					3.1					<1		
Alkalinity (Total as CaCO3)	1 to 2		168	165	167	177	161	152	163	163	150	166	146
Bicarbonate Alkalinity	1 to 2					177			163	163	150	166	146
Carbonate Alkalinity	1 to 2					<2			<2	<2	<1	<2	<1
Color TCU	5			<5	<5	<5	<5	<5	<5	<5	<5		
Hardness as CaCO3 (Dissolved)	0.5 to 1.1		1280	1290	1160	1240	1190	1230	1380	1330	1340	1360	1300
Hydroxide Alkalinity	1 to 2					<2			<2	<2	<1	<2	<1
pH (unitless)	0.01 to 0.1		8.21	8.21	8.27	8.16	8.32	8.31	8.29	8.3	8.32	8.22	8.33
Specific Conductivity µS/cm	2		2620	2740	2720	2780	2730	2750	2850	2740	2790	2800	2790
Total Dissolved Solids	1 to 2		2240	2270	2260	2250	2270	2270	2510	2650	2440	2600	2420
Total Suspended Solids	3		<3	<3	<3	<3	<3	<3	<3	4	<3	5.2	5.2
Turbidity NTU	0.1					0.23	0.19	0.14	0.18	0.36	1.29	0.45	0.24
Dissolved Anions													
Bromide	0.05 to 2.495		<0.25	<5	<0.5	<2.5	<0.05	<2.5	<1	<1	<1	<1	<1
Chloride	0.5 to 1		26.6	<50	25.3	<25	24.1	34	30	31	30	31	27
Fluoride	0.02 to 0.4		0.37		0.22	1.2	0.144	<1	<0.4	<0.4	<0.4	<0.4	0.177
Sulphate	0.5 to 1		1390	1350	1400	1360	1410	1480	1590	1600	1560	1600	1580
Nutrients													
Ammonia (Total)	0.005 to 0.05		0.027	0.041	0.0073	<0.02	<0.02	<0.02	<0.005	<0.005	0.0051	<0.005	<0.005
Nitrate (as N)	0.005 to 0.1		24.4	24	23.8	22.5	20.8	22.7	22	20.6	21.1	18.8	18.5
Nitrite (as N)	0.001 to 0.02		0.0128	0.16	0.022	0.091	0.0079	0.134	0.029	0.025	0.046	0.031	0.031
Nitrogen (Dissolved)	0.05 to 0.1								28.5	31.4	23.9		
Nitrogen (Total)	0.0025 to 0.11								22.2	20.8	21.2		
Nitrogen Kjeldahl (Total)	0.05 to 0.2		<0.05	0.258	0.209	0.176	0.17	0.222	0.177	0.126	<0.5	<0.05	<0.05
Orthophosphate (Dissolved)	0.001 to 0.01		<0.001	<0.001	0.0027	0.0025	0.0014				0.0019	0.0021	0.0012
Phosphorus - Dissolved	0.002 to 0.02								<0.002	0.0034	<0.002	<0.002	<0.002
Phosphorus - Total	0.002 to 0.02		0.003	0.0032	0.0043	<0.002	0.0022		0.0021	0.0029	<0.002	0.0102	<0.002
Cyanide													
Cyanide (Free)	0.005					<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005					<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	0.001 to 0.025		<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.006	<0.002	0.0021	0.0012	<0.001
Antimony	0.0001 to 0.0025		0.0225	0.0247	0.0237	0.0209	0.0206	0.021	0.0211	0.0222	0.02	0.0194	0.0189
Arsenic	0.0001 to 0.0025		0.0793	0.0829	0.0757	0.0714	0.0691	0.0725	0.0633	0.0612	0.0572	0.0533	0.0512
Barium	5E-005 to 0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.0167	0.0162	0.0201	0.0185	0.0187
Beryllium	0.0001 to 0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2								<0.001	<0.001	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1		<0.1	<0.1	<0.1	0.1	<0.1	0.1	0.114	0.097	0.091	0.098	0.105
Cadmium	1E-005 to 8.5E-005		0.00111	<0.003	<0.001	0.000479	0.000355	0.00059	<0.0004	<0.0022	<0.00055		<0.0001
Calcium	0.05 to 0.1		164	169	154	157	157	160	175	174	172	177	172
Chromium	0.0001 to 0.018		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015		<0.0015	0.0017	0.0016	<0.0015	<0.0015	0.0017	0.00162	0.00191	0.00119	0.00124	0.00134
Copper	0.0002 to 0.006		0.0292	0.0414	0.0365	<0.03	0.0296	0.0364	0.0249	0.03	0.0175	0.0203	0.0182
Dissolved Cadmium (by saltwater extraction)	0.00002											<0.00006	<0.00006
Iron	0.01 to 0.03		<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.02	<0.01	<0.01	<0.01
Lead	5E-005 to 0.0025		<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025		0.045	0.053	0.042	0.052	0.042	0.04	0.0462	0.0412	0.0397	0.0439	0.0457
Magnesium	0.1		212	212	188	207	194	203	229	218	222	222	211
Manganese	5E-005 to 0.0015		0.0019	0.0018	0.002	<0.0015	<0.0015	<0.0015	0.00105	0.00136	0.00118	0.000689	0.000787
Mercury	1E-005 to 5E-005		<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002		<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005		2.25	2.24	2.17	2.18	1.95	1.99	2.35	2.34	2.19	2.67	2.2
Nickel	0.0005 to 0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0036	0.0039	0.00334	0.00415	0.00356
Phosphorus	0.05 to 0.3								<0.3	<0.3	<0.05	<0.05	<0.05
Potassium	0.05 to 2		20.1	17.8	19.9	19.2	19.7	18.2	21.3	20.4	21.9	21.6	20
Selenium	0.0001 to 0.006		0.0175	0.017	0.0164	0.0189	0.0155	0.0156	0.0195	0.0162	0.0182	0.0205	0.0184
Silicon	0.05								8.77	9.01	8.65	8.64	8.67
Silver	1E-005 to 0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2		210	212	206	208	207	188	235	206	205	218	210
Strontium	0.0001 to 0.005								2.87	2.89	2.77	3.34	2.77
Sulphur	0.5										0.488	496	474
Thallium	1E-005 to 0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00002	<0.00002	0.000016	<0.00001	<0.00001
Tin	0.0001 to 0.0025		<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001
Titanium	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	0.011	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001		0.0102	0.0107	0.0095	0.0103	0.0098	0.0094	0.0105	0.0109	0.00979	0.00988	0.00944
Vanadium	0.001 to 0.03		<0.03	<0.03	<0.03	0.0086	0.0081	0.0069	0.008	0.007	0.008	0.0078	0.0076
Zinc	0.001 to 0.006		<0.025	<0.025	<0.025	<0.005	<0.005	<0.005	<0.006	0.0025	<0.001	0.0015	0.0016
Total Metals													
Aluminum	0.003 to 0.025		<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.0097	0.0063	0.0699	0.0076	<0.003
Antimony	0.0001 to 0.0025		0.0217	0.0241	0.0234	0.0206	0.021	0.0199	0.0215	0.0223	0.02	0.0191	0.0203
Arsenic	0.0001 to 0.0025		0.0745	0.0811	0.0758	0.0702	0.0726	0.0693	0.064	0.0641	0.0572	0.0518	0.0525
Barium	5E-005 to 0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.0172	0.0171	0.0205	0.0184	0.0191
Beryllium	0.0001 to 0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2								<0.001	<0.001	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.13	0.105	0.095	0.104	0.126
Cadmium	1E-005 to 8.5E-005		0.000645	<0.003	<0.001	0.000472	0.000614	0.000493	<0.0004	<0.0022	<0.00057		<0.0001
Calcium	0.05 to 0.1		157	170	155	157	155	161	182	175	169	173	176
Chromium	0.0001 to 0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0002	<0.0002	0.00046	0.00013	0.00012
Cobalt	0.0001 to 0.0015		<0.0015	0.0016	0.0017	<0.0015	<0.0015	0.0015	0.00168	0.00198	0.00134	0.00129	0.00137
Copper	0.0005 to 0.007		0.0311	0.0407	0.0372	<0.03	0.0313	0.0349	0.0262	0.0327	0.023	0.0221	0.0201
Iron	0.01 to 0.03		<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.02	0.087	<0.01	<0.01
Lead	5E-005 to 0.0025		0.0027	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0001	<0.0001	0.000057	<0.00005	<0.00005
Lithium	0.0005 to 0.025		0.041	0.049	0.041	0.049	0.04	0.041	0.0486	0.0419	0.0398	0.0441	0.0508
Magnesium	0.1		201	215	188	207	195	191	239	222	224	217	217
Manganese	5E-005 to 0.0015		0.0024	0.0018	0.002	<0.0015	<0.0015	<0.0015	0.00122	0.00147	0.00304	0.000896	0.000848
Mercury	1E-005 to 5E-005		<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002		<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005		2.16	2.2	2.14	2.11	2.01	1.89	2.48	2.45	2.32	2.73	2.47
Nickel	0.0005 to 0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0037	0.0039	0.00386	0.0038	0.00362
Phosphorus	0.05 to 0.3								<0.3	<0.3	<0.05	<0.05	<0.05
Potassium	0.05 to 2		19.5	17.8	20	18.6	19.3	18.3	21.9	21.2	21.8	21.1	21.1
Selenium	0.0001 to 0.006		0.0162	0.0165	0.016	0.0178	0.0176	0.0153	0.02	0.0172	0.0183	0.0191	0.0191
Silicon	0.05								9.28	9.19	8.88	8.72	8.88
Silver	1E-005 to 0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2		205	215	205	202	201	189	244	213	213	216	220
Strontium	0.0001 to 0.005								3.03	3	2.89	3.36	3
Sulphur	0.5										497	499	492
Thallium	1E-005 to 0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00002	<0.00002	0.000011	<0.00001	0.00001
Tin	0.0001 to 0.0025		<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001
Titanium	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002											<0.00006	<0.00006
Uranium	1E-005 to 0.001		0.0098	0.0105	0.0095	0.0101	0.01	0.0092	0.0111	0.011	0.0103	0.0102	0.0103
Vanadium	0.001 to 0.03		<0.03	<0.03	<0.03	0.0084	0.0085	0.0066	0.0083	0.0079	0.0087	0.008	0.0077
Zinc	0.003 to 0.006		<0.025	<0.025	<0.025	<0.005	<0.005	<0.005	<0.006	<0.006	<0.003	<0.003	<0.003
Organics													
Carbon Organic (Dissolved)	0.5 to 5		1.74	1.71	1.58	1.55	1.46	1.1	1.49	1.2	1.29	0.92	1.2
Carbon Organic (Total)	0.5 to 5								1.4	1.15	1.16	0.99	1.2
Nitrogen Organic (Dissolved)	0.05 to 0.26								6.5	10.8	<4.8		
Nitrogen Organic (Total)	0.05 to 0.3								0.177	0.126	<0.5		
ALS LAB ID			**L502198**	**L532007**	**L556006**	**L624576**	**L653575**	**L679672**	**L1145681**	**L1177597**	**l1234688**	**L1450350**	**L1523985**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		AJWE-M
Analytes	**MDL**	**24-Sep-14**
In Situ Parameters		
Conductivity µS/cm	...	2194
Oxygen Dissolved %	...	
Oxygen Dissolved	...	
pH (unitless)	...	8.42
Redox Potential mV	...	115
Salinity ppt	...	1.48
Specific Conductivity µS/cm	...	2250
Temperature °C	...	13.4
Total Dissolved Solids	...	1837
Turbidity NTU	...	-0.1
Physical Tests		
Acidity to pH 8.3 (as CaCO3)	1	
Alkalinity (Total as CaCO3)	1 to 2	149
Bicarbonate Alkalinity	1 to 2	149
Carbonate Alkalinity	1 to 2	<1
Color TCU	5	
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	1240
Hydroxide Alkalinity	1 to 2	<1
pH (unitless)	0.01 to 0.1	8.33
Specific Conductivity µS/cm	2	2720
Total Dissolved Solids	1 to 2	2380
Total Suspended Solids	3	5.1
Turbidity NTU	0.1	0.16
Dissolved Anions		
Bromide	0.05 to 2.495	<1
Chloride	0.5 to 1	26
Fluoride	0.02 to 0.4	0.185
Sulphate	0.5 to 1	1540
Nutrients		
Ammonia (Total)	0.005 to 0.05	0.0094
Nitrate (as N)	0.005 to 0.1	17.5
Nitrite (as N)	0.001 to 0.02	0.121
Nitrogen (Dissolved)	0.05 to 0.1	
Nitrogen (Total)	0.0025 to 0.11	
Nitrogen Kjeldahl (Total)	0.05 to 0.2	<0.05
Orthophosphate (Dissolved)	0.001 to 0.01	0.0022
Phosphorus - Dissolved	0.002 to 0.02	<0.002
Phosphorus - Total	0.002 to 0.02	<0.002
Cyanide		
Cyanide (Free)	0.005	<0.005
Cyanide (Total)	0.005	<0.005
Cyanide (WAD)	0.005	<0.005
Dissolved Metals		
Aluminum	0.001 to 0.025	<0.001
Antimony	0.0001 to 0.0025	0.0186
Arsenic	0.0001 to 0.0025	0.0468
Barium	5E-005 to 0.02	0.0187
Beryllium	0.0001 to 0.005	<0.0001
Bismuth	0.0005 to 0.2	<0.0005
Boron	0.01 to 0.1	0.103
Cadmium	1E-005 to 8.5E-005	<0.0001
Calcium	0.05 to 0.1	166
Chromium	0.0001 to 0.018	<0.0001
Cobalt	0.0001 to 0.0015	0.001
Copper	0.0002 to 0.006	0.0166
Dissolved Cadmium (by saltwater extraction)	0.00002	<0.00006
Iron	0.01 to 0.03	<0.01
Lead	5E-005 to 0.0025	<0.00005
Lithium	0.0005 to 0.025	0.0445
Magnesium	0.1	200
Manganese	5E-005 to 0.0015	0.000629
Mercury	1E-005 to 5E-005	<0.00001
Molybdenum	5E-005 to 0.005	2.26
Nickel	0.0005 to 0.005	0.0035
Phosphorus	0.05 to 0.3	<0.05
Potassium	0.05 to 2	19.7
Selenium	0.0001 to 0.006	0.0182
Silicon	0.05	8.5
Silver	1E-005 to 0.0001	<0.00001
Sodium	0.05 to 2	201
Strontium	0.0001 to 0.005	2.8
Sulphur	0.5	452
Thallium	1E-005 to 0.001	0.000011
Tin	0.0001 to 0.0025	<0.0001
Titanium	0.01	<0.01
Uranium	1E-005 to 0.001	0.00918
Vanadium	0.001 to 0.03	0.0081
Zinc	0.001 to 0.006	0.0013
Total Metals		
Aluminum	0.003 to 0.025	<0.006
Antimony	0.0001 to 0.0025	0.0192
Arsenic	0.0001 to 0.0025	0.0484
Barium	5E-005 to 0.02	0.0183
Beryllium	0.0001 to 0.005	<0.0001
Bismuth	0.0005 to 0.2	<0.0005
Boron	0.01 to 0.1	0.12
Cadmium	1E-005 to 8.5E-005	<0.0001
Calcium	0.05 to 0.1	169
Chromium	0.0001 to 0.005	0.00025
Cobalt	0.0001 to 0.0015	0.00105
Copper	0.0005 to 0.007	0.0179
Iron	0.01 to 0.03	<0.01
Lead	5E-005 to 0.0025	<0.00005
Lithium	0.0005 to 0.025	0.0495
Magnesium	0.1	208
Manganese	5E-005 to 0.0015	0.000781
Mercury	1E-005 to 5E-005	<0.00001
Molybdenum	5E-005 to 0.005	2.34
Nickel	0.0005 to 0.005	0.00379
Phosphorus	0.05 to 0.3	<0.05
Potassium	0.05 to 2	20.5
Selenium	0.0001 to 0.006	0.0183
Silicon	0.05	8.7
Silver	1E-005 to 0.0001	<0.00001
Sodium	0.05 to 2	208
Strontium	0.0001 to 0.005	2.86
Sulphur	0.5	467
Thallium	1E-005 to 0.001	0.000011
Tin	0.0001 to 0.0025	<0.0001
Titanium	0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002	<0.00006
Uranium	1E-005 to 0.001	0.00967
Vanadium	0.001 to 0.03	0.0085
Zinc	0.003 to 0.006	<0.003
Organics		
Carbon Organic (Dissolved)	0.5 to 5	1.17
Carbon Organic (Total)	0.5 to 5	1.03
Nitrogen Organic (Dissolved)	0.05 to 0.26	
Nitrogen Organic (Total)	0.05 to 0.3	
ALS LAB ID		**L1523985**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID			AJWE-S	AJWE-S	AJWE-S	AJWE-S	AJWE-S	AJWE-S	AJWE-S	AJWE-S	AJWE-S	AJWE-S	AJWE-S
Analytes		MDL	3-May-07	17-Jul-07	18-Sep-07	29-Apr-08	7-Jul-08	6-Sep-08	9-May-12	11-Jul-12	6-Nov-12	1-May-14	24-Sep-14
In Situ Parameters													
Conductivity µS/cm		...	1535	2406	2204	1692	2718	2264	1883	2553	1938	13	1000
Oxygen Dissolved %	...					92.7	81.1	106	91.3	91.5		90.4	1
Oxygen Dissolved	...		10.7	8.79	9.22	11.3	7.5	10.5	10.4	8.16		10.3	1
pH (unitless)		...	8.4	7.89	8.26	8.11	8.01	8.39	8.49	8.3	8.37	8.01	1
Redox Potential mV		...		-68.8			-99.4		218	191	90.9	82.2	1
Salinity ppt		...		1.36					1.4		1.45	0.01	1
Specific Conductivity µS/cm		...	2254	2623	2703	2620	2887	2753	2689	2826	2777	18	1000
Temperature °C		...	8.29	20.7	15.3	6.48	18.7	15.7	9.31	19.9	9.17	9.81	1
Total Dissolved Solids		...		1701					1748		1805	12	1000
Turbidity NTU		...							0.2		0.2	-2.4	1
Physical Tests													
Acidity to pH 8.3 (as CaCO3)		1				2.8					<1		
Alkalinity (Total as CaCO3)		1 to 2	170	165	162	191	157	154	144	149	146	151	149
Bicarbonate Alkalinity		1 to 2				191			144	149	146	151	149
Carbonate Alkalinity		1 to 2				<2			<1	<1	<1	<2	<1
Color TCU		5		<5	<5	<5	<5	<5	<5	<5	<5		
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	1170	1250	1130	1160	1180	1290	1250	1290	1340	1060	1270
Hydroxide Alkalinity		1 to 2				<2			<1	<1	<1	<2	<1
pH (unitless)		0.01 to 0.1	8.21	8.27	8.36	8.17	8.39	8.39	8.31	8.33	8.3	8.24	8.35
Specific Conductivity µS/cm		2	2530	2630	2680	2620	2670	2770	2650	2650	2780	2240	2720
Total Dissolved Solids		1 to 2	2210	2220	2250	2100	2200	2310	2270	2480	2260	1910	2350
Total Suspended Solids		3	<3	<3	<3	4.2	<3	<3	<3	<3	<3	<3	8.2
Turbidity NTU		0.1				0.31	0.31	0.19	0.22	0.25	0.17	0.45	0.13
Dissolved Anions													
Bromide		0.05 to 2.495	<0.25	<5	<0.5	<2.5	<0.05	<2.5	<1	<1	<1	<1	<1
Chloride		0.5 to 1	25.3	<50	24.6	<25	24.6	30	25	30	29	20	26
Fluoride		0.02 to 0.4	0.38		0.21	1.4	0.154	<1	<0.4	<0.4	<0.4	<0.4	0.184
Sulphate		0.5 to 1	1340	1300	1380	1280	1400	1500	1450	1520	1560	1200	1550
Nutrients													
Ammonia (Total)		0.005 to 0.05	0.023	0.03	<0.005	<0.02	0.039	0.023	0.0064	<0.005	0.0051	<0.005	0.0102
Nitrate (as N)		0.005 to 0.1	23.2	21.8	23.1	20.8	20.3	22.4	19.8	19.2	21.2	13.7	17.7
Nitrite (as N)		0.001 to 0.02	0.0456	0.22	0.09	0.127	0.143	0.242	0.101	0.162	0.028	0.116	0.127
Nitrogen (Dissolved)		0.05 to 0.1							25	29.7	22.6		
Nitrogen (Total)		0.0025 to 0.11							19.9	19.4	21.2		
Nitrogen Kjeldahl (Total)		0.05 to 0.2	<0.05	0.212	<0.05	0.153	0.33	0.34	<0.05	<0.05	<0.05	<0.05	<0.05
Orthophosphate (Dissolved)		0.001 to 0.01	0.0014	0.0027	0.0028	0.0028	0.0024				0.0015	0.0017	0.003
Phosphorus - Dissolved		0.002 to 0.02							0.002	<0.002	<0.002	<0.002	<0.002
Phosphorus - Total		0.002 to 0.02	0.0024	<0.002	0.0069	0.0024	0.0039		<0.002	0.0023	<0.002	<0.002	<0.002
Cyanide													
Cyanide (Free)		0.005				<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)		0.005				<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum		0.001 to 0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.003	<0.002	0.0012	0.001	<0.001
Antimony		0.0001 to 0.0025	0.0209	0.0187	0.0207	0.0225	0.0183	0.0186	0.0184	0.0196	0.0194	0.0135	0.0185
Arsenic		0.0001 to 0.0025	0.0727	0.0614	0.0657	0.0763	0.0599	0.0613	0.0549	0.0547	0.0561	0.0381	0.0473
Barium		5E-005 to 0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.0158	0.0174	0.0196	0.0149	0.0192
Beryllium		0.0001 to 0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2							<0.0005	<0.001	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.11	0.108	0.095	0.088	0.076	0.101
Cadmium		1E-005 to 8.5E-005	0.000342	<0.003	<0.001	<0.0006	0.000467	0.00048	<0.0004	<0.002	<0.00053		<0.0001
Calcium		0.05 to 0.1	152	162	153	150	153	170	160	169	171	140	169
Chromium		0.0001 to 0.018	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001
Cobalt		0.0001 to 0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	0.00122	0.00115	0.00116	0.00097	0.00097
Copper		0.0002 to 0.006	0.0213	0.0172	0.0163	0.0276	0.0193	0.0169	0.0197	0.0177	0.0178	0.0206	0.0162
Dissolved Cadmium (by saltwater extraction)		0.00002										<0.00004	<0.00006
Iron		0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.02	<0.01	<0.01	<0.01
Lead		5E-005 to 0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.00005	<0.0001	<0.00005	<0.00005	<0.00005
Lithium		0.0005 to 0.025	0.04	0.045	0.041	0.054	0.039	0.04	0.0426	0.04	0.038	0.0313	0.0428
Magnesium		0.1	192	205	181	191	193	211	205	212	223	173	207
Manganese		5E-005 to 0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	0.000648	0.0008	0.00116	0.000841	0.000598
Mercury		1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002		<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	2.21	2.03	2.26	2.47	1.93	1.99	2.16	2.33	2.17	1.98	2.2
Nickel		0.0005 to 0.005	<0.005	<0.005	<0.005	0.0051	<0.005	<0.005	0.00344	0.0038	0.00324	0.00345	0.00359
Phosphorus		0.05 to 0.3							<0.3	<0.3	<0.05	<0.05	<0.05
Potassium		0.05 to 2	19.1	17.5	19	17.6	19.7	21.6	19.3	20.1	21.8	17.3	20.5
Selenium		0.0001 to 0.006	0.0165	0.0165	0.0177	0.0221	0.0159	0.0153	0.0174	0.0163	0.0178	0.0158	0.018
Silicon		0.05							8.05	8.86	8.6	7.22	8.67
Silver		1E-005 to 0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	198	192	191	190	200	211	211	199	206	164	200
Strontium		0.0001 to 0.005							2.65	2.83	2.67	2.52	2.68
Sulphur		0.5									0.483	379	465
Thallium		1E-005 to 0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00001	<0.00002	<0.00001	<0.00001	0.00001
Tin		0.0001 to 0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium		1E-005 to 0.001	0.0097	0.0104	0.0101	0.0121	0.0099	0.0098	0.00962	0.0105	0.00979	0.00784	0.00916
Vanadium		0.001 to 0.03	<0.03	<0.03	<0.03	0.0109	0.01	0.0089	0.0076	0.008	0.008	0.008	0.0081
Zinc		0.001 to 0.006	<0.025	<0.025	<0.025	<0.005	<0.005	<0.005	<0.003	0.0048	<0.001	<0.001	<0.001
Total Metals													
Aluminum		0.003 to 0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.007	<0.006	0.0033	0.0089	<0.006
Antimony		0.0001 to 0.0025	0.0204	0.0193	0.0208	0.0173	0.0179	0.0187	0.0184	0.0205	0.0198	0.0134	0.0189
Arsenic		0.0001 to 0.0025	0.0715	0.0628	0.0654	0.0597	0.0588	0.0608	0.0545	0.0517	0.0567	0.0363	0.0482
Barium		5E-005 to 0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.021	0.016	0.0173	0.0199	0.0145	0.0184
Beryllium		0.0001 to 0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2							<0.0005	<0.001	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.11	0.117	0.086	0.094	0.08	0.114
Cadmium		1E-005 to 8.5E-005	0.000135	<0.003	<0.001	<0.0005	0.000449	0.000439	<0.0004	<0.0005	<0.00056		<0.0001
Calcium		0.05 to 0.1	158	160	151	148	153	175	163	163	171	135	169
Chromium		0.0001 to 0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00012	<0.0002	<0.0001	0.00011	0.00015
Cobalt		0.0001 to 0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	0.00131	0.00111	0.00122	0.00098	0.00102
Copper		0.0005 to 0.007	0.0218	0.0187	0.0173	0.0221	0.02	0.0172	0.0206	0.0178	0.0186	0.0216	0.0169
Iron		0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.02	<0.01	<0.01	<0.01
Lead		5E-005 to 0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.00005	<0.0001	<0.00005	<0.00005	<0.00005
Lithium		0.0005 to 0.025	0.04	0.048	0.042	0.04	0.038	0.04	0.0433	0.043	0.0396	0.0314	0.0441
Magnesium		0.1	201	202	179	193	195	222	212	206	225	169	211
Manganese		5E-005 to 0.0015	<0.0015	<0.0015	0.0016	<0.0015	<0.0015	<0.0015	0.000913	0.00076	0.00136	0.00099	0.00064
Mercury		1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002		<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	2.18	2.08	2.27	1.89	1.88	1.96	2.21	2.51	2.33	2	2.48
Nickel		0.0005 to 0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00358	0.0036	0.00332	0.00347	0.00363
Phosphorus		0.05 to 0.3							<0.3	<0.3	<0.05	<0.05	<0.05
Potassium		0.05 to 2	19.1	17.3	18.7	17.8	19.8	23.9	19.5	18.6	21.9	16.6	20.8
Selenium		0.0001 to 0.006	0.0168	0.0167	0.0168	0.0165	0.0154	0.0154	0.0168	0.0149	0.018	0.0147	0.018
Silicon		0.05							8.3	8.67	8.75	7.15	8.78
Silver		1E-005 to 0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	197	193	187	192	202	229	211	192	211	165	202
Strontium		0.0001 to 0.005							2.68	3.1	2.86	2.49	3
Sulphur		0.5									501	385	471
Thallium		1E-005 to 0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00001	<0.00002	<0.00001	<0.00001	0.000011
Tin		0.0001 to 0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.012	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)		0.00002										<0.00004	<0.00006
Uranium		1E-005 to 0.001	0.0094	0.0101	0.0102	0.0094	0.0097	0.0097	0.00983	0.011	0.0102	0.00785	0.00979
Vanadium		0.001 to 0.03	<0.03	<0.03	<0.03	0.0085	0.0101	0.0088	0.0079	0.008	0.0083	0.0081	0.0083
Zinc		0.003 to 0.006	<0.025	<0.025	<0.025	<0.005	<0.005	<0.005	<0.003	<0.006	<0.003	<0.003	<0.003
Organics													
Carbon Organic (Dissolved)		0.5 to 5	1.57	1.57	1.48	1.88	2.08	1.47	1.1	1.31	1.73	1.31	1.08
Carbon Organic (Total)		0.5 to 5							1.14	1.16	1.67	1.5	1.07
Nitrogen Organic (Dissolved)		0.05 to 0.26							5.1	10.3	<4.5		
Nitrogen Organic (Total)		0.05 to 0.3							<0.06	<0.06	<0.06		
ALS LAB ID			L502198	L532007	L556006	L624576	L653575	L679672	L1145681	L1177597	l1234688	L1450350	L1523985

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C3.6 - AJWW-D
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Site ID		AJWW-D	AJWW-D	AJWW-D	AJWW-D	AJWW-D	AJWW-D	AJWW-D
Analytes	MDL	19-Jul-07	18-Sep-07	29-Apr-08	7-Jul-08	5-Sep-08	1-May-14	25-Sep-14
In Situ Parameters								
Conductivity µS/cm	...	2174	2202		2139	2150	2321	2445
Oxygen Dissolved %	...				12.2	17.5	65.7	20.2
Oxygen Dissolved	...	2.08	1.82		1.54	2.14	7.37	2.26
pH (unitless)	...	7.9	8.04		7.59	7.71	8	7.76
Redox Potential mV	...				-73.8	-65	110	137
Salinity ppt	...						1.71	1.81
Specific Conductivity µS/cm	...	3367	3428		3477	3406	3254	3437
Temperature °C	...	6.46	6.3		4.85	5.67	10.1	9.9
Total Dissolved Solids	...						2100	2233
Turbidity NTU	...						-3.1	0
Physical Tests								
Acidity to pH 8.3 (as CaCO3)	1	5.8		7.8				
Alkalinity (Total as CaCO3)	1 to 2	154	161	170	163	165	162	158
Bicarbonate Alkalinity	1 to 2			170		165	162	158
Carbonate Alkalinity	1 to 2			<2		<2	<2	<2
Color TCU	5	<5	<5	<5	<5	<5		
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	1770	1590	1750	1700	1710	1930	1830
Hydroxide Alkalinity	1 to 2			<2		<2	<2	<2
pH (unitless)	0.01 to 0.1	7.97	8.1	7.95	8.1	8.14	8.07	8.22
Specific Conductivity µS/cm	2	3300	3370	3450	3380	3410	3520	3530
Total Dissolved Solids	1 to 2	2970	3010	741	2930	3140	3390	3230
Total Suspended Solids	3	4.2	<3	4.1	<3	<3	6	3.6
Turbidity NTU	0.1			0.65	0.5	0.39	0.29	0.16
Dissolved Anions								
Bromide	0.05 to 2.495	<0.5	<0.5	<2.5	<0.5	<2.5	<1	<1
Chloride	0.5 to 1	35.8	38.4	33	36	39	38	32
Fluoride	0.02 to 0.4		0.24	1.3	0.38	<1	<0.4	0.206
Sulphate	0.5 to 1	1650	1800	1650	1700	1770	1980	1850
Nutrients								
Ammonia (Total)	0.005 to 0.05	0.024	0.0107	<0.02	0.045	0.028	<0.005	0.0115
Nitrate (as N)	0.005 to 0.1	72.9	79.9	74.1	74.3	79	71.4	65.4
Nitrite (as N)	0.001 to 0.02	0.138	0.187	0.074	0.049	0.138	0.036	0.149
Nitrogen (Dissolved)	0.05 to 0.1							
Nitrogen (Total)	0.0025 to 0.11							
Nitrogen Kjeldahl (Total)	0.05 to 0.2	<0.05	0.27	0.152	0.39	0.239	<0.05	<0.05
Orthophosphate (Dissolved)	0.001 to 0.01	0.0012	0.0021	0.0011	<0.001		0.0011	0.0018
Phosphorus - Dissolved	0.002 to 0.02						<0.002	<0.002
Phosphorus - Total	0.002 to 0.02	0.0032	0.0066	0.0034	0.005		<0.002	<0.002
Cyanide								
Cyanide (Free)	0.005			<0.005	<0.005		<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005
Cyanide (WAD)	0.005			<0.005	<0.005		<0.005	<0.005
Dissolved Metals								
Aluminum	0.001 to 0.025	<0.025	<0.05	<0.05	<0.05	<0.025	<0.002	<0.001
Antimony	0.0001 to 0.0025	0.0151	0.0142	0.0167	0.0143	0.0157	0.0171	0.0172
Arsenic	0.0001 to 0.0025	0.02	0.0183	0.0212	0.018	0.0193	0.0178	0.0154
Barium	5E-005 to 0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.0137	0.0155
Beryllium	0.0001 to 0.005	<0.005	<0.01	<0.01	<0.01	<0.005	<0.0002	<0.0001
Bismuth	0.0005 to 0.2						<0.001	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.066	0.073
Cadmium	1E-005 to 8.5E-005	<0.005	<0.002	<0.0007	0.00066	0.000914		<0.0002
Calcium	0.05 to 0.1	228	212	221	218	225	255	243
Chromium	0.0001 to 0.018	<0.005	<0.01	<0.01	<0.01	<0.005	<0.0002	<0.0001
Cobalt	0.0001 to 0.0015	<0.0015	<0.003	<0.003	<0.003	<0.0015	0.00089	0.00097
Copper	0.0002 to 0.006	0.0281	0.028	0.034	0.031	0.0265	0.0384	0.0399
Dissolved Cadmium (by saltwater extraction)	0.00002						<0.00008	<0.00012
Iron	0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.01	<0.01
Lead	5E-005 to 0.0025	<0.0025	<0.005	<0.005	<0.005	<0.0025	<0.0001	<0.00005
Lithium	0.0005 to 0.025	0.047	<0.05	0.054	0.05	0.045	0.0505	0.0545
Magnesium	0.1	292	258	292	280	279	314	297
Manganese	5E-005 to 0.0015	0.0269	0.0341	0.0213	0.0234	0.0278	0.00317	0.00506
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	3.3	3.29	3.4	3.15	3.37	4.84	4.11
Nickel	0.0005 to 0.005	0.0118	0.012	0.015	0.014	0.0135	0.0149	0.0147
Phosphorus	0.05 to 0.3						<0.05	<0.05
Potassium	0.05 to 2	25.4	24.5	24.7	25.5	25.1	31.9	30.4
Selenium	0.0001 to 0.006	0.0291	0.028	0.035	0.028	0.0321	0.0522	0.0485
Silicon	0.05						7.19	7.33
Silver	1E-005 to 0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0001	<0.00002	<0.00001
Sodium	0.05 to 2	200	193	197	198	183	214	205
Strontium	0.0001 to 0.005						4.46	3.75
Sulphur	0.5						616	597
Thallium	1E-005 to 0.001	<0.001	<0.002	<0.002	<0.002	<0.001	<0.00002	0.00001
Tin	0.0001 to 0.0025	<0.0025	<0.005	<0.005	<0.005	<0.0025	<0.0002	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	0.01	0.012	<0.02	<0.01
Uranium	1E-005 to 0.001	0.0103	0.0111	0.0111	0.0111	0.0109	0.0109	0.0106
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.01	<0.01	0.005	0.0046	0.0046
Zinc	0.001 to 0.006	<0.025	<0.05	<0.005	<0.005	<0.005	<0.002	0.0014
Total Metals								
Aluminum	0.003 to 0.025	<0.025	<0.05	<0.05	<0.05	<0.025	0.0088	<0.006
Antimony	0.0001 to 0.0025	0.0143	0.0152	0.017	0.0142	0.0156	0.017	0.0175
Arsenic	0.0001 to 0.0025	0.0192	0.0186	0.0211	0.0176	0.0196	0.0177	0.0148
Barium	5E-005 to 0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.0136	0.0146
Beryllium	0.0001 to 0.005	<0.005	<0.01	<0.01	<0.01	<0.005	<0.0002	<0.0001
Bismuth	0.0005 to 0.2						<0.001	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.071	0.08
Cadmium	1E-005 to 8.5E-005	<0.005	<0.002	<0.0008	0.00057	0.000887		<0.0002
Calcium	0.05 to 0.1	230	212	222	221	222	245	237
Chromium	0.0001 to 0.005	<0.005	<0.01	<0.01	<0.01	<0.005	<0.0002	0.0002
Cobalt	0.0001 to 0.0015	<0.0015	<0.003	<0.003	<0.003	<0.0015	0.00093	0.00094
Copper	0.0005 to 0.007	0.0275	0.029	0.036	0.032	0.0274	0.0438	0.0412
Iron	0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.01	<0.01
Lead	5E-005 to 0.0025	<0.0025	<0.005	<0.005	<0.005	<0.0025	<0.0001	<0.00005
Lithium	0.0005 to 0.025	0.045	0.05	0.057	0.051	0.046	0.0516	0.0544
Magnesium	0.1	287	261	292	281	277	310	291
Manganese	5E-005 to 0.0015	0.026	0.0357	0.0225	0.0235	0.0278	0.00326	0.0052
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	3.16	3.43	3.54	3.15	3.4	4.97	4.11
Nickel	0.0005 to 0.005	0.0113	0.013	0.015	0.014	0.0135	0.0153	0.0147
Phosphorus	0.05 to 0.3						<0.05	<0.05
Potassium	0.05 to 2	25	24.4	24.6	25.7	24.3	30.3	30.3
Selenium	0.0001 to 0.006	0.0284	0.029	0.033	0.028	0.031	0.05	0.0477
Silicon	0.05						7.08	7.27
Silver	1E-005 to 0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0001	<0.00002	<0.00001
Sodium	0.05 to 2	198	191	195	199	183	217	199
Strontium	0.0001 to 0.005						4.49	3.84
Sulphur	0.5						624	583
Thallium	1E-005 to 0.001	<0.001	<0.002	<0.002	<0.002	<0.001	<0.00002	0.000012
Tin	0.0001 to 0.0025	<0.0025	<0.005	<0.005	<0.005	<0.0025	<0.0002	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	0.011	<0.02	<0.01
Total Cadmium (by saltwater extraction)	0.00002						<0.00008	<0.00012
Uranium	1E-005 to 0.001	0.0101	0.0118	0.0115	0.0107	0.0111	0.0111	0.0104
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.01	<0.01	0.0051	0.0048	0.0045
Zinc	0.003 to 0.006	<0.025	<0.05	<0.005	<0.005	<0.005	<0.006	<0.003
Organics								
Carbon Organic (Dissolved)	0.5 to 5	2.59	2.51	2.45	2.29	2.4	1.45	1.35
Carbon Organic (Total)	0.5 to 5						1.57	1.42
Nitrogen Organic (Dissolved)	0.05 to 0.26							
Nitrogen Organic (Total)	0.05 to 0.3							
ALS LAB ID		L532652	L556006	L624576	L653575	L679128	L1450350	L1523985

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C3.7 - AJWW-S
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Site ID		AJWW-S	AJWW-S	AJWW-S	AJWW-S	AJWW-S	AJWW-S	AJWW-S	AJWW-S
Analytes	MDL	3-May-07	19-Jul-07	18-Sep-07	29-Apr-08	7-Jul-08	5-Sep-08	1-May-14	25-Sep-14
In Situ Parameters									
Conductivity µS/cm	...	2285	2575	2579	2283	2748	2643	2321	2725
Oxygen Dissolved %	...					57.9	83.3	65.7	85.9
Oxygen Dissolved	...	9.09	4.84	8.39		5.6	8.62	7.37	8.75
pH (unitless)	...	8.28	7.9	8.3		7.28	8.08	8	8.19
Redox Potential mV	...					-57.9	-86	110	113
Salinity ppt	...							1.71	1.83
Specific Conductivity µS/cm	...	3334	3352	3399	3439	3465	3406	3254	3470
Temperature °C	...	8.5	12.9	12.4	7.41	14.2	13.3	10.1	13.8
Total Dissolved Solids	...							2110	2256
Turbidity NTU	...							-3.1	0.1
Physical Tests									
Acidity to pH 8.3 (as CaCO3)	1		4.6		6.4				
Alkalinity (Total as CaCO3)	1 to 2	165	152	155	156	157	154	157	161
Bicarbonate Alkalinity	1 to 2				156		154	157	161
Carbonate Alkalinity	1 to 2				<2		<2	<2	<2
Color TCU	5		<5	<5	<5	<5	<5		
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	1670	1760	1630	1710	1690	1750	1900	1820
Hydroxide Alkalinity	1 to 2				<2		<2	<2	<2
pH (unitless)	0.01 to 0.1	8.13	8.05	8.21	8.09	8.14	8.22	8.16	8.27
Specific Conductivity µS/cm	2	3150	3290	3360	3430	3370	3420	3410	3510
Total Dissolved Solids	1 to 2	2870	2900	2880	1030	2880	3110	3260	3250
Total Suspended Solids	3	<3	5.5	<3	<3	<3	<3	5.7	<3
Turbidity NTU	0.1				0.28	0.22	0.32	0.32	0.18
Dissolved Anions									
Bromide	0.05 to 2.495	<0.5	<0.5	<0.5	<2.5	<0.5	<0.5	<1	<1
Chloride	0.5 to 1	35.7	35	33.6	35	35.5	34.5	36	33
Fluoride	0.02 to 0.4	0.4		0.22	<1	0.27	<0.2	<0.4	0.209
Sulphate	0.5 to 1	1640	1660	1640	1670	1690	1690	1910	1960
Nutrients									
Ammonia (Total)	0.005 to 0.05	0.032	0.029	0.0326	<0.02	0.048	0.063	<0.005	0.0059
Nitrate (as N)	0.005 to 0.1	71.5	72.2	71.5	74.3	72.8	72.6	68.2	68.9
Nitrite (as N)	0.001 to 0.02	0.077	0.127	0.137	0.112	0.093	0.134	0.137	0.138
Nitrogen (Dissolved)	0.05 to 0.1								
Nitrogen (Total)	0.0025 to 0.11								
Nitrogen Kjeldahl (Total)	0.05 to 0.2	<0.05	<0.05	<0.05	0.064	<0.36	0.169	<0.05	<0.05
Orthophosphate (Dissolved)	0.001 to 0.01	<0.001	0.0013	0.002	0.0013	0.001		0.001	0.0017
Phosphorus - Dissolved	0.002 to 0.02							<0.002	<0.002
Phosphorus - Total	0.002 to 0.02	0.0036	0.0026	0.0036	0.0027	0.0041		0.0021	0.0032
Cyanide									
Cyanide (Free)	0.005				<0.005	<0.005		<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	0.0207	<0.005		<0.005	<0.005
Cyanide (WAD)	0.005				<0.005	<0.005		<0.005	<0.005
Dissolved Metals									
Aluminum	0.001 to 0.025	<0.05	<0.025	<0.05	<0.05	<0.05	<0.05	0.0065	<0.001
Antimony	0.0001 to 0.0025	0.0157	0.0166	0.0165	0.0198	0.0166	0.0179	0.0167	0.0174
Arsenic	0.0001 to 0.0025	0.025	0.0226	0.0214	0.0264	0.0207	0.0204	0.0177	0.0164
Barium	5E-005 to 0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.0157	0.0157
Beryllium	0.0001 to 0.005	<0.01	<0.005	<0.01	<0.01	<0.01	<0.01	<0.0001	<0.0001
Bismuth	0.0005 to 0.2							<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.065	0.073
Cadmium	1E-005 to 8.5E-005	0.00151	<0.005	<0.002	<0.002	0.00054	0.00093		<0.0002
Calcium	0.05 to 0.1	219	228	213	218	219	228	250	239
Chromium	0.0001 to 0.018	<0.01	<0.005	<0.01	<0.01	<0.01	<0.01	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015	<0.003	<0.0015	<0.003	<0.003	<0.003	<0.003	0.0007	0.00071
Copper	0.0002 to 0.006	0.03	0.0311	0.028	0.035	0.031	0.032	0.0334	0.0338
Dissolved Cadmium (by saltwater extraction)	0.00002							<0.00008	<0.0001
Iron	0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.01	<0.01
Lead	5E-005 to 0.0025	<0.005	<0.0025	<0.005	<0.005	<0.005	<0.005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	<0.05	0.048	0.051	0.061	<0.05	<0.05	0.0485	0.0534
Magnesium	0.1	273	289	267	284	278	287	310	298
Manganese	5E-005 to 0.0015	0.008	0.0111	0.0074	0.0073	0.0081	0.0066	0.00237	0.00308
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	3.41	3.28	3.23	4.09	3.21	3.48	4.56	4.15
Nickel	0.0005 to 0.005	0.012	0.0115	0.012	0.017	0.012	0.013	0.013	0.0138
Phosphorus	0.05 to 0.3							<0.05	<0.05
Potassium	0.05 to 2	23.8	26.1	25.3	24.9	26.1	26.8	31.2	29.5
Selenium	0.0001 to 0.006	0.031	0.0293	0.029	0.042	0.029	0.032	0.0505	0.0485
Silicon	0.05							7.1	7.16
Silver	1E-005 to 0.0001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001
Sodium	0.05 to 2	194	200	190	195	198	201	206	211
Strontium	0.0001 to 0.005							4.35	3.9
Sulphur	0.5							608	594
Thallium	1E-005 to 0.001	<0.002	<0.001	<0.002	<0.002	<0.002	<0.002	<0.00001	0.000012
Tin	0.0001 to 0.0025	<0.005	<0.0025	<0.005	<0.005	<0.005	<0.005	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.0111	0.0102	0.0107	0.0118	0.0108	0.0114	0.0107	0.0101
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.03	<0.01	<0.01	<0.01	0.0054	0.005
Zinc	0.001 to 0.006	<0.05	<0.025	<0.05	<0.005	<0.005	<0.005	<0.001	0.0037
Total Metals									
Aluminum	0.003 to 0.025	<0.05	<0.025	<0.05	<0.05	<0.05	<0.05	<0.003	<0.009
Antimony	0.0001 to 0.0025	0.0156	0.016	0.0163	0.0194	0.016	0.0174	0.0164	0.0184
Arsenic	0.0001 to 0.0025	0.0237	0.0218	0.0209	0.0258	0.0231	0.0199	0.0174	0.0167
Barium	5E-005 to 0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.0153	0.0163
Beryllium	0.0001 to 0.005	<0.01	<0.005	<0.01	<0.01	<0.01	<0.01	<0.0001	<0.0001
Bismuth	0.0005 to 0.2							<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.07	0.082
Cadmium	1E-005 to 8.5E-005	0.00113	<0.005	<0.002	<0.002	0.00066	0.00069		<0.0002
Calcium	0.05 to 0.1	217	230	213	219	217	227	241	245
Chromium	0.0001 to 0.005	<0.01	<0.005	<0.01	<0.01	<0.01	<0.01	<0.0001	0.00019
Cobalt	0.0001 to 0.0015	<0.003	<0.0015	<0.003	<0.003	<0.003	<0.003	0.00065	0.00082
Copper	0.0005 to 0.007	0.031	0.0309	0.028	0.036	0.031	0.031	0.0331	0.0358
Iron	0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.01	0.01
Lead	5E-005 to 0.0025	<0.005	<0.0025	<0.005	<0.005	<0.005	<0.005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	<0.05	0.044	<0.05	0.066	<0.05	<0.05	0.0489	0.0561
Magnesium	0.1	273	291	261	287	279	286	304	295
Manganese	5E-005 to 0.0015	0.0099	0.0107	0.0076	0.0102	0.0092	0.0073	0.00129	0.0037
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	3.23	3.16	3.16	3.99	3.1	3.48	4.75	4.47
Nickel	0.0005 to 0.005	0.012	0.011	0.011	0.016	0.012	0.012	0.0135	0.0144
Phosphorus	0.05 to 0.3							<0.05	<0.05
Potassium	0.05 to 2	24	26	26	24.9	26.3	26.6	29.6	30.3
Selenium	0.0001 to 0.006	0.027	0.0294	0.028	0.041	0.029	0.032	0.048	0.0502
Silicon	0.05							7.02	7.37
Silver	1E-005 to 0.0001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001
Sodium	0.05 to 2	196	200	196	196	199	199	206	215
Strontium	0.0001 to 0.005							4.32	4.1
Sulphur	0.5							614	594
Thallium	1E-005 to 0.001	<0.002	<0.001	<0.002	<0.002	<0.002	<0.002	<0.00001	0.000012
Tin	0.0001 to 0.0025	<0.005	<0.0025	<0.005	<0.005	<0.005	<0.005	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002							<0.00008	<0.0001
Uranium	1E-005 to 0.001	0.0109	0.0101	0.0101	0.0116	0.0105	0.0114	0.0106	0.0117
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.03	<0.01	<0.01	<0.01	0.0054	0.0052
Zinc	0.003 to 0.006	<0.05	<0.025	<0.05	<0.005	<0.005	<0.005	<0.003	<0.003
Organics									
Carbon Organic (Dissolved)	0.5 to 5	2.67	2.5	2.38	2.43	2.16	1.56	1.43	1.32
Carbon Organic (Total)	0.5 to 5							1.41	1.39
Nitrogen Organic (Dissolved)	0.05 to 0.26								
Nitrogen Organic (Total)	0.05 to 0.3								
ALS LAB ID		L502198	L532652	L556006	L624576	L653575	L679128	L1450350	L1523985

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C3.8 - ANDER10
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Site ID		ANDER-10	ANDER-10	ANDER-10	ANDER-10	ANDER-10	ANDER-10	ANDER-10	ANDER-10	ANDER-10	ANDER-10	ANDER-10	ANDER-10
Analytes	**MDL**	**12-Mar-14**	**19-Mar-14**	**26-Mar-14**	**2-Apr-14**	**9-Apr-14**	**23-Apr-14**	**6-May-14**	**21-May-14**	**3-Jun-14**	**17/Jun/2014**	**3-Jul-14**	**15-Jul-14**
In Situ Parameters													
Conductivity µS/cm	...	430	392	402	424	390	377	367	524	602	543	602	499
Oxygen Dissolved %	...		85.6	77.8	83.1	82.4	84.7	107	97.6	84.8	84.5	79.3	88.3
Oxygen Dissolved	...	11.3	12.4	11.3	12	11.7	11.3	12.5	10.1	7.99	8.58	7.86	8.74
pH (unitless)	...	7.84	8.12	7.9	8.11	8.01	8.25	8.36	8.27	8.31	8.41	8.36	8.73
Redox Potential mV	...	37.9	24.8	182	168	153	127	206	60.6	136	81.5	79.6	161
Salinity ppt	...	0.4	0.36	0.37	0.39	0.29	0.31	0.26	0.33	0.34	0.33	0.36	0.3
Specific Conductivity µS/cm	...	821	748	767	805	612	641	533	665	691	677	733	603
Temperature °C	...	0.05	0.1	0.05	0.22	0.79	3.43	8	13.9	18.3	14.6	15.6	15.8
Total Dissolved Solids	...	533	486	499	523	398	417	349	433	449	441	476	396
Turbidity NTU	...												
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1												
Alkalinity (Total as CaCO3)	1 to 2	349	321	337	298	254	249	258	266	286	282	310	323
Bicarbonate Alkalinity	1 to 2	349	321	337	289	254	237	258	266	278	262	295	306
Carbonate Alkalinity	1 to 2	<1	<2	<2	8.6	<2	11.2	<2	<1	7.8	19.2	14.2	17.4
Color TCU	5												
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	385	343	355	346	281	281	278	320	306	306	326	360
Hydroxide Alkalinity	1 to 2	<1	<2	<2	<1	<2	<1	<2	<1	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1	8.38	8.26	8.26	8.3	8.22	8.37	8.26	8.32	8.49	8.46	8.47	8.38
Specific Conductivity µS/cm	2	809	728	775	714	585	630	595	655	668	665	710	770
Total Dissolved Solids	1 to 2	488	443	435	461	382	388	367	410	415	410	441	471
Total Suspended Solids	3	4	4.3	6.3	14.6	8.8	<3	6	11.4	21.8	13.7	10.1	13.6
Turbidity NTU	0.1	2.31	1.43	1.25	2.94	2.21	0.98	1.33	3.1	6.33	4.99	3.87	2.14
Dissolved Anions													
Bromide	0.05 to 2.495	<0.5	<0.05	<0.5	<0.25	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05	<0.5
Chloride	0.5 to 1	52.3	45.1	57.4	60.5	40.9	50.4	50.7	46.2	47.5	52.4	59	61.4
Fluoride	0.02 to 0.4	0.31	0.19	<0.2	0.17	0.162	0.183	0.195	0.218	0.23	0.219	0.241	0.229
Sulphate	0.5 to 1	23.9	20	21.6	22.8	21.5	21	20.2	16.7	13.3	11.9	11.9	12.4
Nutrients													
Ammonia (Total)	0.005 to 0.05	0.0619	0.0389	0.0353	0.0234	0.0215	0.0076	0.0075	0.0154	0.0192	0.0117	0.0244	0.0307
Nitrate (as N)	0.005 to 0.1	0.142	0.102	0.102	0.064	0.0496	0.0134	0.0054	0.0105	0.022	<0.025	0.0541	<0.05
Nitrite (as N)	0.001 to 0.02	<0.01	0.0028	<0.01	<0.005	0.0017	<0.001	<0.001	<0.001	0.0012	<0.005	0.002	<0.01
Nitrogen (Dissolved)	0.05 to 0.1												
Nitrogen (Total)	0.0025 to 0.11								0.715				
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.668	0.635	0.605	0.586	0.504	0.619	0.715	0.74	0.922	0.934	0.873	1.89
Orthophosphate (Dissolved)	0.001 to 0.01	0.0777	0.0578	0.0396	0.0355	0.0342	0.0227	0.0194	0.0376	0.0562	0.034	0.0659	0.0787
Phosphorus - Dissolved	0.002 to 0.02	0.0858	0.0761	0.0512	0.0467	0.0696	0.0337	0.0278	0.0501	0.0672	0.0456	0.0747	0.096
Phosphorus - Total	0.002 to 0.02	0.0967	0.089	0.0604	0.0761	0.0449	0.0451	0.0384	0.072	0.103	0.0772	0.0985	0.486
Cyanide													
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	0.001 to 0.025	0.0022	0.0016	0.0012	0.0011	0.0023	0.0022	0.0017	0.0016	0.0019	0.0019	0.0019	0.0176
Antimony	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00121	0.00108	0.00097	0.00093	0.00109	0.00108	0.00112	0.00148	0.00157	0.00124	0.00166	0.00208
Barium	5E-005 to 0.02	0.079	0.0691	0.0728	0.0692	0.0593	0.0573	0.0615	0.0707	0.0757	0.0695	0.0771	0.0805
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	87.2	77.4	79.9	78.9	63.8	65	68.1	74.9	72.7	73.3	75.5	81.2
Chromium	0.0001 to 0.018	0.00016	0.00014	0.00013	0.00012	<0.0001	0.00012	0.00012	0.00014	0.00012	0.00012	0.00014	0.00018
Cobalt	0.0001 to 0.0015	0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	0.00012	0.00015	0.00012	0.00016	0.00018
Copper	0.0002 to 0.006	0.00183	0.0014	0.00115	0.00115	0.00116	0.00141	0.00149	0.00147	0.00145	0.00123	0.00159	0.00199
Dissolved Cadmium (by saltwater extraction)	0.00002												
Iron	0.01 to 0.03	0.049	0.052	0.043	0.031	0.037	0.026	0.024	0.037	0.039	0.034	0.046	0.094
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00919	0.00795	0.00802	0.00744	0.00739	0.00716	0.00707	0.00834	0.008	0.00811	0.00827	0.00976
Magnesium	0.1	40.6	36.3	37.7	36.1	29.6	28.9	26.3	32.3	30.2	29.9	33.5	38.3
Manganese	5E-005 to 0.0015	0.0695	0.0338	0.0233	0.0271	0.0441	0.0115	0.0161	0.052	0.102	0.0555	0.159	0.243
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00189	0.00185	0.00186	0.00187	0.00294	0.00269	0.00277	0.00262	0.00229	0.00175	0.00196	0.00232
Nickel	0.0005 to 0.005	0.00155	0.00125	0.00108	0.00108	0.00094	0.00101	0.00111	0.00125	0.00152	0.00122	0.00197	0.00224
Phosphorus	0.05 to 0.3	0.092	0.081	<0.05	<0.05	0.05	<0.05	<0.05	0.051	0.069	0.053	0.079	0.102
Potassium	0.05 to 2	9.2	8.98	8.55	8.16	7.2	7.61	7.67	8.57	8.39	8.86	9.77	10.7
Selenium	0.0001 to 0.006	0.00033	0.00026	0.00022	0.00023	0.00028	0.00027	0.00024	0.00026	0.00023	0.00022	0.00023	0.00026
Silicon	0.05	11.8	11.5	11.6	11	8.8	9.41	9.28	9.79	8.74	6.63	7.21	9.09
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	36.4	31.2	32.2	33	26	28.7	30.8	32.6	31.2	31.8	36	38.6
Strontium	0.0001 to 0.005	0.405	0.376	0.369	0.347	0.296	0.281	0.295	0.322	0.33	0.315	0.367	0.426
Sulphur	0.5	8.29	7	7.58	8.11	7.36	7.51	7	6.53	5.25	4.67	4.43	4.81
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00258	0.00228	0.00273	0.00271	0.00273	0.00269	0.00241	0.00216	0.00186	0.00166	0.00134	0.00125
Vanadium	0.001 to 0.03	0.0024	0.0023	0.0025	0.0024	0.0026	0.0027	0.003	0.0034	0.0036	0.0029	0.0028	0.0025
Zinc	0.001 to 0.006	<0.001	0.0023	0.0013	<0.001	<0.001	0.0011	0.0012	0.0017	<0.001	0.0068	<0.001	<0.001
Total Metals													
Aluminum	0.003 to 0.025	0.0727	0.0854	0.0508	0.332	0.155	0.0539	0.0866	0.152	0.361	0.331	0.104	<0.003
Antimony	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00012	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00122	0.00107	0.00097	0.00106	0.00109	0.00102	0.00113	0.00147	0.00161	0.00137	0.0018	0.00199
Barium	5E-005 to 0.02	0.0783	0.0692	0.0699	0.0743	0.0588	0.0579	0.062	0.0706	0.0812	0.0749	0.0787	0.0789
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.011
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	84.8	75.3	78.3	75.5	60.1	65.4	66.1	71.8	68.7	70.9	74.1	79.3
Chromium	0.0001 to 0.005	0.00038	0.00034	0.00028	0.00112	0.00059	0.00027	0.00038	<0.0006	0.00107	0.00098	0.00047	0.00017
Cobalt	0.0001 to 0.0015	0.00016	0.00016	0.00013	0.0004	0.00026	0.00011	0.00015	0.00025	0.00047	0.00041	0.00028	0.00018
Copper	0.0005 to 0.007	0.00231	0.00196	0.00151	0.00327	0.00255	0.00196	0.00212	0.00242	0.00367	0.00283	0.00265	0.00192
Iron	0.01 to 0.03	0.161	0.184	0.129	0.512	0.287	0.103	0.151	0.275	0.618	0.513	0.2	0.051
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	0.000084	0.000131	<0.00005	<0.00005	<0.00005	0.000094	0.000077	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00923	0.00718	0.00753	0.00759	0.00695	0.00741	0.00695	0.00816	0.00787	0.00858	0.00819	0.0083
Magnesium	0.1	40	34.2	34.4	33.8	28.2	28.3	26.1	31.2	29.5	29.4	33	37.2
Manganese	5E-005 to 0.0015	0.0814	0.0526	0.035	0.0815	0.0835	0.0215	0.0356	0.0975	0.214	0.137	0.185	0.231
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00201	0.00197	0.00194	0.00189	0.003	0.00296	0.0028	0.00274	0.00234	0.00211	0.00201	0.00239
Nickel	0.0005 to 0.005	0.00188	0.00154	0.00132	0.00274	0.00167	0.00125	0.00143	0.00199	0.00283	0.00257	0.00244	0.00228
Phosphorus	0.05 to 0.3	0.084	0.09	<0.05	0.087	0.067	0.052	<0.05	0.071	0.118	0.08	0.102	0.099
Potassium	0.05 to 2	9.06	8.62	8.28	7.77	6.75	7.64	7.34	8.28	8.05	8.82	9.66	10
Selenium	0.0001 to 0.006	0.0003	0.00026	0.00023	0.00025	0.00028	0.00025	0.00025	0.00025	0.00027	0.00023	0.00025	0.00023
Silicon	0.05	11.8	11.2	11.3	11.3	8.79	9.53	9.18	9.79	9.34	7.45	7.46	8.92
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	36.5	29.4	32.2	32.5	25	28.5	29.9	31.3	30.6	32.3	36.5	36
Strontium	0.0001 to 0.005	0.399	0.393	0.359	0.338	0.287	0.293	0.284	0.325	0.328	0.357	0.369	0.41
Sulphur	0.5	8.35	7.16	7.63	8.14	7.29	7.56	6.98	6.39	5.11	4.78	4.55	5.03
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	0.00081	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	0.013	<0.01	<0.01	<0.01	<0.01	0.013	0.013	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002												
Uranium	1E-005 to 0.001	0.00261	0.00234	0.00274	0.00266	0.00276	0.00284	0.00251	0.00228	0.0019	0.00185	0.00138	0.00132
Vanadium	0.001 to 0.03	0.0027	0.0027	0.0026	0.0035	0.0033	0.0029	0.0033	0.004	0.0045	0.004	0.0033	0.0025
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics													
Carbon Organic (Dissolved)	0.5 to 5	12.8	12.3	11.2	11	9.75	12.8	13.7	14.4	14.9	16.1	15	15.2
Carbon Organic (Total)	0.5 to 5	12.9	12.1	11.6	11.4	10.1	13	14.1	15	16	16.3	15.9	26.8
Nitrogen Organic (Dissolved)	0.05 to 0.26												
Nitrogen Organic (Total)	0.05 to 0.3												
ALS LAB ID		**L1432163**	**L1434695**	**L1437439**	**L1439467**	**L1441961**	**L1446462**	**L1451608**	**L1458340**	**L1465108**	**L1472862**	**L1481215**	**L1488139**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		ANDER-10	ANDER-10	ANDER-10	ANDER-10
Analytes	**MDL**	**29-Jul-14**	**11-Aug-14**	**3-Sep-14**	**17-Sep-14**
In Situ Parameters					
Conductivity µS/cm	...	554	627		554
Oxygen Dissolved %	...	85	79.8		9.14
Oxygen Dissolved	...	8.57	8.49		7.82
pH (unitless)	...	8.47	7.94	8.23	12.8
Redox Potential mV	...	121	192		0
Salinity ppt	...	0.34	0.41		76.5
Specific Conductivity µS/cm	...	685	824		832
Temperature °C	...	15	12.4	11	7.53
Total Dissolved Solids	...	446	536		541
Turbidity NTU	...				
Physical Tests					
Acidity to pH 8.3 (as CaCO3)	1				
Alkalinity (Total as CaCO3)	1 to 2	334	385	401	404
Bicarbonate Alkalinity	1 to 2	325	385	384	399
Carbonate Alkalinity	1 to 2	9.2	<2	16.3	4.7
Color TCU	5				
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	347	379	418	400
Hydroxide Alkalinity	1 to 2	<1	<2	<1	<1
pH (unitless)	0.01 to 0.1	8.36	8.29	8.4	8.31
Specific Conductivity µS/cm	2	774	840	867	860
Total Dissolved Solids	1 to 2	479	527	529	556
Total Suspended Solids	3	3.6	124	<3	3.2
Turbidity NTU	0.1	1.44	15.9	1.31	1
Dissolved Anions					
Bromide	0.05 to 2.495	<0.5	<0.5	<0.5	<0.5
Chloride	0.5 to 1	60.7	58.3	58.8	59.5
Fluoride	0.02 to 0.4	0.244	0.37	0.199	<0.2
Sulphate	0.5 to 1	11.8	18.1	23	26.4
Nutrients					
Ammonia (Total)	0.005 to 0.05	0.0167	0.0164	0.0103	0.0074
Nitrate (as N)	0.005 to 0.1	<0.05	<0.05	<0.05	<0.05
Nitrite (as N)	0.001 to 0.02	<0.01	<0.01	<0.01	<0.01
Nitrogen (Dissolved)	0.05 to 0.1				
Nitrogen (Total)	0.0025 to 0.11				
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.807	0.693	0.658	0.535
Orthophosphate (Dissolved)	0.001 to 0.01	0.0803	0.0926	0.0843	0.0706
Phosphorus - Dissolved	0.002 to 0.02	0.0916		0.0894	0.0713
Phosphorus - Total	0.002 to 0.02	0.115	0.137	0.0808	0.0626
Cyanide					
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals					
Aluminum	0.001 to 0.025	0.0021	0.0013	0.0011	0.0028
Antimony	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00203	0.00166	0.00173	0.00117
Barium	5E-005 to 0.02	0.0785	0.0826	0.0768	0.0849
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.01	<0.01	<0.01	<0.01
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	79.1	84.6	92.5	89.4
Chromium	0.0001 to 0.018	0.00016	0.00012	0.00014	0.00012
Cobalt	0.0001 to 0.0015	0.00017	0.00026	0.00021	0.00015
Copper	0.0002 to 0.006	0.00177	0.00114	0.00152	0.00109
Dissolved Cadmium (by saltwater extraction)	0.00002				
Iron	0.01 to 0.03	0.054	0.055	0.083	0.036
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	0.000186
Lithium	0.0005 to 0.025	0.00897	0.00966	0.0102	0.0106
Magnesium	0.1	36.3	40.6	45.5	42.9
Manganese	5E-005 to 0.0015	0.196	0.962	0.283	0.289
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00207	0.00192	0.00192	0.0021
Nickel	0.0005 to 0.005	0.00233	0.00248	0.00234	0.00211
Phosphorus	0.05 to 0.3	0.11	0.119	0.105	0.069
Potassium	0.05 to 2	10.4	9.37	10.2	9.61
Selenium	0.0001 to 0.006	0.00026	0.0002	0.00025	0.00017
Silicon	0.05	9.33	13.5	12.1	12.1
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	39	40.7	41.2	40.6
Strontium	0.0001 to 0.005	0.407	0.469	0.461	0.46
Sulphur	0.5	4.51	6.64	8.51	9.35
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00114	0.000958	0.00133	0.00156
Vanadium	0.001 to 0.03	0.0021	0.0015	0.0018	0.0013
Zinc	0.001 to 0.006	<0.001	0.0016	0.0012	<0.001
Total Metals					
Aluminum	0.003 to 0.025	0.0339	0.117	0.0524	0.0172
Antimony	0.0001 to 0.0025	0.00011	<0.0001	0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00196	0.00178	0.0018	0.00123
Barium	5E-005 to 0.02	0.0788	0.0829	0.078	0.089
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.01	0.013	0.012	0.017
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	77.7	80.9	90.9	89.5
Chromium	0.0001 to 0.005	0.00025	0.0005	0.00035	0.0003
Cobalt	0.0001 to 0.0015	0.0002	0.00036	0.00027	0.00018
Copper	0.0005 to 0.007	0.00202	0.00183	0.00195	0.00119
Iron	0.01 to 0.03	0.102	0.299	0.2	0.112
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00858	0.00958	0.00978	0.0105
Magnesium	0.1	36.1	39.4	45.6	44.1
Manganese	5E-005 to 0.0015	0.207	1	0.301	0.32
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00214	0.00202	0.00212	0.00236
Nickel	0.0005 to 0.005	0.00248	0.00302	0.00289	0.00228
Phosphorus	0.05 to 0.3	0.108	0.127	0.108	0.091
Potassium	0.05 to 2	10.3	9.08	10	9.89
Selenium	0.0001 to 0.006	0.00024	0.00022	0.00024	0.00019
Silicon	0.05	9.25	13.3	12	12.6
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	39.3	39.3	41.5	37.7
Strontium	0.0001 to 0.005	0.41	0.462	0.473	0.478
Sulphur	0.5	4.6	6.59	8.69	9.95
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002				
Uranium	1E-005 to 0.001	0.00118	0.00101	0.00138	0.00172
Vanadium	0.001 to 0.03	0.0023	0.0019	0.0021	0.0015
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003
Organics					
Carbon Organic (Dissolved)	0.5 to 5	16.3	12.8	14.8	12.4
Carbon Organic (Total)	0.5 to 5	16.4	13.1	15.4	12.9
Nitrogen Organic (Dissolved)	0.05 to 0.26				
Nitrogen Organic (Total)	0.05 to 0.3				
ALS LAB ID		**L1494491**	**L1500711**	**L1513418**	**L1519657**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C3.9 - ANDR15
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Site ID		ANDR15	ANDR15	ANDR15	ANDR15	ANDR15	ANDR15	ANDR15	ANDR15	ANDR15	ANDR15	ANDR15	ANDR15
Analytes	**MDL**	**5-Feb-14**	**13-Mar-14**	**19-Mar-14**	**27-Mar-14**	**3-Apr-14**	**9-Apr-14**	**24-Apr-14**	**7-May-14**	**23-May-14**	**4-Jun-14**	**17-Jun-14**	**3-Jul-14**
In Situ Parameters													
Conductivity µS/cm	...	421	408	474	517	576	470	295	358	443	485	535	569
Oxygen Dissolved %	...	43.5	77.2	82.9	87.1	67.7	80.7	81.1	101	93.8	89.7	84.1	82.3
Oxygen Dissolved	...	6.33	11	12.1	12.5	9.64	11.7	10.9	13	10.5	10.1	8.88	8.6
pH (unitless)	...	8.65	8.1	8.02	8.06	8.2	8.29	8.24	8.44	8.45	8.41	8.49	8.43
Redox Potential mV	...	-76	45.4	172	86.2	-1.3	-69.5	87.8	203	35.6	154	92.5	45.7
Salinity ppt	...	0.39	0.36	0.44	0.47	0.52	0.43	0.24	0.26	0.3	0.33	0.34	0.36
Specific Conductivity µS/cm	...	811	756	908	968	1070	896	510	592	614	683	699	734
Temperature °C	...	-0.25	0.92	0.02	0.6	0.82	0.14	2.89	4.3	10.4	9.84	12.7	13.2
Total Dissolved Solids	...	528	490	590	629	695	582	332	384	399	444	454	477
Turbidity NTU	...												
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1												
Alkalinity (Total as CaCO3)	1 to 2	266	258	255	275	251	235	175	207	216	231	230	255
Bicarbonate Alkalinity	1 to 2	266	258	255	262	243	235	169	207	209	227	215	247
Carbonate Alkalinity	1 to 2	<2	<2	<2	13.4	8	<2	6	<2	7.5	4.4	15.1	8.3
Color TCU	5								33.7				
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	369	351	338	371	385	322	215	237	260	274	272	294
Hydroxide Alkalinity	1 to 2	<2	<2	<2	<1	<1	<2	<1	<2	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1	8.06	8.2	8.26	8.32	8.31	8.24	8.37	8.26	8.35	8.45	8.46	8.48
Specific Conductivity µS/cm	2	809	785	909	987	976	846	507	562	592	663	686	714
Total Dissolved Solids	1 to 2	528	489	495	606	637	561	331	384	382	368	426	418
Total Suspended Solids	3	<3	<3	4.1	4.3	3.1	108	36.7	16.7	7	6.1	33.8	7.9
Turbidity NTU	0.1	0.61	0.42	1.15	0.8	0.54	15.8	7.04	2.63	1.45	2.76	4.76	2.48
Dissolved Anions													
Bromide	0.05 to 2.495	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05
Chloride	0.5 to 1	114	90.8	131	148	155	134	48.2	53.9	58.9	71.9	81.8	80
Fluoride	0.02 to 0.4	<0.2	0.39	<0.2	<0.2	0.2	<0.2	0.158	0.192	0.21	0.218	0.221	0.24
Sulphate	0.5 to 1	34.5	29.8	36.2	37.4	36.3	32	19	21.6	17.9	17.7	18.2	17.2
Nutrients													
Ammonia (Total)	0.005 to 0.05	0.0101	0.012	0.0109	0.0076	0.0093	0.0153	0.0084	0.0051	0.0077	0.0063	0.0101	0.0125
Nitrate (as N)	0.005 to 0.1	0.137	0.142	0.107	0.113	0.103	<0.05	0.0327	0.0203	0.0103	0.011	<0.025	0.0205
Nitrite (as N)	0.001 to 0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001
Nitrogen (Dissolved)	0.05 to 0.1												
Nitrogen (Total)	0.0025 to 0.11												
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.359	0.329	0.565	0.448	0.506	1.26	0.709	0.492	0.579	0.555	0.978	0.77
Orthophosphate (Dissolved)	0.001 to 0.01	0.0176	0.0232	0.0207	0.0171	0.018	0.0149	0.0174	0.013	0.0156	0.0191	0.0171	0.0272
Phosphorus - Dissolved	0.002 to 0.02	0.019	0.0231	0.0268	0.0226	0.0257	0.222	0.154	0.0206	0.0262	0.0263	0.0263	0.0308
Phosphorus - Total	0.002 to 0.02	0.0291	0.025	0.0378	0.0256	0.0196	0.019	0.0305	0.0398	0.0346	0.0604	0.0762	0.14
Cyanide													
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	0.001 to 0.025	<0.001	0.0017	0.0015	0.0019	0.0012	0.002	0.0067	0.0032	0.0025	0.0043	0.0033	0.0023
Antimony	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00054	0.00048	0.00047	0.00045	0.00046	0.00042	0.00042	0.00045	0.00056	0.00056	0.00055	0.00064
Barium	5E-005 to 0.02	0.0857	0.0841	0.0711	0.0741	0.0759	0.0673	0.045	0.0479	0.0576	0.0629	0.0635	0.0685
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000027	<0.00001	<0.00001
Calcium	0.05 to 0.1	98.2	93.9	92.9	98.6	105	88.7	59.4	67	72.8	75.6	76.9	81.1
Chromium	0.0001 to 0.018	<0.0001	0.00019	<0.0001	<0.0001	<0.0001	<0.0001	0.00012	0.00012	0.0001	0.0001	0.00011	0.00015
Cobalt	0.0001 to 0.0015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	0.0002 to 0.006	0.00113	0.00105	0.00104	0.00102	0.00103	0.00105	0.00149	0.00137	0.00131	0.00145	0.00127	0.00135
Dissolved Cadmium (by saltwater extraction)	0.00002												
Iron	0.01 to 0.03	0.02	0.022	0.029	0.016	0.015	0.041	0.032	0.027	0.038	0.051	0.043	0.018
Lead	5E-005 to 0.0025	<0.00005	0.000061	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00881	0.00706	0.00775	0.00817	0.00739	0.00659	0.00442	0.00453	0.00612	0.00718	0.00682	0.00842
Magnesium	0.1	30.1	28.2	25.6	30.4	29.9	24.5	16.2	16.8	18.9	20.8	19.4	22.2
Manganese	5E-005 to 0.0015	0.014	0.0135	0.00834	0.00633	0.00603	0.0186	0.00323	0.00339	0.00597	0.00895	0.00663	0.018
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00335	0.00283	0.00309	0.00327	0.00313	0.00308	0.00205	0.00213	0.00255	0.00251	0.00236	0.00311
Nickel	0.0005 to 0.005	0.0005	<0.0005	0.00055	<0.0005	0.00052	0.00068	0.0008	0.00074	0.0007	0.00108	0.0007	0.00065
Phosphorus	0.05 to 0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	0.05 to 2	9.41	8.4	10.7	10.1	9.81	9.01	6.6	6.97	7.87	8.66	9.13	9.72
Selenium	0.0001 to 0.006	0.00038	0.00038	0.00031	0.00028	0.00031	0.00028	0.00022	0.00023	0.00018	0.00019	0.00021	0.00019
Silicon	0.05	9.34	9.21	8	8.48	8.49	8.37	8.53	8.81	8.77	8.07	7.55	9.2
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	43.8	36.1	54.4	58.4	58.9	55.6	25.2	28.4	30	37.6	41.4	38.9
Strontium	0.0001 to 0.005	0.41	0.377	0.396	0.422	0.412	0.355	0.229	0.245	0.292	0.322	0.318	0.331
Sulphur	0.5	12	10	12.5	12.4	12.5	11.1	6.74	8	6.31	6.54	6.59	6.04
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00464	0.00396	0.0049	0.00558	0.00548	0.0044	0.00233	0.0024	0.00246	0.00251	0.00242	0.00296
Vanadium	0.001 to 0.03	0.0018	0.002	0.0014	0.0015	0.0016	0.0015	0.0021	0.0019	0.0023	0.0019	0.0019	0.0022
Zinc	0.001 to 0.006	<0.001	<0.001	<0.001	<0.001	<0.001	0.0012	<0.001	<0.001	0.0013	0.0062	0.0034	0.0019
Total Metals													
Aluminum	0.003 to 0.025	0.0854	0.0074	0.0896	0.0241	0.0182	1.85	0.733	0.178	0.142	0.124	0.463	0.0833
Antimony	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.0005	0.00047	0.00049	0.00047	0.00047	0.00084	0.00058	0.00046	0.00058	0.00061	0.00067	0.00067
Barium	5E-005 to 0.02	0.0828	0.0761	0.0698	0.0753	0.0762	0.0989	0.0561	0.0451	0.0567	0.0626	0.0711	0.0727
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000055	0.000022	<0.00001	0.000011	0.000012	0.000023	<0.00001
Calcium	0.05 to 0.1	91	89.8	90.9	96.1	102	85.9	58.7	63.9	68.7	71.8	74.2	80
Chromium	0.0001 to 0.005	0.0004	0.00025	0.00028	0.00021	0.00015	0.00401	0.00152	0.00045	0.00041	0.00038	0.00104	0.00027
Cobalt	0.0001 to 0.0015	0.00012	<0.0001	0.00012	<0.0001	<0.0001	0.00146	0.00056	0.00018	0.00017	0.00017	0.00047	0.00015
Copper	0.0005 to 0.007	0.00153	0.00123	0.00145	0.00122	0.00136	0.00881	0.00499	0.00225	0.00203	0.00195	0.00332	0.00194
Iron	0.01 to 0.03	0.152	0.035	0.16	0.053	0.045	3.07	1.14	0.341	0.287	0.268	0.894	0.162
Lead	5E-005 to 0.0025	<0.00005	<0.00005	0.00007	<0.00005	<0.00005	0.00101	0.00036	0.000111	0.00011	0.000087	0.000318	0.000079
Lithium	0.0005 to 0.025	0.00807	0.00694	0.0073	0.00808	0.00776	0.00799	0.00491	0.00501	0.00576	0.00657	0.00667	0.00756
Magnesium	0.1	28.7	26.4	24.9	28.6	29.2	24.1	16.2	15.9	17.9	20.1	18.9	22.2
Manganese	5E-005 to 0.0015	0.0239	0.0139	0.0164	0.00874	0.00781	0.253	0.0634	0.0217	0.0263	0.0309	0.0852	0.0367
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00341	0.00306	0.00322	0.0035	0.00339	0.00327	0.00207	0.00231	0.00245	0.00246	0.00241	0.00301
Nickel	0.0005 to 0.005	0.00074	<0.0005	0.00075	0.00053	0.0006	0.00381	0.00205	0.00092	0.00099	0.00092	0.0015	0.00089
Phosphorus	0.05 to 0.3	0.059	<0.05	<0.05	<0.05	<0.05	0.212	0.097	<0.05	<0.05	0.051	0.09	<0.05
Potassium	0.05 to 2	8.7	8.04	10.1	9.91	9.56	8.95	6.66	6.56	7.58	8.45	8.77	9.67
Selenium	0.0001 to 0.006	0.00033	0.00038	0.0003	0.00032	0.0003	0.00043	0.00028	0.00026	0.00019	0.00021	0.00029	0.00022
Silicon	0.05	9.02	8.9	7.85	8.33	8.41	11.9	9.71	8.52	8.58	8.06	8.28	9.4
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000038	0.000012	<0.00001	<0.00001	<0.00001	0.000014	<0.00001
Sodium	0.05 to 2	41.9	33.5	54.3	57.8	58.4	56.2	24.6	24.4	29.5	37.7	39.6	41.7
Strontium	0.0001 to 0.005	0.41	0.383	0.401	0.421	0.419	0.377	0.224	0.254	0.277	0.305	0.311	0.336
Sulphur	0.5	12.1	9.79	12.7	12.6	12.8	10.9	6.86	7.81	6.07	6.39	6.57	6.2
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000019	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.103	0.038	<0.01	<0.01	<0.01	0.025	<0.01
Total Cadmium (by saltwater extraction)	0.00002												
Uranium	1E-005 to 0.001	0.00461	0.00418	0.00509	0.00579	0.00578	0.00485	0.00239	0.00241	0.00246	0.00255	0.00247	0.00297
Vanadium	0.001 to 0.03	0.0022	0.002	0.0018	0.0017	0.0018	0.0085	0.0047	0.0025	0.0028	0.0025	0.0036	0.0028
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	0.0082	0.0032	<0.003	<0.003	<0.003	<0.003	<0.003
Organics													
Carbon Organic (Dissolved)	0.5 to 5	9.12	8.42	12.3	10.6	11.8	11.1	13.8	13.2	13	12.8	14.4	11.3
Carbon Organic (Total)	0.5 to 5	8.9	8.48	12.9	10.5	11.5	13	14.6	14.1	13.3	13.4	16.9	12.9
Nitrogen Organic (Dissolved)	0.05 to 0.26												
Nitrogen Organic (Total)	0.05 to 0.3												
ALS LAB ID		**L1419486**	**L1432163**	**L1434695**	**L1437439**	**L1439655**	**L1441961**	**L1447300**	**L1452368**	**L1459728**	**L1465478**	**L1472862**	**L1481215**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		ANDR15	ANDR15	ANDR15	ANDR15	ANDR15
Analytes	**MDL**	**15-Jul-14**	**29-Jul-14**	**11-Aug-14**	**3-Sep-14**	**17-Sep-14**
In Situ Parameters						
Conductivity µS/cm	...	502	485	598		549
Oxygen Dissolved %	...	84.9	85.9	82.3		92.9
Oxygen Dissolved	...	8.96	9.32	8.66		10.8
pH (unitless)	...	8.5	8.53	8.27	8.38	8.26
Redox Potential mV	...	40.4	66.7	23		107
Salinity ppt	...	0.32	0.32	0.38		0.39
Specific Conductivity µS/cm	...	653	650	778		794
Temperature °C	...	12.9	17.7	12.9	10.1	8.84
Total Dissolved Solids	...	424	423	506		516
Turbidity NTU	...					
Physical Tests						
Acidity to pH 8.3 (as CaCO3)	1					
Alkalinity (Total as CaCO3)	1 to 2	253	265	279	266	295
Bicarbonate Alkalinity	1 to 2	238	257	269	254	282
Carbonate Alkalinity	1 to 2	14.9	8.1	10.4	11.3	13.8
Color TCU	5					
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	297	310	317	330	340
Hydroxide Alkalinity	1 to 2	<1	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1	8.39	8.37	8.44	8.43	8.47
Specific Conductivity µS/cm	2	718	793	778	850	821
Total Dissolved Solids	1 to 2	442	476	490	519	563
Total Suspended Solids	3	15.9	8.5	3.7	<3	5.6
Turbidity NTU	0.1	3.48	1.35	0.4	0.49	0.57
Dissolved Anions						
Bromide	0.05 to 2.495	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	0.5 to 1	77.1	92.7	85.4	113	97
Fluoride	0.02 to 0.4	0.232	0.223	0.42	0.217	0.21
Sulphate	0.5 to 1	16.6	21.7	20.3	25.4	23.7
Nutrients						
Ammonia (Total)	0.005 to 0.05	0.0206	0.0083	0.0146	0.0072	0.0077
Nitrate (as N)	0.005 to 0.1	0.064	<0.05	0.063	<0.05	<0.05
Nitrite (as N)	0.001 to 0.02	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen (Dissolved)	0.05 to 0.1					
Nitrogen (Total)	0.0025 to 0.11					
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.59	0.447	0.518	0.46	0.565
Orthophosphate (Dissolved)	0.001 to 0.01	0.0313	0.026	0.0307	0.0251	0.0286
Phosphorus - Dissolved	0.002 to 0.02	0.0398	0.0303		0.0284	0.0296
Phosphorus - Total	0.002 to 0.02	0.0589	0.0365	0.0544	0.0257	0.068
Cyanide						
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals						
Aluminum	0.001 to 0.025	0.0024	0.0018	0.0019	0.0016	0.0016
Antimony	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00068	0.00059	0.00068	0.00059	0.00065
Barium	5E-005 to 0.02	0.0747	0.0736	0.0787	0.0757	0.0802
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	80.6	85.3	85.9	90.6	91.9
Chromium	0.0001 to 0.018	0.00011	<0.0001	0.00011	<0.0001	0.00015
Cobalt	0.0001 to 0.0015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	0.0002 to 0.006	0.00127	0.00126	0.00126	0.00119	0.00126
Dissolved Cadmium (by saltwater extraction)	0.00002					
Iron	0.01 to 0.03	0.039	0.02	0.029	0.025	0.027
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00811	0.0077	0.00809	0.00874	0.00871
Magnesium	0.1	23.1	23.6	25	25.1	26.7
Manganese	5E-005 to 0.0015	0.0489	0.0203	0.0219	0.0134	0.012
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00359	0.00345	0.00333	0.00326	0.00327
Nickel	0.0005 to 0.005	0.00062	0.00067	0.00063	0.00063	0.00065
Phosphorus	0.05 to 0.3	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	0.05 to 2	9.13	10.1	9.71	11	10.1
Selenium	0.0001 to 0.006	0.00017	0.00016	0.00016	0.00018	0.00017
Silicon	0.05	10.2	9.49	10.3	9.1	10.1
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	38.7	44.9	43	51.1	46.9
Strontium	0.0001 to 0.005	0.37	0.367	0.379	0.36	0.398
Sulphur	0.5	6.19	7.63	7.34	9.01	8.26
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00339	0.00332	0.00352	0.00323	0.00392
Vanadium	0.001 to 0.03	0.0025	0.0019	0.002	0.0017	0.0019
Zinc	0.001 to 0.006	<0.001	<0.001	0.0012	<0.001	<0.001
Total Metals						
Aluminum	0.003 to 0.025	0.282	0.0605	0.12	0.0323	0.115
Antimony	0.0001 to 0.0025	<0.0001	0.00011	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00077	0.00071	0.00079	0.00059	0.00066
Barium	5E-005 to 0.02	0.0766	0.0787	0.086	0.0747	0.0841
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium	1E-005 to 8.5E-005	0.000012	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	79.9	86.4	85.2	86.3	93.3
Chromium	0.0001 to 0.005	0.00073	0.00027	0.00039	0.00021	0.00054
Cobalt	0.0001 to 0.0015	0.00024	0.0001	0.00015	<0.0001	0.00014
Copper	0.0005 to 0.007	0.00265	0.00169	0.00182	0.00144	0.00202
Iron	0.01 to 0.03	0.478	0.113	0.224	0.079	0.211
Lead	5E-005 to 0.0025	0.000144	<0.00005	<0.00005	<0.00005	0.000058
Lithium	0.0005 to 0.025	0.00902	0.00847	0.00838	0.00878	0.00897
Magnesium	0.1	22.9	24.3	25.2	24.2	26.9
Manganese	5E-005 to 0.0015	0.0626	0.0269	0.0481	0.0207	0.038
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0038	0.00376	0.00308	0.00343	0.00378
Nickel	0.0005 to 0.005	0.0011	0.00078	0.00083	0.00068	0.00107
Phosphorus	0.05 to 0.3	0.064	<0.05	0.069	<0.05	0.056
Potassium	0.05 to 2	9.21	10.4	9.82	10.6	10.1
Selenium	0.0001 to 0.006	0.00019	0.0002	0.00018	0.00016	0.00017
Silicon	0.05	10.7	9.96	10.5	8.86	10.4
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	39.4	48.7	45.5	51.1	47.8
Strontium	0.0001 to 0.005	0.384	0.397	0.345	0.378	0.429
Sulphur	0.5	6.3	8.08	7.55	8.97	8.69
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	0.014	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002					
Uranium	1E-005 to 0.001	0.00348	0.00381	0.00316	0.00332	0.00421
Vanadium	0.001 to 0.03	0.0035	0.0023	0.0028	0.0019	0.0026
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003
Organics						
Carbon Organic (Dissolved)	0.5 to 5	10	10.3	9.09	12.2	9
Carbon Organic (Total)	0.5 to 5	11.6	9.8	10.4	12.1	11.6
Nitrogen Organic (Dissolved)	0.05 to 0.26					
Nitrogen Organic (Total)	0.05 to 0.3					
ALS LAB ID		**L1488139**	**L1494491**	**L1500711**	**L1513418**	**L1519657**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C3.10 - CC02
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Site ID		CC02	CC02	CC02	CC02	CC02	CC02	CC02	CC02	CC02	CC02	CC02	CC02
Analytes	MDL	1-May-07	18-Jul-07	14-Sep-07	28-Apr-08	7-Jul-08	4-Sep-08	02/Sep/2010	22-Nov-10	28-Mar-11	14-Apr-11	21-Apr-11	28-Apr-11
In Situ Parameters													
Conductivity µS/cm	...	223		408	548	460	461	455	403	522	578	537	469
Oxygen Dissolved %	...				95	99	96.8	91.6	76.7	97		98.2	80.3
Oxygen Dissolved	...	15	11.8	11.7	11.4	10.7	10.4	10.1	11.3	12.3		14.1	10.7
pH (unitless)	...	8.03	7.9	8.29	7.87	8.02	8.25	7.9	7.65	8.39	8.5	8.15	8.11
Redox Potential mV	...	-56.7				-103	-75.6	11.6	268	117	20.2	165	114
Salinity ppt	...											0.49	0.39
Specific Conductivity µS/cm	...	352	582	534	828	615	614	622	773	840	892	1025	802
Temperature °C	...	5.78	12.1	12.6	7.97	11.9	12	10.9	-0.05	5.14	6.61	-0.02	3.39
Total Dissolved Solids	...							405	503	547	580	660	520
Turbidity NTU	...												
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1												
Alkalinity (Total as CaCO3)	1 to 2	150	232	240	334	260	262	255	309	325	343	315	322
Bicarbonate Alkalinity	1 to 2								309			305	
Carbonate Alkalinity	1 to 2								<1			10.2	
Color TCU	5	16.4	9.4	8.4	7.1	9.5	7.3	10.7	7.1	9.2	10.6	7	6.9
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	187	270	246	404	281	295	284	365	391	427	414	432
Hydroxide Alkalinity	1 to 2								<1			<1	
pH (unitless)	0.01 to 0.1	8.33	8.37	8.44	7.91	8.38	8.46	8.29	8.32	8.27	8.46	8.35	8.31
Specific Conductivity µS/cm	2	336	541	538	807	602	624	591	749	802	825	835	813
Total Dissolved Solids	1 to 2	222	338	340	528	390	386	374	476	536	560	548	547
Total Suspended Solids	3	9	6.6	6.2	<3	<3	<3	<3	<3	<3	<3	<3	<3
Turbidity NTU	0.1				0.91	1.25	1.01	0.77	1.41	0.79	1.03	1.22	0.61
Dissolved Anions													
Bromide	0.05 to 2.495	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.69	<0.76	<0.5	<0.25
Chloride	0.5 to 1	1.41	2.48	2.45	7.02	3.71	3.23	2.8	3.77	8.1	9	8.6	6.6
Fluoride	0.02 to 0.4	0.093		0.116	0.094	0.116	0.113	0.106	0.101	<0.2	<0.2	<0.2	<0.1
Sulphate	0.5 to 1	30.3	66.5	61.4	134	85.3	86.2	74.5	111	137	151	156	157
Nutrients													
Ammonia (Total)	0.005 to 0.05	0.023	0.031	0.024	0.031	<0.02	0.024	<0.005	0.0319	0.0269	0.0168	0.0144	0.0193
Nitrate (as N)	0.005 to 0.1	0.033	0.0389	0.0322	0.224	0.14	0.0677	0.0905	0.29	0.448	0.32	0.417	0.357
Nitrite (as N)	0.001 to 0.02	<0.001	0.0022	<0.001	0.0029	0.0026	0.0015	<0.001	0.002	<0.01	<0.01	<0.01	<0.005
Nitrogen (Dissolved)	0.05 to 0.1												0.74
Nitrogen (Total)	0.0025 to 0.11							0.618	0.491	0.779	0.599	0.748	0.628
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.247	0.335	0.177	0.299	0.277	0.221	0.527	0.199	0.331	0.279	0.331	0.271
Orthophosphate (Dissolved)	0.001 to 0.01	0.0088	0.0192	0.015	0.0104	0.0172	0.0279	0.0169	0.0155	0.0286			
Phosphorus - Dissolved	0.002 to 0.02			0.0169				0.019			0.0196	0.0128	0.0217
Phosphorus - Total	0.002 to 0.02	0.025	0.0315	0.0258	0.0257	0.0222	0.0335	0.0233	0.0208	0.0402	0.029	0.0198	0.0207
Cyanide													
Cyanide (Free)	0.005				<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005
Cyanide (Total)	0.005	0.0055	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005		<0.005	<0.005
Cyanide (WAD)	0.005	<0.005			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005
Dissolved Metals													
Aluminum	0.001 to 0.025	0.006	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.01	<0.005
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.0005
Arsenic	0.0001 to 0.0025	0.00057	0.00095	0.00075	<0.001	0.00076	0.00075	0.00069	<0.001	0.00051	<0.001	<0.001	0.00052
Barium	5E-005 to 0.02	0.051	0.06	0.07	0.114	0.085	0.08	0.077	0.104	0.104	0.109	0.108	0.111
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.001
Bismuth	0.0005 to 0.2									<0.2	<0.2	<0.2	<0.2
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	1E-005 to 8.5E-005	<0.000017	<0.000017	<0.000017	<0.000034	<0.000017	0.000031	0.00003	<0.000034	0.000025	<0.000034	<0.000034	0.000021
Calcium	0.05 to 0.1	50.1	66.6	60.2	100	70.8	72.9	69.7	90.5	98	106	103	107
Chromium	0.0001 to 0.018	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.001
Cobalt	0.0001 to 0.0015	<0.0003	<0.0003	<0.0003	<0.0006	<0.0003	<0.0003	<0.0003	<0.0006	<0.0003	<0.0006	<0.0006	<0.0003
Copper	0.0002 to 0.006	0.0026	0.0019	0.0017	<0.002	0.002	0.0015	0.0019	<0.002	0.0013	<0.002	<0.002	0.0014
Dissolved Cadmium (by saltwater extraction)	0.00002												
Iron	0.01 to 0.03	<0.03	<0.03	<0.03	0.031	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.0005
Lithium	0.0005 to 0.025	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.01	<0.005
Magnesium	0.1	15	25.1	23.3	37.1	25.3	27.5	26.8	33.8	35.7	39.3	38.2	40
Manganese	5E-005 to 0.0015	0.00466	0.0279	0.0208	0.0542	0.0283	0.0207	0.0264	0.0388	0.0353	0.0345	0.0355	0.0336
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0122	0.0106	0.0103	0.0085	0.01	0.0099	0.0099	0.0081	0.0083	0.008	0.0082	0.0079
Nickel	0.0005 to 0.005	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.001
Phosphorus	0.05 to 0.3									<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	2	2.3	3.3	4.6	3.5	3.8	3.9	4.2	5.1	5.7	4.5	4.8
Selenium	0.0001 to 0.006	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	0.0018
Silicon	0.05									6.65	6.12	6.17	6.46
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00004	<0.00002	<0.00002	<0.00002	<0.00004	<0.00002	<0.00004	<0.00004	<0.00002
Sodium	0.05 to 2	8.9	20.3	22.5	36.5	27.2	28.3	28	36.6	37.4	41.8	40.3	40.9
Strontium	0.0001 to 0.005									0.408	0.447	0.446	0.464
Sulphur	0.5												
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0004	<0.0002	<0.0002	<0.0002	<0.0004	<0.0002	<0.0004	<0.0004	<0.0002
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.0005
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00046	0.00063	0.00056	0.00089	0.00062	0.00063	0.00067	0.0008	0.00097	0.00108	0.0011	0.00102
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.03	<0.002	0.0019	0.002	0.0018	<0.002	0.0019	0.0021	<0.002	0.0018
Zinc	0.001 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Metals													
Aluminum	0.003 to 0.025	0.107	0.0894	0.0249	<0.01	0.0186	0.0117	0.0202	0.022	0.0213	0.018	0.025	0.0237
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.0005
Arsenic	0.0001 to 0.0025	0.00059	0.00074	0.00073	<0.001	0.00078	0.00073	0.00073	<0.001	<0.0005	<0.001	<0.001	<0.0005
Barium	5E-005 to 0.02	0.052	0.063	0.073	0.116	0.089	0.079	0.081	0.099	0.106	0.112	0.111	0.106
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.001
Bismuth	0.0005 to 0.2									<0.2	<0.2	<0.2	<0.2
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	1E-005 to 8.5E-005	<0.000017	<0.000017	<0.000017	<0.000034	0.000031	0.000027	<0.000017	<0.000034	0.000036	<0.000034	<0.000034	0.000021
Calcium	0.05 to 0.1	47.7	67.8	59.3	100	72.7	71.6	70.8	89.7	98.7	105	102	101
Chromium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.001
Cobalt	0.0001 to 0.0015	<0.0003	<0.0003	<0.0003	<0.0006	<0.0003	<0.0003	<0.0003	<0.0006	<0.0003	<0.0006	<0.0006	<0.0003
Copper	0.0005 to 0.007	0.0035	0.0032	0.0022	<0.002	0.0023	0.0016	0.0022	<0.002	0.0014	<0.002	<0.002	0.0016
Iron	0.01 to 0.03	0.131	0.169	0.069	0.068	0.06	0.041	0.055	0.067	0.086	0.071	0.076	0.073
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.0005
Lithium	0.0005 to 0.025	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.01	<0.005	<0.01	<0.01	<0.005
Magnesium	0.1	14.9	25.6	22.7	37.1	26.4	27.5	28.7	33.2	36.6	41.6	38.5	38.9
Manganese	5E-005 to 0.0015	0.0125	0.0459	0.0333	0.0683	0.0352	0.0255	0.035	0.0463	0.047	0.0394	0.0433	0.0413
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0121	0.0111	0.0103	0.0084	0.0099	0.0096	0.011	0.0084	0.0089	0.0086	0.0091	0.0086
Nickel	0.0005 to 0.005	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.001
Phosphorus	0.05 to 0.3									<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	<2	2.4	3.2	4.6	3.6	3.8	4	4.2	5.2	6.4	4.6	4.5
Selenium	0.0001 to 0.006	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	0.0012
Silicon	0.05									6.74	6.21	6.28	6.21
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00004	<0.00002	<0.00002	0.000046	0.000057	<0.00002	<0.00004	<0.00004	<0.00002
Sodium	0.05 to 2	8.8	20.8	21.9	37	28.4	28	28.9	36.8	37.5	45.3	41.2	38.4
Strontium	0.0001 to 0.005									0.411	0.462	0.459	0.439
Sulphur	0.5												
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0004	<0.0002	<0.0002	<0.0002	<0.0004	<0.0002	<0.0004	<0.0004	<0.0002
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.0005
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.011
Total Cadmium (by saltwater extraction)	0.00002												
Uranium	1E-005 to 0.001	0.00046	0.00068	0.00054	0.00087	0.00061	0.00063	0.00072	0.0008	0.001	0.00117	0.00117	0.0011
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.03	<0.002	0.002	0.002	0.0022	<0.002	0.0021	0.0024	0.002	0.0018
Zinc	0.003 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Organics													
Carbon Organic (Dissolved)	0.5 to 5		6.11	5.35	5.12	6.03	5.39	5.87	5.33	5.86	5.35	4.75	4.22
Carbon Organic (Total)	0.5 to 5	8.76									4.96	4.7	4.26
Nitrogen Organic (Dissolved)	0.05 to 0.26												0.36
Nitrogen Organic (Total)	0.05 to 0.3										0.262		0.252
ALS LAB ID		**L501128**	**L532402**	**L554763**	**L623545**	**L652819**	**L678833**	**L927930**	**L956921**	**L990458**	**L995583**	**L997645**	**L999654**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		CC02	CC02	CC02	CC02	CC02	CC02	CC02	CC02	CC02	CC02	CC02	CC02
Analytes	**MDL**	**5-May-11**	**12-May-11**	**30-May-11**	**28-Jun-11**	**28-Jul-11**	**1-Sep-11**	**27-Sep-11**	**26-Oct-11**	**5-Dec-11**	**10-Jan-12**	**13-Feb-12**	**7-Mar-12**
In Situ Parameters													
Conductivity µS/cm	...	256	165	207	394	422	383		436	414	384	428	422
Oxygen Dissolved %	...	96.6	93.3	78.6	94.7	90.8	104	93.2	94.3	91.4	88.4	92.3	93.3
Oxygen Dissolved	...	12.3	12	9.08	10.3	10.2	12.4	10	12.4	12.7	12.8	12.8	12.9
pH (unitless)	...	8.13	7.91	5.8	7.97	8.07	8.1	8.26	8.26	8.23	8.25	8.08	8.09
Redox Potential mV	...	119	97.9	511	184	80	112	217	163	73.5	103	144	66
Salinity ppt	...	0.2	0.13	0.14	0.26	0.29	0.28		0.36	0.36	0.35	0.37	0.37
Specific Conductivity µS/cm	...	413	270	297	531	585	573	630	730	747	727	766	755
Temperature °C	...	5.08	4.66	8.99	11.6	10.4	7.65	12.1	3.93	1.69	0.31	1.88	1.93
Total Dissolved Solids	...	269	175	193	345	380	373		474	485	473	498	491
Turbidity NTU	...			57.4		1	0.95			8.2	1	0	0.8
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1					3							
Alkalinity (Total as CaCO3)	1 to 2	170	122	134	214	239	234	273	291	316	256	288	290
Bicarbonate Alkalinity	1 to 2										256	288	280
Carbonate Alkalinity	1 to 2										<1	<2	10.3
Color TCU	5	21.1	54.3	48.7	16	11.7	10.2	10.8	8.3	6.7	5.7	5.4	8.7
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	213	142	145	244	274	260	290	330	339	349	371	379
Hydroxide Alkalinity	1 to 2										<1	<2	<1
pH (unitless)	0.01 to 0.1	8.31		8.26	8.36	8.22	8.34	8.36	8.37	8.34	8.34	8.28	8.34
Specific Conductivity µS/cm	2	396	271	275	491	562	538	612	686	723	714	730	753
Total Dissolved Solids	1 to 2	261	196	186	328	351	333	389	429	449	472	482	510
Total Suspended Solids	3	65.5	542	195	<3	<3	4.4	<3	<3	3.3	<3	<3	<3
Turbidity NTU	0.1	26.3	192		0.84	1.06	0.92	0.54	1.43	2.02	1.12	1.05	1.07
Dissolved Anions													
Bromide	0.05 to 2.495	<0.05	<0.05	<0.25	<0.05	<0.05	<0.05	<0.05	<0.25	<0.25	<0.25	<0.25	<0.5
Chloride	0.5 to 1	2	1.42	2.5	3.02	3.19	2.82	3.49	4.5	3.9	4.3	4.8	5.1
Fluoride	0.02 to 0.4	0.078	0.072	<0.1	0.109	0.125	0.128	0.135	0.12	0.11	0.11	0.1	<0.2
Sulphate	0.5 to 1	45.4	23.8	19.3	65	71.6	67.9	84.1	100	111	126	128	141
Nutrients													
Ammonia (Total)	0.005 to 0.05	0.0122	0.0214	0.0185	0.0116	0.0109	0.009	0.0077	0.0228	0.0405	0.0232	0.053	0.0831
Nitrate (as N)	0.005 to 0.1	0.161	0.0491	<0.025	0.0886	0.0815	0.109	0.107	0.265	0.287	0.37	0.469	0.635
Nitrite (as N)	0.001 to 0.02	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	0.0015	0.0068	0.0052	0.006	0.0065	<0.01
Nitrogen (Dissolved)	0.05 to 0.1	0.4	0.56	0.48	0.44	0.37	0.36	0.29	0.26		0.45	0.84	0.96
Nitrogen (Total)	0.0025 to 0.11	0.47	2.17	0.47	0.44	0.39	0.38	0.372		0.49	0.593	0.73	0.972
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.309	1.75	0.47	0.351	0.308	0.215	0.263	0.266	0.27	0.217	0.25	0.337
Orthophosphate (Dissolved)	0.001 to 0.01			0.0257	0.0218	0.0239			0.0224				
Phosphorus - Dissolved	0.002 to 0.02	0.0242	0.0517	0.0317	0.0258	0.0283	0.0306	0.0419	0.0263	0.0372	0.0279	0.0272	0.0829
Phosphorus - Total	0.002 to 0.02	0.206	0.87	0.249	0.0314	0.0333	0.0341	0.0467	0.0321	0.045	0.033	0.0327	0.0921
Cyanide													
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	0.008	0.0217	0.0124	0.0051	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	0.001 to 0.025	<0.005	0.0199	0.0118	<0.005	<0.005	<0.005	<0.005	<0.003	<0.003	<0.003	<0.003	<0.003
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00059	0.0007	0.00078	0.00073	0.00071	0.00069	0.0007	0.00057	0.0005	0.00048	0.00047	0.00063
Barium	5E-005 to 0.02	0.055	0.036	0.039	0.072	0.076	0.07	0.082	0.0834	0.0902	0.0941	0.107	0.101
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.037	0.039	0.04	0.034	0.036
Cadmium	1E-005 to 8.5E-005	0.000029	0.000043	0.000028	0.000036	0.000042	<0.000017	<0.000017	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	57.1	38.1	38.5	60.7	68.2	64.2	72.2	82.5	82.7	86.5	93.2	92.9
Chromium	0.0001 to 0.018	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	0.0002 to 0.006	0.0023	0.0045	0.0043	0.0028	0.0022	0.0019	0.0018	0.00139	0.00098	0.00106	0.00118	0.00151
Dissolved Cadmium (by saltwater extraction)	0.00002												
Iron	0.01 to 0.03	<0.03	0.084	0.045	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00248	0.00321	0.00285	0.00245	0.00242
Magnesium	0.1	17.1	11.3	11.8	22.5	25.2	24.2	26.6	30	32.2	32.3	33.7	35.7
Manganese	5E-005 to 0.0015	0.00883	0.00513	0.00491	0.0131	0.0171	0.0139	0.0169	0.0233	0.0308	0.0305	0.0308	0.0311
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0088	0.0078	0.0081	0.0088	0.0096	0.0102	0.0101	0.00958	0.00941	0.00898	0.00931	0.00931
Nickel	0.0005 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	2.4	2.7	2.4	3.4	3.7	3.5	4.2	4.14	4.31	4.07	4.63	6.24
Selenium	0.0001 to 0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00029	0.00039	0.00047	0.00054	0.00064
Silicon	0.05	6.86	6.21	7.48	7.76	7.96	8.19	8.62	8.05	8.19	7.6	7.3	7.19
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	11.2	7.3	7.8	23.1	26.3	25	31.9	31.4	35.2	32.8	30.1	30.1
Strontium	0.0001 to 0.005	0.223	0.148	0.156	0.29	0.314	0.297	0.331	0.326	0.401	0.386	0.376	0.377
Sulphur	0.5												
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.012	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00049	0.00025	0.00022	0.00047	0.00055	0.00053	0.00059	0.000668	0.000749	0.000768	0.000894	0.000989
Vanadium	0.001 to 0.03	0.0015	0.0018	0.0018	0.0018	0.0017	0.0018	0.0021	0.0016	0.0016	0.0015	0.0018	0.0023
Zinc	0.001 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0043	<0.003	0.0032	0.0256	<0.003
Total Metals													
Aluminum	0.003 to 0.025	1.32	11.5	3.3	0.058	0.0551	0.0315	<0.025	0.0302	0.0583	0.0648	0.0209	0.0224
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	0.0001
Arsenic	0.0001 to 0.0025	0.00087	0.00409	0.00183	0.00074	0.00072	0.0007	0.00061	0.00054	0.00048	0.00049	0.00051	0.00059
Barium	5E-005 to 0.02	0.072	0.183	0.081	0.071	0.08	0.075	0.082	0.083	0.088	0.0953	0.111	0.103
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.042	0.04	0.044	0.044	0.044
Cadmium	1E-005 to 8.5E-005	0.000039	0.000116	0.000051	<0.000017	<0.000017	<0.000017	<0.000017	<0.00001	<0.00001	<0.00001	0.00001	<0.00001
Calcium	0.05 to 0.1	56.5	52.6	41.6	59.6	70.1	65	71.3	81.4	82.6	87.7	96.4	92.9
Chromium	0.0001 to 0.005	0.0025	0.0211	0.0059	<0.001	<0.001	<0.001	<0.001	0.00017	0.0002	0.00036	0.00253	0.00026
Cobalt	0.0001 to 0.0015	0.00116	0.0106	0.00292	<0.0003	<0.0003	<0.0003	<0.0003	<0.0001	<0.0001	0.0001	<0.0001	<0.0001
Copper	0.0005 to 0.007	0.0098	0.0658	0.0209	0.0034	0.0028	0.0023	0.0019	0.00165	0.00151	0.00154	0.00154	0.00185
Iron	0.01 to 0.03	1.9	17	4.32	0.101	0.102	0.067	0.059	0.076	0.117	0.132	0.076	0.071
Lead	5E-005 to 0.0025	<0.0005	0.00183	0.00056	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	<0.005	0.0073	<0.005	<0.005	<0.005	<0.005	<0.005	0.00287	0.00303	0.0029	0.00264	0.00275
Magnesium	0.1	17.5	21.1	14	22.2	26	25.2	26.9	30	31.5	32.9	35.2	36
Manganese	5E-005 to 0.0015	0.0735	0.631	0.14	0.0193	0.0256	0.0201	0.0213	0.0284	0.0399	0.0462	0.0393	0.0367
Mercury	1E-005 to 5E-005	<0.00001	0.000033	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0095	0.0084	0.009	0.0103	0.0112	0.0109	0.0103	0.00994	0.00941	0.0095	0.0107	0.00996
Nickel	0.0005 to 0.005	0.0023	0.017	0.0049	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	0.00225	<0.0005
Phosphorus	0.05 to 0.3	<0.3	1.19	0.4	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	2.6	4.8	2.9	3.4	3.9	3.8	4.2	4.13	4.26	4.21	4.77	6.48
Selenium	0.0001 to 0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00026	0.00033	0.00039	0.00056	0.0006
Silicon	0.05	9.67	30.7	14.5	7.78	8.29	8.46	8.49	8.08	8.16	7.84	7.62	7.29
Silver	1E-005 to 0.0001	<0.00002	0.000076	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	11	8.2	8.1	23.2	27.5	26.8	31.2	31.2	34.2	34	31.5	31
Strontium	0.0001 to 0.005	0.225	0.221	0.175	0.289	0.327	0.312	0.329	0.33	0.393	0.39	0.399	0.387
Sulphur	0.5												
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	0.06	0.518	0.156	<0.01	<0.01	0.013	<0.01	0.015	<0.01	0.012	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002												
Uranium	1E-005 to 0.001	0.00051	0.00055	0.00035	0.00056	0.0006	0.00058	0.00061	0.00067	0.000744	0.000792	0.000956	0.00104
Vanadium	0.001 to 0.03	0.0069	0.0504	0.0161	0.0023	0.0021	0.002	0.0021	0.0017	0.0019	0.0019	0.0022	0.0024
Zinc	0.003 to 0.006	<0.005	0.0335	0.0097	<0.005	<0.005	<0.005	<0.005	<0.003	<0.003	0.0084	0.0033	0.0033
Organics													
Carbon Organic (Dissolved)	0.5 to 5	10.5	16.5	17.4	9.35	7.2	6.9	6.76	5.6	5.1	4.6	4.61	5.22
Carbon Organic (Total)	0.5 to 5	10.6	33.3	17.7	9.4	7.43	6.92	6.76	6.45	5.02	4.61	4.76	5.27
Nitrogen Organic (Dissolved)	0.05 to 0.26	0.227	0.49	0.461	0.34	0.278	0.242	0.174	<0.052		<0.09	0.31	0.24
Nitrogen Organic (Total)	0.05 to 0.3	0.297	1.73	0.451	0.34	0.298	0.262	0.164	0.095	0.158	0.194	<0.3	0.254
ALS LAB ID		**L1002049**	**L1005044**	**L1011001**	**L1025075**	**L1038168**	**L1053400**	**L1065234**	**L1077732**	**L1092368**	**L1103104**	**L1114029**	**L1122039**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		CC02	CC02	CC02	CC02	CC02	CC02	CC02	CC02	CC02	CC02	CC02	CC02
Analytes	**MDL**	**10-Apr-12**	**26-Apr-12**	**4-May-12**	**10-May-12**	**16-May-12**	**24-May-12**	**12-Jul-12**	**8-Aug-12**	**5-Sep-12**	**11-Oct-12**	**5-Nov-12**	**4-Dec-12**
In Situ Parameters													
Conductivity µS/cm	...	479	127	200	223	254	319	368	454	4.4	425	293	433
Oxygen Dissolved %	...		96.3	90.8	94.7	90.7	95	95.7	95.3	103	96.1	100	85.7
Oxygen Dissolved	...	15.7	12.9	11.5	11.3	10.6	10.6	10.4	9.51	11.4	11.8	11.9	11
pH (unitless)	...	8.36	7.85	8.4	8.25	8.25	8.31	8.14	8.17	8.29	8.14	8.14	8.26
Redox Potential mV	...	106	130	91.2	136	155	130	132	91.1	85.9	-233	97.4	176
Salinity ppt	...	0.37	0.1	0.15	0.16	0.18	0.21		0.27	0.29	0.32	0.21	0.34
Specific Conductivity µS/cm	...	762	219	320	333	370	442	496	557	603	661	434	708
Temperature °C	...	5.51	3.14	5.4	7.68	8.61	10.4	11.5	15.3	10.8	6.32	7.89	4.66
Total Dissolved Solids	...	495	142	208	216	240	287		362	392	430	282	460
Turbidity NTU	...		167	9.6	3.4	2.4	1.8	0.2	2.6	1.1	0.9	1	0
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1									<1			
Alkalinity (Total as CaCO3)	1 to 2	314	97.9	128	136	150	182	199	248	259	283	284	290
Bicarbonate Alkalinity	1 to 2	287	97.9	128	136	150	182	199	238	251	283	284	284
Carbonate Alkalinity	1 to 2	26.8	<2	<2	<1	<1	<1	<1	10.8	7.9	<2	<1	6
Color TCU	5	7.1	55.9	41.2	33.4	28.4	19.7	15	13	9.5	8	8.6	6.8
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	387	115	164	164	177	209	235	261	285	323	316	331
Hydroxide Alkalinity	1 to 2	<1	<2	<2	<1	<1	<1	<1	<1	<1	<2	<1	<1
pH (unitless)	0.01 to 0.1	8.54	7.97	8.19	8.33	8.31	8.18	8.38	8.45	8.46	8.27	8.41	8.33
Specific Conductivity µS/cm	2	759	215	312	337	362	432	480	556	593	618	668	670
Total Dissolved Solids	1 to 2	509	162	221	218	244	291	336	368	389	425	460	449
Total Suspended Solids	3	3.3	611	23.3	10.7	6.8	3.3	5.3	3.1	<3	<3	<3	<3
Turbidity NTU	0.1	0.81	184	7.81	2.4	1.76	1.12	1.37	1.5	0.92	0.59	0.83	0.47
Dissolved Anions													
Bromide	0.05 to 2.495	<0.25	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.25
Chloride	0.5 to 1	5.9	1.32	2.29	2.06	2.16	2.68	2.46	2.83	2.92	3.23	<5	4.1
Fluoride	0.02 to 0.4	<0.1	0.079	0.096	0.09	0.093	0.102	0.118	0.134	0.135	0.13	0.27	0.1
Sulphate	0.5 to 1	135	19.1	39.9	45	52.8	69	63	78.5	80.7	94.5	96.7	105
Nutrients													
Ammonia (Total)	0.005 to 0.05	0.0099	0.0095	0.0062	<0.005	0.0069	<0.005	0.0072	0.008	0.0082	0.0089	0.0183	0.0272
Nitrate (as N)	0.005 to 0.1	0.331	0.0341	0.0495	0.0213	0.0624	0.0496	0.103	0.0938	0.108	0.0689	0.236	0.277
Nitrite (as N)	0.001 to 0.02	<0.005	0.0045	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	0.0018	0.007	0.012	0.0101
Nitrogen (Dissolved)	0.05 to 0.1	0.55	0.61	0.38	0.32	0.32	0.25	0.18	0.42	0.36	0.37	0.56	0.588
Nitrogen (Total)	0.0025 to 0.11	0.502	0.593	0.508	0.345	0.368	0.331		0.336		0.318	0.497	0.526
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.171	0.555	0.459	0.324	0.305	0.281	0.274	0.242	0.232	0.242	0.249	0.24
Orthophosphate (Dissolved)	0.001 to 0.01										0.0224		
Phosphorus - Dissolved	0.002 to 0.02	0.0111	0.0567	0.0312	0.0186	0.0172	0.0145	0.03	0.0411	0.0353	0.0261	0.0325	0.0269
Phosphorus - Total	0.002 to 0.02	0.0202	0.742	0.0916	0.0415	0.0296	0.02	0.0384	0.0495	0.0374	0.031	0.0364	0.0301
Cyanide													
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	0.0119	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	0.001 to 0.025	<0.003	0.0165	0.0079	0.007	0.0044	0.0029	0.0019	0.0049	0.0015	<0.001	<0.001	<0.001
Antimony	0.0001 to 0.0025	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	0.00012	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.0005	0.00052	0.00064	0.00057	0.00052	0.00061	0.00072	0.00078	0.00072	0.00053	0.0005	0.00048
Barium	5E-005 to 0.02	0.108	0.0309	0.0417	0.048	0.0513	0.0589	0.0638	0.0703	0.0756	0.0815	0.0866	0.0913
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.036	<0.01	0.013	0.014	0.015	0.019	0.027	0.039	0.042	0.039	0.041	0.042
Cadmium	1E-005 to 8.5E-005	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	93.8	32.3	42.9	42.5	45.7	53.6	60.1	63.6	71.7	79.4	79	84.2
Chromium	0.0001 to 0.018	<0.0001	0.00015	0.00014	0.0002	0.00015	0.00012	<0.0001	<0.0001	0.00011	<0.0001	<0.0001	0.00014
Cobalt	0.0001 to 0.0015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	0.0002 to 0.006	0.00122	0.0042	0.00403	0.00376	0.0035	0.00301	0.00274	0.00214	0.00137	0.00136	0.00113	0.00112
Dissolved Cadmium (by saltwater extraction)	0.00002												
Iron	0.01 to 0.03	<0.03	0.116	0.04	<0.03	<0.03	0.011	0.014	0.017	0.02	0.019	0.017	0.021
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00267	<0.0005	0.00125	0.00118	0.00132	0.00143	0.00178	0.00255	0.003	0.00229	0.00251	0.00289
Magnesium	0.1	37.1	8.38	13.9	14.2	15.3	18.3	20.6	24.9	25.8	30.4	28.8	29.3
Manganese	5E-005 to 0.0015	0.0347	0.00626	0.00305	0.00391	0.00465	0.00655	0.0132	0.0159	0.0181	0.0212	0.0223	0.0236
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0086	0.00803	0.0099	0.00957	0.00935	0.00885	0.00935	0.00989	0.0101	0.00945	0.00839	0.00923
Nickel	0.0005 to 0.005	<0.0005	0.00054	0.00055	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.05	<0.3	<0.3	<0.05
Potassium	0.05 to 2	4.13	2.19	2.57	2.3	2.24	2.6	2.94	3.72	4.04	3.71	4.04	4.17
Selenium	0.0001 to 0.006	0.00062	0.00035	0.0004	0.00039	0.00038	0.00053	0.00037	0.00034	0.00025	0.00023	0.00022	0.00028
Silicon	0.05	6.31	5.44	6.49	6.32	6.47	6.57	7.84	8.12	7.86	8.2	8.06	7.77
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	30.9	4.5	9.22	10.2	11.5	15.3	19.7	27.5	30.3	31	30.4	36.2
Strontium	0.0001 to 0.005	0.403	0.108	0.175	0.176	0.2	0.231	0.254	0.281	0.307	0.328	0.33	0.356
Sulphur	0.5												34.5
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.000979	0.000167	0.00031	0.000298	0.000318	0.000407	0.000434	0.000597	0.000578	0.000672	0.000659	0.000714
Vanadium	0.001 to 0.03	0.002	0.0014	0.0016	0.0016	0.0015	0.0017	0.002	0.0021	0.0019	0.0016	0.0015	0.0015
Zinc	0.001 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	0.0049	0.0029	0.0016	0.0019	<0.001	<0.001	<0.001
Total Metals													
Aluminum	0.003 to 0.025	0.01	8.32	0.425	0.219	0.107	0.0575	0.0987	0.0829	0.0382	0.0172	0.0231	0.0146
Antimony	0.0001 to 0.0025	<0.0001	0.00021	0.00011	<0.0001	0.00011	<0.0001	0.0001	0.00012	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00051	0.00304	0.00084	0.0006	0.00059	0.00064	0.00073	0.00075	0.00074	0.00054	0.00055	0.00046
Barium	5E-005 to 0.02	0.104	0.142	0.0469	0.0482	0.0546	0.0566	0.0648	0.0748	0.0773	0.0779	0.0913	0.0859
Beryllium	0.0001 to 0.005	<0.0001	0.00018	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.04	0.017	0.017	0.018	0.021	0.023	0.03	0.047	0.048	0.039	0.046	0.043
Cadmium	1E-005 to 8.5E-005	<0.00001	0.000065	0.000012	<0.00001	<0.00001	<0.00001	0.000016	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	93.8	39.2	42.3	41.6	46.8	50.3	61.8	63.3	71.9	75.9	79.4	80.4
Chromium	0.0001 to 0.005	0.00019	0.015	0.00101	<0.0006	0.00041	0.00027	0.00034	0.0003	0.00033	0.00016	0.00014	0.00019
Cobalt	0.0001 to 0.0015	<0.0001	0.00773	0.00045	0.00021	0.00014	<0.0001	0.00015	0.00012	<0.0001	<0.0001	<0.0001	<0.0001
Copper	0.0005 to 0.007	0.00145	0.0528	0.0067	0.00462	0.00469	0.00344	0.0035	0.00313	0.00229	0.00158	0.00154	0.00334
Iron	0.01 to 0.03	0.046	12.2	0.686	0.27	0.17	0.09	0.149	0.121	0.082	0.049	0.062	0.053
Lead	5E-005 to 0.0025	<0.00005	0.00142	0.000089	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000051	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00252	0.00495	0.00149	0.00121	0.00154	0.00147	0.00176	0.00283	0.00298	0.00192	0.00281	0.00294
Magnesium	0.1	37.1	14.7	14	14	15.9	17.7	21	25	26.3	27	28.1	27.8
Manganese	5E-005 to 0.0015	0.0364	0.426	0.0221	0.0115	0.00985	0.0102	0.0202	0.0249	0.0245	0.0251	0.0295	0.0272
Mercury	1E-005 to 5E-005	<0.00001	0.000035	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00854	0.0106	0.00952	0.00967	0.0101	0.00911	0.0102	0.0107	0.0107	0.00932	0.00914	0.00889
Nickel	0.0005 to 0.005	<0.0005	0.0133	0.00125	0.00071	0.00057	<0.0005	0.00059	0.00057	<0.0005	<0.0005	<0.0005	<0.0005
Phosphorus	0.05 to 0.3	<0.3	0.83	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.05	<0.3	<0.3	<0.05
Potassium	0.05 to 2	4.1	3.48	2.54	2.23	2.34	2.52	3	3.75	4.28	3.72	4.1	3.94
Selenium	0.0001 to 0.006	0.00061	0.0006	0.00035	0.00038	0.00043	0.00052	0.00037	0.00029	0.00022	0.00023	0.00024	0.00027
Silicon	0.05	6.33	23.1	7.31	6.54	6.87	6.21	8.25	8.35	8.13	7.8	8.16	7.47
Silver	1E-005 to 0.0001	<0.00001	0.000048	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	30	4.79	9.01	9.83	12	14.9	20.2	27.2	31.7	30.2	30.9	29.9
Strontium	0.0001 to 0.005	0.393	0.152	0.166	0.173	0.208	0.229	0.262	0.303	0.319	0.319	0.345	0.329
Sulphur	0.5												34.3
Thallium	1E-005 to 0.001	<0.00001	0.000034	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	0.375	0.023	0.01	<0.01	<0.01	0.012	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002												
Uranium	1E-005 to 0.001	0.000929	0.000394	0.000311	0.000343	0.000343	0.00044	0.000473	0.000652	0.00061	0.00064	0.000684	0.000684
Vanadium	0.001 to 0.03	0.002	0.0359	0.0034	0.0022	0.0021	0.0021	0.0024	0.0026	0.0023	0.0017	0.0017	0.0017
Zinc	0.003 to 0.006	<0.003	0.0238	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics													
Carbon Organic (Dissolved)	0.5 to 5	5.05	16.2	13.5	10.3	10.4	9.33	7.97	6.7	5.81	5.77	5.49	4.79
Carbon Organic (Total)	0.5 to 5	5.13	26.6	13.6	10.8	10.6	9.47	8.06	6.91	5.82	5.75	5.51	4.88
Nitrogen Organic (Dissolved)	0.05 to 0.26	0.21	0.562	0.324	0.294	0.25	0.196	0.07	0.318	0.242	0.285	0.29	0.27
Nitrogen Organic (Total)	0.05 to 0.3	0.161	0.545	0.453	0.324	0.298	0.281	0.266	0.234	0.223	0.233	0.231	0.212
ALS LAB ID		**L1133342**	**L1140194**	**L1143149**	**L1146570**	**L1148880**	**L1152500**	**L1178283**	**L1191600**	**L1205273**	**L1222966**	**L1233797**	**L1245799**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C3.10 - CC02
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Site ID		CC02	CC02	CC02	CC02	CC02	CC02	CC02	CC02	CC02	CC02	CC02	CC02
Analytes	MDL	10-Jan-13	5-Feb-13	5-Mar-13	2-Apr-13	6-May-13	4-Jun-13	2-Jul-13	6-Aug-13	3-Sep-13	8-Oct-13	6-Nov-13	4-Dec-13
In Situ Parameters													
Conductivity µS/cm	...	384	0.397	422	555	178	264	349	425		633	404	365
Oxygen Dissolved %	...	90.3	90.4	107		89.4	91.6	95.7	104	85.9	91.6	94.5	98
Oxygen Dissolved	...	12.9	12.6	14.2		9.9	9.58	9.27	10.4	9.1	10.3	12.2	14.3
pH (unitless)	...	8.65	8.08	8.46	8.18	7.95	8.22	8.19	8.13	8.17	8.24	8.38	8.06
Redox Potential mV	...	109	153	80.4	144	214	110	104	222	233	82.2	74.5	110
Salinity ppt	...	0.34	0.34	0.35	0.42	0.12	0.16	0.2	0.25	0.3	0.31	0.32	0.33
Specific Conductivity µS/cm	...	716	713	714	850	245	339	414	521	616	451	662	697
Temperature °C	...	0.73	1.79	3.6	6.83	10.8	13.3	16.9	15.3	12.7	9.96	4.65	0.04
Total Dissolved Solids	...	465	463	464	552	159	220	269	339	400	412	430	453
Turbidity NTU	...	0.5	0.7	0.6	0.8	134	17.5	3	1.2		0	1.2	0.6
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1											<1	
Alkalinity (Total as CaCO3)	1 to 2	298	283	290	313	110	152	170	209	267	276	287	291
Bicarbonate Alkalinity	1 to 2	298	283	273	300	110	152	164	202	263		283	291
Carbonate Alkalinity	1 to 2	<2	<1	17	13	<2	<1	6.4	7.5	3.6		3.8	<2
Color TCU	5	5.4	6.4	9	7.7	41.3	34.1	25.4	12.2	9.8	9.3	7.9	6.2
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	335	347	374	387	116	162	194	233	263	301	298	312
Hydroxide Alkalinity	1 to 2	<2	<1	<1	<1	<2	<1	<1	<1	<1		<1	<2
pH (unitless)	0.01 to 0.1	8.3	8.31	8.41	8.36	8.25	8.38	8.37	8.41	8.41	8.46	8.37	8.18
Specific Conductivity µS/cm	2	660	695	741	797	229	328	391	505	580	611	666	623
Total Dissolved Solids	1 to 2	426	444	492	533	151	222	272	334	380	391	431	428
Total Suspended Solids	3	<3	<3	4	<3	346	41.7	10.9	<3	<3	<3	<3	<3
Turbidity NTU	0.1	1.01	0.66	0.66	1.13	123	14.2	1.56	0.66	1.13	0.75	1.31	0.67
Dissolved Anions													
Bromide	0.05 to 2.495	<0.25	<0.5	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05
Chloride	0.5 to 1	3.9	<5	5.44	5.4	1.24	2.14	2.38	2.86	3.25	3.75	5	3.95
Fluoride	0.02 to 0.4	0.17	<0.2	0.117	0.27	0.101	0.113	0.126	0.13	0.13	0.136	0.12	0.132
Sulphate	0.5 to 1	110	120	131	153	18.3	24.8	31	56	66.1	73.8	85.2	85.9
Nutrients													
Ammonia (Total)	0.005 to 0.05	0.0151	0.03	0.0151	0.021	0.0148	0.0061	0.0087	0.0103	0.0106	0.006	0.0102	0.0279
Nitrate (as N)	0.005 to 0.1	0.326	0.41	0.385	0.518	0.0199	0.042	0.0625	0.0719	0.166	0.16	0.311	0.402
Nitrite (as N)	0.001 to 0.02	0.0073	<0.01	0.0047	0.016	<0.001	<0.001	<0.001	<0.001	<0.001	0.0018	0.0056	0.0032
Nitrogen (Dissolved)	0.05 to 0.1	0.527	0.671	0.616	0.758				0.361	0.375			
Nitrogen (Total)	0.0025 to 0.11	0.502	0.669	0.655	0.834	1.37	0.364	0.453	0.377	0.394	0.36	0.499	
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.208	0.291	0.337	0.3	1.62	0.426	0.391	0.277	0.332	0.237	0.285	0.27
Orthophosphate (Dissolved)	0.001 to 0.01										0.0185	0.0195	0.0408
Phosphorus - Dissolved	0.002 to 0.02	0.0397	0.0345	0.0544	0.0367	0.0335	0.0288	0.058	0.0206	0.0326		0.0216	0.0454
Phosphorus - Total	0.002 to 0.02		0.0375	0.0587	0.0449	0.844	0.116	0.0343	0.0343	0.0368	0.0276	0.0278	0.049
Cyanide													
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	0.001 to 0.025	0.0012	0.0012	0.001	<0.001	0.0156	0.0066	0.0035	0.0015	0.0015	0.0019	<0.001	<0.001
Antimony	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00049	0.00048	0.0005	0.00056	0.00061	0.00072	0.00091	0.00079	0.00073	0.00066	0.00057	0.00047
Barium	5E-005 to 0.02	0.0901	0.0965	0.0929	0.108	0.031	0.0451	0.0564	0.07	0.0791	0.0846	0.0921	0.0863
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.037	0.04	0.035	0.044	<0.01	0.014	0.02	0.036	0.044	0.042	0.043	0.039
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	82.7	85.3	90.4	96.6	31.6	43.1	49.9	58.3	64.7	76.5	75.6	75.9
Chromium	0.0001 to 0.018	<0.0001	<0.0001	<0.0001	<0.0001	0.00015	0.00015	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	0.0002 to 0.006	0.00105	0.00123	0.0016	0.00126	0.00391	0.00357	0.00297	0.00223	0.00177	0.00139	0.00115	0.00101
Dissolved Cadmium (by saltwater extraction)	0.00002												
Iron	0.01 to 0.03	0.016	0.017	0.022	0.015	0.048	0.02	0.017	0.018	0.018	0.017	0.015	0.013
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.0022	0.00306	0.00285	0.00198	0.00093	0.00102	0.00133	0.00212	0.00353	0.00161	0.00296	0.00268
Magnesium	0.1	31.2	32.6	36	35.3	8.93	13.3	16.7	21.3	24.8	26.6	26.6	29.7
Manganese	5E-005 to 0.0015	0.0249	0.0236	0.0239	0.0302	0.00501	0.00363	0.00726	0.0129	0.0148	0.0154	0.0213	0.0194
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0088	0.00945	0.00884	0.00866	0.00982	0.00954	0.01	0.0105	0.0104	0.00958	0.00861	0.0098
Nickel	0.0005 to 0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00053	0.00052	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Phosphorus	0.05 to 0.3	<0.05	<0.05	0.056	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	0.05 to 2	4.16	4.69	6.53	4.92	2.1	2.35	3.05	3.56	4.02	4.15	4.38	4.24
Selenium	0.0001 to 0.006	0.00038	0.0005	0.00057	0.00133	0.00024	0.00023	0.00023	0.00027	0.00027	0.00026	0.00026	0.00038
Silicon	0.05	7.49	7.25	7.03	6.76	6.38	7.2	7.77	7.9	8.36	7.98	8.29	7.89
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	31	33.3	32.2	34.4	5.45	8.7	12.8	24.4	30.7	30.6	31.3	28.7
Strontium	0.0001 to 0.005	0.364	0.386	0.391	0.407	0.124	0.175	0.221	0.27	0.297	0.322	0.325	0.33
Sulphur	0.5	36.4	38.3	42.2	47.6	6.07	8.01	10.2	18.1	21.4	24.1	29	28
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.000771	0.000817	0.000877	0.00101	0.000169	0.000278	0.000363	0.000537	0.000618	0.000586	0.000638	0.000716
Vanadium	0.001 to 0.03	0.0017	0.0017	0.0019	0.0021	0.0017	0.0019	0.0022	0.0023	0.0022	0.002	0.0016	0.0016
Zinc	0.001 to 0.006	0.002	0.0011	<0.001	0.0019	<0.001	0.0015	0.0017	0.0011	<0.001	<0.001	<0.001	<0.001
Total Metals													
Aluminum	0.003 to 0.025	0.0093	0.0168	0.0062	0.0159	7.23	0.581	0.283	0.0505	0.0372	0.0268	0.0429	0.0263
Antimony	0.0001 to 0.0025	0.00011	0.00011	<0.0001	<0.0001	0.0002	0.00013	0.00014	<0.0001	<0.0001	<0.0001	0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.0005	0.00049	0.00057	0.00053	0.00301	0.00096	0.00101	0.00079	0.00069	0.00068	0.00068	0.00051
Barium	5E-005 to 0.02	0.087	0.0965	0.0948	0.105	0.13	0.0558	0.0605	0.0734	0.076	0.0886	0.0946	0.0886
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	0.00017	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.04	0.045	0.038	0.048	0.011	0.017	0.023	0.043	0.047	0.046	0.043	0.042
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	0.000015	0.000012	0.000064	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	82.5	88	94.5	93.3	39.2	43.1	50.2	61.9	65.8	76.5	78	78
Chromium	0.0001 to 0.005	0.00016	0.00018	0.00011	0.00015	0.0135	0.0012	0.0006	0.00033	0.00019	0.00017	0.00023	0.00015
Cobalt	0.0001 to 0.0015	<0.0001	<0.0001	<0.0001	<0.0001	0.00731	0.00058	0.00031	0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	0.0005 to 0.007	0.00142	0.00174	0.00175	0.00162	0.0483	0.00679	0.00491	0.00288	0.00212	0.00176	0.00165	0.00136
Iron	0.01 to 0.03	0.035	0.055	0.042	0.053	11	0.838	0.425	0.097	0.093	0.068	0.098	0.062
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	0.00132	0.000118	0.000057	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00241	0.00314	0.00315	0.00202	0.00472	0.00168	0.00166	0.00222	0.00375	0.00162	0.00257	0.00278
Magnesium	0.1	31.4	32.7	35.3	33.9	14.7	13.6	17.3	22.5	25.2	26.7	28.8	29
Manganese	5E-005 to 0.0015	0.0274	0.0277	0.0256	0.0336	0.381	0.0296	0.0231	0.0209	0.0221	0.0212	0.0318	0.0247
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	0.000029	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00939	0.0101	0.00968	0.0087	0.00835	0.0112	0.011	0.0114	0.0108	0.0102	0.00933	0.0102
Nickel	0.0005 to 0.005	<0.0005	<0.0005	<0.0005	<0.0005	0.0122	0.00156	0.00096	0.00052	<0.0005	<0.0005	0.00052	<0.0005
Phosphorus	0.05 to 0.3	<0.05	<0.05	0.064	<0.05	0.816	0.081	0.053	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	0.05 to 2	4.26	4.85	6.78	4.97	3.27	2.44	3.22	3.84	4.06	4.13	5.31	4.53
Selenium	0.0001 to 0.006	0.00052	0.00052	0.00057	0.00118	0.00042	0.00026	0.00025	0.00026	0.00025	0.00025	0.00023	0.00037
Silicon	0.05	7.57	7.34	7.16	6.67	21.1	8.41	8.63	8.32	8.41	8.17	8.56	8.06
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	0.000043	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	31.6	34.2	32.6	33.4	5.73	9.14	13.3	25.6	31.2	31.7	31.7	29.5
Strontium	0.0001 to 0.005	0.357	0.39	0.417	0.404	0.156	0.184	0.236	0.292	0.304	0.334	0.336	0.333
Sulphur	0.5	37.4	40.4	44.8	47.2	6.16	8.29	10.2	19.5	22.3	25.1	30.6	29.1
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	0.000028	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	0.245	0.024	0.012	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002												
Uranium	1E-005 to 0.001	0.000809	0.000872	0.000957	0.001	0.000353	0.000306	0.00039	0.000582	0.000639	0.000616	0.000676	0.000789
Vanadium	0.001 to 0.03	0.0018	0.002	0.0022	0.0022	0.0319	0.0044	0.0034	0.0026	0.0024	0.0023	0.0023	0.0018
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	0.0218	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics													
Carbon Organic (Dissolved)	0.5 to 5	4.56	4.45	5.32	5.42	11.9	12	11	7.57	6.48	5.37	5.46	4.86
Carbon Organic (Total)	0.5 to 5	4.41	4.53	5.25	5.48	13.2	12.9	11.4	7.62	6.29	5.79	5.72	5
Nitrogen Organic (Dissolved)	0.05 to 0.26				0.2								
Nitrogen Organic (Total)	0.05 to 0.3	0.193	0.261	0.322	0.279								
ALS LAB ID		**L1256678**	**l1265809**	**L1275746**	**L1285503**	**L1298960**	**L1311741**	**L1326032**	**L1344180**	**L1357647**	**L1376311**	**L1388680**	**L1399806**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		CC02	CC02
Analytes	**MDL**	**10-Apr-14**	**10-Sep-14**
In Situ Parameters			
Conductivity µS/cm	...	462	387
Oxygen Dissolved %	...	102	90.1
Oxygen Dissolved	...	12.9	10.3
pH (unitless)	...	8.41	8.25
Redox Potential mV	...	129	170
Salinity ppt	...	0.36	0.27
Specific Conductivity µS/cm	...	740	552
Temperature °C	...	5.28	9.36
Total Dissolved Solids	...	481	359
Turbidity NTU	...	0.6	
Physical Tests			
Acidity to pH 8.3 (as CaCO3)	1		
Alkalinity (Total as CaCO3)	1 to 2	312	267
Bicarbonate Alkalinity	1 to 2	290	263
Carbonate Alkalinity	1 to 2	21.3	4.3
Color TCU	5		
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	379	275
Hydroxide Alkalinity	1 to 2	<1	<1
pH (unitless)	0.01 to 0.1	8.42	8.32
Specific Conductivity µS/cm	2	762	567
Total Dissolved Solids	1 to 2	513	381
Total Suspended Solids	3	<3	<3
Turbidity NTU	0.1	1.69	0.7
Dissolved Anions			
Bromide	0.05 to 2.495	<0.25	<0.05
Chloride	0.5 to 1	6.5	2.76
Fluoride	0.02 to 0.4	0.11	0.142
Sulphate	0.5 to 1	125	67.3
Nutrients			
Ammonia (Total)	0.005 to 0.05	0.0109	0.0073
Nitrate (as N)	0.005 to 0.1	0.552	0.145
Nitrite (as N)	0.001 to 0.02	0.0058	<0.001
Nitrogen (Dissolved)	0.05 to 0.1		
Nitrogen (Total)	0.0025 to 0.11		
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.331	0.24
Orthophosphate (Dissolved)	0.001 to 0.01	0.0336	0.038
Phosphorus - Dissolved	0.002 to 0.02	0.0381	
Phosphorus - Total	0.002 to 0.02	0.0498	0.0508
Cyanide			
Cyanide (Free)	0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005
Dissolved Metals			
Aluminum	0.001 to 0.025	<0.001	<0.001
Antimony	0.0001 to 0.0025	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00054	0.00066
Barium	5E-005 to 0.02	0.0937	0.0773
Beryllium	0.0001 to 0.005	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005
Boron	0.01 to 0.1	0.038	0.041
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001
Calcium	0.05 to 0.1	94.2	68.1
Chromium	0.0001 to 0.018	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015	<0.0001	<0.0001
Copper	0.0002 to 0.006	0.00152	0.00126
Dissolved Cadmium (by saltwater extraction)	0.00002		
Iron	0.01 to 0.03	0.017	0.022
Lead	5E-005 to 0.0025	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00261	0.00211
Magnesium	0.1	34.8	25.4
Manganese	5E-005 to 0.0015	0.0275	0.0223
Mercury	1E-005 to 5E-005	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00908	0.0093
Nickel	0.0005 to 0.005	<0.0005	<0.0005
Phosphorus	0.05 to 0.3	<0.05	<0.05
Potassium	0.05 to 2	4.91	3.57
Selenium	0.0001 to 0.006	0.00098	0.00034
Silicon	0.05	6.54	7.97
Silver	1E-005 to 0.0001	<0.00001	<0.00001
Sodium	0.05 to 2	32.5	26.2
Strontium	0.0001 to 0.005	0.377	0.293
Sulphur	0.5	42.4	22
Thallium	1E-005 to 0.001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.000979	0.000545
Vanadium	0.001 to 0.03	0.0023	0.0018
Zinc	0.001 to 0.006	<0.001	<0.001
Total Metals			
Aluminum	0.003 to 0.025	0.0383	0.0305
Antimony	0.0001 to 0.0025	0.00011	0.00012
Arsenic	0.0001 to 0.0025	0.00059	0.00065
Barium	5E-005 to 0.02	0.0958	0.074
Beryllium	0.0001 to 0.005	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005
Boron	0.01 to 0.1	0.042	0.045
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001
Calcium	0.05 to 0.1	93.5	64.7
Chromium	0.0001 to 0.005	0.00019	0.00016
Cobalt	0.0001 to 0.0015	0.00011	<0.0001
Copper	0.0005 to 0.007	0.0018	0.00153
Iron	0.01 to 0.03	0.085	0.084
Lead	5E-005 to 0.0025	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00281	0.00191
Magnesium	0.1	34.8	24.5
Manganese	5E-005 to 0.0015	0.0312	0.0283
Mercury	1E-005 to 5E-005	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0103	0.00905
Nickel	0.0005 to 0.005	<0.0005	<0.0005
Phosphorus	0.05 to 0.3	<0.05	0.056
Potassium	0.05 to 2	4.91	3.49
Selenium	0.0001 to 0.006	0.00088	0.0003
Silicon	0.05	6.7	7.88
Silver	1E-005 to 0.0001	<0.00001	<0.00001
Sodium	0.05 to 2	33.4	25
Strontium	0.0001 to 0.005	0.409	0.284
Sulphur	0.5	44	22.1
Thallium	1E-005 to 0.001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002		
Uranium	1E-005 to 0.001	0.00109	0.00053
Vanadium	0.001 to 0.03	0.0027	0.002
Zinc	0.003 to 0.006	<0.003	<0.003
Organics			
Carbon Organic (Dissolved)	0.5 to 5	5.41	5.07
Carbon Organic (Total)	0.5 to 5	5.37	5.24
Nitrogen Organic (Dissolved)	0.05 to 0.26		
Nitrogen Organic (Total)	0.05 to 0.3		
ALS LAB ID		**L1442672**	**L1516193**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C3.11 - CC08
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Site ID		CC08	CC08	CC08	CC08	CC08	CC08	CC08	CC08	CC08	CC08	CC08	CC08
Analytes	**MDL**	**1-May-07**	**18-Jul-07**	**14-Sep-07**	**28-Apr-08**	**7-Jul-08**	**4-Sep-08**	**02/Sep/2010**	**22-Nov-10**	**28-Mar-11**	**14-Apr-11**	**21-Apr-11**	**28-Apr-11**
In Situ Parameters													
Conductivity µS/cm	...	158	233	166	107	220	212	201	171	196	194	201	185
Oxygen Dissolved %	...				94.1	96.6	89.4	88.3	75.2	88.4	90.4	91.9	79.1
Oxygen Dissolved	...	11.8	10.2	12.9	13	10.6	9.85	10.3	10.9	12.2	12.5	15.9	11.5
pH (unitless)	...	8.34	7.82	8.6	8.2	8.16	8.21	7.91	7.48	8.85	8.18	8.14	8.05
Redox Potential mV	...	-72.6	-60.4			-106	-92.9	26	251	95.4	66.2	150	109
Salinity ppt	...							0.14				0.19	0.17
Specific Conductivity µS/cm	...	252	300	228	333	299	290	293	327	348	347	388	351
Temperature °C	...	5.46	13.3	10.3	2.02	11.3	11	8.65	0.07	2.13	1.9	-0.13	0.17
Total Dissolved Solids	...							190	212	226	225	254	228
Turbidity NTU	...												
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1												
Alkalinity (Total as CaCO3)	1 to 2	108	135	130	158	143	149	138	161	167	170	171	166
Bicarbonate Alkalinity	1 to 2								161			171	
Carbonate Alkalinity	1 to 2								<2			<2	
Color TCU	5	20.7	18.4	15.1	7.7	15.1	9.7	15.7	7.4	5.1	8.1	5.7	7.1
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	133	158	118	182	153	153	143	179	181	186	184	187
Hydroxide Alkalinity	1 to 2								<2			<2	
pH (unitless)	0.01 to 0.1	8.31	8.29	8.32	8.11	8.36	8.34	8.22	8.2	8.2	8.31	8.21	8.24
Specific Conductivity µS/cm	2	230	280	232	333	290	292	266	322	329	320	328	316
Total Dissolved Solids	1 to 2	161	186	149	195	197	179	175	196	196	194	204	209
Total Suspended Solids	3	3	3.1	4.7	10.4	<3	<3	<3	<3	<3	<3	<3	<3
Turbidity NTU	0.1				3.08	0.22	0.51	0.37	0.32	0.17	0.18	0.38	0.26
Dissolved Anions													
Bromide	0.05 to 2.495	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.073	<0.05	<0.05	<0.05
Chloride	0.5 to 1	0.54	<0.5	0.55	0.95	0.66	0.62	0.58	0.83	0.99	1.04	1.15	0.98
Fluoride	0.02 to 0.4	0.067		0.069	0.094	0.083	0.076	0.066	0.066	0.067	0.074	0.084	0.072
Sulphate	0.5 to 1	14.6	13.4	3.4	25.3	11.3	8.4	7.4	15.6	14.6	15	15.3	15.5
Nutrients													
Ammonia (Total)	0.005 to 0.05	<0.02	0.03	0.031	<0.02	<0.02	0.036	<0.005	<0.005	<0.005	0.0064	<0.005	0.0074
Nitrate (as N)	0.005 to 0.1	0.0082	0.0634	0.0379	0.167	0.0085	<0.005	0.006	<0.005	0.176	0.0936	0.0754	0.0613
Nitrite (as N)	0.001 to 0.02	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen (Dissolved)	0.05 to 0.1												0.37
Nitrogen (Total)	0.0025 to 0.11							0.351	0.112	0.3	0.222	0.19	0.219
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.232	0.307	0.18	0.243	0.215	0.14	0.345	0.112	0.124	0.128	0.115	0.157
Orthophosphate (Dissolved)	0.001 to 0.01	0.0039	0.0109	0.0094	0.0076	0.0108	0.0117	0.0095	0.0104	0.0081			
Phosphorus - Dissolved	0.002 to 0.02			0.0122				0.0121			0.007	0.0051	0.0095
Phosphorus - Total	0.002 to 0.02	0.0105	0.0198	0.0194	0.0213	0.0226	0.0155	0.0121	0.0126	0.0104	0.0075	0.0072	0.0081
Cyanide													
Cyanide (Free)	0.005				<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005
Cyanide (Total)	0.005	0.0061	0.0065	0.006	<0.005	0.0061		0.0061	<0.005	<0.005		<0.005	<0.005
Cyanide (WAD)	0.005	<0.005			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005
Dissolved Metals													
Aluminum	0.001 to 0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Barium	5E-005 to 0.02	0.04	0.043	0.04	0.055	0.055	0.052	0.052	0.058	0.052	0.052	0.051	0.05
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth	0.0005 to 0.2									<0.2	<0.2	<0.2	<0.2
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	1E-005 to 8.5E-005	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	0.000027	0.000024	0.000023	0.000037	0.000036	0.00003	0.000024
Calcium	0.05 to 0.1	41.1	47.4	35.2	54.1	45.7	45.9	42.9	53.7	53.5	54.9	54.5	55.5
Chromium	0.0001 to 0.018	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	0.0001 to 0.0015	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Copper	0.0002 to 0.006	0.0025	0.0026	0.0024	0.0016	0.0029	0.0025	0.0029	0.0018	0.0016	0.0016	0.0017	0.0016
Dissolved Cadmium (by saltwater extraction)	0.00002												
Iron	0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Lithium	0.0005 to 0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Magnesium	0.1	7.48	9.68	7.31	11.3	9.54	9.28	8.75	11	11.4	11.8	11.6	11.7
Manganese	5E-005 to 0.0015	<0.0003	0.00144	0.0007	0.00033	0.00159	0.00074	0.00071	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0122	0.0111	0.0057	0.0103	0.0106	0.0087	0.0079	0.0086	0.0095	0.0096	0.0096	0.0099
Nickel	0.0005 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Phosphorus	0.05 to 0.3									<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Selenium	0.0001 to 0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon	0.05									5.9	5.8	5.75	5.86
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	0.05 to 2	3.1	3.2	3.4	4.5	4.2	4	3.8	4.5	5.1	5.3	5.1	5.1
Strontium	0.0001 to 0.005									0.159	0.158	0.157	0.156
Sulphur	0.5												
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	0.00051	<0.0002	<0.0002	<0.0002	0.00026	0.00049	0.0005	0.00052	0.00052
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.03	<0.001	0.0013	0.0013	0.0012	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	0.001 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Metals													
Aluminum	0.003 to 0.025	0.0391	0.0549	0.0339	0.0737	0.0106	<0.005	0.0083	<0.005	<0.005	<0.005	0.0135	0.0073
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Barium	5E-005 to 0.02	0.039	0.04	0.041	0.051	0.056	0.052	0.051	0.054	0.051	0.052	0.053	0.052
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth	0.0005 to 0.2									<0.2	<0.2	<0.2	<0.2
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	1E-005 to 8.5E-005	<0.000017	<0.000017	0.00002	0.000034	<0.000017	0.000027	0.000031	0.000027	<0.000017	<0.000017	<0.000017	<0.000017
Calcium	0.05 to 0.1	39.4	45	34.5	51.7	45.8	45.6	43.9	52.3	52.3	54	53.4	54.4
Chromium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	0.0001 to 0.0015	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Copper	0.0005 to 0.007	0.0028	0.003	0.0027	0.0027	0.003	0.0025	0.0032	0.0019	0.0017	0.0017	0.0019	0.0018
Iron	0.01 to 0.03	0.068	0.092	0.06	0.121	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Lithium	0.0005 to 0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Magnesium	0.1	7.32	9.17	7.21	10.9	9.56	9.44	8.98	10.6	11.2	11.8	11.7	11.6
Manganese	5E-005 to 0.0015	0.00225	0.00458	0.00375	0.00515	0.00194	0.00103	0.00126	0.00058	<0.0003	<0.0003	<0.0009	0.00042
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	0.000494	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0125	0.0109	0.0057	0.0099	0.0105	0.0087	0.0092	0.0092	0.0103	0.0111	0.0109	0.0109
Nickel	0.0005 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Phosphorus	0.05 to 0.3									<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	<2	<2	<2	<2	<2	<2	<2	<2	<2	2.1	<2	<2
Selenium	0.0001 to 0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon	0.05									5.73	5.72	5.77	5.84
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	0.05 to 2	3.1	3	3.3	4.2	4.1	4.1	3.8	4.4	5	5.6	5.2	5.2
Strontium	0.0001 to 0.005									0.158	0.159	0.161	0.158
Sulphur	0.5												
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002												
Uranium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	0.00053	<0.0002	<0.0002	<0.0002	0.00028	0.00053	0.00056	0.00054	0.00056
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.03	0.0014	0.0013	0.0013	0.0014	0.001	0.001	0.0011	<0.001	<0.001
Zinc	0.003 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Organics													
Carbon Organic (Dissolved)	0.5 to 5		8.52	8.21	5.8	7.89	6.81	7.06	5.31	4.83	4.87	4.61	4.57
Carbon Organic (Total)	0.5 to 5	9.52									4.62	4.8	4.66
Nitrogen Organic (Dissolved)	0.05 to 0.26												0.301
Nitrogen Organic (Total)	0.05 to 0.3										0.122		0.15
ALS LAB ID		**L501128**	**L532402**	**L554763**	**L623545**	**L652819**	**L678833**	**L927930**	**L956921**	**L990458**	**L995583**	**L997645**	**L999654**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		CC08	CC08	CC08	CC08	CC08	CC08	CC08	CC08	CC08	CC08	CC08	CC08
Analytes	**MDL**	**5-May-11**	**12-May-11**	**30-May-11**	**28-Jun-11**	**28-Jul-11**	**1-Sep-11**	**27-Sep-11**	**26-Apr-12**	**4-May-12**	**10-May-12**	**16-May-12**	**24-May-12**
In Situ Parameters													
Conductivity µS/cm	...	163	106	129	219	215	167		97	109	116	120	122
Oxygen Dissolved %	...	91.8	89.5	76.4	92.6	89.9	92.7	84.4	95.8	88.9	92.4	88.4	90.1
Oxygen Dissolved	...	12.5	12.1	9.12	10.3	10.1	11.1	10.1	13.2	11.6	11.8	10.4	10.7
pH (unitless)	...	8.26	7.85	7.3	7.97	8.04	7.93	7.98	7.88	8.08	8.18	8.11	8.02
Redox Potential mV	...	97.4	171	436	194	76.5	100	157	124	120	164	152	141
Salinity ppt	...	0.13	0.09	0.09	0.14	0.14	0.12		0.08	0.09	0.09	0.08	0.09
Specific Conductivity µS/cm	...	284	184	193	301	301	250	256	172	181	189	177	182
Temperature °C	...	2.66	2.76	7.65	10.7	10.1	7.65	9.79	2.08	4.21	4.92	8.2	4.81
Total Dissolved Solids	...	185	119	126	195	195	162		112	118	123	115	118
Turbidity NTU	...			9.6		0.2	2.6		49.8	2.9	1.6	1.2	0.6
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1					2.9							
Alkalinity (Total as CaCO3)	1 to 2	134	90.6	97.4	143	153	124	138	82.4	81	90.6	94.2	103
Bicarbonate Alkalinity	1 to 2								82.4	81	90.6	94.2	103
Carbonate Alkalinity	1 to 2								<2	<2	<2	<1	<1
Color TCU	5	30.7	57.3	55.8	25.9	19.9	22.9	17.7	58.6	49.3	42.8	42	33.6
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	157	102	104	151	162	130	136	89.4	100	100	98.4	106
Hydroxide Alkalinity	1 to 2								<2	<2	<2	<1	<1
pH (unitless)	0.01 to 0.1	8.22		8.09	8.3	8.25	8.23	8.2	8.15	8.1	8.26	8.17	7.58
Specific Conductivity µS/cm	2	269	186	183	267	296	232	253	172	178	191	186	196
Total Dissolved Solids	1 to 2	190	152	141	198	170	160	163	139	140	142	138	140
Total Suspended Solids	3	6	179	18.1	<3	<3	<3	<3	120	3.3	<3	3.5	<3
Turbidity NTU	0.1	1.82	54		0.32	0.41	0.37	0.33	34	1.66	1.05	0.68	0.39
Dissolved Anions													
Bromide	0.05 to 2.495	<0.05	<0.05	<0.25	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloride	0.5 to 1	1.1	0.6	<2.5	0.51	0.55	0.54	0.62	1.07	0.93	0.86	0.85	0.79
Fluoride	0.02 to 0.4	0.055	0.057	<0.1	0.086	0.097	0.081	0.087	0.066	0.07	0.068	0.07	0.073
Sulphate	0.5 to 1	13.9	9.16	8.1	8.83	8.84	6.45	4.56	9.9	13.2	12.4	10.3	10.2
Nutrients													
Ammonia (Total)	0.005 to 0.05	<0.005	0.0082	0.0159	<0.005	<0.005	0.0052	<0.005	0.0138	<0.005	0.0058	<0.005	<0.005
Nitrate (as N)	0.005 to 0.1	0.0845	0.0352	<0.025	0.0068	0.0163	0.0114	<0.005	0.0461	0.02	<0.005	<0.005	<0.005
Nitrite (as N)	0.001 to 0.02	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	0.0032	<0.001	<0.001	<0.001	<0.001
Nitrogen (Dissolved)	0.05 to 0.1	0.33	0.43	0.41	0.35	0.31	0.32	0.17	0.57	0.3	0.29	0.29	0.2
Nitrogen (Total)	0.0025 to 0.11	0.42	0.95	0.64	0.35	0.32	0.33	0.231	0.921	0.44	0.351	0.328	0.323
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.336	0.854	0.64	0.343	0.304	0.281	0.231	0.871	0.42	0.351	0.328	0.323
Orthophosphate (Dissolved)	0.001 to 0.01			0.0084	0.0132	0.0139							
Phosphorus - Dissolved	0.002 to 0.02	0.0149	0.0336	0.0147	0.0157	0.0166	0.0112	0.0144	0.0369	0.018	0.0142	0.0134	0.01
Phosphorus - Total	0.002 to 0.02	0.0266	0.241	0.0416	0.0171	0.0183	0.0127	0.0148	0.224	0.0278	0.0209	0.0169	0.012
Cyanide													
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	0.0069	0.0205	0.0132	0.0078	<0.005		0.0054	<0.005	0.0104	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	0.001 to 0.025	0.0052	0.0317	0.0218	<0.005	<0.005	<0.005	<0.005	0.0219	0.0129	0.0118	0.0074	0.0059
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00038	0.00032	0.00031	0.00031	0.00031
Barium	5E-005 to 0.02	0.042	0.029	0.032	0.05	0.051	0.042	0.047	0.0287	0.03	0.0315	0.0323	0.033
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium	1E-005 to 8.5E-005	0.000029	0.000028	0.00003	0.000042	0.000036	<0.000017	<0.000017	0.000013	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	47.4	30.5	31.2	44.8	48.1	39	40.5	26.3	30.4	29.9	29.5	32.1
Chromium	0.0001 to 0.018	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00013	0.00018	0.00026	0.00016	0.00016
Cobalt	0.0001 to 0.0015	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	0.0002 to 0.006	0.0027	0.004	0.0043	0.0031	0.0028	0.003	0.0031	0.00372	0.00413	0.0037	0.00376	0.0035
Dissolved Cadmium (by saltwater extraction)	0.00002												
Iron	0.01 to 0.03	<0.03	0.098	0.06	<0.03	<0.03	<0.03	<0.03	0.125	0.061	0.054	0.04	0.023
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0005	<0.0005	0.00064	0.00051	0.00055
Magnesium	0.1	9.45	6.39	6.4	9.5	10.2	7.9	8.55	5.74	5.94	6.26	6.03	6.3
Manganese	5E-005 to 0.0015	0.00047	0.00206	0.00094	0.00068	0.00047	0.00053	0.00077	0.00571	0.00038	0.000329	0.000228	0.000224
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0086	0.0072	0.0083	0.0088	0.0088	0.0079	0.0076	0.00728	**0.0116**	**0.0104**	0.00907	0.0084
Nickel	0.0005 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00062	<0.0005	<0.0005	<0.0005	<0.0005
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	<2	<2	<2	<2	<2	<2	<2	1.75	1.31	1.2	1.25	1.2
Selenium	0.0001 to 0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00019	0.00022	0.00013	0.00011	0.00011
Silicon	0.05	6.85	6.01	7.04	7.75	7.55	7.71	7.51	5.18	5.82	5.82	5.95	6.14
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	3.8	2.9	3	4.2	4.3	3.3	3.8	2.52	2.59	2.53	2.73	2.85
Strontium	0.0001 to 0.005	0.132	0.0865	0.0911	0.133	0.143	0.117	0.125	0.0757	0.0887	0.0837	0.0878	0.0883
Sulphur	0.5												
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00028	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.000093	0.000075	0.000076	0.000062	0.000065
Vanadium	0.001 to 0.03	<0.001	<0.001	0.0011	0.0013	0.0012	0.001	0.0011	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	0.001 to 0.006	<0.005	0.0076	<0.005	<0.005	<0.005	<0.005	<0.005	<0.003	<0.003	<0.003	<0.003	0.0014
Total Metals													
Aluminum	0.003 to 0.025	0.127	4.96	0.492	0.0184	0.0161	0.018	<0.01	2.27	0.1	0.0638	0.0633	0.0221
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	<0.0005	0.00161	<0.0015	<0.0005	<0.0005	<0.0005	<0.0005	0.00093	0.00031	0.00031	0.00035	0.00033
Barium	5E-005 to 0.02	0.045	0.096	0.038	0.049	0.053	0.044	0.048	0.0627	0.03	0.0315	0.0336	0.0316
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium	1E-005 to 8.5E-005	0.000034	0.000064	0.000033	0.000021	0.000039	<0.000017	<0.000017	0.000021	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	47.4	36.3	31.2	43.7	48.2	39.2	41.4	28.8	29.9	29.2	29.8	30.4
Chromium	0.0001 to 0.005	<0.001	**0.0085**	0.0012	<0.001	<0.001	<0.001	<0.001	0.0044	0.00039	<0.0004	0.00057	0.00024
Cobalt	0.0001 to 0.0015	<0.0003	0.00419	0.00041	<0.0003	<0.0003	<0.0003	<0.0003	0.00224	0.00012	<0.0001	<0.0001	<0.0001
Copper	0.0005 to 0.007	0.0033	0.0285	0.0064	0.0034	0.0027	0.0032	0.0033	0.0165	0.00466	0.0155	0.00458	0.00354
Iron	0.01 to 0.03	0.208	6.71	0.67	<0.03	0.03	0.031	<0.03	3.5	0.181	0.124	0.106	0.045
Lead	5E-005 to 0.0025	<0.0005	0.00068	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00037	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00157	<0.0005	0.00061	0.00061	<0.0005
Magnesium	0.1	9.56	10.2	6.6	9.34	10.3	8.14	8.67	7.35	5.91	6.19	6.24	6.04
Manganese	5E-005 to 0.0015	0.00528	**0.248**	0.0223	0.00151	0.00125	0.00137	0.00126	0.134	0.00345	0.00236	0.00237	0.00105
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000012	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0096	0.0081	0.0093	0.01	0.0096	0.0087	0.0078	0.00759	**0.0111**	**0.0107**	0.00961	0.00875
Nickel	0.0005 to 0.005	<0.001	0.0059	<0.001	<0.001	<0.001	<0.001	<0.001	0.00365	0.0006	0.0137	<0.0005	<0.0005
Phosphorus	0.05 to 0.3	<0.3	0.66	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	<2	2.5	<2	<2	<2	<2	<2	2.05	1.28	1.18	1.3	1.15
Selenium	0.0001 to 0.006	<0.001	<0.001	<0.004	<0.001	<0.001	<0.001	<0.001	0.00027	0.00016	0.00014	0.00012	0.00012
Silicon	0.05	7.12	15.4	7.92	7.64	7.57	7.9	7.66	9.73	5.89	5.8	6.19	5.79
Silver	1E-005 to 0.0001	<0.00002	0.000028	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	0.000023	0.000012	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	3.9	3.1	2.9	4.2	4.5	3.5	3.8	2.5	2.53	2.51	2.85	2.75
Strontium	0.0001 to 0.005	0.136	0.11	0.0929	0.134	0.148	0.123	0.13	0.0833	0.0818	0.0839	0.0897	0.0872
Sulphur	0.5												
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	0.012	0.242	0.034	<0.01	<0.01	<0.01	<0.01	0.112	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002												
Uranium	1E-005 to 0.001	0.00031	0.00024	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.000171	0.000075	0.000079	0.000067	0.000072
Vanadium	0.001 to 0.03	0.0014	0.0213	0.0039	0.0015	0.0014	0.0011	0.0012	0.0107	0.0011	0.0011	0.0012	0.0011
Zinc	0.003 to 0.006	<0.005	0.0145	<0.005	<0.005	<0.005	<0.005	<0.005	0.0087	<0.003	0.0044	<0.003	<0.003
Organics													
Carbon Organic (Dissolved)	0.5 to 5	13.4	17.4	18.3	12	9.86	10.8	9.65	16.6	14.8	11.8	13.4	12.2
Carbon Organic (Total)	0.5 to 5	13.5	22.4	19.2	12.2	9.96	10.9	9.51	16.8	14.7	11.8	13.6	12.6
Nitrogen Organic (Dissolved)	0.05 to 0.26	0.242	0.387	0.394	0.34	0.289	0.303	0.166	0.507	0.275	0.284	0.285	0.197
Nitrogen Organic (Total)	0.05 to 0.3	0.332	0.846	0.624	0.34	0.299	0.313	0.186	0.857	0.42	0.345	0.328	0.323
ALS LAB ID		**L1002049**	**L1005044**	**L1011001**	**L1025075**	**L1038168**	**L1053400**	**L1065234**	**L1140194**	**L1143149**	**L1146570**	**L1148880**	**L1152500**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C3.11 - CC08
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Site ID		CC08	CC08	CC08	CC08	CC08	CC08	CC08	CC08	CC08	CC08	CC08	CC08
Analytes	**MDL**	**12-Jul-12**	**8-Aug-12**	**5-Sep-12**	**8-Jan-13**	**5-Feb-13**	**5-Mar-13**	**2-Apr-13**	**6-May-13**	**4-Jun-13**	**2-Jul-13**	**6-Aug-13**	**3-Sep-13**
In Situ Parameters													
Conductivity µS/cm	...	203	212	176	179	177	279	205	121	168	241	195	
Oxygen Dissolved %	...	92	88.2	98	85.6	85.4	93.2		85.7	91.8	93.2		80.3
Oxygen Dissolved	...	9.85	8.97	10.9	12.2	12	12.8		9.74	10.1	9.24		8.62
pH (unitless)	...	8.18	8.1	8.12	8.41	8.16	8.29	8.05	8.1	8.21	8.1	8.08	7.82
Redox Potential mV	...	114	109	96	84.1	216	116	186	192	149	142	238	225
Salinity ppt	...		0.13	0.12	0.16	0.15	0.13	0.17	0.08	0.11	0.12	0.12	0.14
Specific Conductivity µS/cm	...	268	265	243	330	321	158	348	170	228	260	245	300
Temperature °C	...	12.3	14.6	10.6	1.01	1.53	2.26	3.44	9.69	11.2	15.7	14.3	12.1
Total Dissolved Solids	...		172	158	214	209	181	226	111	148	169	159	195
Turbidity NTU	...	-2	0.6	0.3	0.1	0.1	1.3	0	33.2	2.7	0	0.7	
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1			<1									
Alkalinity (Total as CaCO3)	1 to 2	131	144	125	156	156	157	152	79.5	109	121	126	137
Bicarbonate Alkalinity	1 to 2	131	142	125	156	156	150	152	79.5	109	118	126	137
Carbonate Alkalinity	1 to 2	<1	2	<1	<2	<2	7.3	<1	<2	<2	2.9	<2	<1
Color TCU	5	25.2	21.6	20.4	5.7	5.3	5.1	6.6	46.1	40	34	26.7	16.1
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	143	148	136	164	163	165	168	83.9	112	135	128	141
Hydroxide Alkalinity	1 to 2	<1	<1	<1	<2	<2	<1	<1	<2	<2	<1	<2	<1
pH (unitless)	0.01 to 0.1	8.35	8.33	8.38	8.23	8.2	8.37	8.15	8.14	8.29	8.32	8.27	8.3
Specific Conductivity µS/cm	2	260	263	237	281	295	307	306	161	214	243	232	266
Total Dissolved Solids	1 to 2	186	181	163	184	181	185	195	119	156	184	166	187
Total Suspended Solids	3	<3	<3	<3	<3	<3	<3	<3	76.7	<3	<3	5.1	<3
Turbidity NTU	0.1	0.41	0.49	0.42	0.24	0.4	0.2	0.19	22.2	1.57	0.85	0.43	0.3
Dissolved Anions													
Bromide	0.05 to 2.495	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloride	0.5 to 1	0.55	0.56	0.63	0.96	1.02	1.06	1.03	0.64	0.53	<0.5	0.53	0.6
Fluoride	0.02 to 0.4	0.091	0.094	0.084	0.083	0.077	0.088	0.09	0.068	0.089	0.093	0.085	0.081
Sulphate	0.5 to 1	8.97	10.5	5.94	10.7	11.6	13.5	15.9	9.12	8.75	7.09	6.07	5.31
Nutrients													
Ammonia (Total)	0.005 to 0.05	<0.005	<0.005	0.0057	<0.005	<0.005	<0.005	<0.005	0.0053	<0.005	0.0066	0.0065	0.0059
Nitrate (as N)	0.005 to 0.1	0.0561	0.0264	0.0142	0.0075	0.0239	0.014	0.302	<0.005	0.0059	0.0405	0.0224	0.0459
Nitrite (as N)	0.001 to 0.02	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0011	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen (Dissolved)	0.05 to 0.1	0.13	0.34	0.29	0.14	0.155	0.16	0.429				0.279	0.241
Nitrogen (Total)	0.0025 to 0.11		0.283		0.181	0.141	0.122	0.47	0.683	0.288	0.378	0.29	0.246
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.28	0.256	0.23	0.132	0.158	0.146	0.167	0.622	0.362	0.338	0.258	0.217
Orthophosphate (Dissolved)	0.001 to 0.01												
Phosphorus - Dissolved	0.002 to 0.02	0.0166	0.0126	0.0104	0.0131	0.0101	0.0088	0.009	0.0149	0.0145	0.0188	0.0112	0.0127
Phosphorus - Total	0.002 to 0.02	0.0168	0.0145	0.0112		0.0098	0.0097	0.0102	0.219	0.0194	0.0138	0.0146	0.0137
Cyanide													
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	0.001 to 0.025	0.0033	0.0023	0.0023	0.0012	0.0011	<0.001	<0.001	0.0191	0.0076	0.0049	0.0035	0.002
Antimony	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00041	0.00043	0.00037	0.00037	0.00036	0.00035	0.00035	0.0003	0.00034	0.00039	0.00041	0.00042
Barium	5E-005 to 0.02	0.045	0.0485	0.043	0.0464	0.047	0.0449	0.0475	0.0267	0.036	0.0447	0.0435	0.0508
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	43.1	44.2	41.4	48.5	48.2	49.1	49.7	25.3	33.7	41	38.6	42
Chromium	0.0001 to 0.018	0.00011	<0.0001	0.00013	<0.0001	<0.0001	<0.0001	<0.0001	0.00017	0.00017	<0.0001	0.00012	<0.0001
Cobalt	0.0001 to 0.0015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	0.0002 to 0.006	0.00329	0.00295	0.00254	0.00154	0.00143	0.00146	0.00148	0.00373	0.00354	0.00323	0.0032	0.00281
Dissolved Cadmium (by saltwater extraction)	0.00002												
Iron	0.01 to 0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.055	0.027	0.02	0.013	<0.01
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00089	0.00088	0.00096	<0.0005	0.00082	0.00077	0.00053	<0.0005	<0.0005	<0.0005	<0.0005	0.001
Magnesium	0.1	8.6	9.09	7.94	10.4	10.2	10.4	10.8	5.05	6.79	7.87	7.54	8.68
Manganese	5E-005 to 0.0015	0.000754	0.000728	0.000565	0.000102	0.000078	<0.00005	0.000197	0.000822	0.000382	0.000913	0.000756	0.000882
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00958	**0.011**	0.00794	0.00825	0.00911	0.00934	0.00991	0.00972	0.00974	**0.0111**	0.00902	0.00839
Nickel	0.0005 to 0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	0.05 to 2	1.52	1.58	1.62	1.61	1.45	1.55	1.91	1.16	1.25	1.54	1.56	1.81
Selenium	0.0001 to 0.006	0.00012	0.00013	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00013	0.00012	0.00011	0.00012	0.00011
Silicon	0.05	7.78	7.86	6.7	6.08	5.84	5.83	5.58	5.87	6.81	7.57	7.4	7.45
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	3.73	3.85	3.38	4.06	4.25	4.08	4.3	2.44	2.9	3.24	3.25	3.84
Strontium	0.0001 to 0.005	0.129	0.128	0.115	0.149	0.149	0.147	0.139	0.076	0.0983	0.124	0.112	0.126
Sulphur	0.5				3.73	4.06	4.46	5.32	3.1	2.98	2.46	2.26	1.94
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.000113	0.000128	0.000102	0.000308	0.000345	0.000372	0.000391	0.000049	0.000078	0.000107	0.000091	0.000122
Vanadium	0.001 to 0.03	0.0014	0.0013	0.0011	<0.001	<0.001	<0.001	<0.001	<0.001	0.0012	0.0012	0.0012	0.0012
Zinc	0.001 to 0.006	0.0059	<0.001	0.0016	<0.001	0.0022	<0.001	<0.001	0.0023	0.0014	0.0012	0.001	<0.001
Total Metals													
Aluminum	0.003 to 0.025	0.0482	0.0185	0.0124	<0.003	<0.003	<0.003	0.0041	1.76	0.103	0.0742	0.0578	0.0089
Antimony	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	0.00011	0.00012	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00046	0.00045	0.00042	0.00045	0.00035	0.00039	0.00035	0.00087	0.00039	0.00043	0.00042	0.00041
Barium	5E-005 to 0.02	0.0453	0.0477	0.0427	0.0486	0.047	0.0471	0.0471	0.0569	0.0369	0.0459	0.0446	0.0489
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00002	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	44.2	42.3	41.1	48.9	49.6	51.2	48.8	27.8	34.8	40.2	40.6	42.6
Chromium	0.0001 to 0.005	0.00033	0.00016	0.00029	0.00013	0.00017	<0.0001	0.00013	0.00348	0.00037	0.00028	0.00029	0.00014
Cobalt	0.0001 to 0.0015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00186	0.00013	0.00011	<0.0001	<0.0001
Copper	0.0005 to 0.007	0.00357	0.00343	0.00362	0.00207	0.00195	0.0016	0.00177	0.0144	0.00439	0.00383	0.00376	0.00303
Iron	0.01 to 0.03	0.039	0.033	0.025	<0.01	<0.01	<0.01	<0.01	2.95	0.165	0.125	0.102	0.017
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0003	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00078	0.00099	0.0009	<0.0005	0.00097	0.00087	0.0006	0.00162	0.00052	<0.0005	<0.0005	0.00184
Magnesium	0.1	8.82	8.88	7.91	10.5	10.6	10.8	10.7	6.53	6.98	7.9	7.98	8.88
Manganese	5E-005 to 0.0015	0.00181	0.0018	0.00143	0.00011	0.000169	<0.00005	0.000423	0.112	0.00518	0.00472	0.00368	0.00164
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	**0.0102**	**0.0119**	0.00845	0.0087	0.00963	0.00993	**0.0105**	0.00932	**0.0108**	**0.0116**	0.00969	0.009
Nickel	0.0005 to 0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00297	0.00068	0.00052	<0.0005	<0.0005
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.05	<0.05	<0.05	<0.05	<0.05	0.262	<0.05	<0.05	<0.05	<0.05
Potassium	0.05 to 2	1.52	1.56	1.67	1.63	1.5	1.6	1.94	1.51	1.27	1.59	1.71	1.87
Selenium	0.0001 to 0.006	0.00014	0.00012	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00017	0.00013	0.00013	0.00012	0.00012
Silicon	0.05	7.94	7.82	6.75	6.06	5.97	5.88	5.61	9.36	7.17	7.72	7.73	7.38
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000019	0.000011	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	3.86	3.71	3.48	4.12	4.38	4.33	4.52	2.45	3.03	3.25	3.33	3.89
Strontium	0.0001 to 0.005	0.127	0.131	0.122	0.153	0.162	0.155	0.147	0.0824	0.106	0.128	0.119	0.131
Sulphur	0.5				3.9	4.18	4.71	5.45	3.1	3.1	2.49	2.36	1.99
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.079	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002												
Uranium	1E-005 to 0.001	0.000121	0.000138	0.000106	0.000318	0.000342	0.000402	0.000411	0.000099	0.000086	0.000109	0.000097	0.00013
Vanadium	0.001 to 0.03	0.0016	0.0015	0.0013	0.001	0.001	0.0012	<0.001	0.0089	0.0016	0.0016	0.0016	0.0014
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	0.0055	<0.003	<0.003	0.0075	<0.003	<0.003	<0.003	<0.003
Organics													
Carbon Organic (Dissolved)	0.5 to 5	10.2	9.13	8.97	4.21	3.8	4.09	4.47	12.4	12.9	12.6	10.9	8.34
Carbon Organic (Total)	0.5 to 5	10.4	9.36	8.83	4.26	3.67	4.12	4.26	12.2	14.2	12.9	11.1	8.34
Nitrogen Organic (Dissolved)	0.05 to 0.26	0.07	0.31	0.27				0.122					
Nitrogen Organic (Total)	0.05 to 0.3	0.28	0.256	0.224	0.132	0.158	0.146	0.167					
ALS LAB ID		**L1178283**	**L1191600**	**L1205273**	**L1256678**	**I1265809**	**L1275746**	**L1285503**	**L1298960**	**L1311741**	**L1326032**	**L1344180**	**L1357647**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		CC08	CC08	CC08	CC08	CC08	CC08	CC08	CC08
Analytes	MDL	8-Oct-13	6-Nov-13	10-Apr-14	8-May-14	5-Jun-14	2-Jul-14	28-Jul-14	2-Sep-14
In Situ Parameters									
Conductivity µS/cm	...	305	192	172	133	149	201	185	
Oxygen Dissolved %	...	87	87	7.97	95.1	76.3	83.1	68.5	
Oxygen Dissolved	...	10.3	11.5	116	11.9	8.63	9.02	7.47	
pH (unitless)	...	8.03	8.14	-0.9	8.62	8.28	8.26	8.23	8.16
Redox Potential mV	...	151	102	91.2	63.4	190	141	64.4	
Salinity ppt	...	0.15	0.16	0.15	0.1	0.1	0.13	0.12	
Specific Conductivity µS/cm	...	207	327	307	210	209	270	249	
Temperature °C	...	8.12	3.35	2.06	5.8	9.91	11.6	11.5	11.1
Total Dissolved Solids	...	198	213	199	1365	136	175	162	
Turbidity NTU	...	0	-0.1	12.6					
Physical Tests									
Acidity to pH 8.3 (as CaCO3)	1		<1						
Alkalinity (Total as CaCO3)	1 to 2	165	173	161	79.2	1770	143	129	143
Bicarbonate Alkalinity	1 to 2		173	161	79.2	948	143	129	142
Carbonate Alkalinity	1 to 2		<2	<2	<2	825	<1	<2	<1
Color TCU	5	9.2	9.7						
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	179	163	170	95.3	948	148	141	146
Hydroxide Alkalinity	1 to 2		<2	<2	<2	<1	<1	<2	<1
pH (unitless)	0.01 to 0.1	8.38	8.29	8.24	8	9.41	8.35	8.24	8.31
Specific Conductivity µS/cm	2	304	319	312	173	4880	262	252	263
Total Dissolved Solids	1 to 2	195	209	208	147	3940	154	166	180
Total Suspended Solids	3	<3	<3	<3	7.5	7.6	<3	<3	<3
Turbidity NTU	0.1	0.18	0.19	0.18	2.92	0.97	0.37	0.49	0.29
Dissolved Anions									
Bromide	0.05 to 2.495	<0.05	<0.05	<0.05	<0.05	1.4	<0.05	<0.05	<0.05
Chloride	0.5 to 1	0.71	0.84	1.03	0.76	107	0.59	<0.5	0.53
Fluoride	0.02 to 0.4	0.09	0.101	0.092	0.064	0.046	0.093	0.094	0.091
Sulphate	0.5 to 1	7.56	9.4	20.4	11	1390	8.4	6.43	7.08
Nutrients									
Ammonia (Total)	0.005 to 0.05	<0.005	<0.005	<0.005	0.0069	0.101	0.0063	<0.005	0.0058
Nitrate (as N)	0.005 to 0.1	<0.005	<0.005	0.207	0.0214	<0.1	0.0253	0.0408	0.0351
Nitrite (as N)	0.001 to 0.02	<0.001	<0.001	<0.001	<0.001	<0.02	<0.001	<0.001	<0.001
Nitrogen (Dissolved)	0.05 to 0.1								
Nitrogen (Total)	0.0025 to 0.11	0.15	0.141						
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.182	0.18	0.136	0.508	7.54	0.305	0.241	0.226
Orthophosphate (Dissolved)	0.001 to 0.01	0.0133	0.034	0.0065	0.0046	0.0097	0.0127	0.009	0.0096
Phosphorus - Dissolved	0.002 to 0.02		0.0371	0.0083	0.0158	0.0661	0.0152	0.0125	0.0129
Phosphorus - Total	0.002 to 0.02	0.017	0.0381	0.0086	0.0353	0.0721	0.0194	0.0128	0.0091
Cyanide									
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals									
Aluminum	0.001 to 0.025	0.0015	<0.001	<0.001	0.0247	<0.005	0.0036	0.0029	0.0019
Antimony	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	0.00201	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00046	0.00046	0.00036	0.00032	0.0195	0.00043	0.0004	0.00043
Barium	5E-005 to 0.02	0.0537	0.0595	0.0474	0.029	0.017	0.047	0.0443	0.0493
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0025	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.01	<0.01	<0.01	<0.01	0.248	<0.01	<0.01	<0.01
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	54.1	48	50.9	29.7	7.41	44.5	42.3	43.6
Chromium	0.0001 to 0.018	<0.0001	<0.0001	<0.0001	0.00019	<0.0005	<0.0001	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001
Copper	0.0002 to 0.006	0.00215	0.00167	0.00148	0.00426	<0.001	0.00326	0.0029	0.00266
Dissolved Cadmium (by saltwater extraction)	0.00002					<0.00002			
Iron	0.01 to 0.03	<0.01	<0.01	<0.01	0.068	<0.01	<0.01	<0.01	<0.01
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00025	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	<0.0005	0.00104	<0.0005	<0.0005	0.0668	0.00072	0.00078	0.00089
Magnesium	0.1	10.7	10.4	10.4	5.13	226	9.05	8.45	8.93
Manganese	5E-005 to 0.0015	0.000631	0.00181	0.000132	0.000739	0.00095	0.000668	0.000536	0.000572
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00808	0.00738	0.00928	0.01	0.00426	0.0096	0.00961	0.00897
Nickel	0.0005 to 0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0025	<0.0005	<0.0005	<0.0005
Phosphorus	0.05 to 0.3	<0.05	<0.05	<0.05	<0.05	0.053	<0.05	<0.05	<0.05
Potassium	0.05 to 2	1.86	1.92	1.68	1.3	170	1.75	1.81	1.75
Selenium	0.0001 to 0.006	<0.0001	<0.0001	0.0001	0.00017	<0.0005	0.00011	0.0001	<0.0001
Silicon	0.05	7.43	7.28	5.78	5.99	0.185	7.22	7.23	7.35
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	4.22	4.31	4.27	2.59	932	3.76	3.54	3.56
Strontium	0.0001 to 0.005	0.148	0.154	0.139	0.0792	0.52	0.126	0.124	0.133
Sulphur	0.5	2.64	3.34	7.21	3.74	395	3	2.35	2.6
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.000202	0.000252	0.000423	0.000065	0.00423	0.000136	0.000119	0.000124
Vanadium	0.001 to 0.03	0.0013	<0.001	<0.001	<0.001	<0.005	0.0012	0.0011	0.0011
Zinc	0.001 to 0.006	<0.001	<0.001	0.0012	<0.001	<0.005	0.0026	<0.001	<0.001
Total Metals									
Aluminum	0.003 to 0.025	0.0134	0.007	<0.003	0.273	<0.015	0.013	0.018	0.022
Antimony	0.0001 to 0.0025	<0.0001	0.00011	<0.0001	0.00011	0.00191	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00052	0.00055	0.00035	0.00042	0.0191	0.00049	0.00041	0.0004
Barium	5E-005 to 0.02	0.0546	0.0607	0.0474	0.0298	0.018	0.0479	0.0418	0.0489
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0025	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.01	<0.01	<0.01	<0.01	0.242	<0.01	<0.01	<0.01
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	51.8	50.5	50	28.8	7.58	44.8	38.5	42.9
Chromium	0.0001 to 0.005	0.00016	0.00013	0.00011	0.00058	<0.0005	0.00014	0.00018	0.00022
Cobalt	0.0001 to 0.0015	<0.0001	<0.0001	<0.0001	0.00025	<0.0005	<0.0001	<0.0001	<0.0001
Copper	0.0005 to 0.007	0.00271	0.00199	0.00179	0.00559	<0.0025	0.00336	0.003	0.00297
Iron	0.01 to 0.03	0.016	0.011	<0.01	0.408	0.025	0.021	0.024	0.038
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	0.000053	<0.00025	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	<0.0005	0.00093	0.00076	<0.0005	0.0695	0.00074	0.00071	0.00082
Magnesium	0.1	10.3	11.2	10.1	5.17	228	9.41	7.82	8.81
Manganese	5E-005 to 0.0015	0.00161	0.00243	0.000191	0.0111	0.00116	0.00129	0.00125	0.00221
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.009	0.00833	0.0102	0.0103	0.00437	0.0105	0.00877	0.00972
Nickel	0.0005 to 0.005	<0.0005	<0.0005	<0.0005	0.00079	<0.0025	<0.0005	0.00054	<0.0005
Phosphorus	0.05 to 0.3	<0.05	<0.05	<0.05	<0.05	0.074	<0.05	<0.05	<0.05
Potassium	0.05 to 2	1.78	2.24	1.62	1.34	176	1.77	1.74	1.76
Selenium	0.0001 to 0.006	<0.0001	<0.0001	<0.0001	0.00017	<0.0005	0.00013	0.00011	<0.0001
Silicon	0.05	7.18	7.48	5.69	6.29	0.217	7.44	6.68	7.28
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	0.000011	<0.00005	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	4.42	4.43	4.32	2.49	983	3.9	3.29	3.63
Strontium	0.0001 to 0.005	0.155	0.169	0.148	0.0792	0.53	0.13	0.111	0.14
Sulphur	0.5	2.71	3.57	7.09	3.72	430	3.17	2.17	2.64
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	0.00011	<0.0005	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	0.012	<0.05	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002					<0.00002			
Uranium	1E-005 to 0.001	0.000216	0.000275	0.000428	0.000075	0.00436	0.00015	0.000111	0.000131
Vanadium	0.001 to 0.03	0.0014	0.0015	<0.001	0.0017	<0.005	0.0015	0.0012	0.0013
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.015	<0.003	<0.003	<0.003
Organics									
Carbon Organic (Dissolved)	0.5 to 5	5.69	6.08	5.1	14.4	122	8.76	8.73	8.03
Carbon Organic (Total)	0.5 to 5	5.7	6.39	5.14	14.5	128	9.85	8.66	7.61
Nitrogen Organic (Dissolved)	0.05 to 0.26								
Nitrogen Organic (Total)	0.05 to 0.3								
ALS LAB ID		**L1376311**	**L1388680**	**L1442672**	**L1453031**	**L1466627**	**L1481215**	**L1494516**	**L1511703**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C3.12 - EDITH-01D
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Site ID		EDITH-01D	EDITH-01D	EDITH-01D	EDITH-01D	EDITH-01D	EDITH-01D	EDITH-01D	EDITH-01D	EDITH-01D	EDITH-01D	EDITH-01D
Analytes	**MDL**	**30-Apr-14**	**14-May-14**	**27-May-14**	**10-Jun-14**	**27-Jun-14**	**8-Jul-14**	**22-Jul-14**	**7-Aug-14**	**20-Aug-14**	**14-Sep-14**	**30-Sep-14**
In Situ Parameters												
Conductivity µS/cm	...	527	677	712	720	765	642	875	614	614	660	1148
Oxygen Dissolved %	...		76.5	87.8	92.3		1.6	81.4	5.1	2.7	3.4	4.4
Oxygen Dissolved	...		8.13	9	8.99		0.17	7.38	0.61	0.33	0.41	0.53
pH (unitless)	...	8.14	8.81	8.75	8.76	8.81	8.12	7.88	8.03	7.65	7.26	7.41
Redox Potential mV	...	0.8	71.3	49.9	27.8	-52.6	88.5	-49.2	-105	-161	272	-279
Salinity ppt	...	0.39	0.44	0.44	0.42	0.44	0.46	0.43	0.46	0.47	0.51	0.89
Specific Conductivity µS/cm	...	798	885	897	859	883	921	792	926	956	1021	1765
Temperature °C	...	7.23	12.7	14.3	16.6	17.9	9.12	20	7.51	6.27	6.49	6.7
Total Dissolved Solids	...	518	575	584	559	574	600	569	603	622	664	1461
Turbidity NTU	...	-0.9	-0.3	-0.4	0.8	3.7	3.2	1.5	2.5	2.2	2.6	-8.7
Physical Tests												
Acidity to pH 8.3 (as CaCO3)	1											
Alkalinity (Total as CaCO3)	1 to 2	400	394	390	401	413	418	409	419	442	426	552
Bicarbonate Alkalinity	1 to 2	368	356	370	383	404	410	379	406	442	377	552
Carbonate Alkalinity	1 to 2	31.9	38.1	20.4	18.3	9.4	8.3	29.8	12.7	<2	49.3	<20
Color TCU	5											
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	393	383	401	402	389	397	397	388	422	407	407
Hydroxide Alkalinity	1 to 2	<1	<1	<1	<1	<1	<1	<1	<1	<2	<1	<20
pH (unitless)	0.01 to 0.1	8.61	8.77	8.46	8.45	8.34	8.34	8.36	8.37	8.17	8.75	8.25
Specific Conductivity µS/cm	2	871	880	880	900	900	912	872	916	969	898	954
Total Dissolved Solids	1 to 2	371	533	527	518	533	526	527	540	568	546	565
Total Suspended Solids	3	6.9	<3	<3	<3	<3	<3	<3	5.8	4.5	<3	<3
Turbidity NTU	0.1	1.56	1.2	0.5	0.5	1.11	3.9	3.73	2.81	4.62	1.09	43.3
Dissolved Anions												
Bromide	0.05 to 2.495	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	0.5 to 1	52	48.4	51.6	50.3	50.8	48.6	47.9	49.4	49.4	50.2	50.4
Fluoride	0.02 to 0.4	0.21	0.21	0.25	0.23	0.24	0.33	0.242	0.42	0.228	0.248	0.246
Sulphate	0.5 to 1	39.7	40.6	42.7	42.6	41.3	41.2	40.5	41.9	27.5	41.9	25.6
Nutrients												
Ammonia (Total)	0.005 to 0.05	0.0169	0.0163	0.147	0.238	0.32	0.402	0.322	0.152	2.42	0.0186	1.87
Nitrate (as N)	0.005 to 0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.051	<0.05
Nitrite (as N)	0.001 to 0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen (Dissolved)	0.05 to 0.1											
Nitrogen (Total)	0.0025 to 0.11											
Nitrogen Kjeldahl (Total)	0.05 to 0.2	1.58	1.58	1.44	1.5	1.72	1.61	1.99	1.7	3.64	1.44	3.2
Orthophosphate (Dissolved)	0.001 to 0.01	0.0023	0.0019	0.0236	0.0532	0.0772	0.0367	<0.001	<0.001	0.434	0.0011	0.32
Phosphorus - Dissolved	0.002 to 0.02	0.0254	0.0245	0.0467	0.0746	0.117	0.0607	0.021	0.0198	0.502	0.0197	0.375
Phosphorus - Total	0.002 to 0.02	0.0732	0.0535	0.0495	0.0806	0.12	0.12	0.0528	0.054	0.504	0.038	0.34
Cyanide												
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals												
Aluminum	0.001 to 0.025	<0.001	<0.001	0.0011	0.001	0.0016	0.0011	0.0041	0.0023	0.0014	0.0037	0.002
Antimony	0.0001 to 0.0025	0.00011	0.00012	0.00011	0.00012	0.0001	0.00011	0.00014	0.00012	<0.0001	0.00013	<0.0001
Arsenic	0.0001 to 0.0025	0.00151	0.00145	0.0015	0.00151	0.0014	0.00149	0.00166	0.00158	0.00154	0.00161	0.00159
Barium	5E-005 to 0.02	0.0537	0.0486	0.0496	0.0508	0.0541	0.0549	0.0488	0.0572	0.066	0.0506	0.0679
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.015	0.018	0.019	0.018	0.017	0.019	0.016	0.018	0.017	0.016	0.019
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	40.2	41.1	41.7	41.5	41.7	42	39	42	45.8	39.8	43.7
Chromium	0.0001 to 0.018	<0.0001	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00012	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015	0.0001	<0.0001	0.00011	0.00011	0.0001	0.00012	0.00014	0.0001	0.00011	0.00012	0.00011
Copper	0.0002 to 0.006	0.00124	0.00099	0.00172	0.0047	0.00081	0.00104	0.0016	0.0014	0.00027	0.00152	<0.0002
Dissolved Cadmium (by saltwater extraction)	0.00002											
Iron	0.01 to 0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.016	<0.01	0.012
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.0111	0.0117	0.0115	0.0123	0.0108	0.0127	0.0113	0.012	0.0117	0.0109	0.0123
Magnesium	0.1	71.1	68.1	72.1	72.4	69.1	70.9	72.7	68.8	74.6	74.6	72.3
Manganese	5E-005 to 0.0015	0.00189	0.0015	0.00858	0.0375	0.0908	0.127	0.00217	0.166	0.173	0.00507	0.254
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00184	0.00246	0.0018	0.00195	0.00169	0.00168	0.00198	0.00167	0.000476	0.00193	0.000589
Nickel	0.0005 to 0.005	0.00088	0.00079	0.00089	0.00075	0.00063	0.00075	0.0007	0.00065	0.00069	0.00065	0.00071
Phosphorus	0.05 to 0.3	<0.05	<0.05	<0.05	0.074	0.1	0.09	<0.05	<0.05	0.474	<0.05	0.375
Potassium	0.05 to 2	17.7	17	17.1	20	17.8	19.9	17.5	20.4	21.3	18.8	18.1
Selenium	0.0001 to 0.006	0.0001	0.0001	0.00012	0.00011	0.00027	0.00035	<0.0001	<0.0001	0.00052	<0.0001	0.00791
Silicon	0.05	0.054	0.124	0.424	1.08	1.46	1.58	0.178	1.58	3.81	0.897	3.55
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	56.4	53.7	55.6	50.8	53	54.1	55.7	55.5	57.4	56.5	59.5
Strontium	0.0001 to 0.005	0.274	0.262	0.269	0.287	0.283	0.293	0.278	0.292	0.317	0.278	0.331
Sulphur	0.5	13.6	14.7	14.6	14.1	15.2	19.9	14.8	14	119	14.8	150
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00146	0.0013	0.00141	0.00154	0.00161	0.00161	0.00167	0.00163	0.00143	0.00167	0.00155
Vanadium	0.001 to 0.03	0.0022	0.0022	0.0022	0.002	0.0019	0.002	0.0032	0.0021	0.002	0.0032	0.0021
Zinc	0.001 to 0.006	0.0011	<0.001	<0.001	0.0013	<0.001	<0.001	<0.001	0.0022	<0.001	<0.001	<0.001
Total Metals												
Aluminum	0.003 to 0.025	0.0104	0.0072	0.0058	0.0056	0.0092	0.009	0.0124	0.0169	0.0078	0.0218	0.011
Antimony	0.0001 to 0.0025	0.00011	0.00015	0.00017	0.00013	0.00012	0.00015	0.00013	0.00014	0.00011	0.00013	0.00011
Arsenic	0.0001 to 0.0025	0.00136	0.00137	0.00131	0.00153	0.0015	0.00156	0.00158	0.00148	0.00163	0.00185	0.00158
Barium	5E-005 to 0.02	0.0492	0.0486	0.0495	0.0496	0.0539	0.0554	0.0574	0.0539	0.0635	0.0556	0.0619
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.015	0.016	0.016	0.018	0.019	0.021	0.018	0.017	0.02	0.021	0.024
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	38.2	41.5	40.9	39.5	41.1	41.1	42.2	39.3	46.8	38.8	41.4
Chromium	0.0001 to 0.005	0.00014	0.00014	0.0001	<0.0001	0.00018	0.0001	0.00012	0.0001	0.00016	<0.0003	0.00031
Cobalt	0.0001 to 0.0015	0.00012	0.00012	0.00012	0.00012	0.00012	0.00013	0.00014	0.00013	0.00014	0.00017	0.00014
Copper	0.0005 to 0.007	0.00404	0.00226	0.00234	0.00472	0.00284	0.00319	0.00242	0.00152	0.00672	0.00163	0.00093
Iron	0.01 to 0.03	0.019	0.013	0.01	0.012	0.018	0.019	0.021	0.023	0.045	0.026	0.053
Lead	5E-005 to 0.0025	<0.00005	<0.00005	0.000054	<0.00005	<0.00005	0.000206	<0.00005	<0.00005	0.000157	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.0105	0.0114	0.00979	0.0109	0.0105	0.0123	0.0111	0.0104	0.012	0.0112	0.0105
Magnesium	0.1	65.1	67.7	69.3	69.7	68.3	68.8	71.4	65.5	76.2	72.8	68.8
Manganese	5E-005 to 0.0015	0.0157	0.0103	0.0103	0.041	0.0918	0.132	0.146	0.163	0.188	0.0234	0.235
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00188	0.00237	0.00186	0.00189	0.00179	0.00174	0.00178	0.00166	0.0015	0.00198	0.000903
Nickel	0.0005 to 0.005	0.00082	0.00093	0.00091	0.00078	0.00073	0.00076	0.00078	0.00069	0.00081	0.00088	0.00081
Phosphorus	0.05 to 0.3	0.076	0.058	0.076	0.072	0.114	0.104	0.062	0.055	0.518	<0.05	0.376
Potassium	0.05 to 2	16.5	17.1	16.8	17.5	17.5	18.8	17.5	19	21.6	18.6	17.3
Selenium	0.0001 to 0.006	<0.0001	0.00013	<0.0001	0.00011	0.0001	<0.0001	<0.0001	<0.0001	0.0001	0.00019	<0.0001
Silicon	0.05	0.106	0.144	0.428	1.1	1.45	1.58	1.55	1.55	3.93	0.942	3.41
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	50.3	56.3	52.7	53.6	53.4	54	56.3	53	60.3	61.3	53.7
Strontium	0.0001 to 0.005	0.272	0.273	0.261	0.284	0.284	0.299	0.294	0.282	0.347	0.281	0.285
Sulphur	0.5	13.7	14.4	14.5	15.1	14.2	14.5	14.7	13.8	13.2	15	11
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002											
Uranium	1E-005 to 0.001	0.00175	0.00179	0.00178	0.00175	0.00172	0.00171	0.00166	0.0016	0.00158	0.00176	0.00143
Vanadium	0.001 to 0.03	0.0022	0.0024	0.0022	0.0023	0.0022	0.0022	0.0022	0.0022	0.0022	0.0039	0.0022
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0041	0.0031	<0.003
Organics												
Carbon Organic (Dissolved)	0.5 to 5	19.1	20.1	18.4	18	19.4	9.78	19.4	19.6	20.8	20.5	20
Carbon Organic (Total)	0.5 to 5	20.1	19.4	18.7	18.1	19.3	9.89	19.7	20	21.5	19.8	20.2
Nitrogen Organic (Dissolved)	0.05 to 0.26											
Nitrogen Organic (Total)	0.05 to 0.3											
ALS LAB ID		**L1449318**	**L1455480**	**L1461081**	**L1469099**	**L1478913**	**L1483419**	**L1490937**	**L1499202**	**L1506521**	**L1518246**	**L1526071**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		EDITH-01M	EDITH-01M	EDITH-01M
Analytes	**MDL**	**20-Aug-14**	**14-Sep-14**	**30-Sep-14**
In Situ Parameters				
Conductivity µS/cm	...	723	699	1227
Oxygen Dissolved %	...	25.4	5.4	18.8
Oxygen Dissolved	...	2.3	0.59	2
pH (unitless)	...	8.5	7.93	8.31
Redox Potential mV	...	130	-233	109
Salinity ppt	...	0.44	0.48	0.83
Specific Conductivity µS/cm	...	893	978	1640
Temperature °C	...	15.1	10	11.8
Total Dissolved Solids	...	581	634	1066
Turbidity NTU	...	1.1	9.6	-10.1
Physical Tests				
Acidity to pH 8.3 (as CaCO3)	1			
Alkalinity (Total as CaCO3)	1 to 2	418	448	407
Bicarbonate Alkalinity	1 to 2	418	447	374
Carbonate Alkalinity	1 to 2	<1	<1	32.8
Color TCU	5			
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	400	414	397
Hydroxide Alkalinity	1 to 2	<1	<1	<1
pH (unitless)	0.01 to 0.1	8.37	8.36	8.58
Specific Conductivity µS/cm	2	917	942	906
Total Dissolved Solids	1 to 2	549	562	534
Total Suspended Solids	3	5.8	<3	<3
Turbidity NTU	0.1	5.22	23.8	1.02
Dissolved Anions				
Bromide	0.05 to 2.495	<0.5	<0.5	<0.5
Chloride	0.5 to 1	48.7	49.7	50.8
Fluoride	0.02 to 0.4	0.232	0.247	0.252
Sulphate	0.5 to 1	40.5	26.5	42.1
Nutrients				
Ammonia (Total)	0.005 to 0.05	0.36	1.56	0.243
Nitrate (as N)	0.005 to 0.1	<0.05	<0.05	<0.05
Nitrite (as N)	0.001 to 0.02	<0.01	<0.01	<0.01
Nitrogen (Dissolved)	0.05 to 0.1			
Nitrogen (Total)	0.0025 to 0.11			
Nitrogen Kjeldahl (Total)	0.05 to 0.2	2.09	3.18	1.51
Orthophosphate (Dissolved)	0.001 to 0.01	0.0011	0.325	0.0114
Phosphorus - Dissolved	0.002 to 0.02	0.0217	0.377	0.0297
Phosphorus - Total	0.002 to 0.02	0.0699	0.407	0.044
Cyanide				
Cyanide (Free)	0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005
Dissolved Metals				
Aluminum	0.001 to 0.025	0.0021	0.0015	0.0033
Antimony	0.0001 to 0.0025	0.00012	<0.0001	0.00013
Arsenic	0.0001 to 0.0025	0.00156	0.00164	0.00158
Barium	5E-005 to 0.02	0.0592	0.0673	0.0525
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.017	0.018	0.018
Cadmium	1E-005 to 8.5E-005	0.000011	<0.00001	<0.00001
Calcium	0.05 to 0.1	42.1	44.9	40.2
Chromium	0.0001 to 0.018	<0.0001	0.0001	<0.0001
Cobalt	0.0001 to 0.0015	0.0001	0.00011	0.00012
Copper	0.0002 to 0.006	0.00122	0.00026	0.00099
Dissolved Cadmium (by saltwater extraction)	0.00002			
Iron	0.01 to 0.03	<0.01	0.015	<0.01
Lead	5E-005 to 0.0025	0.000051	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.0108	0.011	0.0123
Magnesium	0.1	71.6	73.4	72
Manganese	5E-005 to 0.0015	0.215	0.204	0.107
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00141	0.000298	0.00237
Nickel	0.0005 to 0.005	0.00063	0.00071	0.00064
Phosphorus	0.05 to 0.3	<0.05	0.343	<0.05
Potassium	0.05 to 2	19.4	19.4	18.7
Selenium	0.0001 to 0.006	<0.0001	0.00018	<0.0001
Silicon	0.05	1.97	3.4	1.36
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	56.3	59.1	55
Strontium	0.0001 to 0.005	0.29	0.292	0.305
Sulphur	0.5	13.8	113	14.6
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00153	0.00147	0.00171
Vanadium	0.001 to 0.03	0.0021	0.0021	0.0029
Zinc	0.001 to 0.006	0.0032	<0.001	<0.001
Total Metals				
Aluminum	0.003 to 0.025	0.0136	0.0056	0.0165
Antimony	0.0001 to 0.0025	0.00012	0.00011	0.00013
Arsenic	0.0001 to 0.0025	0.00158	0.00165	0.00164
Barium	5E-005 to 0.02	0.0583	0.0643	0.0546
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.019	0.022	0.024
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	42.1	42.6	38.8
Chromium	0.0001 to 0.005	0.00015	<0.0003	0.00016
Cobalt	0.0001 to 0.0015	0.00014	0.00014	0.00014
Copper	0.0005 to 0.007	0.00155	0.00173	0.00149
Iron	0.01 to 0.03	0.024	0.046	0.023
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.0114	0.0112	0.0117
Magnesium	0.1	71.9	72	69.8
Manganese	5E-005 to 0.0015	0.225	0.198	0.121
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00163	0.00096	0.00241
Nickel	0.0005 to 0.005	0.00076	0.00085	0.00071
Phosphorus	0.05 to 0.3	0.075	0.328	<0.05
Potassium	0.05 to 2	19.2	18.1	17.9
Selenium	0.0001 to 0.006	<0.0001	<0.0001	<0.0001
Silicon	0.05	2	3.21	1.35
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	56.5	56.4	55.8
Strontium	0.0001 to 0.005	0.312	0.304	0.299
Sulphur	0.5	14.4	11.4	14.5
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002			
Uranium	1E-005 to 0.001	0.00158	0.00151	0.00183
Vanadium	0.001 to 0.03	0.0023	0.0025	0.0031
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003
Organics				
Carbon Organic (Dissolved)	0.5 to 5	19.1	20.8	19.7
Carbon Organic (Total)	0.5 to 5	20.3	20.9	19.7
Nitrogen Organic (Dissolved)	0.05 to 0.26			
Nitrogen Organic (Total)	0.05 to 0.3			
ALS LAB ID		**L1506521**	**L1518246**	**L1526071**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C3.14 - EDITH-01S
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Site ID		EDITH-01S	EDITH-01S	EDITH-01S	EDITH-01S	EDITH-01S	EDITH-01S	EDITH-01S	EDITH-01S	EDITH-01S	EDITH-01S	EDITH-01S	
Analytes	**MDL**	**30-Apr-14**	**13-May-14**	**27-May-14**	**10/Jun/2014**	**27-Jun-14**	**8-Jul-14**	**22-Jul-14**	**7-Aug-14**	**20-Aug-14**	**14-Sep-14**	**30-Sep-14**	
In Situ Parameters													
Conductivity µS/cm	...	527	677	712	720	765	782	792	833	794	794	1236	
Oxygen Dissolved %	...			76.5	87.8	92.3		12.9	81.4	52.2	88.1	85.1	84.1
Oxygen Dissolved	...			8.13	9	8.99		1.21	7.38	4.6	7.92	8.75	8.75
pH (unitless)	...	8.14	8.81	8.75	8.76	8.81	8.69	7.88	8.82	8.75	8.78	8.72	
Redox Potential mV	...	0.8	71.1	49.9	27.8	-52.6	-196	-49.2	58.7	123	168	81.9	
Salinity ppt	...	0.39	0.44	0.44	0.42	0.44	0.44	0.43	0.44	0.43	0.46	0.81	
Specific Conductivity µS/cm	...	798	885	897	859	883	894	875	888	872	929	1597	
Temperature °C	...	7.23	12.7	14.3	16.6	17.6	18.5	20	21.8	20.4	14	13.2	
Total Dissolved Solids	...	518	575	584	559	574	581	569	577	566	603	1037	
Turbidity NTU	...	-0.9	-0.3	-0.4	0.8	3.7	1.9	1.5	0.7	1.2	1.6	-9.9	
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1												
Alkalinity (Total as CaCO3)	1 to 2	384	355	394	393	404	403	400	416	402	421	408	
Bicarbonate Alkalinity	1 to 2	344	304	346	343	355	345	339	358	345	382	364	
Carbonate Alkalinity	1 to 2	39.9	51.1	47.8	50.3	49.5	58.3	60.7	58.1	56.6	39.3	43.5	
Color TCU	5												
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	393	394	387	382	382	391	396	387	390	408	394	
Hydroxide Alkalinity	1 to 2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	
pH (unitless)	0.01 to 0.1	8.7	8.84	8.68	8.73	8.71	8.8	8.77	8.79	8.77	8.76	8.63	
Specific Conductivity µS/cm	2	842	864	867	861	858	860	846	891	883	898	901	
Total Dissolved Solids	1 to 2	501	527	528	457	481	525	494	545	541	547	538	
Total Suspended Solids	3	7.4	<3	<3	<3	5	<3	<3	3.8	5.5	<3	3.1	
Turbidity NTU	0.1	1.69	0.69	0.52	1.48	6.47	1.98	1.95	1.1	3.41	1.18	2.22	
Dissolved Anions													
Bromide	0.05 to 2.495	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Chloride	0.5 to 1	47.3	48.1	46.6	49.8	50	48.8	49.2	50.8	50	50.3	51	
Fluoride	0.02 to 0.4	0.22	0.21	0.25	0.23	0.23	0.35	0.257	0.46	0.235	0.244	0.25	
Sulphate	0.5 to 1	38.9	40.5	41.1	41.6	40.7	41.1	42	42.4	42	42.1	42.4	
Nutrients													
Ammonia (Total)	0.005 to 0.05	0.0183	0.0293	0.0922	0.0238	0.0161	0.0319	0.0238	0.0288	0.0125	0.0172	0.052	
Nitrate (as N)	0.005 to 0.1	<0.05	<0.05	0.0063	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Nitrite (as N)	0.001 to 0.02	<0.01	<0.01	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Nitrogen (Dissolved)	0.05 to 0.1												
Nitrogen (Total)	0.0025 to 0.11												
Nitrogen Kjeldahl (Total)	0.05 to 0.2	1.58	1.39	1.36	1.32	1.64	1.26	1.42	1.66	1.5	1.43	1.4	
Orthophosphate (Dissolved)	0.001 to 0.01	0.0024	0.004	0.0078	<0.001	<0.001	<0.001	0.0012	<0.001	<0.001	<0.001	<0.001	
Phosphorus - Dissolved	0.002 to 0.02	0.0251	0.0263	0.0314	0.0217	0.0216	0.0221	0.0214	0.0212	0.0214	0.0179	0.0183	
Phosphorus - Total	0.002 to 0.02	0.0698	0.0313	0.0371	0.034	0.0395	0.0308	0.0328	0.0281	0.0314	0.0298	0.029	
Cyanide													
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Dissolved Metals													
Aluminum	0.001 to 0.025	<0.001	0.0012	0.0021	0.0019	0.0041	0.0049	0.0042	0.0116	0.0059	0.0044	0.0105	
Antimony	0.0001 to 0.0025	0.0001	0.00012	0.00011	0.00013	0.00013	0.00013	0.00012	0.00014	0.00012	0.00013	0.00013	
Arsenic	0.0001 to 0.0025	0.00141	0.00141	0.00141	0.00149	0.00149	0.00158	0.00162	0.00176	0.00173	0.00175	0.0017	
Barium	5E-005 to 0.02	0.0494	0.0488	0.0455	0.0418	0.0469	0.0467	0.0476	0.0502	0.0489	0.054	0.0543	
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Boron	0.01 to 0.1	0.014	0.015	0.015	0.016	0.015	0.016	0.015	0.018	0.016	0.016	0.02	
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
Calcium	0.05 to 0.1	40.4	42	40.7	39.2	40.5	39.1	39.4	38.9	37.7	40.5	39.8	
Chromium	0.0001 to 0.018	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Cobalt	0.0001 to 0.0015	<0.0001	<0.0001	0.00011	0.00011	0.00012	0.00012	0.00014	0.00014	0.00014	0.00013	0.00013	
Copper	0.0002 to 0.006	0.00074	0.00079	0.00102	0.00103	0.00114	0.0011	0.00115	0.00123	0.0014	0.00105	0.00108	
Dissolved Cadmium (by saltwater extraction)	0.00002												
Iron	0.01 to 0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	
Lithium	0.0005 to 0.025	0.0106	0.0118	0.0108	0.0119	0.0104	0.012	0.0112	0.0125	0.0113	0.0102	0.0129	
Magnesium	0.1	70.9	70.3	69.2	69	68.2	71.1	72.2	70.4	71.8	74.5	71.5	
Manganese	5E-005 to 0.0015	0.00106	0.00238	0.00483	0.00375	0.00249	0.00176	0.00172	0.00185	0.00104	0.00487	0.00936	
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
Molybdenum	5E-005 to 0.005	0.00185	0.00201	0.00186	0.002	0.00186	0.00188	0.00203	0.00208	0.00204	0.00189	0.00217	
Nickel	0.0005 to 0.005	0.00061	0.00063	0.00074	0.00069	0.00062	0.00058	0.00065	0.00067	0.00064	0.00067	0.00066	
Phosphorus	0.05 to 0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Potassium	0.05 to 2	17.6	16.9	16.8	17.2	17.4	18.2	17.8	20.9	19.3	19.1	18.7	
Selenium	0.0001 to 0.006	0.00013	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	0.0001	<0.0001	<0.0001	
Silicon	0.05	<0.05	<0.05	0.16	0.282	0.32	0.511	0.174	0.202	0.324	0.899	1.03	
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
Sodium	0.05 to 2	52.2	53	53.7	52.6	54.5	53.7	57.2	57.4	56.5	59.8	60.8	
Strontium	0.0001 to 0.005	0.282	0.271	0.267	0.287	0.272	0.267	0.282	0.277	0.289	0.273	0.331	
Sulphur	0.5	13.7	14.8	14.2	15.7	13.8	14.7	14.6	14.7	14.3	14.2	14.5	
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Uranium	1E-005 to 0.001	0.00156	0.00143	0.00162	0.00162	0.00168	0.0016	0.00169	0.00177	0.00155	0.00166	0.00177	
Vanadium	0.001 to 0.03	0.0021	0.0022	0.0023	0.0023	0.0026	0.0028	0.0032	0.0033	0.0033	0.0033	0.0033	
Zinc	0.001 to 0.006	<0.001	0.0012	0.0034	<0.001	<0.001	<0.001	<0.001	0.0011	0.0017	<0.001	0.0013	
Total Metals													
Aluminum	0.003 to 0.025	0.0088	0.0037	0.006	0.0056	0.0149	0.0137	0.017	0.0224	0.0232	0.0144	0.0141	
Antimony	0.0001 to 0.0025	0.00013	0.00013	0.00015	0.00014	0.00012	0.00015	0.00014	0.00017	0.00016	0.00014	0.00013	
Arsenic	0.0001 to 0.0025	0.00136	0.00133	0.00129	0.00148	0.00153	0.00156	0.00169	0.00162	0.00172	0.00167	0.00159	
Barium	5E-005 to 0.02	0.0483	0.0463	0.0423	0.0408	0.0461	0.0467	0.0495	0.0478	0.0451	0.052	0.0505	
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Boron	0.01 to 0.1	0.014	0.015	0.015	0.017	0.017	0.019	0.018	0.018	0.018	0.02	0.022	
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
Calcium	0.05 to 0.1	38.5	40.7	39.3	37.8	39.9	39.5	39.4	37.1	37.9	38.3	37.2	
Chromium	0.0001 to 0.005	0.00011	<0.0001	<0.0001	<0.0001	0.00015	<0.0001	<0.0001	0.00012	0.00015	<0.0003	0.00018	
Cobalt	0.0001 to 0.0015	0.00011	<0.0001	0.00011	0.00011	0.00016	0.00013	0.00016	0.00016	0.00017	0.00015	0.00014	
Copper	0.0005 to 0.007	0.00099	0.00095	0.00106	0.00111	0.00128	0.00123	0.00144	0.00142	0.00277	0.0013	0.00212	
Iron	0.01 to 0.03	0.016	0.049	0.012	0.011	0.021	0.014	0.02	0.027	0.03	0.023	0.02	
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000077	<0.00005	<0.00005	
Lithium	0.0005 to 0.025	0.00996	0.0112	0.00936	0.0112	0.0101	0.0114	0.0111	0.0112	0.0118	0.0102	0.011	
Magnesium	0.1	64.7	68.8	68.7	68.5	67.4	71.2	73.4	68.6	72.6	72.2	67.6	
Manganese	5E-005 to 0.0015	0.0107	0.00389	0.00573	0.00649	0.00691	0.00395	0.00419	0.00523	0.00506	0.0205	0.0232	
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
Molybdenum	5E-005 to 0.005	0.00195	0.00202	0.00191	0.00206	0.00206	0.00208	0.00213	0.00212	0.00218	0.00211	0.00207	
Nickel	0.0005 to 0.005	0.00071	0.00072	0.00072	0.00073	0.00072	0.00065	0.00074	0.00079	0.00074	0.00083	0.00076	
Phosphorus	0.05 to 0.3	0.078	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Potassium	0.05 to 2	16.7	16.3	16.5	17	17.5	18.4	18.1	20.2	19.5	18.4	17.5	
Selenium	0.0001 to 0.006	0.00012	<0.0001	0.00011	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	0.0001	
Silicon	0.05	0.071	0.057	0.168	0.292	0.36	0.54	0.232	0.24	0.378	0.911	1.01	
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
Sodium	0.05 to 2	50.9	53.4	52.8	53.7	53.9	55.8	56.6	55.2	58.1	57.7	54.4	
Strontium	0.0001 to 0.005	0.28	0.27	0.261	0.288	0.278	0.295	0.291	0.277	0.295	0.289	0.293	
Sulphur	0.5	13.6	14.5	14.3	14.7	14	15.1	15.5	14.6	14.8	14.6	14	
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Total Cadmium (by saltwater extraction)	0.00002												
Uranium	1E-005 to 0.001	0.00168	0.00176	0.00181	0.00182	0.0018	0.00178	0.00187	0.00183	0.00188	0.00183	0.00187	
Vanadium	0.001 to 0.03	0.0023	0.0023	0.0023	0.0026	0.0026	0.003	0.0034	0.0035	0.0036	0.0035	0.0031	
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	
Organics													
Carbon Organic (Dissolved)	0.5 to 5	18.4	19.5	18.6	19.1	18.8	9.75	19.2	19.9	19	20.2	19.7	
Carbon Organic (Total)	0.5 to 5	20.4	19.3	18.9	19.8	20	9.96	19.9	20.1	20.1	20.4	20.3	
Nitrogen Organic (Dissolved)	0.05 to 0.26												
Nitrogen Organic (Total)	0.05 to 0.3												
ALS LAB ID		**L1449318**	**L1455480**	**L1461081**	**L1469099**	**L1478913**	**L1483419**	**L1490937**	**L1499202**	**L1506521**	**L1518246**	**L1526071**	

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C3.15 - GOOSE LAKE
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Site ID	MDL	GOOSE LAKE	GOOSE LAKE	GOOSE LAKE	GOOSE LAKE	GOOSE LAKE	GOOSE LAKE	GOOSE LAKE	GOOSE LAKE	GOOSE LAKE	GOOSE LAKE	GOOSE LAKE	GOOSE LAKE
Date/Time Sampled		9-Apr-14	24-Apr-14	8-May-14	23-May-14	5-Jun-14	18-Jun-14	3-Jul-14	15-Jul-14	29-Jul-14	11-Aug-14	3-Sep-14	18-Sep-14
In Situ Parameters													
Conductivity (In Situ) µS/cm	...	2631	2923	3284	4046	4884	5436	5259	5310	5357	6755		5332
Oxygen Dissolved (In Situ %) %	...	12.6	90.3	60.3	91.8	30.8	87	84.9	75.6	61.6	33.1		36.9
Oxygen Dissolved (In Situ)	...	1.4	10.5	6.28	8.73	6.94	6.97	6.92	5.92	5.15	2.78		3.42
pH (In Situ) pH	...	9.49	9.53	9.58	9.59	9.59	9.58	9.57	9.36	9.77	9.35	9.35	9.33
Redox Potential (In Situ) mV	...	-241	67.4	-6.2	-21.4	34.9	43	-63.7	-349	-296	-280		-237
Salinity (In Situ) ppt	...	1.96	2.29	2.29	2.57	2.79	2.89	2.87	2.74	2.97	3.85		3.49
Specific Conductivity (In Situ) µS/cm	...	3703	4284	4281	4776	5172	5374	5272	5117	5504	7000		6361
Temperature (In Situ) °C	...	9.84	8.33	12.8	16.9	22.1	25.6	24.6	27	23.6	23.2	17.9	16.5
Total Dissolved Solids (In Situ)	...	2407	2787	2782	3105	3362	3492	3459	3326	3578	4550		4134
Turbidity (In Situ) NTU	...												
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1												
Alkalinity (Total as CaCO3)	1 to 2	1310	1370	1540	1640	1770	1800	2040	2100	2220	2420	2200	2450
Bicarbonate Alkalinity	1 to 2	732	790	863	902	955	994	1070	1170	1120	1230	1290	1360
Carbonate Alkalinity	1 to 2	576	584	677	736	816	808	966	939	1100	1180	911	1090
Color TCU	5												
Hardness as CaCO3 (Dissolved)	0.5 to 9.6	676	752	850	918	955	1040	1130	1170	1160	1160	1030	1230
Hydroxide Alkalinity	1 to 2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
pH pH	0.01 to 0.1	9.42	9.45	9.34	9.4	9.4	9.39	9.42	9.45	9.52	9.47	9.34	9.43
Specific Conductivity µS/cm	2	3730	4190	4630	4620	4850	5200	5660	6330	6510	7290	6620	7140
Total Dissolved Solids	1 to 2	2980	3470	3850	3870	4240	4470	4940	6150	5920	6260	5680	6040
Total Suspended Solids	3 to 5	26.7	15.6	5.1	<3	13.8	4.5	17.5	41	50.1	36.6	218	19.9
Turbidity NTU	0.1	50.2	3.78	1.21	0.76	1	1.48	3.5	5.67	10.7	12	161	19.3
Dissolved Anions													
Bromide (Dissolved)	0.05 to 152.5	1.1	1.1	1.5	<2.5	1.3	1.4	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Chloride (Dissolved)	0.5 to 25	86	100	103	103	106	114	147	143	145	169	148	162
Fluoride (Dissolved)	0.02 to 1	<0.4	<0.4	<0.4	<1	0.045	0.039	0.033	0.031	<0.03	<1	<0.03	<0.03
Sulphate (Dissolved)	0.5 to 25	997	1120	1250	1280	1370	1480	1620	1850	1870	2170	1880	2130
Nutrients													
Ammonia (Total)	0.005 to 0.13	0.341	0.0633	0.0818	0.124	0.127	0.148	0.137	0.186	0.0913	0.147	0.167	0.149
Nitrate (as N)	0.005 to 2.5	<0.1	<0.1	<0.1	<0.25	<0.1	<0.1	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Nitrite (as N)	0.001 to 0.5	<0.02	<0.02	<0.02	<0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.065	<0.05
Nitrogen (Dissolved)	0.05 to 1												
Nitrogen (Total)	0.0025 to 1.4												
Nitrogen Kjeldahl (Total)	0.05 to 1.25	10.8	7.22	8.67	7.73	7.57	9.71	10.6	12.5	16.5	17.2	14.4	14.3
Orthophosphate (Dissolved)	0.001 to 0.1	0.0027	0.0013	0.0018	0.0092	0.0196	0.0017	0.0011	0.0022	0.0042	0.0041	0.0216	0.0043
Phosphorus (Nutrient) Dissolved	0.002 to 0.2	0.196	0.127	0.0415	0.0613	0.0766	0.06	0.0311	0.0858	0.0939		0.178	0.135
Phosphorus (Nutrient) Total	0.002 to 0.2	0.0516	0.0423	0.0611	0.113	0.0801	0.0817	0.0746	0.165	0.295	0.4	0.38	0.301
Cyanide													
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum (Dissolved)	0.001 to 0.5	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.007	<0.005	<0.005	<0.01	<0.005	<0.005
Antimony (Dissolved)	0.0001 to 0.05	0.00153	0.00165	0.00191	0.00198	0.00206	0.00177	0.00229	0.00234	0.0027	0.0028	0.00306	0.00319
Arsenic (Dissolved)	0.0001 to 0.05	0.0193	0.0201	0.0204	0.0198	0.0192	0.0181	0.0193	0.0198	0.0226	0.0283	0.0302	0.0325
Barium (Dissolved)	5E-005 to 0.4	0.011	0.0148	0.0158	0.0182	0.017	0.0168	0.0186	0.0164	0.007	0.00662	0.00584	0.00472
Beryllium (Dissolved)	0.0001 to 0.1	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005
Bismuth (Dissolved)	0.0005 to 4	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.005	<0.0025	<0.0025
Boron (Dissolved)	0.01 to 2	0.161	0.17	0.224	0.242	0.228	0.229	0.325	0.341	0.308	0.32	0.314	0.326
Cadmium (Dissolved)	1E-005 to 0.0017	<0.00005		<0.00005	<0.00005	0.000058	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.00005
Calcium (Dissolved)	0.05 to 2	5.67	6.01	7.35	8.98	7.42	7.4	6.91	6.52	6.06	5.92	5.55	5.64
Chromium (Dissolved)	0.0001 to 0.1	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005
Cobalt (Dissolved)	0.0001 to 0.03	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005
Copper (Dissolved)	0.0002 to 0.15	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	0.0014
Dissolved Cadmium (by saltwater extraction)	0.00002		<0.00002	<0.00002	<0.00002		<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	
Iron (Dissolved)	0.01 to 0.6	0.027	0.016	<0.01	0.029	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	0.058	<0.02
Lead (Dissolved)	5E-005 to 0.05	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.0005	<0.00025	<0.00025
Lithium (Dissolved)	0.0005 to 0.5	0.0503	0.0511	0.0623	0.0653	0.0611	0.0611	0.0832	0.0881	0.0938	0.0927	0.0892	0.0829
Magnesium (Dissolved)	0.1 to 2	161	179	202	218	227	249	270	280	278	279	247	294
Manganese (Dissolved)	5E-005 to 0.03	0.00247	0.00167	0.00079	0.00077	0.00112	0.00109	0.00158	0.00073	0.00107	0.00087	0.00146	0.00076
Mercury (Dissolved)	1E-005 to 2E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Dissolved)	5E-005 to 0.1	0.00323	0.00377	0.00424	0.00435	0.0043	0.00449	0.00512	0.0051	0.00507	0.00495	0.00456	0.00439
Nickel (Dissolved)	0.0005 to 0.1	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.005	<0.0025	<0.0025
Phosphorus (Metal) Dissolved	0.05 to 6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.1	<0.1	0.14	0.11	<0.1	<0.1
Potassium (Dissolved)	0.05 to 4	138	146	157	160	173	177	214	237	236	287	250	269
Selenium (Dissolved)	0.0001 to 0.1	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005
Silicon (Dissolved)	0.05 to 1	3.67	1.8	0.336	0.698	0.184	0.58	0.58	0.62	0.78	1.82	3.82	4.17
Silver (Dissolved)	1E-005 to 0.002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.00005
Sodium (Dissolved)	0.05 to 4	719	792	852	860	884	891	1110	1230	1320	1440	1280	1370
Strontium (Dissolved)	0.0001 to 0.1	0.375	0.377	0.46	0.54	0.518	0.523	0.555	0.583	0.546	0.449	0.467	0.483
Sulphur (Dissolved)	0.0005 to 1	319	339	366	372	399	450	524	548	575	689	610	684
Thallium (Dissolved)	1E-005 to 0.02	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.00005
Tin (Dissolved)	0.0001 to 0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005
Titanium (Dissolved)	0.01 to 1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05
Uranium (Dissolved)	1E-005 to 0.02	0.00342	0.00367	0.00418	0.00447	0.00442	0.00431	0.00499	0.00507	0.00526	0.00525	0.00433	0.00473
Vanadium (Dissolved)	0.001 to 0.3	<0.005	0.005	0.0058	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005
Zinc (Dissolved)	0.001 to 0.5	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	0.0055	<0.005
Total Metals													
Aluminum (Total)	0.003 to 0.5	0.465	<0.015	<0.015	0.027	<0.015	0.02	<0.015	0.016	0.056	<0.03	0.031	<0.015
Antimony (Total)	0.0001 to 0.05	0.00153	0.00175	0.00212	0.00204	0.00207	0.00181	0.00245	0.00233	0.00262	0.0025	0.00293	0.00323
Arsenic (Total)	0.0001 to 0.05	0.0189	0.0202	0.0222	0.0191	0.0195	0.018	0.0187	0.0192	0.0211	0.0271	0.0294	0.0309
Barium (Total)	5E-005 to 0.4	0.0247	0.0137	0.0177	0.0184	0.0184	0.0175	0.0185	0.0177	0.0093	0.00839	0.00702	0.00542
Beryllium (Total)	0.0001 to 0.1	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005
Bismuth (Total)	0.0005 to 4	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.005	<0.0025	<0.0025
Boron (Total)	0.01 to 2	0.153	0.168	0.224	0.245	0.232	0.229	0.32	0.356	0.289	0.3	0.298	0.341
Cadmium (Total)	1E-005 to 0.0017	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.00005
Calcium (Total)	0.05 to 2	9.82	5.93	7.46	8.38	7.6	7.63	6.93	6.78	6.61	6.15	5.23	5.7
Chromium (Total)	0.0001 to 0.1	0.00165	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005
Cobalt (Total)	0.0001 to 0.03	0.00059	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005
Copper (Total)	0.0005 to 0.15	0.003	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.005	<0.0025	<0.0025
Iron (Total)	0.01 to 0.6	0.814	0.031	0.016	0.021	0.022	0.041	<0.02	0.03	0.107	0.062	0.065	0.034
Lead (Total)	5E-005 to 0.05	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.0005	<0.00025	<0.00025
Lithium (Total)	0.0005 to 0.5	0.0453	0.051	0.0625	0.0642	0.0658	0.0608	0.0806	0.095	0.0871	0.0808	0.0831	0.0869
Magnesium (Total)	0.1 to 2	155	178	195	222	232	258	272	293	279	275	233	289
Manganese (Total)	5E-005 to 0.03	0.0271	0.00175	0.00113	0.00129	0.0011	0.00183	0.00179	0.00131	0.00413	0.00383	0.00331	0.00174
Mercury (Total)	1E-005 to 2E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Total)	5E-005 to 0.1	0.0032	0.00424	0.00444	0.0045	0.00437	0.00452	0.00536	0.00542	0.00481	0.00464	0.00432	0.00438
Nickel (Total)	0.0005 to 0.1	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.005	<0.0025	<0.0025
Phosphorus (Metal) Total	0.05 to 6	0.308	0.107	0.07	0.059	0.058	<0.1	<0.1	0.12	0.29	0.37	0.33	0.21
Potassium (Total)	0.05 to 4	129	144	154	161	179	181	211	241	234	278	229	262
Selenium (Total)	0.0001 to 0.1	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005
Silicon (Total)	0.05 to 1	5.58	1.89	0.345	0.737	0.219	0.65	0.59	0.7	1.01	1.93	3.69	4.18
Silver (Total)	1E-005 to 0.002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.00005
Sodium (Total)	0.05 to 4	691	784	908	845	992	896	1090	1240	1270	1350	1200	1300
Strontium (Total)	0.0001 to 0.1	0.442	0.395	0.486	0.563	0.529	0.532	0.556	0.622	0.555	0.433	0.46	0.48
Sulphur (Total)	0.5 to 1	313	357	375	409	429	477	541	598	600	690	579	671
Thallium (Total)	1E-005 to 0.02	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.00005
Tin (Total)	0.0001 to 0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005
Titanium (Total)	0.01 to 1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05
Total Cadmium (by saltwater extraction)	0.00002		<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	
Uranium (Total)	1E-005 to 0.02	0.00336	0.0037	0.00464	0.00447	0.00433	0.00449	0.00486	0.005	0.00512	0.00499	0.00506	0.00484
Vanadium (Total)	0.001 to 0.3	0.0051	0.005	0.0063	0.0052	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005
Zinc (Total)	0.003 to 0.5	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.03	<0.015	<0.015
Organics													
Carbon Organic (Dissolved)	0.2 to 1	102	119	109	111	120	123	144	159	169	184	170	199
Carbon Organic (Total)	0.5 to 1	111	112	107	117	137	123	147	168	176	187	181	196
Nitrogen Organic (Dissolved)	0.05 to 1												
Nitrogen Organic (Total)	0.05 to 1												
Lab ID		L1441961	L1447300	L1453031	L1459728	L1466627	L1473827	L1481215	L1488139	L1494491	L1500711	L1513418	L1520952

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C3.16 - HUMPH02
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Site ID			HUMPH02	HUMPH02	HUMPH02	HUMPH02	HUMPH02	HUMPH02	HUMPH02	HUMPH02	HUMPH02	HUMPH02	HUMPH02	HUMPH02
Analytes	**MDL**		**5-Feb-14**	**13-Mar-14**	**21-Mar-14**	**26-Mar-14**	**3-Apr-14**	**10-Apr-14**	**24-Apr-14**	**7-May-14**	**22-May-14**	**4-Jun-14**	**17-Jun-14**	**3-Jul-14**
In Situ Parameters														
Conductivity µS/cm	...			904	840	814	919	854	859	814	861	772	600	828
Oxygen Dissolved %	...			83.9	82.4	79.5	70.7	88.6	83.9	106	87	104	89.9	88.1
Oxygen Dissolved	...			11.6	11	10.2	8.91	11.3	10.5	13.3	9.82	12.2	9.89	9.01
pH (unitless)	...			8.33	8.14	8.24	8.28	8.27	8.3	8.37	8.39	8.35	8.5	8.41
Redox Potential mV	...			64.5	52.3	117	-0.9	-70.4	87.8	217	58.9	151	80.9	68.4
Salinity ppt	...			0.81	0.72	0.66	0.74	0.69	0.68	0.64	0.61	0.57	0.41	0.52
Specific Conductivity µS/cm	...			1619	1443	1330	1470	1384	1354	12850	1215	1141	825	1044
Temperature °C	...			1.87	3.11	4.72	5.37	4.98	5.85	5.8	9.79	8.07	10.7	14.7
Total Dissolved Solids	...			1052	937	863	955	900	880	832	789	742	542	679
Turbidity NTU	...													
Physical Tests														
Acidity to pH 8.3 (as CaCO3)	1													
Alkalinity (Total as CaCO3)	1 to 2			469	484	289	473	495	481	475	465	443	482	453
Bicarbonate Alkalinity	1 to 2			469	476	188	443	450	439	442	444	425	429	434
Carbonate Alkalinity	1 to 2			<2	8.5	101	30.1	45.2	42.1	32.8	21.4	17.3	53.3	19.4
Color TCU	5									17.7				
Hardness as CaCO3 (Dissolved)	0.5 to 1.1			850	782	760	733	721	675	651	597	639	632	489
Hydroxide Alkalinity	1 to 2			<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1			8.28	8.44	8.39	8.39	8.36	8.49	8.43	8.48	8.51	8.53	8.54
Specific Conductivity µS/cm	2			1540	1450	1420	1380	1370	1310	1240	1210	1200	1230	1000
Total Dissolved Solids	1 to 2			1000	1050	1010	988	963	946	851	800	801	826	493
Total Suspended Solids	3			17.7	19.3	28.3	14.5	13	11.6	19.7	5.8	22.7	9.4	4.3
Turbidity NTU	0.1			7.22	5.55	4.9	3.24	2.14	1.89	3.39	0.47	7.59	1.95	1.12
Dissolved Anions														
Bromide	0.05 to 2.495			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	0.5 to 1			25.4	30.6	28.4	29.1	30.4	32.1	34	32.4	35.2	32.2	47.7
Fluoride	0.02 to 0.4			0.36	0.25	0.25	0.26	0.28	0.26	0.23	0.28	0.26	0.285	0.27
Sulphate	0.5 to 1			478	386	369	342	329	313	248	230	224	231	95.5
Nutrients														
Ammonia (Total)	0.005 to 0.05			0.0237	0.018	0.012	0.0105	0.0077	0.0062	0.0063	0.0083	0.0071	0.0073	0.0186
Nitrate (as N)	0.005 to 0.1			0.053	0.18	0.129	0.088	0.055	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrite (as N)	0.001 to 0.02			<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen (Dissolved)	0.05 to 0.1													
Nitrogen (Total)	0.0025 to 0.11													
Nitrogen Kjeldahl (Total)	0.05 to 0.2			0.92	0.678	0.679	0.605	0.646	0.552	0.591	0.597	0.916	0.611	0.97
Orthophosphate (Dissolved)	0.001 to 0.01			0.0866	0.0817	0.0771	0.0753	0.0744	0.0767	0.0864	0.0819	0.0856	0.0834	0.123
Phosphorus - Dissolved	0.002 to 0.02			0.0893	0.0901	0.0879	0.114	0.0777	0.094	0.0921	0.0875	0.0891	0.0878	0.146
Phosphorus - Total	0.002 to 0.02			0.144	0.152	0.16	0.0811	0.092	0.0813	0.142	0.0914	0.114	0.116	0.141
Cyanide														
Cyanide (Free)	0.005			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals														
Aluminum	0.001 to 0.025			0.0019	<0.001	0.0014	<0.001	<0.001	<0.001	0.0013	0.0016	<0.001	0.0018	0.0018
Antimony	0.0001 to 0.0025			0.0002	0.00026	0.00021	0.00023	0.00023	0.00021	0.00019	0.00021	0.00021	0.00021	0.00019
Arsenic	0.0001 to 0.0025			0.0028	0.00352	0.00331	0.00325	0.00356	0.00345	0.00327	0.00383	0.00361	0.00358	0.00306
Barium	5E-005 to 0.02			0.069	0.0635	0.0586	0.0547	0.0552	0.0554	0.0567	0.0567	0.0528	0.0576	0.0672
Beryllium	0.0001 to 0.005			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2			<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1			0.039	0.029	0.029	0.027	0.026	0.028	0.023	0.029	0.029	0.032	0.029
Cadmium	1E-005 to 8.5E-005			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00005	<0.00001
Calcium	0.05 to 0.1			132	121	113	114	113	106	99.2	92.7	96.8	99.6	69.8
Chromium	0.0001 to 0.018			0.00044	0.00013	0.00012	0.00014	0.00012	0.00016	0.00016	0.00021	0.00015	0.00014	<0.0001
Cobalt	0.0001 to 0.0015			<0.0001	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00011
Copper	0.0002 to 0.006			0.004	0.00632	0.00608	0.00629	0.00681	0.00635	0.00724	0.00741	0.00671	0.00641	0.00732
Dissolved Cadmium (by saltwater extraction)	0.00002										<0.00002		<0.00002	
Iron	0.01 to 0.03			0.028	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01
Lead	5E-005 to 0.0025			<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025			0.00715	0.00699	0.00717	0.00643	0.00673	0.00646	0.00643	0.00702	0.0066	0.00672	0.00783
Magnesium	0.1			126	117	116	109	107	99.5	98.1	88.9	96.6	93	76.5
Manganese	5E-005 to 0.0015			0.0248	0.0153	0.0126	0.00971	0.00772	0.00923	0.00531	0.00697	0.0103	0.0128	0.00358
Mercury	1E-005 to 5E-005			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005			0.0199	0.0248	0.0245	0.0242	0.0239	0.0235	0.0205	0.0226	0.0233	0.0228	0.0126
Nickel	0.0005 to 0.005			0.00134	0.00135	0.00113	0.00114	0.00123	0.00115	0.00121	0.00128	0.0012	0.00122	0.00152
Phosphorus	0.05 to 0.3			0.096	0.101	0.071	0.095	0.074	0.078	0.099	0.078	0.081	0.093	0.138
Potassium	0.05 to 2			14.5	15.2	14.2	13.8	13.7	13.2	13.8	13.2	13.9	14.5	18
Selenium	0.0001 to 0.006			0.00211	0.00618	0.00486	0.00505	0.00477	0.00448	0.00333	0.0027	0.0021	0.00178	0.00072
Silicon	0.05			9.5	8.79	8.64	8.29	8.4	8.04	8.51	8.64	8.96	9.15	7.98
Silver	1E-005 to 0.0001			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2			68.5	65.6	63.7	62.5	63.7	63.8	57.3	62.5	58.8	60.3	54.4
Strontium	0.0001 to 0.005			1.19	1.01	0.985	0.959	0.955	0.972	0.83	0.888	0.815	0.839	0.593
Sulphur	0.5			150	123	113	110	109	100	84.7	72.5	76.9	75.6	31.1
Thallium	1E-005 to 0.001			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01			<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001			0.0038	0.00471	0.00455	0.0045	0.00435	0.004	0.00377	0.00363	0.0036	0.00326	0.00258
Vanadium	0.001 to 0.03			0.0042	0.0049	0.0052	0.0051	0.0053	0.0051	0.0052	0.0059	0.0055	0.0054	0.0056
Zinc	0.001 to 0.006			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0011	<0.001	<0.001	<0.001
Total Metals														
Aluminum	0.003 to 0.025			0.19	0.345	0.36	0.205	0.18	0.156	0.192	0.186	0.0788	0.129	0.0484
Antimony	0.0001 to 0.0025			0.0002	0.00028	0.00023	0.00026	0.00021	0.00022	0.00024	0.00021	0.00021	0.00019	0.0002
Arsenic	0.0001 to 0.0025			0.00275	0.00338	0.00326	0.00332	0.00333	0.00329	0.00317	0.00341	0.00331	0.00332	0.00312
Barium	5E-005 to 0.02			0.0717	0.0687	0.0637	0.0605	0.0585	0.0595	0.0604	0.06	0.0515	0.0554	0.0684
Beryllium	0.0001 to 0.005			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2			<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1			0.04	0.032	0.032	0.03	0.029	0.028	0.024	0.028	0.032	0.035	0.032
Cadmium	1E-005 to 8.5E-005			0.000012	0.000016	0.000012	0.000012	0.000012	0.000011	0.00001	<0.00001	<0.00001	<0.00005	<0.00001
Calcium	0.05 to 0.1			129	116	107	111	109	108	99.5	93.2	90.1	95.1	68.7
Chromium	0.0001 to 0.005			0.00055	0.00086	0.00093	0.00057	0.00055	0.00047	0.00064	0.00059	0.00033	0.00046	0.00027
Cobalt	0.0001 to 0.0015			0.00027	0.00049	0.00047	0.0003	0.00031	0.0003	0.00035	0.00027	0.00014	0.0002	0.00016
Copper	0.0005 to 0.007			0.00741	0.0134	0.0143	0.0111	0.0112	0.0111	0.0143	0.0117	0.00864	0.0101	0.00892
Iron	0.01 to 0.03			0.282	0.518	0.571	0.327	0.32	0.243	0.341	0.294	0.114	0.197	0.072
Lead	5E-005 to 0.0025			0.00007	0.000132	0.000131	0.000074	0.000088	0.000071	0.000092	0.000065	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025			0.00696	0.00734	0.00651	0.00691	0.00659	0.00635	0.00675	0.00681	0.00634	0.0065	0.00794
Magnesium	0.1			122	110	103	107	103	101	89.9	89.3	91.4	87.9	75.8
Manganese	5E-005 to 0.0015			0.065	0.0848	0.0739	0.0458	0.0537	0.0454	0.0399	0.0317	0.0189	0.0308	0.00848
Mercury	1E-005 to 5E-005			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005			0.0199	0.0251	0.024	0.0253	0.0239	0.0238	0.0219	0.0234	0.0229	0.0228	0.0136
Nickel	0.0005 to 0.005			0.00186	0.00252	0.00242	0.00185	0.0019	0.00179	0.00202	0.00197	0.00139	0.00162	0.00178
Phosphorus	0.05 to 0.3			0.122	0.13	0.126	0.116	0.105	0.106	0.122	0.106	0.1	0.105	0.137
Potassium	0.05 to 2			14.1	14.1	13.3	13.3	12.9	13.6	13.3	13.2	12.9	13.6	17.4
Selenium	0.0001 to 0.006			0.00196	0.0051	0.00477	0.00492	0.00443	0.00384	0.00292	0.00245	0.00173	0.00162	0.00057
Silicon	0.05			9.67	9.13	9.02	8.64	8.48	8.44	8.76	9.12	8.64	9.24	8.04
Silver	1E-005 to 0.0001			<0.00001	0.000017	<0.00001	<0.00001	<0.00001	<0.00001	0.00003	<0.00001	<0.00001	0.000011	<0.00001
Sodium	0.05 to 2			67.2	64.9	59.8	63	62.9	63.1	56.3	60.6	55.7	57.1	56
Strontium	0.0001 to 0.005			1.16	1.04	0.967	0.985	0.982	0.969	0.846	0.855	0.794	0.833	0.617
Sulphur	0.5			147	122	110	111	109	102	85.4	74.3	74.5	75	32.5
Thallium	1E-005 to 0.001			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025			<0.0001	<0.0001	<0.0001	<0.0001	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01			<0.01	0.013	0.015	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002												<0.00002	
Uranium	1E-005 to 0.001			0.00386	0.00476	0.0044	0.00462	0.00431	0.00405	0.00399	0.00384	0.0035	0.00327	0.0027
Vanadium	0.001 to 0.03			0.0049	0.0062	0.0064	0.0062	0.0061	0.0058	0.0063	0.0067	0.0057	0.0058	0.0062
Zinc	0.003 to 0.006			<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics														
Carbon Organic (Dissolved)	0.5 to 5			9.93	10.9	10.2	10.8	9.87	9.63	10.4	9.83	9.31	9.8	17.2
Carbon Organic (Total)	0.5 to 5			13.3	11.5	12.3	12.4	11.8	10.1	10.6	10.3	20.6	10.8	16.4
Nitrogen Organic (Dissolved)	0.05 to 0.26													
Nitrogen Organic (Total)	0.05 to 0.3													
ALS LAB ID				**L1432163**	**L1435186**	**L1437439**	**L1439655**	**L1442672**	**L1447300**	**L1452368**	**L1459064**	**L1465478**	**L1472862**	**L1481215**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID			HUMPH02	HUMPH02	HUMPH02	HUMPH02	HUMPH02
Analytes	**MDL**		**15-Jul-14**	**29-Jul-14**	**11-Aug-14**	**3-Sep-14**	**17-Sep-14**
In Situ Parameters							
Conductivity µS/cm	...		767	828	920		882
Oxygen Dissolved %	...		96.7	88.3	89.8	89.4	
Oxygen Dissolved	...		9.67	9.1	9.43	10	
pH (unitless)	...		8.54	8.68	8.4	8.5	8.36
Redox Potential mV	...		118	48.9	54		109
Salinity ppt	...		0.417	0.52	0.6		0.62
Specific Conductivity µS/cm	...		942	1051	1187		1231
Temperature °C	...		15.3	13.9	13	11.5	10.1
Total Dissolved Solids	...		612	683	780		800
Turbidity NTU	...						
Physical Tests							
Acidity to pH 8.3 (as CaCO3)	1						
Alkalinity (Total as CaCO3)	1 to 2		442	473	489	494	508
Bicarbonate Alkalinity	1 to 2		409	440	460	452	464
Carbonate Alkalinity	1 to 2		33.1	32.9	28.3	41.3	44.1
Color TCU	5						
Hardness as CaCO3 (Dissolved)	0.5 to 1.1		483	562	583	635	642
Hydroxide Alkalinity	1 to 2		<1	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1		8.45	8.49	8.49	8.52	8.56
Specific Conductivity µS/cm	2		1030	1150	1230	1260	1270
Total Dissolved Solids	1 to 2		664	728	804	858	934
Total Suspended Solids	3		3.9	9.3	4.6	10.5	9.1
Turbidity NTU	0.1		0.98	3.52	1.4	2.56	1.88
Dissolved Anions							
Bromide	0.05 to 2.495		<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	0.5 to 1		48.9	45.3	43.1	38.2	40.9
Fluoride	0.02 to 0.4		0.293	0.282	0.4	0.257	0.25
Sulphate	0.5 to 1		84.9	158	200	217	238
Nutrients							
Ammonia (Total)	0.005 to 0.05		0.019	0.0112	0.012	0.0107	0.0098
Nitrate (as N)	0.005 to 0.1		<0.05	<0.05	0.055	<0.05	<0.05
Nitrite (as N)	0.001 to 0.02		<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen (Dissolved)	0.05 to 0.1						
Nitrogen (Total)	0.0025 to 0.11						
Nitrogen Kjeldahl (Total)	0.05 to 0.2		1.05	0.86	0.805	0.598	0.637
Orthophosphate (Dissolved)	0.001 to 0.01		0.133	0.0934	0.0961	0.102	0.103
Phosphorus - Dissolved	0.002 to 0.02		0.16	0.0995		0.138	0.12
Phosphorus - Total	0.002 to 0.02		0.166	0.114	0.132	0.153	0.166
Cyanide							
Cyanide (Free)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals							
Aluminum	0.001 to 0.025		0.0019	0.0018	0.0026	0.0017	0.0021
Antimony	0.0001 to 0.0025		0.00018	0.00021	0.00018	0.00013	0.00014
Arsenic	0.0001 to 0.0025		0.00327	0.00346	0.00318	0.00319	0.00291
Barium	5E-005 to 0.02		0.067	0.065	0.0675	0.0648	0.0651
Beryllium	0.0001 to 0.005		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1		0.033	0.033	0.037	0.034	0.034
Cadmium	1E-005 to 8.5E-005		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1		68.8	86.7	90.6	101	101
Chromium	0.0001 to 0.018		0.00011	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015		0.00013	<0.0001	<0.0001	<0.0001	<0.0001
Copper	0.0002 to 0.006		0.00722	0.00679	0.00631	0.00547	0.00512
Dissolved Cadmium (by saltwater extraction)	0.00002						
Iron	0.01 to 0.03		<0.01	<0.01	0.012	0.012	0.012
Lead	5E-005 to 0.0025		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025		0.00804	0.00766	0.00753	0.00759	0.00775
Magnesium	0.1		75.6	83.8	86.5	92.9	94.7
Manganese	5E-005 to 0.0015		0.00583	0.00923	0.0204	0.0241	0.0216
Mercury	1E-005 to 5E-005		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005		0.0135	0.0212	0.0191	0.0172	0.017
Nickel	0.0005 to 0.005		0.00166	0.00142	0.00138	0.00128	0.00145
Phosphorus	0.05 to 0.3		0.145	0.109	0.115	0.113	0.118
Potassium	0.05 to 2		17	15.7	15.5	15.4	15.1
Selenium	0.0001 to 0.006		0.00064	0.0008	0.00056	0.00073	0.00075
Silicon	0.05		8.45	9.75	9.96	10.4	10.3
Silver	1E-005 to 0.0001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2		57.8	60	63	59.4	63.6
Strontium	0.0001 to 0.005		0.621	0.81	0.892	0.875	0.962
Sulphur	0.5		28.4	52.2	64.3	73	76.2
Thallium	1E-005 to 0.001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01		<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001		0.0024	0.00277	0.0026	0.00243	0.00251
Vanadium	0.001 to 0.03		0.0044	0.0048	0.0039	0.0034	0.0033
Zinc	0.001 to 0.006		<0.001	0.0011	<0.001	0.0018	<0.001
Total Metals							
Aluminum	0.003 to 0.025		0.0604	0.07	0.054	0.182	0.211
Antimony	0.0001 to 0.0025		0.00019	0.00021	0.00018	0.00018	0.00016
Arsenic	0.0001 to 0.0025		0.00305	0.00327	0.00322	0.00297	0.00311
Barium	5E-005 to 0.02		0.0659	0.0628	0.0673	0.0685	0.0713
Beryllium	0.0001 to 0.005		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1		0.032	0.032	0.043	0.038	0.041
Cadmium	1E-005 to 8.5E-005		<0.00001	0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1		67.9	81.3	90.5	102	102
Chromium	0.0001 to 0.005		0.00025	0.00023	0.00021	0.0005	0.00058
Cobalt	0.0001 to 0.0015		0.00017	0.00016	0.00015	0.0003	0.00028
Copper	0.0005 to 0.007		0.00871	0.00909	0.00821	0.00967	0.00956
Iron	0.01 to 0.03		0.095	0.096	0.087	0.29	0.285
Lead	5E-005 to 0.0025		<0.00005	<0.00005	<0.00005	0.000109	0.000065
Lithium	0.0005 to 0.025		0.00676	0.00694	0.00774	0.00758	0.00802
Magnesium	0.1		72.9	78.5	86.9	94.8	96
Manganese	5E-005 to 0.0015		0.0125	0.0227	0.0282	0.0587	0.0552
Mercury	1E-005 to 5E-005		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005		0.014	0.02	0.0206	0.0183	0.0188
Nickel	0.0005 to 0.005		0.00184	0.00166	0.0015	0.00193	0.00209
Phosphorus	0.05 to 0.3		0.158	0.108	0.095	0.127	0.14
Potassium	0.05 to 2		16.5	14.8	15.5	15.4	15.3
Selenium	0.0001 to 0.006		0.00059	0.00077	0.0007	0.00071	0.00077
Silicon	0.05		8.43	9.29	10.1	11	11
Silver	1E-005 to 0.0001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2		51.4	56.2	60.8	59.8	64.9
Strontium	0.0001 to 0.005		0.599	0.775	0.906	0.919	0.99
Sulphur	0.5		28.8	49.7	66.6	76	80.3
Thallium	1E-005 to 0.001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01		<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002						
Uranium	1E-005 to 0.001		0.00249	0.00263	0.00272	0.00257	0.00271
Vanadium	0.001 to 0.03		0.0045	0.005	0.0041	0.004	0.0044
Zinc	0.003 to 0.006		<0.003	<0.003	<0.003	<0.003	0.0031
Organics							
Carbon Organic (Dissolved)	0.5 to 5		17.1	12.8	11.9	11.5	11.1
Carbon Organic (Total)	0.5 to 5		17	13.2	12.1	12.4	12.6
Nitrogen Organic (Dissolved)	0.05 to 0.26						
Nitrogen Organic (Total)	0.05 to 0.3						
ALS LAB ID			**L1488139**	**L1494491**	**L1500711**	**L1513418**	**L1519657**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C3.17 - HUMPH08
PAGE 1 OF 1

Site ID			HUMPH-08	HUMPH-08	HUMPH-08	HUMPH-08	HUMPH-08	HUMPH-08	HUMPH-08	HUMPH-08	HUMPH-08
Analytes	**MDL**		**22-May-14**	**5-Jun-14**	**17-Jun-14**	**3-Jul-14**	**15-Jul-14**	**30-Jul-14**	**11-Aug-14**	**3-Sep-14**	**18-Sep-14**
In Situ Parameters											
Conductivity µS/cm	...		750	709	714	855	792	686	836		723
Oxygen Dissolved %	...		76.4	73.2	90.9	81.2	86.4	83.3	76.1		73.4
Oxygen Dissolved	...		8.05	8.15	9.98	7.32	7.63	8.68	7.21		7.74
pH (unitless)	...		8.23	8.35	8.47	8.41	8.53	8.59	8.46	8.57	8.28
Redox Potential mV	...		45.9	56.8	72.4	76.8	93	171	72.3		134
Salinity ppt	...		0.48	0.49	0.48	0.47	0.42	0.44	0.48		0.47
Specific Conductivity µS/cm	...		975	981	972	942	850	884	964		942
Temperature °C	...		12.9	10.5	11.2	20.1	21.4	13.1	18.1	13.8	12.8
Total Dissolved Solids	...		630	638	632	612	553	575	627		613
Turbidity NTU	...										
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	1										
Alkalinity (Total as CaCO3)	1 to 2		413	433	431	427	415	462	465	472	463
Bicarbonate Alkalinity	1 to 2		405	397	385	410	385	433	433	430	463
Carbonate Alkalinity	1 to 2		7.7	36.2	45.3	16.7	29.8	29.3	31.5	42.1	<1
Color TCU	5										
Hardness as CaCO3 (Dissolved)	0.5 to 1.1		458	447	451	418	407	432	429	461	447
Hydroxide Alkalinity	1 to 2		<1	<1	<1	<1	<1	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1		8.48	8.4	8.54	8.55	8.44	8.43	8.56	8.59	8.63
Specific Conductivity µS/cm	2		973	934	949	898	920	973	974	990	970
Total Dissolved Solids	1 to 2		566	586	572	487	578	577	605	593	616
Total Suspended Solids	3		49.7	26.5	22.1	40.5	66.8	42.8	12.8	17.2	24.9
Turbidity NTU	0.1		12.9	10	9.05	13	15.1	14.7	6.47	9.27	17.4
Dissolved Anions											
Bromide	0.05 to 2.495		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	0.5 to 1		37	39.3	44.4	49	50.3	47.6	45	41.4	39.6
Fluoride	0.02 to 0.4		0.23	0.22	0.24	0.24	0.255	0.24	0.43	0.236	0.235
Sulphate	0.5 to 1		91.7	80.2	76.2	41.7	38.8	47.3	53.5	68.1	75.7
Nutrients											
Ammonia (Total)	0.005 to 0.05		0.0207	0.0166	0.0115	0.0433	0.0654	0.0328	0.024	0.0183	0.0273
Nitrate (as N)	0.005 to 0.1		<0.05	0.066	0.063	<0.05	0.078	0.064	0.071	0.118	0.165
Nitrite (as N)	0.001 to 0.02		<0.01	<0.01	<0.01	<0.01	0.014	0.012	<0.01	<0.01	<0.01
Nitrogen (Dissolved)	0.05 to 0.1										
Nitrogen (Total)	0.0025 to 0.11										
Nitrogen Kjeldahl (Total)	0.05 to 0.2		0.905	0.653	0.819	1.83	1.73	1.28	1.02	0.709	0.9
Orthophosphate (Dissolved)	0.001 to 0.01		0.13	0.114	0.107	0.153	0.183	0.158	0.137	0.135	0.137
Phosphorus - Dissolved	0.002 to 0.02		0.153	0.115	0.118	0.192	0.242	0.167		0.169	0.179
Phosphorus - Total	0.002 to 0.02		0.222	0.155	0.187	0.294	0.332	0.298	0.176	0.201	0.245
Cyanide											
Cyanide (Free)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals											
Aluminum	0.001 to 0.025		0.0014	<0.001	0.002	0.0045	0.0101	0.0023	0.0026	0.0015	0.0017
Antimony	0.0001 to 0.0025		0.00021	0.00019	0.00017	0.00014	0.00014	0.00019	0.0002	0.0002	0.00022
Arsenic	0.0001 to 0.0025		0.00384	0.00389	0.00406	0.00245	0.00264	0.0048	0.00497	0.00521	0.00492
Barium	5E-005 to 0.02		0.0689	0.0648	0.065	0.0618	0.0582	0.0695	0.0772	0.0733	0.0748
Beryllium	0.0001 to 0.005		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1		0.031	0.028	0.029	0.019	0.022	0.027	0.033	0.029	0.032
Cadmium	1E-005 to 8.5E-005		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1		66.1	64.5	66	48.4	46	61.3	62.5	67.5	66.4
Chromium	0.0001 to 0.018		0.00023	0.00027	0.00027	<0.0001	0.00014	0.00015	0.00016	0.00023	0.00021
Cobalt	0.0001 to 0.0015		0.00019	0.00015	0.00012	0.00029	0.00029	0.00017	0.00013	0.00012	0.00015
Copper	0.0002 to 0.006		0.00534	0.00523	0.00515	0.00292	0.00314	0.00494	0.00589	0.0055	0.00463
Dissolved Cadmium (by saltwater extraction)	0.00002										
Iron	0.01 to 0.03		0.023	0.017	0.011	0.026	0.041	0.015	0.011	<0.01	<0.01
Lead	5E-005 to 0.0025		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025		0.00668	0.00614	0.00595	0.00989	0.011	0.00698	0.00702	0.00705	0.00687
Magnesium	0.1		71.1	69.5	69.6	72.2	71	67.8	66.3	71.1	68.2
Manganese	5E-005 to 0.0015		0.0434	0.0348	0.0308	0.03	0.0365	0.0556	0.0233	0.0181	0.0275
Mercury	1E-005 to 5E-005		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005		0.0119	0.0124	0.0126	0.00387	0.00422	0.0127	0.0147	0.0156	0.0155
Nickel	0.0005 to 0.005		0.00224	0.00174	0.00165	0.00175	0.00174	0.00204	0.00184	0.00155	0.00148
Phosphorus	0.05 to 0.3		0.144	0.133	0.126	0.182	0.221	0.167	0.164	0.145	0.161
Potassium	0.05 to 2		15.4	15.3	16.3	20.5	18.7	18.9	18	18.2	18.1
Selenium	0.0001 to 0.006		0.0013	0.00101	0.00085	0.00019	0.00018	0.00064	0.00081	0.00114	0.00132
Silicon	0.05		8.31	8.21	8.32	3.23	3.65	9.16	8.98	8.99	8.71
Silver	1E-005 to 0.0001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2		50	50.9	51	54.2	57.2	52.9	58.3	53.3	50.6
Strontium	0.0001 to 0.005		0.595	0.536	0.509	0.354	0.371	0.513	0.555	0.561	0.537
Sulphur	0.5		29.7	26.7	25.3	14.6	13.7	15.6	18.1	22.7	24.8
Thallium	1E-005 to 0.001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001		0.00315	0.00321	0.00334	0.00183	0.00172	0.00262	0.00302	0.00352	0.00338
Vanadium	0.001 to 0.03		0.0076	0.0074	0.0074	0.0043	0.004	0.0076	0.0099	0.0099	0.0103
Zinc	0.001 to 0.006		<0.001	<0.001	0.0018	<0.001	0.0028	<0.001	0.0014	<0.001	<0.001
Total Metals											
Aluminum	0.003 to 0.025		1.18	0.604	0.518	0.276	3.42	1.37	0.302	0.455	1.05
Antimony	0.0001 to 0.0025		0.00024	0.00023	0.00019	0.00016	0.00024	0.00023	0.00023	0.00023	0.00023
Arsenic	0.0001 to 0.0025		0.00403	0.00397	0.00414	0.00253	0.00353	0.00482	0.00437	0.00517	0.0049
Barium	5E-005 to 0.02		0.0794	0.0707	0.0701	0.0661	0.0992	0.0829	0.069	0.0781	0.0793
Beryllium	0.0001 to 0.005		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1		0.032	0.029	0.031	0.021	0.026	0.029	0.037	0.033	0.037
Cadmium	1E-005 to 8.5E-005		0.000018	0.000013	0.000015	<0.00001	0.000028	0.000017	<0.00001	0.00001	<0.00001
Calcium	0.05 to 0.1		62.7	62.5	62.5	47.2	47.2	60.3	60.6	67.2	60.8
Chromium	0.0001 to 0.005		0.00317	0.00171	0.00162	0.00084	0.00744	0.00352	0.00088	0.00144	0.00282
Cobalt	0.0001 to 0.0015		0.00105	0.00054	0.0005	0.00068	0.00253	0.00112	0.00032	0.00043	0.00088
Copper	0.0005 to 0.007		0.0171	0.0123	0.0124	0.00935	0.0295	0.0192	0.00933	0.0113	0.0154
Iron	0.01 to 0.03		1.65	0.811	0.727	0.374	3.88	1.89	0.451	0.614	1.46
Lead	5E-005 to 0.0025		0.000294	0.000118	0.000116	0.00015	0.000626	0.000272	0.000067	0.000101	0.000197
Lithium	0.0005 to 0.025		0.00744	0.00602	0.00581	0.0094	0.0125	0.00732	0.00704	0.00727	0.00721
Magnesium	0.1		69.2	68.1	66.9	69.8	70.5	68.1	64.5	71.6	64.2
Manganese	5E-005 to 0.0015		0.0656	0.0472	0.0421	0.0521	0.16	0.0866	0.0288	0.0315	0.0491
Mercury	1E-005 to 5E-005		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005		0.0127	0.0126	0.0128	0.00367	0.00433	0.0129	0.015	0.0167	0.0154
Nickel	0.0005 to 0.005		0.00575	0.00345	0.00333	0.00332	0.0102	0.00611	0.00253	0.00312	0.0048
Phosphorus	0.05 to 0.3		0.208	0.161	0.153	0.216	0.425	0.246	0.177	0.188	0.198
Potassium	0.05 to 2		14.8	14.9	15.6	18.5	18.4	18.7	17.5	18.2	16.8
Selenium	0.0001 to 0.006		0.00133	0.00091	0.00082	0.0002	0.00048	0.00066	0.00078	0.0011	0.00126
Silicon	0.05		10.8	9.63	9.39	3.61	11.2	12.7	9.59	10.1	11
Silver	1E-005 to 0.0001		0.000103	<0.00001	0.000013	<0.00001	0.000032	0.000024	0.000011	<0.00001	0.000017
Sodium	0.05 to 2		49.3	49	50.2	53.7	54.3	51.8	47.9	53.7	47.1
Strontium	0.0001 to 0.005		0.62	0.515	0.503	0.359	0.412	0.506	0.544	0.577	0.53
Sulphur	0.5		29.1	26.6	25.6	14.8	13.8	16.1	18.1	23.3	23.7
Thallium	1E-005 to 0.001		0.000011	<0.00001	<0.00001	<0.00001	0.000016	0.000011	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01		0.047	0.027	0.02	<0.01	0.13	0.053	0.013	0.019	0.04
Total Cadmium (by saltwater extraction)	0.00002										
Uranium	1E-005 to 0.001		0.00326	0.00341	0.00343	0.00188	0.0019	0.00283	0.00316	0.0037	0.00333
Vanadium	0.001 to 0.03		0.0112	0.0092	0.0088	0.0054	0.0133	0.0116	0.0096	0.0115	0.013
Zinc	0.003 to 0.006		0.0033	<0.003	<0.003	0.0031	0.0087	0.0041	0.0034	<0.003	0.0043
Organics											
Carbon Organic (Dissolved)	0.5 to 5		11.1	9.14	9.48	19.7	20.2	13.8	11.6	10.7	10.6
Carbon Organic (Total)	0.5 to 5		14.4	10.5	12	19.7	21.1	20.1	11.9	12.2	12.6
Nitrogen Organic (Dissolved)	0.05 to 0.26										
Nitrogen Organic (Total)	0.05 to 0.3										
ALS LAB ID			**L1459064**	**L1466627**	**L1472862**	**L1481215**	**L1488139**	**L1495443**	**L1500711**	**L1513418**	**L1520952**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C3.18 - HUMPH10
PAGE 1 OF 2

Site ID			HUMPH-10	HUMPH-10	HUMPH-10	HUMPH-10	HUMPH-10	HUMPH-10	HUMPH-10	HUMPH-10	HUMPH-10	HUMPH-10	HUMPH-10	HUMPH-10
Analytes	**MDL**		**12-Mar-14**	**19-Mar-14**	**26-Mar-14**	**2-Apr-14**	**9-Apr-14**	**23-Apr-14**	**6-May-14**	**21-May-14**	**3-Jun-14**	**17-Jun-14**	**3-Jul-14**	**15-Jul-14**
In Situ Parameters														
Conductivity µS/cm	...		386	588	539	672	511	638	364	797	831	930	812	727
Oxygen Dissolved %	...		56.9	73.6	66.6	67.9	52.9	82.8		95.6	55.4	65.1	87.1	85.7
Oxygen Dissolved	...		7.57	9.61	8.89	7.79	6.81	9.41		9.08	5.38	5.78	7.86	7.38
pH (unitless)	...		7.75	7.86	7.75	7.78	7.76	7.92	8.72	8.49	7.81	7.96	8.91	9.11
Redox Potential mV	...		-24.3	-9	30.7	54.3	-22.8	49	175	35.4	39.6	82.7	31.2	53.1
Salinity ppt	...		0.32	0.48	0.45	0.48	0.41	0.45	0.45	0.46	0.49	0.5	0.44	0.4
Specific Conductivity µS/cm	...		658	982	926	963	837	906	908	932	992	1007	892	813
Temperature °C	...		3.48	3.95	3.09	9.16	4.61	9.53	12.3	17.8	16.5	20.9	20.3	22.7
Total Dissolved Solids	...		427	638	602	626	544	588	591	600	645	655	580	529
Turbidity NTU	...													
Physical Tests														
Acidity to pH 8.3 (as CaCO3)	1													
Alkalinity (Total as CaCO3)	1 to 2		280	451	452	438	382	407	411	406	419	474	414	396
Bicarbonate Alkalinity	1 to 2		280	451	452	438	382	407	379	397	419	436	361	340
Carbonate Alkalinity	1 to 2		<1	<2	<2	<2	<2	<2	31.9	8.7	<1	37.9	52.7	55.4
Color TCU	5													
Hardness as CaCO3 (Dissolved)	0.5 to 1.1		292	437	437	418	369	394	401	421	424	436	403	397
Hydroxide Alkalinity	1 to 2		<1	<2	<2	<2	<2	<2	<1	<1	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1		8.33	8.22	8.24	8.2	8.1	8.28	8.59	8.48	8.4	8.46	8.79	8.78
Specific Conductivity µS/cm	2		671	959	926	877	820	887	874	895	960	959	862	884
Total Dissolved Solids	1 to 2		372	546	537	541	497	469	490	532	539	592	527	526
Total Suspended Solids	3		6.4	8.3	7.1	4.5	14.1	<3	84.5	<3	30.7	5.9	17	11.5
Turbidity NTU	0.1		3.51	0.78	0.84	2.14	1.45	0.92	0.98	1.04	5.54	2.9	5.67	2
Dissolved Anions														
Bromide	0.05 to 2.495		<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.25	<0.5	<0.5	<0.5
Chloride	0.5 to 1		31.1	52.5	49.5	47.4	41	41.2	50.5	48.9	48.7	50.2	52.7	50.5
Fluoride	0.02 to 0.4		0.177	0.23	0.24	0.25	0.25	0.24	0.23	0.23	0.3	0.34	0.24	0.265
Sulphate	0.5 to 1		32.4	39.2	37.9	37.8	37	52.6	42.9	40.3	30.6	26.3	40	42.3
Nutrients														
Ammonia (Total)	0.005 to 0.05		0.386	0.088	0.0571	0.0769	0.0869	0.0782	0.0199	0.0282	0.0883	0.0563	0.0648	0.0857
Nitrate (as N)	0.005 to 0.1		0.0779	0.068	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.025	<0.05	<0.05	<0.05
Nitrite (as N)	0.001 to 0.02		0.0058	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0052	<0.01	0.01	<0.01
Nitrogen (Dissolved)	0.05 to 0.1													
Nitrogen (Total)	0.0025 to 0.11									1.25				
Nitrogen Kjeldahl (Total)	0.05 to 0.2		2.13	1.16	1.21	1.01	1.32	1.11	1.53	1.34	1.37	1.37	1.59	1.65
Orthophosphate (Dissolved)	0.001 to 0.01		0.401	0.0493	0.0423	0.0363	0.0434	0.0543	0.0098	0.0351	0.077	0.0613	<0.001	0.0055
Phosphorus - Dissolved	0.002 to 0.02		0.479	0.0697	0.058	0.0529	0.107	0.0636	0.0316	0.0624	0.0913	0.0723	0.0241	0.03
Phosphorus - Total	0.002 to 0.02		0.574	0.113	0.14	0.11	0.0595	0.103	0.0528	0.0747	0.176	0.126	0.0609	0.0533
Cyanide														
Cyanide (Free)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals														
Aluminum	0.001 to 0.025		0.0027	0.0016	<0.001	0.0017	<0.001	<0.001	0.0028	0.0027	0.0015	0.0026	0.0045	0.0051
Antimony	0.0001 to 0.0025		<0.0001	<0.0001	<0.0001	0.00011	<0.0001	0.00011	0.00013	0.00013	0.00013	0.00015	0.00014	0.00014
Arsenic	0.0001 to 0.0025		0.00133	0.00149	0.00137	0.00158	0.00143	0.00153	0.00158	0.00192	0.00243	0.00256	0.00163	0.00171
Barium	5E-005 to 0.02		0.0658	0.0903	0.0879	0.093	0.0805	0.0828	0.0576	0.0646	0.107	0.129	0.0484	0.0471
Beryllium	0.0001 to 0.005		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1		0.012	<0.01	<0.01	<0.01	<0.01	<0.01	0.015	0.017	0.019	0.021	0.014	0.018
Cadmium	1E-005 to 8.5E-005		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1		33.3	47.5	45.5	45.2	41.2	42.1	42.4	44.3	47.1	50.5	41.1	39.6
Chromium	0.0001 to 0.018		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00012	0.00011	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015		0.00055	0.00053	0.00049	0.00062	0.00072	0.00077	0.00023	0.0004	0.00098	0.00118	0.00017	0.00016
Copper	0.0002 to 0.006		0.00399	0.00329	0.00308	0.00269	0.00296	0.00331	0.00142	0.00226	0.00286	0.00271	0.00118	0.00118
Dissolved Cadmium (by saltwater extraction)	0.00002													
Iron	0.01 to 0.03		0.086	0.074	0.076	0.055	0.095	0.097	0.024	0.033	0.151	0.082	0.011	<0.01
Lead	5E-005 to 0.0025		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025		0.00424	0.00601	0.00513	0.00596	0.00508	0.00506	0.0107	0.0104	0.0076	0.00744	0.0112	0.0121
Magnesium	0.1		50.6	77.4	78.6	74	64.7	70.2	71.8	75.4	74.5	75.2	72.9	72.3
Manganese	5E-005 to 0.0015		0.221	0.262	0.232	0.283	0.385	0.428	0.0717	0.118	0.577	0.666	0.015	0.0146
Mercury	1E-005 to 5E-005		<0.00001	<0.00001	<0.00001	0.000013	0.000012	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005		0.00455	0.00442	0.00379	0.00498	0.00435	0.00463	0.00285	0.00369	0.00736	0.00846	0.00195	0.00217
Nickel	0.0005 to 0.005		0.00366	0.00457	0.00426	0.00477	0.00473	0.00463	0.00127	0.00218	0.00568	0.00648	0.00075	0.00069
Phosphorus	0.05 to 0.3		0.504	0.059	0.066	0.063	0.074	0.089	<0.05	0.062	0.112	0.093	<0.05	<0.05
Potassium	0.05 to 2		13	13.4	13	13.5	12.4	12.9	17.1	17.8	16.2	19.2	19.8	18.8
Selenium	0.0001 to 0.006		0.0001	0.00012	0.00011	0.00013	0.00012	0.00021	0.00013	0.00013	0.00015	0.00017	0.00011	<0.0001
Silicon	0.05		3.64	4.14	4.05	4.22	4.2	4.59	0.761	1.71	5.54	6.53	0.576	0.611
Silver	1E-005 to 0.0001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2		36.4	60.2	58	58.2	53.6	51.1	53.3	58.6	59.5	61.4	54.9	57.4
Strontium	0.0001 to 0.005		0.27	0.402	0.37	0.379	0.345	0.353	0.299	0.328	0.444	0.45	0.272	0.289
Sulphur	0.5		10.8	13.7	12.9	13.2	12.5	18	14.4	15.3	11.7	9.17	14.3	14.8
Thallium	1E-005 to 0.001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001		0.00144	0.00216	0.0021	0.00216	0.00178	0.00169	0.00193	0.00178	0.00199	0.00191	0.00162	0.0017
Vanadium	0.001 to 0.03		0.002	0.0013	0.0012	0.0018	0.0015	0.0019	0.0026	0.0026	0.0024	0.0031	0.0031	0.0034
Zinc	0.001 to 0.006		0.0015	<0.001	<0.001	<0.001	0.0017	<0.001	<0.001	0.0017	<0.001	<0.001	<0.001	<0.001
Total Metals														
Aluminum	0.003 to 0.025		0.0857	0.0187	0.0329	0.121	0.47	0.0161	0.0376	0.0308	0.171	0.129	0.099	0.233
Antimony	0.0001 to 0.0025		<0.0001	<0.0001	<0.0001	0.00012	0.00013	0.00012	0.00017	0.00013	0.00014	0.00016	0.00012	0.00014
Arsenic	0.0001 to 0.0025		0.00146	0.00147	0.00142	0.00161	0.00179	0.0016	0.00148	0.00182	0.00257	0.00276	0.00167	0.00173
Barium	5E-005 to 0.02		0.0654	0.09	0.0918	0.0935	0.112	0.0889	0.0563	0.0622	0.117	0.133	0.0509	0.0502
Beryllium	0.0001 to 0.005		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1		0.014	<0.01	<0.01	0.014	0.014	<0.01	0.015	0.017	0.019	0.024	0.015	0.019
Cadmium	1E-005 to 8.5E-005		0.000013	<0.00001	<0.00001	<0.00001	0.000018	<0.00001	<0.00001	<0.00001	0.000014	0.000012	<0.00001	<0.00001
Calcium	0.05 to 0.1		32.7	46.9	44.9	42.5	40.3	43.1	40.3	43.5	46.7	47.6	40.3	38.6
Chromium	0.0001 to 0.005		0.00024	0.00013	0.00013	0.00031	0.00088	0.00012	0.00015	0.00017	0.00037	0.00037	0.00022	0.00048
Cobalt	0.0001 to 0.0015		0.00066	0.00058	0.00066	0.00073	0.00184	0.00085	0.00028	0.00041	0.00136	0.00133	0.00028	0.00033
Copper	0.0005 to 0.007		0.00601	0.00529	0.00559	0.00611	0.00916	0.00646	0.00203	0.00308	0.00697	0.00702	0.00243	0.00273
Iron	0.01 to 0.03		0.206	0.147	0.174	0.337	0.836	0.207	0.073	0.092	0.516	0.491	0.135	0.266
Lead	5E-005 to 0.0025		<0.00005	<0.00005	<0.00005	<0.00005	0.000121	<0.00005	<0.00005	<0.00005	0.000053	0.000054	0.000058	0.000059
Lithium	0.0005 to 0.025		0.00407	0.00534	0.00544	0.00562	0.00504	0.00528	0.00972	0.00936	0.00695	0.00699	0.00973	0.0123
Magnesium	0.1		49.9	72.8	73.5	68	62.7	67.7	65.8	73.8	73.1	70.5	71.5	69.6
Manganese	5E-005 to 0.0015		0.254	0.273	0.309	0.278	1.04	0.454	0.081	0.129	0.678	0.675	0.0335	0.0299
Mercury	1E-005 to 5E-005		0.000014	0.000015	0.000017	0.000025	0.000027	0.000023	<0.00001	<0.00001	0.000021	0.000019	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005		0.00505	0.00474	0.00413	0.00512	0.0041	0.00512	0.00273	0.00374	0.00689	0.00887	0.00171	0.00233
Nickel	0.0005 to 0.005		0.00384	0.00459	0.00474	0.00502	0.00666	0.00504	0.00149	0.00222	0.00628	0.00696	0.00113	0.00125
Phosphorus	0.05 to 0.3		0.63	0.087	0.084	0.107	0.179	0.141	0.051	0.079	0.151	0.14	<0.05	0.064
Potassium	0.05 to 2		12.9	12.9	12.6	12.7	12.2	13.2	16	17.7	15.9	17.8	18.8	18.1
Selenium	0.0001 to 0.006		0.00013	0.00011	0.00011	0.00012	0.00017	0.00021	0.00012	0.00012	0.00016	0.00018	0.00011	0.00011
Silicon	0.05		3.85	4.06	4.02	4.28	5.13	4.67	0.79	1.76	5.84	6.55	0.724	1.08
Silver	1E-005 to 0.0001		0.000016	0.000016	0.000016	0.000019	0.000061	0.000019	<0.00001	<0.00001	0.000019	0.00004	<0.00001	<0.00001
Sodium	0.05 to 2		36.2	57.8	57.2	56.4	52.5	52.9	54.2	55.5	56.7	59.1	54.6	55.4
Strontium	0.0001 to 0.005		0.266	0.425	0.379	0.357	0.352	0.373	0.279	0.33	0.41	0.432	0.257	0.303
Sulphur	0.5		10.9	13.9	13.4	13.2	12.7	18.9	14.4	15.1	11.5	9.4	14.6	14.6
Thallium	1E-005 to 0.001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01		<0.01	<0.01	<0.01	<0.01	0.016	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002													
Uranium	1E-005 to 0.001		0.00156	0.00225	0.00222	0.00221	0.00187	0.00182	0.00189	0.0019	0.00199	0.00207	0.00145	0.00178
Vanadium	0.001 to 0.03		0.0024	0.0016	0.0015	0.0023	0.0034	0.0022	0.0028	0.003	0.0031	0.004	0.0036	0.0039
Zinc	0.003 to 0.006		<0.003	<0.003	<0.003	<0.003	0.0055	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics														
Carbon Organic (Dissolved)	0.5 to 5		16.9	16.4	16.2	15.8	14.3	15.3	17.7	18.1	18	18.9	19.1	19.6
Carbon Organic (Total)	0.5 to 5		18	16.8	16.1	16.3	15.4	15.6	18.3	18.3	18.9	19.9	20.5	21.9
Nitrogen Organic (Dissolved)	0.05 to 0.26													
Nitrogen Organic (Total)	0.05 to 0.3													
ALS LAB ID			**L1432163**	**L1434695**	**L1437439**	**L1439467**	**L1441961**	**L1446462**	**L1451608**	**L1458340**	**L1465108**	**L1472862**	**L1481215**	**L1488139**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID			HUMPH-10	HUMPH-10	HUMPH-10
Analytes		MDL	29-Jul-14	11-Aug-14	3-Sep-14
In Situ Parameters					
Conductivity µS/cm		...	895	898	
Oxygen Dissolved %	...		49.7	79.4	
Oxygen Dissolved	...		3.75	6.88	
pH (unitless)		...	7.99	7.77	8.25
Redox Potential mV		...	55.2	35.8	
Salinity ppt		...	0.42	0.47	
Specific Conductivity µS/cm		...	865	951	
Temperature °C		...	26.9	22	17.5
Total Dissolved Solids		...	591	618	
Turbidity NTU		...			
Physical Tests					
Acidity to pH 8.3 (as CaCO3)		1			
Alkalinity (Total as CaCO3)		1 to 2	487	474	462
Bicarbonate Alkalinity		1 to 2	487	474	438
Carbonate Alkalinity		1 to 2	<2	<1	24.6
Color TCU		5			
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	411	397	415
Hydroxide Alkalinity		1 to 2	<2	<1	<1
pH (unitless)		0.01 to 0.1	8.2	8.3	8.47
Specific Conductivity µS/cm		2	978	955	936
Total Dissolved Solids		1 to 2	572	567	552
Total Suspended Solids		3	51.9	68.6	7.6
Turbidity NTU		0.1	10.9	10.1	2.53
Dissolved Anions					
Bromide		0.05 to 2.495	<0.5	<0.5	<0.5
Chloride		0.5 to 1	50.4	50.8	51
Fluoride		0.02 to 0.4	0.317	0.46	0.288
Sulphate		0.5 to 1	19.8	15.4	21.6
Nutrients					
Ammonia (Total)		0.005 to 0.05	0.535	0.227	0.0886
Nitrate (as N)		0.005 to 0.1	<0.05	<0.05	<0.05
Nitrite (as N)		0.001 to 0.02	<0.01	0.017	0.025
Nitrogen (Dissolved)		0.05 to 0.1			
Nitrogen (Total)		0.0025 to 0.11			
Nitrogen Kjeldahl (Total)		0.05 to 0.2	2.35	2.12	1.29
Orthophosphate (Dissolved)		0.001 to 0.01	0.0969	0.0448	0.0349
Phosphorus - Dissolved		0.002 to 0.02	0.131		0.0487
Phosphorus - Total		0.002 to 0.02	0.248	0.165	0.0618
Cyanide					
Cyanide (Free)		0.005	<0.005	<0.005	<0.005
Cyanide (Total)		0.005	<0.005	<0.005	<0.005
Cyanide (WAD)		0.005	<0.005	<0.005	<0.005
Dissolved Metals					
Aluminum		0.001 to 0.025	0.0032	0.0026	0.002
Antimony		0.0001 to 0.0025	0.00018	0.00019	0.00016
Arsenic		0.0001 to 0.0025	0.00379	0.00312	0.00275
Barium		5E-005 to 0.02	0.138	0.145	0.118
Beryllium		0.0001 to 0.005	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	0.025	0.023	0.021
Cadmium		1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001
Calcium		0.05 to 0.1	47.6	45.5	48.4
Chromium		0.0001 to 0.018	<0.0001	<0.0001	0.00016
Cobalt		0.0001 to 0.0015	0.00146	0.00139	0.0008
Copper		0.0002 to 0.006	0.00309	0.00417	0.00376
Dissolved Cadmium (by saltwater extraction)		0.00002			
Iron		0.01 to 0.03	0.095	0.097	0.044
Lead		5E-005 to 0.0025	<0.00005	<0.00005	<0.00005
Lithium		0.0005 to 0.025	0.00884	0.00907	0.00932
Magnesium		0.1	70.9	68.8	71.5
Manganese		5E-005 to 0.0015	0.694	0.561	0.203
Mercury		1E-005 to 5E-005	0.000013	0.000015	0.000012
Molybdenum		5E-005 to 0.005	0.00484	0.00457	0.00431
Nickel		0.0005 to 0.005	0.0068	0.00743	0.007
Phosphorus		0.05 to 0.3	0.14	0.071	<0.05
Potassium		0.05 to 2	21.8	20.7	20.3
Selenium		0.0001 to 0.006	0.00018	0.00016	0.00016
Silicon		0.05	6.13	5.86	6.78
Silver		1E-005 to 0.0001	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	60.7	55.9	55.7
Strontium		0.0001 to 0.005	0.408	0.391	0.383
Sulphur		0.5	7.25	5.81	8.02
Thallium		1E-005 to 0.001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01
Uranium		1E-005 to 0.001	0.00145	0.00133	0.00112
Vanadium		0.001 to 0.03	0.0055	0.0045	0.0032
Zinc		0.001 to 0.006	0.0022	<0.001	0.0013
Total Metals					
Aluminum		0.003 to 0.025	0.376	0.711	0.136
Antimony		0.0001 to 0.0025	0.00021	0.00021	0.00017
Arsenic		0.0001 to 0.0025	0.00384	0.00347	0.00297
Barium		5E-005 to 0.02	0.146	0.149	0.123
Beryllium		0.0001 to 0.005	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	0.026	0.03	0.023
Cadmium		1E-005 to 8.5E-005	0.000013	0.000018	<0.00001
Calcium		0.05 to 0.1	46.8	45.1	47.7
Chromium		0.0001 to 0.005	0.00068	0.00125	0.00035
Cobalt		0.0001 to 0.0015	0.00179	0.00204	0.00096
Copper		0.0005 to 0.007	0.00885	0.0133	0.00821
Iron		0.01 to 0.03	0.836	1.1	0.374
Lead		5E-005 to 0.0025	0.000139	0.000215	0.000055
Lithium		0.0005 to 0.025	0.00838	0.00958	0.00917
Magnesium		0.1	69.1	68.5	71.8
Manganese		5E-005 to 0.0015	0.708	0.576	0.22
Mercury		1E-005 to 5E-005	0.000029	0.000038	0.000027
Molybdenum		5E-005 to 0.005	0.00482	0.00475	0.00473
Nickel		0.0005 to 0.005	0.00796	0.00995	0.00776
Phosphorus		0.05 to 0.3	0.216	0.16	0.079
Potassium		0.05 to 2	20.9	20.3	20.5
Selenium		0.0001 to 0.006	0.00018	0.00011	0.00014
Silicon		0.05	6.77	7.22	7.07
Silver		1E-005 to 0.0001	0.00002	0.000023	0.000015
Sodium		0.05 to 2	59.2	55.4	56.9
Strontium		0.0001 to 0.005	0.404	0.426	0.401
Sulphur		0.5	7.32	5.98	8.12
Thallium		1E-005 to 0.001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001
Titanium		0.01	0.014	0.026	<0.01
Total Cadmium (by saltwater extraction)		0.00002			
Uranium		1E-005 to 0.001	0.00148	0.00138	0.00119
Vanadium		0.001 to 0.03	0.0067	0.0068	0.0037
Zinc		0.003 to 0.006	0.005	0.0062	<0.003
Organics					
Carbon Organic (Dissolved)		0.5 to 5	19.6	19.5	19
Carbon Organic (Total)		0.5 to 5	20.1	20.4	19.3
Nitrogen Organic (Dissolved)		0.05 to 0.26			
Nitrogen Organic (Total)		0.05 to 0.3			
ALS LAB ID			L1494491	L1500711	L1513418

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C3.19 - INKS-S
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Site ID			INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S
Analytes	**MDL**		**05/Jun/2010**	**30-Aug-10**	**28-Mar-11**	**14-Apr-11**	**1-Jun-11**	**29-Jun-11**	**28-Jul-11**	**31-Aug-11**	**27-Sep-11**	**26-Oct-11**	**10-Jan-12**	**14-Feb-12**
In Situ Parameters														
Conductivity µS/cm	...		7072	9736	1355	4417	7138	8247	9936	85.3		3719	6314	6675
Oxygen Dissolved %	...		88.3	66.3	66.7	106	87.2	67.6		7.2		91.2	52.7	78.8
Oxygen Dissolved	...		8.8	6.53	9.37	13.1	8.24	6.22		0.66		11.9	7.33	11
pH (unitless)	...		8.57	8.91	8.95	8.28	8.75	8.8	8.85	8.84	9.25	9.14	8.89	8.81
Redox Potential mV	...			9.3	151	71.1	-176	-53.7	146	78.4	171	118	244	-295
Salinity ppt	...			5.51			4.75	5.41	5.96	5.59		3.42	6.68	7.1
Specific Conductivity µS/cm	...		8935	7800	2493	792	8480	9586	10500	9906	804	6350	12040	12750
Temperature °C	...		14.1	14.6	1.09	5.23	16.7	17.7	22.1	17.7	14.4	3.37	0.5	0.02
Total Dissolved Solids	...			6330	1620	4613	5500	6230	6833	6435		4150	7829	8298
Turbidity NTU	...								12.3	17	18.2	10.2	0.5	
Physical Tests														
Acidity to pH 8.3 (as CaCO3)	1		<1						<1					
Alkalinity (Total as CaCO3)	1 to 2		615	656	183	498	580	625	641	683	700	721	767	830
Bicarbonate Alkalinity	1 to 2		315										606	
Carbonate Alkalinity	1 to 2		300										161	
Color TCU	5		19.5	26.1	17	17.3	17.1	17.4	19.4	22.8	23.7	21.6	20.6	21.5
Hardness as CaCO3 (Dissolved)	0.5 to 1.1		3170	3480	741	2500	3170	3420	3500	3860	3990	4170	5280	4660
Hydroxide Alkalinity	1 to 2		<1										<1	
pH (unitless)	0.01 to 0.1		9.18	8.86	8.82	8.94	8.87	8.76	8.87	9.01	8.84	8.74	8.66	8.67
Specific Conductivity µS/cm	2		8500	9350	2360	6920	9010	9380	10100	10600	10700	10900	11600	12000
Total Dissolved Solids	1 to 2		7900	9680	1810	6670	8550	8880	9000	9750	8310	10600	11400	11300
Total Suspended Solids	3		55	13.3	6	14.5	5.9	8	14.1	283	8.4	18	6.9	16.5
Turbidity NTU	0.1		41.5	1.92	3.98	8.78	0.73	0.99	10.5	16.4	2.37	6.63	4.32	2.45
Dissolved Anions														
Bromide	0.05 to 2.495		<1	<2.5	<5.5	<20	<2.5	<2.5	<2.5	<2.5	<5	<5	<2.5	<2.5
Chloride	0.5 to 1		345	376	76	285	352	393	431	420	382	431	472	504
Fluoride	0.02 to 0.4		<0.4	<1	<0.4	<1	<1	1	<1	<1	<2	0.247	<1	<1
Sulphate	0.5 to 1		4840	5390	1090	3990	5150	5530	6150	5990	5570	6360	6910	7260
Nutrients														
Ammonia (Total)	0.005 to 0.05		0.129	0.0748	0.0086	0.0271	0.102	0.148	0.0407	0.0469	0.0639	0.161	0.327	0.208
Nitrate (as N)	0.005 to 0.1		<0.1	<0.25	<0.1	<0.25	<0.25	<0.25	<0.25	<0.25	<0.5	<0.5	<0.25	<0.25
Nitrite (as N)	0.001 to 0.02		<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.1	0.086	0.052
Nitrogen (Dissolved)	0.05 to 0.1						2.83	3.4	3.44	4.32	3.19	3.68	3.75	3.51
Nitrogen (Total)	0.0025 to 0.11		2.94	3.24	0.078	2.19	2.52	3.25	3.55	4.36	3.42		3.42	3.35
Nitrogen Kjeldahl (Total)	0.05 to 0.2		2.94	3.5	0.078	2.19	2.52	3.25	3.55	3.23	3.42	3.38	3.33	3.3
Orthophosphate (Dissolved)	0.001 to 0.01		0.0553	0.0502	0.0178	<0.001	0.0226	0.0284	0.0019	0.008	0.0424	0.0649	0.0779	0.0474
Phosphorus - Dissolved	0.002 to 0.02		0.116	0.104		0.0373	0.0835	0.088	0.0669	0.0785	0.105	0.112	0.142	0.111
Phosphorus - Total	0.002 to 0.02			0.121	0.105	0.0908	0.0845	0.0948	0.116	0.117	0.112	0.152	0.159	0.188
Cyanide														
Cyanide (Free)	0.005		<0.005		<0.005		<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005		0.0075	0.0084	0.0067		0.006	0.0094	0.0077		0.0078	0.0085	0.0076	0.0076
Cyanide (WAD)	0.005		<0.005		<0.005		<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Dissolved Metals														
Aluminum	0.001 to 0.025		<0.05	<0.1	<0.025	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.03	<0.03	<0.03
Antimony	0.0001 to 0.0025		<0.005	<0.01	<0.0025	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001
Arsenic	0.0001 to 0.0025		0.0164	0.021	0.0068	0.013	0.016	<0.02	0.021	0.022	0.022	0.0204	0.0219	0.0218
Barium	5E-005 to 0.02		<0.04	<0.04	<0.02	<0.04	<0.04	<0.06	<0.06	0.054	<0.06	0.0331	0.0317	0.0336
Beryllium	0.0001 to 0.005		<0.01	<0.02	<0.005	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.001	<0.001	<0.001
Bismuth	0.0005 to 0.2				<0.2	<0.4	<0.4	<0.6	<0.6	<0.4	<0.6	<0.005	<0.005	<0.005
Boron	0.01 to 0.1		1.58	1.79	0.37	1.25	1.66	1.8	1.89	1.96	2.12	1.84	2.43	2.63
Cadmium	1E-005 to 8.5E-005		<0.00017	<0.00034	<0.000085	<0.00034	<0.00034	<0.00034	<0.00034	<0.00034	<0.00034	<0.0001	<0.0001	<0.0001
Calcium	0.05 to 0.1		72.9	80.5	31.6	56.3	70.4	70.7	72.8	80.4	76.9	80.8	103	94.1
Chromium	0.0001 to 0.018		<0.01	<0.02	<0.005	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.001	<0.001	<0.001
Cobalt	0.0001 to 0.0015		<0.003	<0.006	<0.0015	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.001	<0.001	<0.001
Copper	0.0002 to 0.006		<0.02	<0.02	0.0066	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.005	<0.005	<0.005
Dissolved Cadmium (by saltwater extraction)	0.00002													
Iron	0.01 to 0.03		<0.06	<0.06	<0.03	<0.06	<0.06	<0.09	<0.09	<0.06	<0.09	<0.09	<0.09	<0.09
Lead	5E-005 to 0.0025		<0.005	<0.01	<0.0025	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0005	<0.0005	<0.0005
Lithium	0.0005 to 0.025		<0.05	<0.1	<0.025	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.0238	0.0479	0.0603
Magnesium	0.1		727	797	161	573	728	788	805	887	922	964	1220	1070
Manganese	5E-005 to 0.0015		0.0539	0.108	0.101	0.0706	0.0515	0.0435	0.101	0.0477	0.0494	0.0359	0.0451	0.0821
Mercury	1E-005 to 5E-005		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005		0.03	0.029	0.0073	0.02	0.027	0.029	0.03	0.032	0.032	0.0322	0.0353	0.0359
Nickel	0.0005 to 0.005		<0.01	<0.02	<0.005	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.005	<0.005	<0.005
Phosphorus	0.05 to 0.3				<0.3	<0.6	<0.6	<0.9	<0.9	<0.6	<0.9	<0.9	<0.9	<0.9
Potassium	0.05 to 2		163	183	36.5	129	167	178	187	202	214	222	244	291
Selenium	0.0001 to 0.006		<0.01	<0.02	<0.005	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.001	<0.001	<0.001
Silicon	0.05				0.496	0.45	0.16	0.17	0.85	1.24	1.32	1.06	1.02	0.99
Silver	1E-005 to 0.0001		<0.0002	<0.0004	<0.0001	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0001	<0.0001	<0.0001
Sodium	0.05 to 2		1220	1490	288	1000	1370	1450	1520	1660	1680	1550	1830	2000
Strontium	0.0001 to 0.005				1.13	3.75	4.86	5.29	5.57	5.95	6.18	5.99	6.35	6.82
Sulphur	0.5													
Thallium	1E-005 to 0.001		<0.002	<0.004	<0.001	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.0001	<0.0001	<0.0001
Tin	0.0001 to 0.0025		<0.005	<0.01	<0.0025	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001
Titanium	0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.03	<0.03	<0.02	<0.03	<0.03	<0.03	<0.03
Uranium	1E-005 to 0.001		0.003	<0.004	<0.001	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	0.00308	0.00354	0.00355
Vanadium	0.001 to 0.03		<0.01	<0.02	<0.005	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01
Zinc	0.001 to 0.006		<0.01	<0.01	<0.005	<0.01	0.01	<0.015	<0.015	<0.01	<0.015	<0.03	0.129	0.043
Total Metals														
Aluminum	0.003 to 0.025		<0.05	<0.1	0.138	0.17	<0.1	<0.1	<0.1	0.42	<0.1	0.911	<0.03	<0.03
Antimony	0.0001 to 0.0025		<0.005	<0.01	<0.0025	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	0.001	<0.001
Arsenic	0.0001 to 0.0025		0.017	0.021	0.0066	0.013	0.017	<0.03	0.022	0.021	0.021	0.0203	0.0227	0.0229
Barium	5E-005 to 0.02		<0.04	<0.04	<0.02	<0.04	<0.04	<0.06	<0.06	0.042	<0.06	0.0444	0.0335	0.0362
Beryllium	0.0001 to 0.005		<0.01	<0.02	<0.005	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.001	<0.001	<0.001
Bismuth	0.0005 to 0.2				<0.2	<0.4	<0.4	<0.6	<0.6	<0.4	<0.6	<0.005	<0.005	<0.005
Boron	0.01 to 0.1		1.59	1.74	0.36	1.29	1.76	1.89	2.03	2	2.05	2.03	2.68	2.77
Cadmium	1E-005 to 8.5E-005		<0.00017	<0.00034	<0.000085	<0.00034	<0.00034	<0.00034	<0.00034	<0.00034	<0.00034	<0.0001	<0.0001	<0.0001
Calcium	0.05 to 0.1		73.2	79	31.1	58.6	73.3	74.4	80.4	82.2	76.6	81.1	105	95.8
Chromium	0.0001 to 0.005		<0.01	<0.02	<0.005	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.0028	<0.001	<0.001
Cobalt	0.0001 to 0.0015		<0.003	<0.006	<0.0015	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.001	<0.001	<0.001
Copper	0.0005 to 0.007		<0.02	<0.02	0.011	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.0097	<0.005	<0.005
Iron	0.01 to 0.03		<0.06	<0.06	0.166	0.232	<0.06	0.097	<0.09	0.464	0.112	1.19	<0.09	<0.09
Lead	5E-005 to 0.0025		<0.005	<0.01	<0.0025	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0005	<0.0005	<0.0005
Lithium	0.0005 to 0.025		<0.05	<0.1	<0.025	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.0361	0.054	0.0631
Magnesium	0.1		731	776	158	586	767	818	861	905	894	930	1240	1100
Manganese	5E-005 to 0.0015		0.0692	0.113	0.112	0.0908	0.0573	0.0474	0.139	0.0742	0.0514	0.08	0.0472	0.0875
Mercury	1E-005 to 5E-005		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005		0.032	0.027	0.0073	<0.02	0.029	0.03	0.031	0.033	0.031	0.0314	0.0374	0.0373
Nickel	0.0005 to 0.005		<0.01	<0.02	<0.005	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.0052	<0.005	<0.005
Phosphorus	0.05 to 0.3				<0.3	<0.6	<0.6	<0.9	<0.9	<0.6	<0.9	<0.9	<0.9	<0.9
Potassium	0.05 to 2		161	178	35.6	122	175	186	209	205	211	214	251	296
Selenium	0.0001 to 0.006		<0.01	<0.02	<0.005	<0.02	<0.02	<0.03	<0.02	<0.02	<0.02	<0.001	<0.001	<0.001
Silicon	0.05				0.848	0.81	0.2	0.3	0.95	2.1	1.5	3.31	1.07	1.01
Silver	1E-005 to 0.0001		<0.0002	<0.0004	<0.0001	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0001	<0.0001	<0.0001
Sodium	0.05 to 2		1210	1460	280	964	1450	1520	1680	1680	1650	1530	1910	2060
Strontium	0.0001 to 0.005				1.12	3.61	5.08	5.56	6.09	6.02	5.99	5.85	6.76	6.91
Sulphur	0.5													
Thallium	1E-005 to 0.001		<0.002	<0.004	<0.001	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.0001	<0.0001	<0.0001
Tin	0.0001 to 0.0025		<0.005	<0.01	<0.0025	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001
Titanium	0.01		<0.02	<0.02	<0.01	<0.02	<0.02	<0.03	<0.03	<0.02	<0.03	0.052	<0.03	<0.03
Total Cadmium (by saltwater extraction)	0.00002													
Uranium	1E-005 to 0.001		0.0032	<0.004	<0.001	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	0.00312	0.0038	0.00345
Vanadium	0.001 to 0.03		<0.01	<0.02	<0.005	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01
Zinc	0.003 to 0.006		<0.01	<0.01	<0.005	<0.01	<0.01	<0.015	<0.015	<0.01	<0.015	<0.03	<0.03	0.063
Organics														
Carbon Organic (Dissolved)	0.5 to 5		33.9	39.9	12.2	29.2	36	41.8	38.2	46.1	46.2	46.4	45.6	45.5
Carbon Organic (Total)	0.5 to 5					27.8	35.9	38.8	37.5	44.5	47.4	46.4	42.5	50.9
Nitrogen Organic (Dissolved)	0.05 to 0.26						2.73	3.25	3.4	4.27	3.13	3.52	3.34	3.25
Nitrogen Organic (Total)	0.05 to 0.3					2.17	2.42	3.1	3.51	4.31	3.24	3.91	3.01	3.09
ALS LAB ID			**L894378**	**L927439**	**L990458**	**L995583**	**L1012627**	**L1025917**	**L1038168**	**L1052924**	**L1065234**	**L1077732**	**L1103104**	**L1114498**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID			INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S
Analytes		**MDL**	**6-Mar-12**	**25-Apr-12**	**2-May-12**	**10-Jul-12**	**7-Aug-12**	**12-Oct-12**	**7-Nov-12**	**9-Jan-13**	**7-Feb-13**	**3-Apr-13**	**7-May-13**	**5-Jun-13**
In Situ Parameters														
Conductivity µS/cm		...	4054	7949	8222	1082	1137	8469	7570	6717	7024	6975	10470	11220
Oxygen Dissolved %		...					39.8	81.3	72.7	63.3	47.7			
Oxygen Dissolved		...		11	11.1		3.13	8.69	8.84	8.84	6.61			
pH (unitless)		...	9.25	8.68	8.94	8.84	8.63	8.68	8.72	9.15	8.78	9.15	9.03	8.83
Redox Potential mV		...	143	155	131	-40.6	-121	-254	54.8	154	240	106	94.7	191
Salinity ppt		...	4.19	5.6	5.99		6.43	6.69	6.94	7.21	7.5	5.23	6.99	7.18
Specific Conductivity µS/cm		...	7802	9907	10533	1143	1131	11700	12230	12950	13430	9295	12170	12500
Temperature °C		...	-0.14	14.7	13.5	22.3	25.2	10.5	5.08	-0.21	0.01	11.8	17.7	19.6
Total Dissolved Solids		...	5068	6432	6846		7357	7608	7950	8420	8731	6038	7910	8120
Turbidity NTU		...	6.6	3	4.5	1.4	14.2	8.7	25.7	2.9	1.3	23.1	5.8	4.6
Physical Tests														
Acidity to pH 8.3 (as CaCO3)		1						<1						
Alkalinity (Total as CaCO3)		1 to 2	518	671	680	720	760	793	828	855	867	619	771	782
Bicarbonate Alkalinity		1 to 2	293	493	495	551	573	667	728	784	790		513	534
Carbonate Alkalinity		1 to 2	225	178	185	169	187	126	100	70.4	77.1		258	247
Color TCU		5	28.6	20.1	20.7	19.9	21.6	25	22.4	21.7	22.1	15.8	19.3	19.3
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	3080	3790	3690	4200	4080	4570	4800	4990	4670	3280	4480	4620
Hydroxide Alkalinity		1 to 2	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	<1
pH (unitless)		0.01 to 0.1	9.13	8.78	8.78	8.73	8.72	8.59	8.53	8.51	8.5	8.78	8.89	8.83
Specific Conductivity µS/cm		2	8120	10300	10300	10900	11100	12000	12000	12600	12400	9000	11700	12200
Total Dissolved Solids		1 to 2	7370	9660	10300	11900	12400	11400		12600	13000	9300	11300	12200
Total Suspended Solids		3	17.3	5.3	13.1	6.2	10.1	28.8	31.8	7	9.5	33.8	32.1	17.8
Turbidity NTU		0.1	8.74	2.56	3.84	0.94	0.98	14.2	18.6	3.37	2.88	14.2	3.54	1.92
Dissolved Anions														
Bromide		0.05 to 2.495	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Chloride		0.5 to 1	343	453	426	459	466	505	524	523	529	391	486	502
Fluoride		0.02 to 0.4	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1.1
Sulphate		0.5 to 1	4530	6390	6130	6620	6830	7480	7650	7870	7930	5540	7220	7540
Nutrients														
Ammonia (Total)		0.005 to 0.05	0.0394	0.0348	0.0355	0.14	0.221	0.803	1.52	1.67	1.68	0.07	0.044	0.0289
Nitrate (as N)		0.005 to 0.1	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Nitrite (as N)		0.001 to 0.02	0.051	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrogen (Dissolved)		0.05 to 0.1	2.67	3.11	2.85	0.407	5.06	4.7	4.35	5.49	5.07	2.38		
Nitrogen (Total)		0.0025 to 0.11	3.61	3.36	2.89	3.28	3.71	5.15	1.28	5.51	5.18	4.71	3.74	3.54
Nitrogen Kjeldahl (Total)		0.05 to 0.2	3.56	3.36	2.89	3.28	3.71	5.15	1.28	5.72	6.19	4.71	3.74	3.63
Orthophosphate (Dissolved)		0.001 to 0.01	<0.001	0.0039	0.0164	0.0929	0.127	0.162	0.178	0.161	0.204	<0.001		0.133
Phosphorus - Dissolved		0.002 to 0.02	0.0564	0.0764	0.0938	0.178	0.196	0.235	0.233	0.245	0.275	0.0601	0.0956	0.226
Phosphorus - Total		0.002 to 0.02	0.394	0.122	0.135	0.173	0.216	0.3	0.29	0.28	0.308	0.354	0.146	0.241
Cyanide														
Cyanide (Free)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)		0.005	0.0082	<0.005	0.0093	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals														
Aluminum		0.001 to 0.025	<0.03	<0.03	<0.03	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01
Antimony		0.0001 to 0.0025	<0.001	<0.001	<0.001	0.0011	<0.001	0.0011	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001
Arsenic		0.0001 to 0.0025	0.016	0.0169	0.0171	0.0207	0.0235	0.021	0.0161	0.0133	0.0153	0.0094	0.0146	0.0173
Barium		5E-005 to 0.02	0.0391	0.0266	0.0278	0.0345	0.035	0.0338	0.0292	0.0258	0.0302	0.0207	0.0268	0.0315
Beryllium		0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001
Bismuth		0.0005 to 0.2	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005
Boron		0.01 to 0.1	1.68	1.88	2.21	2.18	1.83	2.68	2.26	2.11	2.59	1.61	1.99	2.15
Cadmium		1E-005 to 8.5E-005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001
Calcium		0.05 to 0.1	66.5	75.1	72.9	79.2	79.7	90	96.2	96.5	97.2	68.1	92.2	90.2
Chromium		0.0001 to 0.018	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001
Cobalt		0.0001 to 0.0015	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001
Copper		0.0002 to 0.006	0.0124	<0.005	<0.005	0.0029	<0.002	<0.002	<0.002	<0.004	0.0022	0.0056	0.003	0.0025
Dissolved Cadmium (by saltwater extraction)		0.00002												
Iron		0.01 to 0.03	<0.06	<0.06	<0.09	<0.1	<0.1	<0.1	0.057	0.055	0.052	0.023	<0.03	<0.05
Lead		5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005
Lithium		0.0005 to 0.025	0.0393	0.042	0.0479	0.0483	0.0427	0.0627	0.0497	0.043	0.0524	0.0298	0.0545	0.0461
Magnesium		0.1	708	876	852	973	943	1060	1110	1150	1070	755	963	1070
Manganese		5E-005 to 0.0015	0.0702	0.138	0.138	0.175	0.205	0.1	0.0982	0.0534	0.0659	0.0423	0.132	0.108
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.0278	0.0305	0.0315	0.0321	0.0252	0.0376	0.038	0.0351	0.0387	0.027	0.0411	0.0347
Nickel		0.0005 to 0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	0.0082	<0.005	<0.005
Phosphorus		0.05 to 0.3	<0.6	<0.6	<0.9	<0.9	<0.9	<1.5	0.26	<0.25	0.24	<0.1	<0.15	<0.25
Potassium		0.05 to 2	175	202	200	231	249	272	252	258	258	164	239	245
Selenium		0.0001 to 0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	0.0017	<0.001	<0.001
Silicon		0.05	1.07	0.88	1.12	0.64	1.51	2.15	2.7	2.96	3.25	1.83	2.96	1.02
Silver		1E-005 to 0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001
Sodium		0.05 to 2	1370	1610	1600	1790	1890	2120	1950	1910	2030	1290	1870	1950
Strontium		0.0001 to 0.005	4.58	5.56	5.55	6.33	5.69	7.3	6.83	6.59	7.11	4.78	6.63	6.3
Sulphur		0.5							2430	2570	2470	1690	2310	2380
Thallium		1E-005 to 0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001
Tin		0.0001 to 0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001
Titanium		0.01	<0.02	<0.02	<0.03	<0.03	<0.03	<0.05	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1
Uranium		1E-005 to 0.001	0.00266	0.00328	0.00331	0.00346	0.00276	0.00387	0.00392	0.00377	0.00426	0.00286	0.00408	0.00374
Vanadium		0.001 to 0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	0.012	<0.01
Zinc		0.001 to 0.006	<0.03	<0.03	<0.03	<0.01	<0.01	<0.01	<0.01	<0.02	0.01	0.013	<0.01	<0.01
Total Metals														
Aluminum		0.003 to 0.025	1.33	0.044	0.805	<0.03	<0.03	0.353	0.704	<0.06	<0.03	0.174	0.074	0.065
Antimony		0.0001 to 0.0025	<0.001	<0.001	<0.001	<0.001	0.0011	0.0011	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001
Arsenic		0.0001 to 0.0025	0.0157	0.018	0.0175	0.0194	0.0236	0.0215	0.0166	0.0133	0.015	0.01	0.0145	0.0173
Barium		5E-005 to 0.02	0.0418	0.0279	0.0296	0.0323	0.0351	0.0379	0.0392	0.0269	0.0299	0.0228	0.0276	0.0328
Beryllium		0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001
Bismuth		0.0005 to 0.2	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005
Boron		0.01 to 0.1	1.7	1.94	2.21	1.89	2.14	2.71	2.22	2.21	2.48	1.65	2.04	2.16
Cadmium		1E-005 to 8.5E-005	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001
Calcium		0.05 to 0.1	69.2	76.8	72	77.3	84.8	96	102	103	100	71.9	92.9	91.1
Chromium		0.0001 to 0.005	0.0012	<0.001	<0.001	<0.001	<0.001	0.0015	0.0018	<0.002	<0.001	<0.001	<0.001	<0.001
Cobalt		0.0001 to 0.0015	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001
Copper		0.0005 to 0.007	0.0183	<0.005	<0.005	<0.005	<0.005	<0.005	0.0074	<0.01	<0.005	<0.005	0.0052	<0.005
Iron		0.01 to 0.03	0.226	<0.06	0.161	<0.1	<0.1	0.48	0.966	0.136	0.117	0.254	0.116	0.131
Lead		5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005
Lithium		0.0005 to 0.025	0.0423	0.0441	0.0485	0.0459	0.0504	0.0648	0.048	0.047	0.0512	0.032	0.0553	0.0486
Magnesium		0.1	742	888	825	941	984	1090	1140	1220	1130	793	959	1090
Manganese		5E-005 to 0.0015	0.0794	0.15	0.148	0.173	0.195	0.129	0.141	0.0638	0.0717	0.0733	0.141	0.123
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.0286	0.0319	0.031	0.0299	0.0296	0.0388	0.0379	0.0373	0.0378	0.0285	0.0437	0.036
Nickel		0.0005 to 0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005
Phosphorus		0.05 to 0.3	<0.6	<0.6	<0.9	<0.9	<0.9	<1.5	0.36	0.31	0.31	0.36	<0.15	0.27
Potassium		0.05 to 2	177	205	196	214	240	270	260	275	263	171	237	250
Selenium		0.0001 to 0.006	0.0012	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	0.0019	<0.001	<0.001
Silicon		0.05	1.5	0.99	1.32	0.61	1.62	3.43	4.75	3.22	3.39	2.35	3.1	1.24
Silver		1E-005 to 0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001
Sodium		0.05 to 2	1400	1620	1560	1650	1840	2100	1940	1860	2010	1310	1870	1920
Strontium		0.0001 to 0.005	4.77	5.76	5.6	5.88	6.61	7.51	6.85	6.95	6.94	4.83	6.66	6.47
Sulphur		0.5							2500	2740	2620	1780	2330	2430
Thallium		1E-005 to 0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001
Tin		0.0001 to 0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001
Titanium		0.01	<0.02	<0.02	<0.03	<0.03	<0.03	<0.05	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1
Total Cadmium (by saltwater extraction)		0.00002												
Uranium		1E-005 to 0.001	0.00242	0.00337	0.00324	0.00324	0.00323	0.00402	0.00399	0.00388	0.00416	0.00287	0.00414	0.00411
Vanadium		0.001 to 0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	0.013	0.011
Zinc		0.003 to 0.006	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.06	<0.03	0.031	<0.03	<0.03
Organics														
Carbon Organic (Dissolved)		0.5 to 5	37.5	40.2	41.8	42.9	42.8	49.7	47.4	51.1	46.9	34.9	45	48.1
Carbon Organic (Total)		0.5 to 5	38.5	40.8	42.1	40.6	43.5	51.1	54.9	49.4	46.3	38	48	47.9
Nitrogen Organic (Dissolved)		0.05 to 0.26	2.58	3.08	2.81	0.267	4.84	3.9	2.83		3.39	2.31		
Nitrogen Organic (Total)		0.05 to 0.3	3.52	3.33	2.85	3.14	3.49	4.35	<0.08	4.05	4.51	4.64		
ALS LAB ID			**L1122039**	**L1140194**	**L1142492**	**L1176520**	**L1190914**	**L1223406**	**L1235306**	**L1256679**	**L1266846**	**L1286585**	**L1298960**	**L1312719**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID			INKS-S	INKS-S	INKS-S	INKS-S	INKS-S
Analytes		MDL	3-Jul-13	7-Aug-13	5-Sep-13	9-Oct-13	7-Nov-13
In Situ Parameters							
Conductivity µS/cm		...	11600	12760		13.6	7735
Oxygen Dissolved %	...			59.4			27.8
Oxygen Dissolved	...			4.75			3.45
pH (unitless)		...	8.87	8.84	8.83	9.06	9.01
Redox Potential mV		...	8.1	196	158	40.5	119
Salinity ppt		...	7.04	7.4	7.94	7.88	7.32
Specific Conductivity µS/cm		...	12270	12890	13687	9.79	12890
Temperature °C		...	22.1	24.5	19	10.5	4.05
Total Dissolved Solids		...	7980	8377	8898	8847	8380
Turbidity NTU		...	182	17.3		3.8	17.1
Physical Tests							
Acidity to pH 8.3 (as CaCO3)		1			<1		
Alkalinity (Total as CaCO3)		1 to 2	814	815	876	818	760
Bicarbonate Alkalinity		1 to 2	556	563	553	542	550
Carbonate Alkalinity		1 to 2	258	252	324	276	210
Color TCU		5	19.9	24.3	20.8	23	
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	4270	4640	5110	5150	5050
Hydroxide Alkalinity		1 to 2	<1	<1	<1	<1	<1
pH (unitless)		0.01 to 0.1	8.87	8.88	8.96	8.91	8.78
Specific Conductivity µS/cm		2	12100	12400	12900	13300	12800
Total Dissolved Solids		1 to 2	11900	12600	13700	12600	12500
Total Suspended Solids		3	24.3	25.7	34.7	13.1	35.7
Turbidity NTU		0.1	0.92	24.9	6.51	8.41	12.8
Dissolved Anions							
Bromide		0.05 to 2.495	2.7	<2.5	2.6	<2.5	<2.5
Chloride		0.5 to 1	497	529	574	561	535
Fluoride		0.02 to 0.4	<1	<1	<0.4	<1	<1
Sulphate		0.5 to 1	7190	7900	8070	8390	7870
Nutrients							
Ammonia (Total)		0.005 to 0.05	0.069	0.053	0.0426	0.0466	0.132
Nitrate (as N)		0.005 to 0.1	<0.25	<0.25	<0.1	<0.25	<0.25
Nitrite (as N)		0.001 to 0.02	<0.05	<0.05	<0.02	<0.05	<0.05
Nitrogen (Dissolved)		0.05 to 0.1		3.63			
Nitrogen (Total)		0.0025 to 0.11	3.68	4.27	17.5	4.46	4.54
Nitrogen Kjeldahl (Total)		0.05 to 0.2	3.68	4.03	4.58	5.21	4.83
Orthophosphate (Dissolved)		0.001 to 0.01	0.096		0.0026	0.0029	0.0019
Phosphorus - Dissolved		0.002 to 0.02	0.176	0.202	0.0926	0.0819	0.0667
Phosphorus - Total		0.002 to 0.02	0.188	0.324	0.312	0.256	2.77
Cyanide							
Cyanide (Free)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)		0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals							
Aluminum		0.001 to 0.025	<0.01	<0.01	<0.01	<0.01	<0.01
Antimony		0.0001 to 0.0025	<0.001	0.0012	0.0012	0.001	<0.001
Arsenic		0.0001 to 0.0025	0.0197	0.0229	0.023	0.0199	0.0161
Barium		5E-005 to 0.02	0.026	0.0186	0.0215	0.0215	0.0198
Beryllium		0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth		0.0005 to 0.2	<0.005	<0.005	<0.005	<0.005	<0.005
Boron		0.01 to 0.1	2.05	2.44	2.63	2.68	2.32
Cadmium		1E-005 to 8.5E-005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium		0.05 to 0.1	89.4	89	88.4	83.2	75.6
Chromium		0.0001 to 0.018	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt		0.0001 to 0.0015	<0.001	<0.001	<0.001	<0.001	<0.001
Copper		0.0002 to 0.006	0.003	0.0032	<0.002	<0.002	0.0031
Dissolved Cadmium (by saltwater extraction)		0.00002					
Iron		0.01 to 0.03	<0.03	<0.05	<0.05	<0.05	<0.05
Lead		5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Lithium		0.0005 to 0.025	0.0398	0.0499	0.0601	0.0598	0.0537
Magnesium		0.1	983	1070	1190	1200	1180
Manganese		5E-005 to 0.0015	0.0416	0.096	0.0328	0.0182	0.069
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.0351	0.0368	0.0382	0.0387	0.0379
Nickel		0.0005 to 0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Phosphorus		0.05 to 0.3	0.18	<0.25	<0.25	<0.25	<0.25
Potassium		0.05 to 2	224	253	271	281	263
Selenium		0.0001 to 0.006	<0.001	<0.001	<0.001	<0.001	0.0011
Silicon		0.05	0.32	2.01	3.74	3.64	3.5
Silver		1E-005 to 0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Sodium		0.05 to 2	1830	2170	2260	2140	1860
Strontium		0.0001 to 0.005	6.3	7.2	7.56	7.57	6.89
Sulphur		0.5	2240	2520	2700	2630	2590
Thallium		1E-005 to 0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Tin		0.0001 to 0.0025	<0.001	<0.001	<0.001	<0.001	<0.001
Titanium		0.01	<0.1	<0.1	<0.1	<0.1	<0.1
Uranium		1E-005 to 0.001	0.00378	0.0039	0.00403	0.004	0.00421
Vanadium		0.001 to 0.03	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc		0.001 to 0.006	<0.01	<0.01	<0.01	<0.01	<0.01
Total Metals							
Aluminum		0.003 to 0.025	<0.03	0.036	<0.03	0.059	0.123
Antimony		0.0001 to 0.0025	0.0032	0.0012	0.0013	<0.001	<0.001
Arsenic		0.0001 to 0.0025	0.0199	0.0228	0.0234	0.0199	0.0149
Barium		5E-005 to 0.02	0.0267	0.0201	0.0221	0.0226	0.0197
Beryllium		0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth		0.0005 to 0.2	<0.005	<0.005	<0.005	<0.005	<0.005
Boron		0.01 to 0.1	2.06	2.49	2.58	2.58	2.06
Cadmium		1E-005 to 8.5E-005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium		0.05 to 0.1	91.8	95.2	90.5	81.1	71.9
Chromium		0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt		0.0001 to 0.0015	<0.001	<0.001	<0.001	<0.001	<0.001
Copper		0.0005 to 0.007	<0.005	<0.005	<0.005	<0.005	0.0053
Iron		0.01 to 0.03	0.052	0.051	<0.05	0.111	0.188
Lead		5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Lithium		0.0005 to 0.025	0.0414	0.0516	0.0587	0.0633	0.0474
Magnesium		0.1	1010	1120	1210	1200	1080
Manganese		5E-005 to 0.0015	0.0511	0.122	0.048	0.0702	0.0851
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.0393	0.0376	0.0387	0.0378	0.0339
Nickel		0.0005 to 0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Phosphorus		0.05 to 0.3	0.21	0.33	0.3	0.31	0.3
Potassium		0.05 to 2	236	267	279	271	243
Selenium		0.0001 to 0.006	<0.001	0.001	0.0011	<0.001	0.0012
Silicon		0.05	0.39	2.22	3.86	3.71	3.71
Silver		1E-005 to 0.0001	<0.0001	<0.0001	0.00012	<0.0001	<0.0001
Sodium		0.05 to 2	1880	2180	2260	2050	1730
Strontium		0.0001 to 0.005	6.29	7.31	7.54	7.23	6.16
Sulphur		0.5	2320	2660	2770	2630	2380
Thallium		1E-005 to 0.001	0.00024	<0.0001	<0.0001	<0.0001	<0.0001
Tin		0.0001 to 0.0025	<0.001	<0.001	<0.001	<0.001	<0.001
Titanium		0.01	<0.1	<0.1	<0.1	<0.1	<0.1
Total Cadmium (by saltwater extraction)		0.00002					
Uranium		1E-005 to 0.001	0.00401	0.00396	0.00416	0.00405	0.00379
Vanadium		0.001 to 0.03	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc		0.003 to 0.006	<0.03	<0.03	<0.03	<0.03	<0.03
Organics							
Carbon Organic (Dissolved)		0.5 to 5	50.6	53.2	47.2	49.7	43.4
Carbon Organic (Total)		0.5 to 5	51.2	56.3	51.8	55.1	48.9
Nitrogen Organic (Dissolved)		0.05 to 0.26					
Nitrogen Organic (Total)		0.05 to 0.3					
ALS LAB ID			L1327102	L1344180	L1358626	L1375698	L1389979

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C3.20 - JACL-D
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Site ID		JACL-D	JACL-D	JACL-D	JACL-D	JACL-D	JACL-D	JACL-D	JACL-D	JACL-D	JACL-D	JACL-D	JACL-D
Analytes	**MDL**	**3-May-07**	**19-Jul-07**	**20-Sep-07**	**29-Apr-08**	**10-Jul-08**	**7-Sep-08**	**3-Jun-10**	**1-Sep-10**	**1-Jun-11**	**29-Jun-11**	**28-Jul-11**	**31-Aug-11**
In Situ Parameters													
Conductivity µS/cm	...	492	499	511	484	503	503	483	531	432	484	503	466
Oxygen Dissolved %	...				62.3	1.3	1.5	9.4	0.4	1.3	-0.4	0	0.8
Oxygen Dissolved	...	0.47	0.01	0.21	7.99	0.16	0.19	1.22	0.05	0.18	-0.06	0	0.11
pH (unitless)	...	7.76	7.54	8	8.1	7.42	7.29	7.84	7.71	6.52	7.36	7.55	
Redox Potential mV	...					-64.4				-57.9	-178		-124
Salinity ppt	...									0.35	0.4	0.41	0.41
Specific Conductivity µS/cm	...	754	787	792	790	801	803	802	869	729	814	840	847
Temperature °C	...	5.44	5.85	6.42	4.72	5.47	5.43	4.18	4.62	3.69	3.77	3.99	1.46
Total Dissolved Solids	...		512							474	529	547	550
Turbidity NTU	...										300	1.6	1.5
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1		5.2		4.2							7.7	
Alkalinity (Total as CaCO3)	1 to 2	248	247	280	257	250	255	236	244	255	259	280	256
Bicarbonate Alkalinity	1 to 2				257		255	236					
Carbonate Alkalinity	1 to 2				<2		<2	<2					
Color TCU	5		13.9	15.3	21.3	12.6	14.2	13.7	14.3	15.6	14.7	17.1	16.4
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	321	337	329	341	322	320	318	336	324	321	331	333
Hydroxide Alkalinity	1 to 2				<2		<2	<2					
pH (unitless)	0.01 to 0.1	8.24	7.99	7.9	8.12	8.2	7.85	8.3	7.97	8.11	8.09	8	8.04
Specific Conductivity µS/cm	2	749	774	779	790	793	801	758	769	785	751	811	800
Total Dissolved Solids	1 to 2	461	471	465	447	492	470	454	480	469	458	507	472
Total Suspended Solids	3	<3	3.6	<3	3.2	<3	<3	<3	<3	5.2	3.3	<3	<3
Turbidity NTU	0.1				2.43	2.15	9.9	0.78	2.2	2.07	1.67	13	1.61
Dissolved Anions													
Bromide	0.05 to 2.495	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.25	<0.25	<0.5	<0.5
Chloride	0.5 to 1	61.4	60	59.8	60.6	61.9	62.5	60.5	60.6	61	62.6	65	61.7
Fluoride	0.02 to 0.4	0.191		0.207	0.172	0.175	0.198	0.172	<0.2	0.21	0.32	0.34	<0.2
Sulphate	0.5 to 1	86.4	83.7	82.5	83.7	85.2	73.9	79.5	70.7	74.5	77.3	64.8	73.7
Nutrients													
Ammonia (Total)	0.005 to 0.05	0.131	0.932	1.57	0.076	0.448	1.94	0.19	0.939	0.499	0.513	1.19	0.93
Nitrate (as N)	0.005 to 0.1	0.161	<0.005	<0.005	0.0299	<0.005	<0.005	<0.005	<0.05	<0.025	<0.025	<0.05	<0.05
Nitrite (as N)	0.001 to 0.02	0.0106	<0.001	<0.001	0.0045	<0.001	<0.001	<0.001	<0.01	<0.005	<0.005	<0.01	<0.01
Nitrogen (Dissolved)	0.05 to 0.1									1.59	1.61	2.28	2.25
Nitrogen (Total)	0.0025 to 0.11							1.06	2.01	1.56	1.68	2.3	2.55
Nitrogen Kjeldahl (Total)	0.05 to 0.2	1.02	1.95	2.94	1.13	1.34	3.17	1.06	2.01	1.56	1.68	2.3	1.97
Orthophosphate (Dissolved)	0.001 to 0.01	0.0523	0.216	0.336	0.0281	0.116	0.343	0.0261	0.168	0.109	0.0991	0.278	0.178
Phosphorus - Dissolved	0.002 to 0.02								0.179	0.118	0.106	0.279	0.178
Phosphorus - Total	0.002 to 0.02	0.0788	0.257	0.362	0.0816	0.16	0.383	0.0498	0.193	0.138	0.127	0.317	0.198
Cyanide													
Cyanide (Free)	0.005				<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Cyanide (Total)	0.005	0.006	0.0051	0.0117	<0.005	0.006		<0.005	0.0064	0.0052	0.0063	0.0055	
Cyanide (WAD)	0.005				<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0063	<0.005	
Dissolved Metals													
Aluminum	0.001 to 0.025	<0.01	<0.005	0.009	<0.005	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Antimony	0.0001 to 0.0025	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic	0.0001 to 0.0025	0.0014	0.00138	0.00123	0.00126	0.0013	0.0016	0.00144	0.00131	0.00143	0.00145	0.00143	0.00136
Barium	5E-005 to 0.02	0.059	0.065	0.067	0.059	0.067	0.069	0.056	0.07	0.067	0.066	0.07	0.071
Beryllium	0.0001 to 0.005	<0.002	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth	0.0005 to 0.2									<0.2	<0.2	<0.2	<0.2
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	1E-005 to 8.5E-005	<0.000034	<0.000017	<0.000017	<0.000017	<0.000034	<0.000034	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
Calcium	0.05 to 0.1	57.5	60.2	61.1	57.9	56.4	58.5	50.1	53.5	56.3	54.7	59	57.4
Chromium	0.0001 to 0.018	<0.002	<0.002	<0.001	<0.001	<0.002	<0.004	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001
Cobalt	0.0001 to 0.0015	<0.0006	<0.0003	<0.0003	<0.0003	<0.0006	<0.0006	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Copper	0.0002 to 0.006	<0.002	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Dissolved Cadmium (by saltwater extraction)	0.00002												
Iron	0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Lead	5E-005 to 0.0025	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Lithium	0.0005 to 0.025	<0.01	0.0072	0.0063	0.0062	<0.01	<0.01	0.0055	0.0067	0.0062	<0.005	<0.005	0.0082
Magnesium	0.1	43	45.3	43	46.7	44	42.3	46.8	49.2	44.6	44.9	44.7	46
Manganese	5E-005 to 0.0015	0.0297	0.0995	0.107	0.00936	0.086	0.0982	0.00902	0.0578	0.122	0.103	0.1	0.101
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	<0.004	0.0021	0.0011	0.0024	0.0025	<0.002	0.0023	0.0018	0.002	0.002	0.0012	0.0014
Nickel	0.0005 to 0.005	<0.002	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Phosphorus	0.05 to 0.3									<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	12.3	12.6	12.4	12.2	12.6	13	14.7	14.2	13.1	12.9	13.5	13.5
Selenium	0.0001 to 0.006	<0.002	0.0034	<0.001	<0.001	<0.002	0.0107	<0.001	<0.001	<0.001	<0.001	0.0019	<0.001
Silicon	0.05									3.19	3.13	3.94	3.41
Silver	1E-005 to 0.0001	<0.00004	<0.00002	<0.00002	<0.00002	<0.00004	<0.00004	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	0.05 to 2	39.8	42	43.4	40.7	41.3	39.2	42.9	44.6	42.4	42.2	42.1	42.6
Strontium	0.0001 to 0.005									0.429	0.419	0.427	0.428
Sulphur	0.5												
Thallium	1E-005 to 0.001	<0.0004	<0.0002	<0.0002	<0.0002	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin	0.0001 to 0.0025	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00129	0.00118	0.00098	0.00109	0.00121	0.00112	0.00118	0.00118	0.00111	0.00117	0.00106	0.00117
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.03	0.0016	<0.002	<0.002	0.0019	0.0018	0.0023	0.0018	0.0018	0.0018
Zinc	0.001 to 0.006	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Metals													
Aluminum	0.003 to 0.025	<0.01	0.0058	0.0092	<0.005	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Antimony	0.0001 to 0.0025	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic	0.0001 to 0.0025	0.0012	0.00137	0.0012	0.00127	0.0013	0.0016	0.00105	0.00132	0.00131	0.00137	0.00128	0.00139
Barium	5E-005 to 0.02	0.058	0.066	0.07	0.062	0.067	0.069	0.054	0.068	0.068	0.069	0.073	0.067
Beryllium	0.0001 to 0.005	<0.002	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth	0.0005 to 0.2									<0.2	<0.2	<0.2	<0.2
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	1E-005 to 8.5E-005	<0.000034	<0.000017	<0.000017	<0.000017	<0.000034	<0.000034	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
Calcium	0.05 to 0.1	58.8	60.9	62.1	58.6	56.9	58	48.8	53	55.4	56.2	59.5	55.2
Chromium	0.0001 to 0.005	<0.002	<0.002	<0.001	<0.001	<0.002	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	0.0001 to 0.0015	<0.0006	<0.0003	<0.0003	<0.0003	<0.0006	<0.0006	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Copper	0.0005 to 0.007	<0.002	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Iron	0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.038	<0.03
Lead	5E-005 to 0.0025	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Lithium	0.0005 to 0.025	<0.01	0.0067	0.0063	0.0064	<0.01	<0.01	0.006	0.0077	0.0074	0.0059	0.0074	0.0077
Magnesium	0.1	44	45.9	43.2	47.2	44.3	42.3	45.1	48.2	44.7	46	45.3	44.7
Manganese	5E-005 to 0.0015	0.0479	0.0965	0.106	0.0359	0.0855	0.0982	0.0137	0.0642	0.13	0.11	0.109	0.102
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	<0.004	0.002	0.0014	0.0024	0.0024	<0.002	0.0025	0.0024	0.0025	0.0024	0.0019	0.0022
Nickel	0.0005 to 0.005	<0.002	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Phosphorus	0.05 to 0.3									<0.3	<0.3	0.31	<0.3
Potassium	0.05 to 2	12.2	12.6	12.3	12.4	12.6	13	13.9	13.9	13.3	13.4	13.9	13.1
Selenium	0.0001 to 0.006	<0.002	0.0034	<0.001	<0.001	<0.002	0.0171	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon	0.05									3.23	3.18	3.98	3.29
Silver	1E-005 to 0.0001	<0.00004	<0.00002	<0.00002	<0.00002	<0.00004	<0.00004	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	0.05 to 2	39.6	41.4	43	41.4	41.2	39.3	41.8	43.9	42.9	43.8	44	41.7
Strontium	0.0001 to 0.005									0.435	0.437	0.445	0.422
Sulphur	0.5												
Thallium	1E-005 to 0.001	<0.0004	<0.0002	<0.0002	<0.0002	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin	0.0001 to 0.0025	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002												
Uranium	1E-005 to 0.001	0.00126	0.00105	0.00083	0.00077	0.00115	0.00095	0.00129	0.00136	0.00131	0.0013	0.00127	0.00127
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.03	0.0017	<0.002	<0.002	0.002	0.002	0.0025	0.002	0.002	0.0018
Zinc	0.003 to 0.006	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Organics													
Carbon Organic (Dissolved)	0.5 to 5	14.2	14.7	14.1	14.7	14.9	13.2	13.7	13.3	14.5	14.7	15.4	16.8
Carbon Organic (Total)	0.5 to 5									15.9	15.1	16	16.8
Nitrogen Organic (Dissolved)	0.05 to 0.26									1.09	1.1	1.09	1.32
Nitrogen Organic (Total)	0.05 to 0.3									1.06	1.17	1.11	1.62
ALS LAB ID		**L502198**	**L532652**	**L557583**	**L624228**	**L654416**	**L679955**	**L894163**	**L927896**	**L1012627**	**L1025917**	**L1038168**	**L1052924**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID			JACL-D	JACL-D	JACL-D	JACL-D	JACL-D	JACL-D	JACL-D	JACL-D	JACL-D	JACL-D	JACL-D	JACL-D
Analytes	**MDL**		**28-Sep-11**	**3-Nov-11**	**10-Jan-12**	**13-Feb-12**	**7-Mar-12**	**26-Apr-12**	**3-May-12**	**11-Jul-12**	**8-Aug-12**	**6-Sep-12**	**6-Nov-12**	**9-Jan-13**
In Situ Parameters														
Conductivity µS/cm	...			144	436	457	433	452	453	468	456	470	447	414
Oxygen Dissolved %	...		0.1		33.2	24.4	5.2	2.5	3.5	15.8	1.9	0	57.2	39.1
Oxygen Dissolved	...		0.01	12.2	4.44	3.25	0.7	0.33	0.46	2.12	0.25	0	6.8	5.31
pH (unitless)	...		7.45	7.74	7.77	7.64	7.62	7.48	7.74	7.48	7.5	7.46	7.94	8.23
Redox Potential mV	...		-224	258	219	183	75.1	41.3	123	-140	-264	-225	135	102
Salinity ppt	...			0.11	0.36	0.38	0.36	0.37	0.37		0.36	0.38	0.34	0.35
Specific Conductivity µS/cm	...		843	232	747	782	741	760	758	774	744	770	695	726
Temperature °C	...		4.2	5.21	3.23	3.26	3.24	3.76	3.91	4.29	4.72	4.54	6.29	2.51
Total Dissolved Solids	...			153	485	508	482	494	493		484	500	452	472
Turbidity NTU	...				0.6	0.1	0.6	2.6	1.2	0.8	1	0.6	1.2	2
Physical Tests														
Acidity to pH 8.3 (as CaCO3)	1		4.9										<1	
Alkalinity (Total as CaCO3)	1 to 2		272	272	258	250	253	258	257	247	264	277	245	251
Bicarbonate Alkalinity	1 to 2		272		258	250	253	258	257	247	264	277	245	251
Carbonate Alkalinity	1 to 2		<2		<2	<2	<2	<2	<2	<2	<1	<1	<1	<2
Color TCU	5		16	16.6	16.2	16.1	16.7	17.6	16.4	16.4	16.2	16	14.9	15.4
Hardness as CaCO3 (Dissolved)	0.5 to 1.1		325	323	308	316	316	321	323	319	315	326	296	304
Hydroxide Alkalinity	1 to 2		<2		<2	<2	<2	<2	<2	<2	<1	<1	<1	<2
pH (unitless)	0.01 to 0.1		8.04	8.1	8.21	8.17	8.11	8.23	8.13	8.14	8.22	8.11	8.33	8.21
Specific Conductivity µS/cm	2		809	774	741	746	740	746	735	740	739	744	693	680
Total Dissolved Solids	1 to 2		482	474	458	454	452	448	462	494	488	486	428	413
Total Suspended Solids	3		4	3	<3	7.3	3.3	<3	<3	<3	<3	<3	<3	<3
Turbidity NTU	0.1			23.4	1.4	5.24	1.04	1.82	1.21	2.05	2.26	0.92	0.87	2.06
Dissolved Anions														
Bromide	0.05 to 2.495		<0.25	<0.5	<0.5	<0.25	<0.5	<0.05	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Chloride	0.5 to 1		60.8	63.8	59.6	60	58.9	59.3	59.7	59.6	60.4	57.4	55.6	56
Fluoride	0.02 to 0.4		0.21	0.22	0.21	0.21	0.2	0.229	0.21	0.21	0.22	0.2	0.19	0.28
Sulphate	0.5 to 1		73.3	71.3	67.2	67.9	65.9	66.9	67.6	65.9	67.5	63.6	59.4	60
Nutrients														
Ammonia (Total)	0.005 to 0.05		1.59	0.294	0.283	<0.05	0.0396	0.39	0.144	0.673	0.564	0.962	0.29	0.447
Nitrate (as N)	0.005 to 0.1		<0.025	0.062	0.297	0.557	0.562	<0.005	0.225	<0.025	<0.025	<0.025	<0.025	0.08
Nitrite (as N)	0.001 to 0.02		<0.005	<0.01	0.018	<0.005	<0.01	0.0042	0.0295	<0.005	<0.005	<0.005	0.0067	0.0086
Nitrogen (Dissolved)	0.05 to 0.1		2.45	2.83	1.24	1.49	1.52	1.23	1.14	1.41	1.51	1.95	0.92	1.43
Nitrogen (Total)	0.0025 to 0.11		2.5	2.77	1.39	1.59	1.44	1.01	1.26	1.52	1.45	1.77	1.16	1.45
Nitrogen Kjeldahl (Total)	0.05 to 0.2		2.5	2.38	1.07	1.03	0.876	1.01	1	1.52	1.45	1.77	1.15	1.32
Orthophosphate (Dissolved)	0.001 to 0.01		0.277	0.273	0.0676	0.0708	0.079	0.115	0.0641	0.182	0.162	0.22	0.0575	0.0836
Phosphorus - Dissolved	0.002 to 0.02		0.278	0.276	0.0863	0.0879	0.0986	0.122	0.0798	0.193	0.159	0.217	0.0685	0.0998
Phosphorus - Total	0.002 to 0.02		0.336	0.284	0.0885	0.092	0.099	0.14	0.0921	0.208	0.186	0.253	0.0771	0.092
Cyanide														
Cyanide (Free)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.007	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals														
Aluminum	0.001 to 0.025		<0.005	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.001	<0.001	<0.001	0.0011	<0.001
Antimony	0.0001 to 0.0025		<0.0005	<0.0001	0.00011	0.0001	0.0001	<0.0001	0.0001	<0.0001	<0.0001	0.00012	<0.0001	0.00011
Arsenic	0.0001 to 0.0025		0.00135	0.00137	0.00142	0.00141	0.00139	0.00132	0.00137	0.00132	0.00133	0.00131	0.00124	0.00132
Barium	5E-005 to 0.02		0.074	0.07	0.0632	0.0751	0.07	0.0724	0.0674	0.0733	0.0681	0.0737	0.0452	0.0478
Beryllium	0.0001 to 0.005		<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2		<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1		<0.1	0.02	0.022	0.021	0.022	0.02	0.022	0.02	0.023	0.024	0.019	0.02
Cadmium	1E-005 to 8.5E-005		<0.000017	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1		57.1	56.2	54.4	55.8	55.6	56.8	57.3	57.7	55.2	60.4	51.6	54.7
Chromium	0.0001 to 0.018		<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015		<0.0003	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	0.0002 to 0.006		<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	0.00055	0.0012
Dissolved Cadmium (by saltwater extraction)	0.00002													
Iron	0.01 to 0.03		<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.017	0.018	0.019	<0.01	0.01
Lead	5E-005 to 0.0025		<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000066	<0.00005
Lithium	0.0005 to 0.025		0.0072	0.00646	0.0061	0.00627	0.00607	0.00615	0.00633	0.00698	0.00651	0.00606	0.00574	0.00572
Magnesium	0.1		44.3	44.3	41.9	42.9	43.1	43.5	43.6	42.5	43.1	42.6	40.5	40.6
Manganese	5E-005 to 0.0015		0.108	0.102	0.0151	0.0173	0.031	0.147	0.0423	0.102	0.0937	0.104	0.0319	0.02
Mercury	1E-005 to 5E-005		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005		<0.001	0.00066	0.00243	0.00238	0.00223	0.00184	0.00212	0.00181	0.00183	0.00109	0.00189	0.00325
Nickel	0.0005 to 0.005		<0.001	0.00078	0.00071	0.00077	0.00072	0.00065	0.00071	0.00075	0.0007	0.0007	0.00062	0.0007
Phosphorus	0.05 to 0.3		0.33	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.075	0.104
Potassium	0.05 to 2		13.2	13.2	12.6	13.1	12.1	12.4	12.5	12.2	11.5	12.3	12.5	13.1
Selenium	0.0001 to 0.006		<0.001	0.00021	0.00015	0.00014	0.00015	0.00014	0.00015	0.00059	0.00068	0.00042	0.00012	0.00015
Silicon	0.05		4.13	3.95	3.42	3.57	3.79	4.2	3.73	4.62	4.41	4.87	3.33	3.98
Silver	1E-005 to 0.0001		<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2		42	47	38.4	38.6	39	39.3	39.2	38.8	39.4	39	35.3	34.2
Strontium	0.0001 to 0.005		0.428	0.446	0.418	0.412	0.383	0.39	0.389	0.443	0.385	0.398	0.356	0.369
Sulphur	0.5												0.0196	20.5
Thallium	1E-005 to 0.001		<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025		<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001		0.00116	0.000948	0.00122	0.00121	0.00118	0.00111	0.00113	0.00119	0.00113	0.00103	0.00104	0.0012
Vanadium	0.001 to 0.03		0.0017	0.0017	0.002	0.002	0.0017	0.0019	0.0018	0.0017	0.0017	0.0017	0.0018	0.0022
Zinc	0.001 to 0.006		<0.005	<0.003	<0.003	<0.003	<0.003	<0.003	0.0034	0.0011	<0.001	0.0012	0.0014	0.0043
Total Metals														
Aluminum	0.003 to 0.025		<0.005	0.0033	0.0261	0.0841	0.0138	0.0049	0.0072	0.0035	0.0125	<0.003	0.0158	0.0175
Antimony	0.0001 to 0.0025		<0.0005	<0.0001	0.00011	0.00011	0.00011	0.00011	0.0001	0.0002	0.00013	0.00028	0.00011	0.00012
Arsenic	0.0001 to 0.0025		0.00138	0.00125	0.00126	0.00119	0.00135	0.00133	0.00139	0.00141	0.00136	0.0014	0.00137	0.00138
Barium	5E-005 to 0.02		0.071	0.065	0.0635	0.0669	0.0707	0.071	0.0655	0.0746	0.0691	0.0742	0.0495	0.0486
Beryllium	0.0001 to 0.005		<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2		<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1		<0.1	0.024	0.025	0.026	0.028	0.025	0.025	0.024	0.028	0.029	0.02	0.02
Cadmium	1E-005 to 8.5E-005		<0.000017	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001
Calcium	0.05 to 0.1		56.2	53.6	53.5	56.1	55.4	56.6	56.1	56.8	54.1	61	52.2	53.4
Chromium	0.0001 to 0.005		<0.001	0.00029	0.00022	0.00043	0.00019	0.00018	0.00012	0.00018	0.00019	0.00022	0.00014	0.00014
Cobalt	0.0001 to 0.0015		<0.0003	<0.0001	<0.0001	0.00013	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001
Copper	0.0005 to 0.007		<0.001	0.00087	0.00053	0.00113	<0.0005	<0.0005	0.00071	0.00061	0.00079	0.00051	0.00073	0.00101
Iron	0.01 to 0.03		0.031	0.064	<0.03	0.144	<0.03	<0.03	<0.03	0.022	0.035	0.026	0.032	0.038
Lead	5E-005 to 0.0025		<0.0005	<0.00005	<0.00005	0.00006	<0.00005	<0.00005	<0.00005	<0.00005	0.000083	<0.00005	<0.00005	0.000179
Lithium	0.0005 to 0.025		0.0071	0.00576	0.00586	0.00634	0.0059	0.00616	0.00571	0.00668	0.00628	0.0063	0.00556	0.00596
Magnesium	0.1		43.9	41.7	41.7	43.5	43.1	43.8	42.7	42.6	43.1	42.9	40.1	39.3
Manganese	5E-005 to 0.0015		0.108	0.0995	0.023	0.0264	0.0421	0.149	0.0471	0.104	0.0952	0.11	0.0378	0.028
Mercury	1E-005 to 5E-005		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005		0.0018	0.00138	0.00258	0.00262	0.00239	0.00226	0.00212	0.00223	0.00214	0.00169	0.0021	0.0031
Nickel	0.0005 to 0.005		<0.001	0.00164	0.00073	0.00092	0.00078	0.00077	0.00083	0.00081	0.00076	0.00079	0.00077	0.00073
Phosphorus	0.05 to 0.3		0.33	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.077	0.101
Potassium	0.05 to 2		13.2	12.6	12.9	11.4	12.3	12.2	12.1	12.3	11.6	12.7	12.2	12.6
Selenium	0.0001 to 0.006		<0.001	0.0001	0.00012	0.00015	0.00015	0.00014	0.00015	0.00013	0.00012	0.00013	0.00013	0.00015
Silicon	0.05		4.08	3.73	3.39	3.96	3.77	4.21	3.6	4.66	4.45	4.98	3.41	3.96
Silver	1E-005 to 0.0001		<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2		41.8	44.8	39.6	33.5	40	38.8	38.1	39.3	39.9	41.7	37.9	35.3
Strontium	0.0001 to 0.005		0.43	0.42	0.426	0.418	0.389	0.412	0.366	0.461	0.376	0.409	0.365	0.376
Sulphur	0.5												20.1	20.3
Thallium	1E-005 to 0.001		<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025		<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002													
Uranium	1E-005 to 0.001		0.00126	0.000938	0.0013	0.00135	0.00128	0.00127	0.00114	0.00133	0.00118	0.0011	0.00115	0.00125
Vanadium	0.001 to 0.03		0.0018	0.0016	0.002	0.0022	0.0018	0.0019	0.0019	0.0019	0.002	0.0019	0.0021	0.0024
Zinc	0.003 to 0.006		<0.005	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics														
Carbon Organic (Dissolved)	0.5 to 5		15.9	14.5	14.1	15.8	15.8	16	15.3	15	14.6	14.8	12.3	13.7
Carbon Organic (Total)	0.5 to 5		15.9	15.6	14.3	18	15.7	16.1	15.4	15	15	14.9	12.4	14.2
Nitrogen Organic (Dissolved)	0.05 to 0.26		0.86	2.47	0.64	0.92	0.92	0.835	0.74	0.74	0.95	0.99	0.623	
Nitrogen Organic (Total)	0.05 to 0.3		0.91	2.41	0.791	1.03	0.837	0.62	0.859	0.844	0.888	0.81	0.86	0.875
ALS LAB ID			**L1066047**	**L1081228**	**L1103104**	**L1114029**	**L1122039**	**L1140194**	**L1143149**	**L1177597**	**L1191600**	**L1206738**	**l1234688**	**L1256679**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID			JACL-D	JACL-D	JACL-D	JACL-D	JACL-D	JACL-D	JACL-D	JACL-D	JACL-D	JACL-D	JACL-D	JACL-D
Analytes	**MDL**		**7-Feb-13**	**8-May-13**	**4-Sep-13**	**7-Nov-13**	**9-Jan-14**	**28-Apr-14**	**13-May-14**	**26-May-14**	**10-Jun-14**	**27-Jun-14**	**8-Jul-14**	**22-Jul-14**
In Situ Parameters														
Conductivity µS/cm	...		427	739		446	429	426	542	542	558	588	447	600
Oxygen Dissolved %	...		20.1	39.7	2.4	45.8	19.1	12.4	69.2	69.2			2.1	86.6
Oxygen Dissolved	...		2.72	5.08	0.31	5.82	2.55	13.2	7.15	7.15			0.27	7.78
pH (unitless)	...		7.8	7.87	7.44	8.08	7.68	8.55	8.55	8.55	8.8	8.84	7.74	8.66
Redox Potential mV	...		212	229	-41.3	136	154	102	112	112	-21.3	-37.4	21.4	-23.3
Salinity ppt	...		0.36	0.36	0.37	0.35	0.36	0.3	0.34	0.34	0.31	0.32	0.35	0.32
Specific Conductivity µS/cm	...		747	739	762	721	733	624	690	690	644	656	714	657
Temperature °C	...		2.57	4.86	5.03	5.04	3.25	8.37	13.8	13.8	18	19.6	5.41	20.5
Total Dissolved Solids	...		485	474	495	468	477	405	449	449	418	426	464	427
Turbidity NTU	...		0.4	0		0.9	1.4	2.1	-0.4		2.9	11.7		1.2
Physical Tests														
Acidity to pH 8.3 (as CaCO3)	1													
Alkalinity (Total as CaCO3)	1 to 2		252	259	252	251	246	244	244	219	244	236	249	252
Bicarbonate Alkalinity	1 to 2		252	252	252	251	246	244	244	219	244	214	249	252
Carbonate Alkalinity	1 to 2		<1	6.6	<2	<2	<2	<2	<2	<1	<1	22.6	<1	<2
Color TCU	5		15	13.1	15.2		16.3							
Hardness as CaCO3 (Dissolved)	0.5 to 1.1		297	300	308	298	321	294	299	291	296	281	300	308
Hydroxide Alkalinity	1 to 2		<1	<1	<2	<2	<2	<2	<2	<1	<1	<1	<1	<2
pH (unitless)	0.01 to 0.1		8.33	8.35	8.08	8.19	8.15	8.21	8.15	8.21	8.18	8.64	8.1	8.15
Specific Conductivity µS/cm	2		705	717	742	686	711	659	698	695	709	637	691	678
Total Dissolved Solids	1 to 2		419	439	448	430	445	427	362	370	424	399	436	399
Total Suspended Solids	3		<3	<3	<3	<3	<3	4.7	<3	<3	<3	6.8	<3	<3
Turbidity NTU	0.1		1.04	1.1	7.14	1.21	1.64	2.33	0.72	0.46	1.2	11	2.22	1.96
Dissolved Anions														
Bromide	0.05 to 2.495		<0.25	<0.25	<0.5	<0.25	<0.25	<0.25	<0.05	<0.05	<0.05	<0.25	<0.25	<0.25
Chloride	0.5 to 1		55.9	56.5	60.5	53.8	58.3	56	56	54.2	55.7	55.3	57.3	54.6
Fluoride	0.02 to 0.4		0.21	0.23	0.26	0.19	0.2	0.19	0.224	0.212	0.214	0.21	0.3	0.217
Sulphate	0.5 to 1		60	58.8	55.4	51.4	53.4	51.5	54.1	51.3	53.3	45.2	54	52
Nutrients														
Ammonia (Total)	0.005 to 0.05		0.472	0.0716	0.863	0.251	0.0207	0.0068	0.0438	0.0906	0.194	0.0112	0.241	0.161
Nitrate (as N)	0.005 to 0.1		0.115	0.357	<0.05	0.121	0.503	0.107	0.149	0.0535	0.011	<0.025	<0.025	0.05
Nitrite (as N)	0.001 to 0.02		0.0232	0.0363	<0.01	0.0312	<0.005	0.0056	0.0054	0.0027	0.004	<0.005	0.0078	0.0214
Nitrogen (Dissolved)	0.05 to 0.1		1.44		3.5									
Nitrogen (Total)	0.0025 to 0.11		1.41	1.36	1.67	1.14		1.05						
Nitrogen Kjeldahl (Total)	0.05 to 0.2		1.48	0.969	1.9	1.14	0.852	1.08	0.899	0.888	0.981	1.29	0.985	0.981
Orthophosphate (Dissolved)	0.001 to 0.01		0.096	0.0936	0.337	0.0938	0.113	0.0423	0.0781	0.0704	0.142	<0.001	0.155	0.114
Phosphorus - Dissolved	0.002 to 0.02		0.108	0.105	0.392	0.135	0.119	0.113	0.0969	0.088	0.183	0.0148	0.175	0.141
Phosphorus - Total	0.002 to 0.02		0.108	0.111		0.141	0.125	0.0558	0.113	0.0907	0.188	0.0368	0.18	0.145
Cyanide														
Cyanide (Free)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals														
Aluminum	0.001 to 0.025		0.0012	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0021	<0.001	<0.001
Antimony	0.0001 to 0.0025		0.00012	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025		0.00142	0.00133	0.00128	0.00133	0.00132	0.00126	0.00123	0.00126	0.00131	0.00126	0.00124	0.00126
Barium	5E-005 to 0.02		0.05	0.0547	0.0715	0.0625	0.0641	0.0649	0.0654	0.0643	0.0723	0.0539	0.0687	0.0702
Beryllium	0.0001 to 0.005		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1		0.024	0.02	0.021	0.02	0.025	0.023	0.022	0.022	0.023	0.02	0.024	0.023
Cadmium	1E-005 to 8.5E-005		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1		52.3	53.9	56.8	53.8	59.7	56.6	58.3	55.8	56.2	57.9	57	60
Chromium	0.0001 to 0.018		<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	0.0002 to 0.006		0.00159	0.0006	0.00023	0.00043	0.00046	0.00141	0.00126	0.00219	0.00149	0.00143	0.00075	0.00115
Dissolved Cadmium (by saltwater extraction)	0.00002													
Iron	0.01 to 0.03		0.01	<0.01	0.013	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	<0.01	<0.01
Lead	5E-005 to 0.0025		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000056	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025		0.00577	0.00579	0.00593	0.00498	0.0059	0.00576	0.00585	0.00525	0.00541	0.00466	0.00566	0.00556
Magnesium	0.1		40.4	40.1	40.4	39.7	41.8	37.1	37.2	36.7	37.9	33.2	38.2	38.3
Manganese	5E-005 to 0.0015		0.0278	0.0311	0.168	0.0198	0.00371	0.00146	0.00107	0.00116	0.0383	0.00329	0.0596	0.0383
Mercury	1E-005 to 5E-005		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005		0.00276	0.00227	0.0015	0.00207	0.00233	0.0021	0.00324	0.00233	0.00205	0.00236	0.00208	0.00204
Nickel	0.0005 to 0.005		0.00071	0.00067	0.0007	0.00062	0.00069	0.00072	0.00109	0.00079	0.0007	0.00069	0.00067	0.00094
Phosphorus	0.05 to 0.3		0.109	0.11	0.364	0.111	0.131	0.065	0.094	0.089	0.151	<0.05	0.154	0.127
Potassium	0.05 to 2		11.9	11.8	11.9	11.8	11.6	11	11.5	10.1	11	9.79	11.4	11.2
Selenium	0.0001 to 0.006		0.00015	0.00014	0.00043	0.00017	0.00013	0.00014	0.00017	0.00014	0.00012	0.00015	0.00012	0.00012
Silicon	0.05		4.04	4.28	5.76	5.78	6.49	5.34	5.85	4.85	6.43	5.76	6.18	6.04
Silver	1E-005 to 0.0001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2		39.2	37.4	37.5	32.9	36	37.3	33.5	34.6	34.8	31.7	33.6	35.3
Strontium	0.0001 to 0.005		0.374	0.373	0.398	0.332	0.391	0.374	0.385	0.364	0.385	0.354	0.385	0.385
Sulphur	0.5		20.5	20.9	29.9	17.1	18.8	17.4	17.4	17.5	17.9	14.5	18.7	18.1
Thallium	1E-005 to 0.001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001		0.00116	0.00114	0.000957	0.00105	0.00112	0.00103	0.00108	0.00102	0.000979	0.00106	0.00104	0.00101
Vanadium	0.001 to 0.03		0.0022	0.0019	0.0015	0.0023	0.0022	0.002	0.0019	0.002	0.0018	0.0026	0.0017	0.0018
Zinc	0.001 to 0.006		0.0029	0.0038	0.0012	<0.001	0.0016	0.0033	<0.001	0.0014	<0.001	<0.001	0.0012	0.0013
Total Metals														
Aluminum	0.003 to 0.025		0.008	0.0066	0.004	0.0081	0.0149	0.0081	0.0049	<0.003	0.0032	0.0089	0.0031	0.0058
Antimony	0.0001 to 0.0025		0.00012	0.00012	<0.0001	0.00011	0.0001	<0.0001	0.00011	0.00013	0.00011	0.0001	0.00013	0.00011
Arsenic	0.0001 to 0.0025		0.00143	0.00132	0.00126	0.00139	0.00127	0.00124	0.00128	0.00117	0.0013	0.00131	0.00123	0.00132
Barium	5E-005 to 0.02		0.0511	0.0553	0.0705	0.0605	0.0651	0.0661	0.0723	0.0645	0.068	0.0539	0.0693	0.0718
Beryllium	0.0001 to 0.005		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1		0.03	0.023	0.025	0.023	0.025	0.024	0.023	0.023	0.026	0.022	0.026	0.026
Cadmium	1E-005 to 8.5E-005		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1		52.9	53.9	57.6	55.2	58	56.1	56.9	56.1	54.1	56.3	57.8	59.4
Chromium	0.0001 to 0.005		0.00022	0.00027	0.00013	0.00012	0.00017	<0.0001	0.00013	<0.0001	<0.0001	0.00011	0.00013	0.0001
Cobalt	0.0001 to 0.0015		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	0.0005 to 0.007		0.00282	0.00068	0.00054	0.00073	0.00069	0.00155	0.00589	0.00166	0.00161	0.00179	0.00147	0.00245
Iron	0.01 to 0.03		0.024	0.017	0.019	0.017	0.023	0.019	0.013	<0.01	<0.01	0.021	<0.01	0.01
Lead	5E-005 to 0.0025		0.000588	0.000585	0.000081	<0.00005	<0.00005	0.00012	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025		0.00566	0.00594	0.00602	0.00513	0.00549	0.00576	0.00531	0.00433	0.0052	0.00449	0.00515	0.00548
Magnesium	0.1		39.7	40.5	39.3	38.7	39.2	36.6	36.9	35.9	36.5	32	38.7	38.1
Manganese	5E-005 to 0.0015		0.0342	0.0541	0.172	0.0333	0.00974	0.0165	0.0191	0.0048	0.046	0.00731	0.0638	0.0403
Mercury	1E-005 to 5E-005		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005		0.00293	0.00244	0.00179	0.00228	0.00245	0.00228	0.0033	0.0022	0.0021	0.00249	0.00211	0.00215
Nickel	0.0005 to 0.005		0.00082	0.00075	0.00077	0.00068	0.00076	0.00073	0.0012	0.00072	0.00072	0.00073	0.00073	0.00081
Phosphorus	0.05 to 0.3		0.11	0.122	0.37	0.116	0.139	0.105	0.096	0.082	0.152	<0.05	0.169	0.135
Potassium	0.05 to 2		12.3	11.8	12.2	12.6	11.4	11.1	11.4	10.1	10.8	9.66	11.5	11.2
Selenium	0.0001 to 0.006		0.00017	0.00014	0.00013	0.00021	0.00013	0.00014	0.00013	0.00012	0.00015	0.00016	0.00012	0.00014
Silicon	0.05		4.11	4.38	5.75	5.79	6.42	5.47	5.73	4.88	6.27	5.67	6.23	6.01
Silver	1E-005 to 0.0001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2		41	38.8	38.5	33.6	35.8	36.4	37.3	34	33.3	31.4	34.2	36.2
Strontium	0.0001 to 0.005		0.385	0.399	0.404	0.348	0.392	0.394	0.402	0.35	0.381	0.355	0.386	0.394
Sulphur	0.5		21.2	21.7	18.3	17.8	18.3	17.5	17.5	17.9	17.9	14.3	18.5	18.6
Thallium	1E-005 to 0.001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002													
Uranium	1E-005 to 0.001		0.00121	0.00117	0.00101	0.00113	0.0012	0.00112	0.00114	0.00118	0.00108	0.0011	0.00108	0.00109
Vanadium	0.001 to 0.03		0.0026	0.0021	0.0016	0.0025	0.0023	0.0022	0.0023	0.0021	0.002	0.0027	0.0019	0.0019
Zinc	0.003 to 0.006		<0.003	<0.003	<0.003	<0.003	<0.003	0.004	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics														
Carbon Organic (Dissolved)	0.5 to 5		13	14.4	13.6	13.1	14.5	13.6	13.1	12.4	12.8	13.8	14.1	14.7
Carbon Organic (Total)	0.5 to 5		13.3	13	14.3	13.3	14.9	14.7	13	13	13	14.3	14.1	15
Nitrogen Organic (Dissolved)	0.05 to 0.26		0.83		2.64									
Nitrogen Organic (Total)	0.05 to 0.3		1		1.04									
ALS LAB ID			**L1266846**	**L1299444**	**L1358222**	**L1389979**	**L1410216**	**L1448657**	**L1454705**	**L1461081**	**L1469099**	**L1478913**	**L1483419**	**L1490937**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID			JACL-D	JACL-D	JACL-D	JACL-D
Analytes		MDL	7-Aug-14	20-Aug-14	14/Sep/2014	30-Sep-14
In Situ Parameters						
Conductivity µS/cm		...	439	440	465	804
Oxygen Dissolved %	...		2.6	1.3	4.1	3.3
Oxygen Dissolved	...		0.28	0.16	0.51	0.42
pH (unitless)		...	7.62	7.76	7.35	7.16
Redox Potential mV		...	-88.9	-158	-276	-253
Salinity ppt		...	0.34	0.35	0.37	0.65
Specific Conductivity µS/cm		...	704	714	750	1302
Temperature °C		...	5.31	4.89	5.1	4.98
Total Dissolved Solids		...	457	464	487	846
Turbidity NTU		...	0.5	0.3	0.5	-10.9
Physical Tests						
Acidity to pH 8.3 (as CaCO3)		1				
Alkalinity (Total as CaCO3)		1 to 2	238	264	264	285
Bicarbonate Alkalinity		1 to 2	238	264	264	285
Carbonate Alkalinity		1 to 2	<2	<2	<1	<2
Color TCU		5				
Hardness as CaCO3 (Dissolved)		0.5 to 1.1	295	310	315	304
Hydroxide Alkalinity		1 to 2	<2	<2	<1	<2
pH (unitless)		0.01 to 0.1	8.23	8.03	8.32	8.21
Specific Conductivity µS/cm		2	699	720	717	718
Total Dissolved Solids		1 to 2	429	430	454	428
Total Suspended Solids		3	<3	<3	<3	<3
Turbidity NTU		0.1	0.76	3.12	3.49	1.82
Dissolved Anions						
Bromide		0.05 to 2.495	<0.05	<0.05	<0.25	<0.25
Chloride		0.5 to 1	55.2	55.6	56.9	56.6
Fluoride		0.02 to 0.4	0.213	0.227	0.207	0.206
Sulphate		0.5 to 1	52.7	52.2	51.7	46.2
Nutrients						
Ammonia (Total)		0.005 to 0.05	0.0344	0.917	0.768	0.906
Nitrate (as N)		0.005 to 0.1	0.245	<0.005	<0.025	<0.025
Nitrite (as N)		0.001 to 0.02	0.0128	0.005	0.0066	<0.005
Nitrogen (Dissolved)		0.05 to 0.1				
Nitrogen (Total)		0.0025 to 0.11				
Nitrogen Kjeldahl (Total)		0.05 to 0.2	0.925	1.88	1.59	1.68
Orthophosphate (Dissolved)		0.001 to 0.01	<0.001	0.302	0.299	0.304
Phosphorus - Dissolved		0.002 to 0.02	0.0106	0.351	0.352	0.356
Phosphorus - Total		0.002 to 0.02	0.0187	0.355	0.353	0.43
Cyanide						
Cyanide (Free)		0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)		0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)		0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals						
Aluminum		0.001 to 0.025	0.0011	<0.001	0.0011	0.0019
Antimony		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic		0.0001 to 0.0025	0.00122	0.00115	0.00123	0.00134
Barium		5E-005 to 0.02	0.0661	0.0751	0.0793	0.0778
Beryllium		0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	0.021	0.024	0.026	0.026
Cadmium		1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001
Calcium		0.05 to 0.1	57.8	59.7	61.3	58.1
Chromium		0.0001 to 0.018	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt		0.0001 to 0.0015	<0.0001	<0.0001	<0.0001	<0.0001
Copper		0.0002 to 0.006	0.00117	0.00037	0.00032	<0.0002
Dissolved Cadmium (by saltwater extraction)		0.00002				
Iron		0.01 to 0.03	<0.01	0.012	0.015	<0.01
Lead		5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005
Lithium		0.0005 to 0.025	0.00494	0.00568	0.00628	0.0057
Magnesium		0.1	36.5	39.1	39.3	38.5
Manganese		5E-005 to 0.0015	0.00182	0.112	0.111	0.0977
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.00202	0.00139	0.00143	0.00227
Nickel		0.0005 to 0.005	0.00064	0.00073	0.0007	0.00066
Phosphorus		0.05 to 0.3	<0.05	0.34	0.315	0.174
Potassium		0.05 to 2	12.2	12.7	12.1	11.2
Selenium		0.0001 to 0.006	0.00014	0.00043	0.00017	0.00139
Silicon		0.05	5.19	7.15	7.11	6.3
Silver		1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	34.8	35.5	36.4	36.8
Strontium		0.0001 to 0.005	0.343	0.384	0.397	0.416
Sulphur		0.5	17.7	64.8	70.1	38.9
Thallium		1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	<0.01
Uranium		1E-005 to 0.001	0.00103	0.000965	0.000961	0.00108
Vanadium		0.001 to 0.03	0.002	0.0018	0.0018	0.0017
Zinc		0.001 to 0.006	0.0039	<0.001	<0.001	0.0015
Total Metals						
Aluminum		0.003 to 0.025	0.005	0.0044	0.0038	0.0034
Antimony		0.0001 to 0.0025	0.00012	<0.0001	<0.0001	<0.0001
Arsenic		0.0001 to 0.0025	0.00127	0.00128	0.00129	0.00129
Barium		5E-005 to 0.02	0.0661	0.0749	0.077	0.0758
Beryllium		0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth		0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005
Boron		0.01 to 0.1	0.025	0.025	0.03	0.03
Cadmium		1E-005 to 8.5E-005	0.000012	<0.00001	<0.00001	<0.00001
Calcium		0.05 to 0.1	57.5	60.5	56.4	56
Chromium		0.0001 to 0.005	<0.0001	0.00014	<0.0003	0.0002
Cobalt		0.0001 to 0.0015	<0.0001	<0.0001	<0.0001	<0.0001
Copper		0.0005 to 0.007	0.00202	0.00116	0.00115	0.00153
Iron		0.01 to 0.03	0.01	0.021	0.023	0.02
Lead		5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005
Lithium		0.0005 to 0.025	0.0051	0.00551	0.00613	0.00518
Magnesium		0.1	36.7	39.8	38.1	37.2
Manganese		5E-005 to 0.0015	0.00447	0.12	0.11	0.111
Mercury		1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum		5E-005 to 0.005	0.00232	0.0017	0.00169	0.00329
Nickel		0.0005 to 0.005	0.00071	0.00085	0.00081	0.0008
Phosphorus		0.05 to 0.3	<0.05	0.356	0.305	0.338
Potassium		0.05 to 2	12.4	13	11.2	10.6
Selenium		0.0001 to 0.006	0.00015	0.00013	0.00012	<0.0001
Silicon		0.05	5.18	7.31	6.69	6.8
Silver		1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium		0.05 to 2	35.1	37.3	35.2	34.6
Strontium		0.0001 to 0.005	0.384	0.379	0.388	0.41
Sulphur		0.5	17.9	18	16.4	16.5
Thallium		1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001
Tin		0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001
Titanium		0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)		0.00002				
Uranium		1E-005 to 0.001	0.00116	0.000996	0.000999	0.00106
Vanadium		0.001 to 0.03	0.0021	0.002	0.0022	0.0017
Zinc		0.003 to 0.006	<0.003	<0.003	<0.003	<0.003
Organics						
Carbon Organic (Dissolved)		0.5 to 5	13.2	14.6	14.3	13.4
Carbon Organic (Total)		0.5 to 5	13.2	15.1	14.8	14.6
Nitrogen Organic (Dissolved)		0.05 to 0.26				
Nitrogen Organic (Total)		0.05 to 0.3				
ALS LAB ID			**L1499202**	**L1506521**	**L1518246**	**L1526071**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C3.21 - JACL-S
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Site ID		JACL-S	JACL-S	JACL-S	JACL-S	JACL-S	JACL-S	JACL-S	JACL-S	JACL-S	JACL-S	JACL-S	JACL-S
Analytes	**MDL**	**3-May-07**	**19-Jul-07**	**20-Sep-07**	**29-Apr-08**	**10-Jul-08**	**7-Sep-08**	**2-Jun-10**	**1-Sep-10**	**28-Mar-11**	**1-Jun-11**	**29-Jun-11**	**28-Jul-11**
In Situ Parameters													
Conductivity µS/cm	...	518	692	608	490	612	264	563	662	420	531	547	586
Oxygen Dissolved %	...				94.2	92	106	94.2	8.36	74.9	96.9		
Oxygen Dissolved	...	14.7	9.67	8.2	11.9	8.43	10.5	9.78	8.36	9.78	9.46		
pH (unitless)	...	8.73	8.62	8.87	8.21	8.29	8.39	8.66	8.66	8.03	8.15	8.82	8.6
Redox Potential mV	...					-116				115	27.5	136	155
Salinity ppt	...										0.31	0.32	0.32
Specific Conductivity µS/cm	...	749	745	762	778	684	275	720	771	694	637	647	657
Temperature °C	...	8.81	21.3	14.5	5.61	19.5	15.7	13.6	14.9	4.37	16.3	16.9	19.4
Total Dissolved Solids	...									452	414	421	427
Turbidity NTU	...											20.4	8
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1		<1		<1								<1
Alkalinity (Total as CaCO3)	1 to 2	246	229	231	252	218	230		222	113	230	206	222
Bicarbonate Alkalinity	1 to 2				252		218						
Carbonate Alkalinity	1 to 2				<2		12.7						
Color TCU	5		13.9	12.7	12.4	19.4	16.3	22.8	20.4	11.9	20.4	24.5	21.1
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	322	323	309	335	273	291	308	302	165	283	267	268
Hydroxide Alkalinity	1 to 2				<2		<1						
pH (unitless)	0.01 to 0.1	8.55	8.58	8.36	8.1	8.44	8.35	8.69	8.47	8.06	8.5	8.53	8.68
Specific Conductivity µS/cm	2	725	732	736	777	678	717	681	698	367	670	582	627
Total Dissolved Solids	1 to 2	450	453	461	465	416	431	420	455	213	418	362	398
Total Suspended Solids	3	<3	5.6	<3	5.8	4.3	<3	<3	<3	<3	7.2	11.3	6.1
Turbidity NTU	0.1				2.31	8.57	1.09	0.75	1.02	4.08	1.83	15.9	7.32
Dissolved Anions													
Bromide	0.05 to 2.495	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.19	<0.05	<0.05	<0.05
Chloride	0.5 to 1	60.3	59.6	61.6	60.5	53.4	59.1	54		25.2	52.6	47.8	48.9
Fluoride	0.02 to 0.4	0.19		0.2	0.174	0.174	0.199	0.161		0.088	0.169	0.216	0.209
Sulphate	0.5 to 1	84.5	81.7	83.9	83.5	66.2	74.6	70.2		37	57.4	50.3	50.1
Nutrients													
Ammonia (Total)	0.005 to 0.05	0.028	0.035	0.055	<0.02	0.037	0.098	0.044	0.0425	0.0078	0.0288	0.0291	0.0327
Nitrate (as N)	0.005 to 0.1	<0.005	<0.005	0.0118	<0.005	<0.005	0.0293	<0.005		0.0253	<0.005	<0.005	<0.005
Nitrite (as N)	0.001 to 0.02	<0.001	<0.001	0.0034	<0.001	<0.001	0.0136	<0.001		<0.001	<0.001	<0.001	0.001
Nitrogen (Dissolved)	0.05 to 0.1										0.88	1.07	1.12
Nitrogen (Total)	0.0025 to 0.11							0.909	1.34	0.716	0.99	1.99	1.35
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.895	1.1	0.943	1.62	1.38	1.26	0.909	1.34	0.691	0.99	1.99	1.35
Orthophosphate (Dissolved)	0.001 to 0.01	<0.001	<0.001	0.0016	0.0074	<0.001	0.0021		<0.001	0.0125	0.0013	<0.001	<0.001
Phosphorus - Dissolved	0.002 to 0.02								0.036		0.017	0.0131	0.0123
Phosphorus - Total	0.002 to 0.02	0.0343	0.0279	0.0203	0.124	0.0307	0.0227	0.0253	0.0167	0.0498	0.0365	0.0375	0.0274
Cyanide													
Cyanide (Free)	0.005				<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	0.0062	0.0056	0.0099	<0.005	0.0082		0.0083	0.0106	0.0061	<0.005	0.0103	0.0077
Cyanide (WAD)	0.005				<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	0.001 to 0.025	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Antimony	0.0001 to 0.0025	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic	0.0001 to 0.0025	0.0012	0.00141	0.00131	0.00118	0.00138	0.00168	0.00136	0.00147	0.00081	0.00125	0.00132	0.00123
Barium	5E-005 to 0.02	0.057	0.056	0.057	0.058	0.051	0.06	0.027	0.05	0.031	0.055	0.054	0.056
Beryllium	0.0001 to 0.005	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth	0.0005 to 0.2									<0.2	<0.2	<0.2	<0.2
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	1E-005 to 8.5E-005	<0.000034	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
Calcium	0.05 to 0.1	58.8	54	50.8	57.3	45.1	48.6	52.6	49.2	28.9	54.1	51.7	50.9
Chromium	0.0001 to 0.018	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.0015	<0.001	<0.0015	<0.001
Cobalt	0.0001 to 0.0015	<0.0006	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Copper	0.0002 to 0.006	<0.002	<0.001	<0.001	<0.001	0.0013	0.0016	0.0013	0.0011	0.0014	0.0012	0.0013	<0.001
Dissolved Cadmium (by saltwater extraction)	0.00002												
Iron	0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Lead	5E-005 to 0.0025	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Lithium	0.0005 to 0.025	<0.01	0.0068	0.0069	0.0063	<0.007	0.0066	0.0056	0.006	<0.005	0.0053	<0.005	0.0053
Magnesium	0.1	42.6	45.7	44.3	46.7	38.9	41.2	42.9	43.6	22.6	36	33.5	34.1
Manganese	5E-005 to 0.0015	0.00088	0.001	0.00129	0.00111	0.00446	0.00216	0.00261	0.00122	0.016	0.00551	0.00396	0.00264
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	<0.004	0.0029	0.0031	0.0025	0.0027	0.003	0.003	0.003	0.0035	0.0024	0.0023	0.002
Nickel	0.0005 to 0.005	<0.002	<0.001	<0.001	<0.001	<0.001	0.0015	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Phosphorus	0.05 to 0.3									<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	11.8	12.4	12.4	12.1	11.8	13.3	13.5	13.2	7.3	10.6	10	10.5
Selenium	0.0001 to 0.006	<0.002	<0.001	<0.001	<0.001	<0.001	0.0011	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon	0.05									1.11	2.44	3.58	3.87
Silver	1E-005 to 0.0001	<0.00004	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	0.05 to 2	39	41.9	44.2	40.7	36.5	37.3	39.3	41	21.4	35.6	33.1	33.5
Strontium	0.0001 to 0.005									0.232	0.365	0.345	0.345
Sulphur	0.5												
Thallium	1E-005 to 0.001	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin	0.0001 to 0.0025	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00129	0.0012	0.00117	0.00116	0.00111	0.00118	0.00141	0.00133	0.00058	0.00112	0.001	0.00094
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.03	0.0016	0.0019	0.0023	0.0028	0.0026	0.0011	0.0026	0.0021	0.0021
Zinc	0.001 to 0.006	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0386	<0.005	<0.005
Total Metals													
Aluminum	0.003 to 0.025	<0.01	0.0051	0.0079	<0.005	0.0105	0.0065	<0.005	0.007	0.0709	0.0074	0.007	0.0101
Antimony	0.0001 to 0.0025	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic	0.0001 to 0.0025	0.0012	0.00143	0.00128	0.00116	0.00144	0.00177	0.00142	0.00159	0.00079	0.00114	0.00115	0.00114
Barium	5E-005 to 0.02	0.058	0.056	0.058	0.06	0.051	0.059	0.026	0.048	0.033	0.057	0.056	0.059
Beryllium	0.0001 to 0.005	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth	0.0005 to 0.2									<0.2	<0.2	<0.2	<0.2
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	1E-005 to 8.5E-005	<0.000034	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	0.00002	<0.000017	<0.000017	<0.000017
Calcium	0.05 to 0.1	59.3	54.9	50.3	57.8	44.2	48.4	51.4	49.5	28.9	55.5	52.7	51.9
Chromium	0.0001 to 0.005	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	0.0001 to 0.0015	<0.0006	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Copper	0.0005 to 0.007	<0.002	0.0011	0.0011	<0.001	0.0014	0.001	0.0015	0.0012	0.0023	0.0014	0.0015	0.001
Iron	0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.096	<0.03	<0.03	<0.03
Lead	5E-005 to 0.0025	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Lithium	0.0005 to 0.025	<0.01	0.0069	0.0075	0.0062	<0.008	0.0069	0.0064	0.0062	<0.005	0.006	<0.005	0.0056
Magnesium	0.1	43	45.8	44	46.9	37.9	40.9	41.4	43.7	22.6	36.7	32.9	34.6
Manganese	5E-005 to 0.0015	0.00622	0.0029	0.0027	0.0101	0.0102	0.00411	0.00341	0.003	0.0253	0.00666	0.0068	0.00463
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	<0.004	0.0028	0.0029	0.0023	0.0029	0.0031	0.0035	0.0035	0.004	0.0027	0.0024	0.0022
Nickel	0.0005 to 0.005	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	0.0012	<0.001	0.0011	<0.001	<0.001	<0.001
Phosphorus	0.05 to 0.3									<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	12	12.3	12.5	12.3	11.5	13.2	12.7	12.9	7.3	10.9	9.9	11.1
Selenium	0.0001 to 0.006	<0.002	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon	0.05									1.28	2.52	3.51	3.96
Silver	1E-005 to 0.0001	<0.00004	<0.00002	0.000033	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	0.05 to 2	39.1	41	44.5	41.5	35.4	38.4	37.2	40	21.5	36.7	32.7	35.1
Strontium	0.0001 to 0.005									0.235	0.378	0.349	0.361
Sulphur	0.5												
Thallium	1E-005 to 0.001	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin	0.0001 to 0.0025	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002												
Uranium	1E-005 to 0.001	0.00121	0.00099	0.00107	0.00079	0.00131	0.00113	0.00159	0.00152	0.00067	0.00132	0.00109	0.00116
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.03	0.0015	0.0021	0.0023	0.003	0.0028	0.0015	0.0029	0.0022	0.0025
Zinc	0.003 to 0.006	<0.01	<0.005	<0.005	<0.005	0.032	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.01
Organics													
Carbon Organic (Dissolved)	0.5 to 5	14.5	15.1	15.3	14.4	16.7	15	13.6	14.6	9.13	13.9	15.3	16
Carbon Organic (Total)	0.5 to 5										14.2	17.5	17.7
Nitrogen Organic (Dissolved)	0.05 to 0.26										0.851	1.04	1.09
Nitrogen Organic (Total)	0.05 to 0.3										0.961	1.96	1.32
ALS LAB ID		**L502198**	**L532652**	**L557583**	**L624228**	**L654416**	**L679955**	**L893847**	**L927896**	**L990458**	**L1012627**	**L1025917**	**L1038168**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		JACL-S	JACL-S	JACL-S	JACL-S	JACL-S	JACL-S	JACL-S	JACL-S	JACL-S	JACL-S	JACL-S	JACL-S
Analytes	**MDL**	**31-Aug-11**	**28-Sep-11**	**26-Oct-11**	**10-Jan-12**	**13-Feb-12**	**7-Mar-12**	**26-Apr-12**	**3-May-12**	**11-Jul-12**	**8-Aug-12**	**6-Sep-12**	**6-Nov-12**
In Situ Parameters													
Conductivity µS/cm	...	547		486	113	403	337	502	496	278	600	555	440
Oxygen Dissolved %	...	82.9	86.6	67.5	52.1	67.9	63.3	97.5	85.9	72.4	97.3	87.9	70.1
Oxygen Dissolved	...	8.34	9.1	8.32	7.57	9.8	8.94	10.8	9.66	6.82	8.38	8.5	8.6
pH (unitless)	...	8.23	8.27	8.31	7.59	7.91	7.89	8.13	8.45	9.21	8.62	8.48	8.14
Redox Potential mV	...	136	105	12.7	232	226	51.2	142	115	33.6	130		134
Salinity ppt	...	0.33			0.12	0.37	0.3	0.34	0.34		0.3		0.34
Specific Conductivity µS/cm	...		748	756	211	760	620	690	694	263	628	657	687
Temperature °C	...	15.2	13	6.12	0.51	0.38	1.38	10.7	10.1	17.9	22.7	16.8	6.44
Total Dissolved Solids	...	437		493	165	494	402	449	451		408	427	447
Turbidity NTU	...	1.5			0.2	0.2	2	0.8	0.6	17.9	1.5	0.7	0.9
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1		<1										<1
Alkalinity (Total as CaCO3)	1 to 2	227	227	247	191	250	184	244	237	229	228	236	239
Bicarbonate Alkalinity	1 to 2		221		191	250	184	244	237	205	211	225	239
Carbonate Alkalinity	1 to 2		6.4		<2	<2	<2	<1	<2	23.8	16.7	10.9	<1
Color TCU	5	19.3	17.2	17	11.4	15.3	15.9	15.8	17.1	16.8	16.9	14.4	14.8
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	273	280	301	230	309	242	300	306	282	266	282	296
Hydroxide Alkalinity	1 to 2		<1		<2	<2	<2	<1	<2	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1	8.42	8.35	8.35	8.22	8.17	8.19	8.5	8.12	8.61	8.58	8.41	8.37
Specific Conductivity µS/cm	2	659	693	722	555	721	556	681	677	623	619	634	695
Total Dissolved Solids	1 to 2	394	404	426	325	454	335	413	433	423	409	402	416
Total Suspended Solids	3	<3	<3	10	<3	<3	<3	<3	<3	<3	<3	<3	<3
Turbidity NTU	0.1	1.33		6.66	0.7	1.04	10.5	0.87	0.71	0.84	1.45	0.77	0.73
Dissolved Anions													
Bromide	0.05 to 2.495	<0.25	<0.05	<0.25	<0.05	<0.25	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25
Chloride	0.5 to 1	50	53.7	56.3	43.6	58.1	43.5	54.5	54.4	49	49.4	51.7	56.1
Fluoride	0.02 to 0.4	0.18	0.222	0.2	0.176	0.2	0.176	0.216	0.208	0.201	0.209	0.208	0.19
Sulphate	0.5 to 1	49.9	57.9	62.8	49.2	65.9	50.6	62.3	61.7	51.6	54.8	54.3	59
Nutrients													
Ammonia (Total)	0.005 to 0.05	0.121	0.0827	0.206	0.2	<0.05	0.0108	0.0334	0.0655	0.012	0.0183	0.0591	0.247
Nitrate (as N)	0.005 to 0.1	0.035	0.0633	0.121	0.2	0.546	0.265	0.0382	0.0326	<0.005	<0.005	0.0056	0.037
Nitrite (as N)	0.001 to 0.02	0.0175	0.0243	0.0235	0.0058	<0.005	0.0028	0.0026	0.0027	<0.001	<0.001	0.003	0.0105
Nitrogen (Dissolved)	0.05 to 0.1	1.4	1.03	0.82	0.82	1.48	0.99	0.89	0.78	0.58	0.88	0.97	0.88
Nitrogen (Total)	0.0025 to 0.11	1.46	1.06		0.976	1.44	1.11	0.767	0.876	0.831	0.85	0.866	1.12
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.94	0.972	1.33	0.771	0.9	0.844	0.726	0.841	0.831	0.85	0.857	1.07
Orthophosphate (Dissolved)	0.001 to 0.01	<0.001	0.0017	0.0197	0.0355	0.0641	0.0391	0.0038	0.0079	<0.001	<0.001	<0.001	0.0465
Phosphorus - Dissolved	0.002 to 0.02	0.0122	0.013	0.0324	0.0489	0.0839	0.0595	0.0227	0.026	0.014	0.0113	0.0106	0.0565
Phosphorus - Total	0.002 to 0.02	0.0236	0.0232	0.0513	0.0521	0.0925	0.0887	0.0449	0.034	0.021	0.0172	0.0153	0.0644
Cyanide													
Cyanide (Free)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005		0.0069	0.0061	0.0054	0.0054	0.0061	<0.005	0.0061	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	0.001 to 0.025	<0.005	<0.005	<0.003	<0.003	<0.003	<0.003	<0.003	0.0034	0.0012	0.0011	0.0013	0.0016
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	0.00011	<0.0001	0.00011	<0.0001	<0.0001	0.0001	0.00011	0.0001	0.00013	0.00012
Arsenic	0.0001 to 0.0025	0.00133	0.00131	0.00132	0.00098	0.00131	0.00102	0.00122	0.00114	0.0012	0.0013	0.00134	0.00134
Barium	5E-005 to 0.02	0.063	0.066	0.0646	0.0493	0.0712	0.0519	0.0602	0.0595	0.0443	0.0462	0.0456	0.0454
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	0.02	0.018	0.02	0.019	0.018	0.021	0.017	0.02	0.021	0.019
Cadmium	1E-005 to 8.5E-005	<0.000017	<0.000017	<0.00001	<0.00001	0.000034	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	50.3	50.8	53.9	40.8	54.8	42.6	52.8	55.8	55.6	47.8	52.9	52.2
Chromium	0.0001 to 0.018	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015	<0.0003	<0.0003	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	0.0002 to 0.006	<0.001	<0.001	0.00067	<0.0005	0.00055	0.0009	<0.0005	0.00071	0.00072	0.00069	0.00072	0.00046
Dissolved Cadmium (by saltwater extraction)	0.00002												
Iron	0.01 to 0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.01	<0.01	<0.01	<0.01
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.0059	0.0059	0.00539	0.00469	0.00602	0.00457	0.00565	0.00582	0.00568	0.00537	0.00542	0.00566
Magnesium	0.1	35.8	37.3	40.4	31	41.8	32.8	40.8	40.5	34.9	35.7	36.3	40.2
Manganese	5E-005 to 0.0015	0.001	0.00725	0.0186	0.0167	0.0138	0.0141	0.00179	0.00361	0.00213	0.000889	0.0017	0.0273
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0025	0.0025	0.00263	0.00175	0.00233	0.00212	0.00219	0.00235	0.00232	0.00195	0.00229	0.00195
Nickel	0.0005 to 0.005	<0.001	<0.001	0.0007	0.00054	0.00073	0.00064	0.00062	0.00068	0.00074	0.00063	0.0006	0.00068
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.059
Potassium	0.05 to 2	10.7	11.4	11.5	10.4	12.6	9.75	11.4	11.3	10.4	10	11	12.2
Selenium	0.0001 to 0.006	<0.001	<0.001	0.00013	0.0001	0.00012	0.00011	0.00011	0.00016	0.00013	0.00014	0.00014	0.00012
Silicon	0.05	3.93	3.45	3.08	2.35	3.4	2.61	1.87	2.16	0.929	1.4	2.11	3.23
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	34.2	36	36.3	31.6	37.1	29.7	35.8	35.8	32.8	32.8	34.9	37
Strontium	0.0001 to 0.005	0.351	0.37	0.358	0.306	0.395	0.291	0.355	0.379	0.375	0.313	0.339	0.35
Sulphur	0.5												0.0197
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00101	0.00116	0.00117	0.000862	0.00114	0.000913	0.0011	0.00119	0.00108	0.000988	0.000966	0.00106
Vanadium	0.001 to 0.03	0.0023	0.0024	0.0023	0.0015	0.002	0.0016	0.002	0.0021	0.0019	0.0018	0.0021	0.0019
Zinc	0.001 to 0.006	<0.005	0.0103	<0.003	0.164	0.0497	0.015	0.0039	0.007	0.0046	0.0013	0.0122	0.0018
Total Metals													
Aluminum	0.003 to 0.025	0.0111	0.0081	0.191	0.004	0.0126	0.0816	0.0069	0.0086	0.0059	0.0062	0.0081	0.0068
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	0.00011	<0.0001	0.00012	0.0001	<0.0001	0.00011	0.00011	0.00012	0.00026	0.00011
Arsenic	0.0001 to 0.0025	0.00132	0.00122	0.00133	0.00096	0.0013	0.00106	0.00118	0.00123	0.00122	0.00131	0.00128	0.00131
Barium	5E-005 to 0.02	0.061	0.062	0.0672	0.0473	0.0702	0.0528	0.0606	0.06	0.0443	0.0474	0.0454	0.0463
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	0.025	0.022	0.026	0.025	0.021	0.022	0.023	0.024	0.026	0.02
Cadmium	1E-005 to 8.5E-005	<0.000017	<0.000017	<0.00001	<0.00001	0.000043	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	48.7	49.1	55.4	39.8	52	42.2	53	55.2	54.4	47.3	52.6	51.8
Chromium	0.0001 to 0.005	<0.001	<0.001	0.00049	0.00017	0.0003	0.00039	<0.0001	0.00011	0.00023	0.00015	0.00027	<0.0001
Cobalt	0.0001 to 0.0015	<0.0003	<0.0003	0.0002	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	0.0005 to 0.007	<0.001	0.0011	0.00181	<0.0005	0.00086	0.00154	0.00062	0.00115	0.00118	0.0014	0.00106	0.00052
Iron	0.01 to 0.03	<0.03	<0.03	0.244	<0.03	0.036	0.075	<0.03	<0.03	0.012	0.01	0.011	0.017
Lead	5E-005 to 0.0025	<0.0005	<0.0005	0.000053	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.0054	0.0055	0.00595	0.00423	0.00588	0.00484	0.00543	0.00537	0.00505	0.00546	0.00538	0.00543
Magnesium	0.1	35.7	35.7	41	30.4	41.2	32.9	41.6	40.7	34.5	35.9	36.1	39.8
Manganese	5E-005 to 0.0015	0.00359	0.0101	0.0235	0.0173	0.0172	0.0184	0.00356	0.00503	0.00452	0.00334	0.00374	0.0306
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0026	0.0026	0.00278	0.00199	0.00238	0.00235	0.00246	0.00248	0.00228	0.0022	0.00238	0.00212
Nickel	0.0005 to 0.005	<0.001	<0.001	0.00108	0.00057	0.00085	0.00084	0.0007	0.00078	0.00086	0.00069	0.00068	0.00068
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.062
Potassium	0.05 to 2	10.7	10.9	11.6	10.1	12.7	10	11.5	11.4	10.3	10.3	10.9	12
Selenium	0.0001 to 0.006	<0.001	<0.001	0.00014	<0.0001	0.00013	0.00013	0.00012	0.00016	0.00019	0.00013	0.00016	0.00014
Silicon	0.05	3.85	3.31	3.68	2.3	3.33	2.72	1.94	2.17	0.938	1.41	2.14	3.24
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	34.2	35.5	37	31.2	37.2	30.2	36.6	36.1	32	32.8	34.6	36.7
Strontium	0.0001 to 0.005	0.352	0.359	0.366	0.312	0.391	0.303	0.373	0.383	0.345	0.34	0.339	0.36
Sulphur	0.5												19.8
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	0.017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002												
Uranium	1E-005 to 0.001	0.00108	0.00117	0.00127	0.000932	0.0012	0.001	0.00127	0.00127	0.0011	0.00108	0.0011	0.00114
Vanadium	0.001 to 0.03	0.0023	0.0023	0.0028	0.0015	0.002	0.0018	0.002	0.0022	0.0023	0.0021	0.0022	0.002
Zinc	0.003 to 0.006	<0.005	<0.005	0.0037	0.0295	0.059	0.0261	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics													
Carbon Organic (Dissolved)	0.5 to 5	16.8	14.7	15.2	10.4	15.6	13.2	15	14.3	13.8	13.8	14.7	11.6
Carbon Organic (Total)	0.5 to 5	16.9	15.3	15.2	10.7	15.8	13.7	14.8	14.4	14.2	14	14.4	12.3
Nitrogen Organic (Dissolved)	0.05 to 0.26	1.23	0.86	0.47	0.41	0.92	0.711	0.816	0.679	0.568	0.862	0.902	0.59
Nitrogen Organic (Total)	0.05 to 0.3	1.29	0.89	0.5	0.571	0.9	0.834	0.693	0.775	0.819	0.832	0.798	0.822
ALS LAB ID		**L1052924**	**L1066047**	**L1077732**	**L1103104**	**L1114029**	**L1122039**	**L1140194**	**L1143149**	**L1177597**	**L1191600**	**L1206738**	**l1234688**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		JACL-S	JACL-S	JACL-S	JACL-S	JACL-S	JACL-S	JACL-S	JACL-S	JACL-S	JACL-S	JACL-S	JACL-S
Analytes	**MDL**	**9-Jan-13**	**7-Feb-13**	**8-May-13**	**4-Sep-13**	**7-Nov-13**	**9-Jan-14**	**28-Apr-14**	**13-May-14**	**26-May-14**	**10-Jun-14**	**27-Jun-14**	**8-Jul-14**
In Situ Parameters													
Conductivity µS/cm	...	407	410	563		454	406	426	542	542	558	588	641
Oxygen Dissolved %	...	63.8	56.9	109	85.9	51	42.7	12.4	69.2	69.2			95.1
Oxygen Dissolved	...	8.71	8.05	11	8.16	4.63	5.95	13.2	7.15	7.15			8.17
pH (unitless)	...	8.46	7.76	7.77	8.14	8.26	7.91	8.55	8.55	8.55	8.8	8.84	8.65
Redox Potential mV	...	91.7	223	277	223	149	149	102	112	112	-21.3	-37.4	18.4
Salinity ppt	...	0.35	0.36	0.34	0.34	0.36	0.36	0.3	0.34	0.34	0.31	0.32	0.32
Specific Conductivity µS/cm	...	725	756	696	687	731	726	624	690	690	644	656	667
Temperature °C	...	2.28	1.02	15.1	17.7	5.13	1.97	8.37	13.8	13.8	18	19.6	23
Total Dissolved Solids	...	469	491	452	446	475	480	405	449	449	418	426	434
Turbidity NTU	...	0.3	-1.1	0		1	0.1	2.1	-0.4	-0.4	2.9	11.7	1.1
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1												
Alkalinity (Total as CaCO3)	1 to 2	250	253	246	235	251	253	230	230	220	234	236	237
Bicarbonate Alkalinity	1 to 2	250	253	235	235	251	253	221	218	212	207	213	219
Carbonate Alkalinity	1 to 2	<2	<1	11.2	<1	<2	<2	8.5	12	8.3	27.4	23.1	17.5
Color TCU	5	14.5	14.4	16.1	18.5		15.8						
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	300	301	287	265	299	314	287	289	284	283	282	292
Hydroxide Alkalinity	1 to 2	<2	<1	<1	<1	<2	<2	<1	<1	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1	8.25	8.35	8.38	8.41	8.26	8.18	8.44	8.63	8.39	8.71	8.64	8.58
Specific Conductivity µS/cm	2	687	717	679	643	689	718	645	663	652	651	636	645
Total Dissolved Solids	1 to 2	414	427	431	394	413	449	344	350	387	402	398	407
Total Suspended Solids	3	<3	<3	<3	<3	<3	<3	3	<3	4.4	3.2	7.9	<3
Turbidity NTU	0.1	0.3	0.31	0.59	1.86	0.84	0.31	1.17	0.54	2.56	1.46	13.3	1.62
Dissolved Anions													
Bromide	0.05 to 2.495	<0.25	<0.5	<0.05	<0.05	<0.25	<0.25	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05
Chloride	0.5 to 1	56.5	58.1	55.3	51	54.6	59	53.8	54.5	51.7	52.1	52.7	52.9
Fluoride	0.02 to 0.4	0.3	0.21	0.211	0.221	0.2	0.2	0.201	0.217	0.217	0.211	0.199	0.222
Sulphate	0.5 to 1	60.1	61.8	54.8	44.2	52.1	55.1	51.9	50.4	45.9	45.6	43.8	44.8
Nutrients													
Ammonia (Total)	0.005 to 0.05	0.361	0.306	0.0553	0.0631	0.252	<0.005	0.0064	0.0591	0.0143	0.0181	0.0106	0.0478
Nitrate (as N)	0.005 to 0.1	0.07	0.172	0.0381	0.0576	0.129	0.48	<0.005	<0.005	<0.005	<0.005	<0.025	0.0178
Nitrite (as N)	0.001 to 0.02	0.0064	0.018	0.0036	0.0133	0.0313	<0.005	<0.001	<0.001	<0.001	<0.001	<0.005	0.0064
Nitrogen (Dissolved)	0.05 to 0.1	1.28	1.27		2.1								
Nitrogen (Total)	0.0025 to 0.11	1.33	1.27	0.909	1.1	1.17		0.831					
Nitrogen Kjeldahl (Total)	0.05 to 0.2	1.22	1.19	0.868	1.03	1.12	0.852	0.955	0.93	1.01	0.983	1.32	0.861
Orthophosphate (Dissolved)	0.001 to 0.01	0.0718	0.0737	0.0125	0.0013	0.0958	0.0981	0.0132	0.0122	<0.001	<0.001	<0.001	<0.001
Phosphorus - Dissolved	0.002 to 0.02	0.092	0.086	0.0291	0.0279	0.135	0.115	0.0542	0.0293	0.0139	0.0146	0.0149	0.0155
Phosphorus - Total	0.002 to 0.02	0.093	0.0902	0.0411		0.14	0.116	0.0329	0.0353	0.0379	0.0294	0.033	0.0232
Cyanide													
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	0.001 to 0.025	<0.001	<0.001	0.0015	<0.001	0.0013	<0.001	<0.001	0.0011	0.0011	0.0014	0.0093	<0.001
Antimony	0.0001 to 0.0025	<0.0001	0.00011	<0.0001	0.00011	<0.0001	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	0.00011
Arsenic	0.0001 to 0.0025	0.00138	0.00144	0.00124	0.00139	0.00136	0.0014	0.00118	0.0012	0.00121	0.00128	0.00121	0.00131
Barium	5E-005 to 0.02	0.0477	0.0487	0.0488	0.0714	0.0636	0.0642	0.0619	0.0595	0.0545	0.0515	0.0547	0.0566
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.019	0.025	0.018	0.023	0.021	0.023	0.021	0.019	0.019	0.02	0.02	0.021
Cadmium	1E-005 to 8.5E-005	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	53.5	52.5	54.7	47.7	53.7	58.3	56	59	58.1	57.3	58.1	57.1
Chromium	0.0001 to 0.018	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00027	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	0.0002 to 0.006	0.00042	0.00152	0.001	0.00082	0.00044	0.00048	0.00059	0.00132	0.00136	0.00159	0.00106	0.00099
Dissolved Cadmium (by saltwater extraction)	0.00002												
Iron	0.01 to 0.03	<0.01	<0.01	0.011	<0.01	0.011	<0.01	<0.01	<0.01	0.013	0.023	<0.01	<0.01
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00576	0.00579	0.00543	0.00539	0.00548	0.00591	0.00559	0.00536	0.00482	0.00508	0.00462	0.00486
Magnesium	0.1	40.4	41.2	36.5	35.6	40	40.8	35.8	34.4	33.7	33.9	33.4	36.2
Manganese	5E-005 to 0.0015	0.0206	0.0158	0.00494	0.00307	0.02	0.00152	0.00083	0.00363	0.0061	0.00413	0.00332	0.00301
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00218	0.00226	0.00223	0.00242	0.00222	0.00234	0.00226	0.0024	0.00239	0.00246	0.00232	0.00241
Nickel	0.0005 to 0.005	0.00065	0.00073	0.00069	0.00066	0.00062	0.00094	0.00064	0.00118	0.00072	0.00077	0.00064	0.00065
Phosphorus	0.05 to 0.3	0.095	0.089	<0.05	<0.05	0.111	0.119	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	0.05 to 2	13.1	12.1	10.6	11.2	12.3	11.4	10.8	10.8	9.23	9.95	9.9	10.4
Selenium	0.0001 to 0.006	0.00013	0.00015	0.00016	0.00014	0.00018	0.00015	0.00012	0.00016	0.00017	0.00014	0.00015	0.00014
Silicon	0.05	3.56	3.63	3.96	6.35	5.76	6.06	3.98	4.74	4.8	5.46	5.84	6.16
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	35.3	39.7	34.7	34.4	34	36.6	33.7	32.5	31.6	31.3	31.9	32.4
Strontium	0.0001 to 0.005	0.362	0.385	0.357	0.352	0.358	0.386	0.37	0.365	0.35	0.364	0.355	0.362
Sulphur	0.5	20.1	20.9	19.2	14.7	17.1	18.8	17.1	16.2	15.5	15.6	14.6	15.9
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00115	0.00112	0.00106	0.000891	0.00104	0.00109	0.00111	0.00116	0.00104	0.00104	0.00105	0.00102
Vanadium	0.001 to 0.03	0.0019	0.002	0.0022	0.0026	0.0023	0.0023	0.0022	0.0025	0.0025	0.0026	0.0025	0.0026
Zinc	0.001 to 0.006	0.0012	0.0152	<0.001	0.0012	<0.001	0.0015	<0.001	<0.001	0.001	0.0012	<0.001	<0.001
Total Metals													
Aluminum	0.003 to 0.025	<0.003	0.0037	0.0082	0.0064	0.0071	0.0034	0.0079	0.0048	0.0057	0.0067	0.0069	0.0033
Antimony	0.0001 to 0.0025	0.00012	0.00011	0.00013	0.00012	0.00011	0.00012	0.0001	<0.0001	0.00013	0.00011	0.00012	0.00013
Arsenic	0.0001 to 0.0025	0.00133	0.00143	0.00127	0.00137	0.00135	0.00146	0.00119	0.00117	0.00118	0.00134	0.00128	0.00135
Barium	5E-005 to 0.02	0.0476	0.0488	0.051	0.0698	0.0661	0.0645	0.0617	0.0583	0.0528	0.0522	0.0536	0.0583
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.02	0.03	0.021	0.026	0.023	0.028	0.022	0.02	0.021	0.022	0.023	0.027
Cadmium	1E-005 to 8.5E-005	<0.00001	0.000019	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	54.6	53.3	54.2	49.1	55.1	58.7	56.3	57.1	56.7	56.3	57.5	55.2
Chromium	0.0001 to 0.005	<0.0001	0.00016	0.00016	<0.0001	0.00014	0.0001	<0.0001	<0.0001	0.00011	0.00072	0.00012	0.0001
Cobalt	0.0001 to 0.0015	<0.0001	<0.0001	0.00019	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001
Copper	0.0005 to 0.007	0.00058	0.00374	0.00126	0.00105	0.00069	0.00074	0.00097	0.00096	0.00127	0.0013	0.00156	0.00226
Iron	0.01 to 0.03	<0.01	0.011	0.019	0.016	0.017	<0.01	0.017	0.014	0.024	0.027	0.018	0.013
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	0.00006	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00591	0.00595	0.00544	0.0052	0.00537	0.006	0.0055	0.00475	0.00396	0.00482	0.00467	0.0045
Magnesium	0.1	40.5	40.7	36.3	34.8	38.7	40.6	35.2	33.2	32.6	33.4	32.5	34.1
Manganese	5E-005 to 0.0015	0.0222	0.0185	0.00572	0.00517	0.0338	0.00335	0.00446	0.00432	0.00781	0.00792	0.00684	0.0048
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00229	0.00241	0.00239	0.00248	0.00231	0.00253	0.00245	0.00255	0.0025	0.00252	0.00248	0.00253
Nickel	0.0005 to 0.005	0.00069	0.00082	0.00076	0.00073	0.00069	0.00097	0.00073	0.00072	0.00078	0.00106	0.0007	0.00071
Phosphorus	0.05 to 0.3	0.09	0.091	<0.05	<0.05	0.133	0.118	0.073	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	0.05 to 2	13.4	12.2	10.7	11.2	12.4	11.8	10.9	10.3	9.45	9.75	9.71	10.5
Selenium	0.0001 to 0.006	0.00013	0.00014	0.00016	0.00014	0.00023	0.00016	0.00013	0.00016	0.00016	0.00014	0.00016	0.00013
Silicon	0.05	3.69	3.59	3.99	6.38	5.8	6.2	4.07	4.56	4.79	5.48	5.73	5.92
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	34.9	39.9	35.3	34.6	33.9	38.7	33.7	31.6	30.6	31.8	31.3	32.3
Strontium	0.0001 to 0.005	0.385	0.384	0.367	0.358	0.357	0.407	0.398	0.368	0.346	0.363	0.359	0.373
Sulphur	0.5	21.2	21.6	19.6	15.4	17.9	19.2	17.1	16	15.8	15.8	14.4	15.4
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002												
Uranium	1E-005 to 0.001	0.00124	0.00116	0.00113	0.001	0.00118	0.00121	0.00116	0.00121	0.00117	0.00118	0.00117	0.0011
Vanadium	0.001 to 0.03	0.0021	0.0025	0.0025	0.0028	0.0025	0.0026	0.0023	0.0026	0.0026	0.0028	0.0027	0.0028
Zinc	0.003 to 0.006	<0.003	0.0133	<0.003	0.0035	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0047	<0.003
Organics													
Carbon Organic (Dissolved)	0.5 to 5	13.5	13.2	13.4	15.1	13.8	14.1	13	12.7	12.2	12.6	13.7	14.1
Carbon Organic (Total)	0.5 to 5	13.9	13.3	12.7	15.1	13.4	13.9	14.4	12.3	12.6	12.8	14.4	14.3
Nitrogen Organic (Dissolved)	0.05 to 0.26		0.77		1.97								
Nitrogen Organic (Total)	0.05 to 0.3	0.863	0.888		0.964								
ALS LAB ID		**L1256679**	**L1266846**	**L1299444**	**L1358222**	**L1389979**	**L1410216**	**L1448657**	**L1454705**	**L1461081**	**L1469099**	**L1478913**	**L1483419**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		JACL-S	JACL-S	JACL-S	JACL-S	JACL-S
Analytes	MDL	22-Jul-14	7-Aug-14	20-Aug-14	14/Sep/2014	30-Sep-14
In Situ Parameters						
Conductivity µS/cm	...	600	620	622	556	934
Oxygen Dissolved %	...	86.6	64.4	79.5	90.7	67.9
Oxygen Dissolved	...	7.78	5.58	6.88	9.12	6.99
pH (unitless)	...	8.66	8.41	8.99	8.58	8.42
Redox Potential mV	...	-23.3	71.7	-34.3	72.5	161
Salinity ppt	...	0.32	0.32	0.32	0.34	0.6
Specific Conductivity µS/cm	...	657	661	660	687	1182
Temperature °C	...	20.5	22.5	21.9	15	14
Total Dissolved Solids	...	427	430	429	446	778
Turbidity NTU	...	1.2	1	0.5	1.3	-11.4
Physical Tests						
Acidity to pH 8.3 (as CaCO3)	1					
Alkalinity (Total as CaCO3)	1 to 2	230	235	229	242	215
Bicarbonate Alkalinity	1 to 2	212	217	213	229	206
Carbonate Alkalinity	1 to 2	18.1	17.7	15.7	12.6	8.8
Color TCU	5					
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	281	283	281	289	285
Hydroxide Alkalinity	1 to 2	<1	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1	8.54	8.58	8.56	8.55	8.43
Specific Conductivity µS/cm	2	632	655	652	664	665
Total Dissolved Solids	1 to 2	419	407	406	420	403
Total Suspended Solids	3	<3	3.4	<3	<3	<3
Turbidity NTU	0.1	1.78	0.7	1.73	0.95	1.73
Dissolved Anions						
Bromide	0.05 to 2.495	<0.25	<0.05	<0.05	<0.05	<0.05
Chloride	0.5 to 1	53.1	54.6	54	55.7	55.9
Fluoride	0.02 to 0.4	0.223	0.22	0.225	0.235	0.232
Sulphate	0.5 to 1	44.6	46.3	45.5	47.8	48
Nutrients						
Ammonia (Total)	0.005 to 0.05	0.0207	0.0259	0.0283	0.0147	0.0174
Nitrate (as N)	0.005 to 0.1	<0.025	0.0092	<0.005	0.0109	<0.005
Nitrite (as N)	0.001 to 0.02	0.0064	0.0023	0.0011	0.0028	0.0021
Nitrogen (Dissolved)	0.05 to 0.1					
Nitrogen (Total)	0.0025 to 0.11					
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.909	0.921	0.961	0.89	0.881
Orthophosphate (Dissolved)	0.001 to 0.01	0.001	<0.001	0.0011	0.0013	<0.001
Phosphorus - Dissolved	0.002 to 0.02	0.015	0.0125	0.0141	0.0135	0.0131
Phosphorus - Total	0.002 to 0.02	0.0211	0.0165	0.0195	0.0184	0.0156
Cyanide						
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals						
Aluminum	0.001 to 0.025	0.0015	0.0017	0.0018	0.0013	0.0013
Antimony	0.0001 to 0.0025	<0.0001	0.00011	0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00135	0.0014	0.00137	0.00139	0.00131
Barium	5E-005 to 0.02	0.0556	0.0463	0.0415	0.054	0.0591
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.021	0.021	0.02	0.021	0.021
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	55	55.1	53	53.7	53.3
Chromium	0.0001 to 0.018	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	0.0002 to 0.006	0.00092	0.00091	0.00094	0.00092	0.00073
Dissolved Cadmium (by saltwater extraction)	0.00002					
Iron	0.01 to 0.03	<0.01	<0.01	<0.01	<0.01	<0.01
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00517	0.0053	0.00541	0.00556	0.00498
Magnesium	0.1	34.8	35.4	36.2	37.7	36.9
Manganese	5E-005 to 0.0015	0.00165	0.00113	0.00138	0.00111	0.000736
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00246	0.00254	0.00241	0.0024	0.00251
Nickel	0.0005 to 0.005	0.0007	0.00066	0.00064	0.00061	0.00062
Phosphorus	0.05 to 0.3	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	0.05 to 2	9.95	11.8	11.4	11	10.9
Selenium	0.0001 to 0.006	0.00015	0.00015	0.00016	0.00015	0.00011
Silicon	0.05	6.13	6.59	6.77	6.48	6.23
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	33.8	34.2	34.1	35.6	34.8
Strontium	0.0001 to 0.005	0.365	0.357	0.349	0.349	0.363
Sulphur	0.5	15.3	15.8	15.6	16.3	16.2
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.001	0.00107	0.00101	0.00107	0.00111
Vanadium	0.001 to 0.03	0.0027	0.0029	0.0028	0.0028	0.0028
Zinc	0.001 to 0.006	<0.001	<0.001	0.0011	<0.001	0.001
Total Metals						
Aluminum	0.003 to 0.025	0.0069	0.0047	0.0061	0.0053	0.0058
Antimony	0.0001 to 0.0025	0.00014	0.00013	0.0001	0.00011	0.0001
Arsenic	0.0001 to 0.0025	0.00143	0.00136	0.00137	0.0014	0.00135
Barium	5E-005 to 0.02	0.059	0.0443	0.0425	0.0534	0.0551
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.025	0.022	0.02	0.026	0.025
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	57.1	52	52.3	52.2	50.2
Chromium	0.0001 to 0.005	0.00012	<0.0001	0.00014	<0.0003	0.00015
Cobalt	0.0001 to 0.0015	0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	0.0005 to 0.007	0.0011	0.00104	0.0011	0.00101	0.00089
Iron	0.01 to 0.03	0.014	0.011	0.011	0.012	0.012
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00564	0.00484	0.0051	0.00587	0.00483
Magnesium	0.1	36.6	34	36.1	34.6	34.7
Manganese	5E-005 to 0.0015	0.00364	0.00265	0.00311	0.00196	0.0017
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00271	0.00255	0.00241	0.0025	0.00267
Nickel	0.0005 to 0.005	0.0008	0.00071	0.00073	0.00073	0.00066
Phosphorus	0.05 to 0.3	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	0.05 to 2	10.2	11.5	11.3	10.4	10.2
Selenium	0.0001 to 0.006	0.00015	0.00014	0.00016	0.00014	0.0001
Silicon	0.05	6.4	6.31	6.74	6.28	5.94
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	35.2	33.3	35.7	34.4	32.6
Strontium	0.0001 to 0.005	0.389	0.352	0.338	0.356	0.368
Sulphur	0.5	16.5	15.2	16	16	15.5
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002					
Uranium	1E-005 to 0.001	0.00117	0.00111	0.00105	0.00109	0.00118
Vanadium	0.001 to 0.03	0.0031	0.003	0.0031	0.0032	0.0028
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003
Organics						
Carbon Organic (Dissolved)	0.5 to 5	14.3	13.7	14.2	14.4	13.8
Carbon Organic (Total)	0.5 to 5	14.8	13.8	15.5	14.9	14.5
Nitrogen Organic (Dissolved)	0.05 to 0.26					
Nitrogen Organic (Total)	0.05 to 0.3					
ALS LAB ID		**L1490937**	**L1499202**	**L1506521**	**L1518246**	**L1526071**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C3.22 - JC03
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Site ID		JC03	JC03	JC03	JC03	JC03	JC03	JC03	JC03	JC03	JC03	JC03	JC03
Analytes	**MDL**	**28-Apr-08**	**7-Jul-08**	**3-Jun-10**	**29-Mar-11**	**14-Apr-11**	**21-Apr-11**	**28-Apr-11**	**5-May-11**	**12-May-11**	**1-Jun-11**	**28-Jun-11**	**28-Jul-11**
In Situ Parameters													
Conductivity µS/cm	...	598	519	500	482	511	574	600	675	345	351	430	525
Oxygen Dissolved %	...	82.2	81.5	75.3	75.5	80.8	80.7	71.4	83.4	85.8	77.7	85.2	81.1
Oxygen Dissolved	...	9.18	8.56	7.99	10.5	11.3	13.1	9.48	9.71	10.3	8.56	8.88	8.74
pH (unitless)	...		7.8	8.17	8.11	7.92	7.95	8.08	8.21	7.88	8.27	8.17	8.13
Redox Potential mV	...		-86.1	-305	113	175	88.4	126	110	149	-144	149	96.3
Salinity ppt	...						0.59	0.5	0.49	0.25	0.23	0.27	0.34
Specific Conductivity µS/cm	...	830	675	652	872	930	1320	1024	984	519	480	551	699
Temperature °C	...	10.4	13	12.8	1.62	1.56	4.76	3.32	8.55	7.39	11	13.4	11.9
Total Dissolved Solids	...				507	604	859	666	639	338	312	359	455
Turbidity NTU	...											6.7	5.1
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1												<1
Alkalinity (Total as CaCO3)	1 to 2	306	295	261	308	306	333	295	272	205	215	228	292
Bicarbonate Alkalinity	1 to 2			261			333						
Carbonate Alkalinity	1 to 2			<2			<2						
Color TCU	5	20	27.4	69	40.2	18.5	16.2	14.8	18.2	37.5	48.9	28.7	26.4
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	383	306	302	385	421	438	446	421	236	234	245	317
Hydroxide Alkalinity	1 to 2			<2			<2						
pH (unitless)	0.01 to 0.1	8.2	8.4	8.24	8.16	8.26	8.24	8.29	8.37		8.28	8.35	8.3
Specific Conductivity µS/cm	2	842	665	655	831	881	954	955	946	527	504	512	673
Total Dissolved Solids	1 to 2	516	397	419	524	536	584	609	588	334	315	325	404
Total Suspended Solids	3	89.8	12.5	35.8	35	19.4	6.5	47.4	80.5	116	39.2	21.1	12.1
Turbidity NTU	0.1	66.7	8.04	10.3	7.61	10.1	4.06	19.8	40.1	45.8	11.6	7.95	4.99
Dissolved Anions													
Bromide	0.05 to 2.495	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.25	<0.05	<0.05
Chloride	0.5 to 1	71.4	31.7	40.1	64	97.3	99.3	123	122	40.9	27.4	29.6	40.4
Fluoride	0.02 to 0.4	0.167	0.22	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.142	0.19	0.168	0.217
Sulphate	0.5 to 1	47.8	24	30.9	52	47	54.7	50.2	53.3	26.7	20.6	17.8	22
Nutrients													
Ammonia (Total)	0.005 to 0.05	0.079	0.075	0.026	0.119	0.0279	0.0212	0.0248	0.021	0.0261	0.0231	0.0135	0.0182
Nitrate (as N)	0.005 to 0.1	0.0717	0.056	<0.05	0.134	0.14	0.172	0.098	<0.05	0.04	0.029	0.0311	0.0688
Nitrite (as N)	0.001 to 0.02	0.0042	0.0036	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.005	<0.001	<0.001
Nitrogen (Dissolved)	0.05 to 0.1							0.51	0.51	0.57	0.74	0.48	0.52
Nitrogen (Total)	0.0025 to 0.11			0.99	1.38	0.601	0.32	1.07	0.39	1.09	1.1	0.54	0.57
Nitrogen Kjeldahl (Total)	0.05 to 0.2	2.24	0.516	0.994	1.25	0.461	0.148	0.975	0.39	1.15	1.07	0.509	0.501
Orthophosphate (Dissolved)	0.001 to 0.01	0.0645	0.119	0.196	0.126						0.12	0.0578	0.0806
Phosphorus - Dissolved	0.002 to 0.02					0.0539	0.0555	0.192	0.0508	0.0759	0.122	0.0643	0.0909
Phosphorus - Total	0.002 to 0.02	0.435	0.161	0.261	0.254	0.0865	0.0715	0.181	0.23	0.259	0.197	0.092	0.11
Cyanide													
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	0.0134	0.0081	0.0127	0.0055		<0.005	0.0051	0.0077	0.0136	0.0082	0.0079	0.0065
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	0.001 to 0.025	0.0064	<0.005	<0.005	<0.005	<0.01	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic	0.0001 to 0.0025	0.00108	0.00164	0.00226	0.00139	<0.001	0.0011	<0.001	<0.001	0.00084	0.00143	0.0011	0.00145
Barium	5E-005 to 0.02	0.089	0.075	0.074	0.065	0.085	0.087	0.098	0.096	0.056	0.059	0.069	0.073
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001
Bismuth	0.0005 to 0.2				<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	1E-005 to 8.5E-005	<0.000017	<0.000017	<0.000017	<0.000017	<0.000034	<0.000034	<0.000034	<0.000034	<0.000017	0.000021	<0.000017	<0.000017
Calcium	0.05 to 0.1	95.2	78.1	66.1	89	109	109	117	114	62.3	57.9	65	80.9
Chromium	0.0001 to 0.018	0.0011	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001
Cobalt	0.0001 to 0.0015	<0.0003	<0.0003	<0.0003	0.00032	<0.0006	<0.0006	<0.0006	<0.0006	<0.0003	<0.0003	<0.0003	<0.0003
Copper	0.0002 to 0.006	0.002	0.0017	0.0045	0.0016	<0.002	<0.002	<0.002	<0.002	0.0024	0.003	0.0018	0.0015
Dissolved Cadmium (by saltwater extraction)	0.00002												
Iron	0.01 to 0.03	0.04	0.119	0.038	0.109	0.043	0.049	<0.03	<0.03	0.039	0.059	0.049	0.066
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005
Lithium	0.0005 to 0.025	<0.005	<0.005	<0.005	<0.005	<0.01	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005
Magnesium	0.1	35.4	26.9	33.3	39.6	36	40.3	37.2	33.4	19.5	21.7	20.1	27.9
Manganese	5E-005 to 0.0015	0.0748	0.0581	0.0256	0.104	0.0283	0.0404	0.0323	0.0257	0.0343	0.0206	0.0233	0.0329
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0017	0.0018	0.0038	0.0022	<0.002	<0.002	<0.002	<0.002	0.0017	0.0018	0.0014	0.0017
Nickel	0.0005 to 0.005	<0.001	0.0012	0.0019	0.0015	<0.002	<0.002	<0.002	<0.002	<0.001	0.001	<0.001	<0.001
Phosphorus	0.05 to 0.3				<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	9.3	9.2	11.7	11.6	8.6	9.2	8.7	8.5	7.1	7.2	6.4	8.1
Selenium	0.0001 to 0.006	<0.001	<0.001	<0.001	0.001	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001
Silicon	0.05				8.85	8.57	8.75	8.3	7.73	7.35	9.1	8.57	9.48
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00004	<0.00004	<0.00004	<0.00004	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	0.05 to 2	33	25.9	31.6	36	37.5	40.6	43.8	43.9	23.4	21.6	21.7	28.8
Strontium	0.0001 to 0.005				0.391	0.41	0.441	0.444	0.42	0.235	0.264	0.259	0.338
Sulphur	0.5												
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0004	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00135	0.00093	0.00142	0.00229	0.00186	0.00167	0.00158	0.00168	0.00088	0.00072	0.00056	0.00071
Vanadium	0.001 to 0.03	0.003	0.0027	0.0044	0.0025	0.0024	0.0023	0.0023	0.0024	0.0024	0.0028	0.0019	0.0018
Zinc	0.001 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Metals													
Aluminum	0.003 to 0.025	1.7	0.157	0.599	0.455	0.228	0.123	1.1	1.17	2.22	0.328	0.369	0.175
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic	0.0001 to 0.0025	0.00153	0.00163	0.00238	0.00142	0.001	0.0011	0.001	0.0011	0.0013	0.0013	0.00112	0.00136
Barium	5E-005 to 0.02	0.115	0.075	0.08	0.072	0.085	0.086	0.119	0.112	0.087	0.061	0.068	0.078
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001
Bismuth	0.0005 to 0.2				<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	1E-005 to 8.5E-005	0.000027	<0.000017	0.000018	0.000028	<0.000034	<0.000034	<0.000034	<0.000034	0.000028	0.000075	<0.000017	<0.000017
Calcium	0.05 to 0.1	99.4	74.2	66.5	87.9	103	103	121	111	65.8	55	64.1	81.9
Chromium	0.0001 to 0.005	0.0047	<0.001	0.0019	0.0013	<0.002	<0.002	0.0024	0.0028	0.0056	0.0011	0.0012	<0.001
Cobalt	0.0001 to 0.0015	0.0017	<0.0003	0.00077	0.00062	<0.0006	<0.0006	0.00079	0.00094	0.00167	0.00039	0.00041	<0.0003
Copper	0.0005 to 0.007	0.0151	0.0032	0.0084	0.0046	0.0033	0.0025	0.0071	0.0079	0.014	0.005	0.0041	0.0026
Iron	0.01 to 0.03	2.89	0.382	0.849	0.851	0.37	0.244	1.63	1.78	3.27	0.517	0.58	0.347
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005
Lithium	0.0005 to 0.025	0.0058	<0.005	<0.005	<0.005	<0.01	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	0.0061
Magnesium	0.1	35.7	26.6	32.8	39.2	33.8	38.7	38.9	32.6	20.2	20.7	19.3	28.3
Manganese	5E-005 to 0.0015	0.179	0.0723	0.0579	0.13	0.04	0.0455	0.086	0.0959	0.166	0.0412	0.0575	0.0561
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0016	0.0021	0.0043	0.0024	<0.002	<0.002	<0.002	<0.002	0.002	0.0021	0.0017	0.0019
Nickel	0.0005 to 0.005	0.0055	0.0018	0.0036	0.0023	<0.002	<0.002	0.0027	0.0035	0.005	0.0016	0.0016	<0.001
Phosphorus	0.05 to 0.3				<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	9.5	8.7	11.1	11.5	8.3	8.8	9.3	8.4	7.4	6.8	6.2	8.3
Selenium	0.0001 to 0.006	<0.001	<0.001	<0.001	0.001	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001
Silicon	0.05				9.99	8.53	8.51	11.8	10.5	12.9	9.42	9.04	9.9
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00004	<0.00004	<0.00004	<0.00004	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	0.05 to 2	31.7	24.3	30	35.5	35.6	38.8	45.6	42.3	23	20.5	20.8	29.1
Strontium	0.0001 to 0.005				0.391	0.391	0.427	0.47	0.417	0.25	0.253	0.249	0.344
Sulphur	0.5												
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0004	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005
Titanium	0.01	0.072	0.012	0.026	0.029	0.016	0.011	0.075	0.058	0.093	0.02	0.02	0.016
Total Cadmium (by saltwater extraction)	0.00002												
Uranium	1E-005 to 0.001	0.00149	0.00097	0.00158	0.00261	0.00193	0.00164	0.00172	0.00165	0.00104	0.00078	0.00064	0.00082
Vanadium	0.001 to 0.03	0.0089	0.0035	0.0063	0.004	0.0031	0.0027	0.0053	0.0058	0.0088	0.0039	0.0032	0.0026
Zinc	0.003 to 0.006	0.0076	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0057	0.0077	<0.005	<0.005	<0.005
Organics													
Carbon Organic (Dissolved)	0.5 to 5	9.19	11.2	16.4	14.3	7.92	7.83	6.72	8.56	14.3	13.3	12.4	11.3
Carbon Organic (Total)	0.5 to 5					8.05	7.8	6.68	9.09	14.7	13.5	12.9	11.9
Nitrogen Organic (Dissolved)	0.05 to 0.26							0.387	0.489	0.504	0.688	0.435	0.433
Nitrogen Organic (Total)	0.05 to 0.3					0.433		0.95	0.369	1.13	1.05	0.495	0.483
ALS LAB ID		**L623545**	**L653575**	**L894163**	**L990459**	**L995583**	**L997645**	**L999654**	**L1002049**	**L1005044**	**L1012627**	**L1025075**	**L1038168**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		JC03	JC03	JC03	JC03	JC03	JC03	JC03	JC03	JC03	JC03	JC03	JC03
Analytes	MDL	1-Sep-11	27-Sep-11	10-Apr-12	25-Apr-12	2-May-12	10-May-12	16-May-12	24-May-12	10-Jul-12	6-Sep-12	12-Oct-12	7-Nov-12
In Situ Parameters													
Conductivity µS/cm	...	522		643	645	248	257	293	393	480	198		558
Oxygen Dissolved %	...	96.2	58.2	64	84.8	85.2	88.8	83	80.1	87.8	91.3	69.4	61.9
Oxygen Dissolved	...	12.3	6.67	7.92	9.32	10.7	11.1	9.41	9.13	8.32	9.64	8.97	8.61
pH (unitless)	...	8	7.89	7.5	8.16	8.5	8.1	8.21	8.01	8.06	7.92		7.83
Redox Potential mV	...	93.3	218	91.8	82.6	91.8	140	144	134	202	38.5		21.5
Salinity ppt	...	0.42		0.5	0.44	0.19	0.2	0.2	0.27		0.12		0.45
Specific Conductivity µS/cm	...	855	850	1007	880	395	409	412	558	557	260		919
Temperature °C	...	4.64	9.27	6.09	11	5.46	5.6	9.79	9.49	17.8	12.9		4.43
Total Dissolved Solids	...	556		654	572	257	266	269	362		167		598
Turbidity NTU	...	2.6	0.1		66	10	10.2	58.9	21.8	8.2	3.8		2.8
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1												
Alkalinity (Total as CaCO3)	1 to 2	351	370	417	254	151	168	177	335	231	373		410
Bicarbonate Alkalinity	1 to 2			417	254	151	168	177	326	223	365		410
Carbonate Alkalinity	1 to 2			<1	<1	<1	<1	<1	8.1	8	7.6		<2
Color TCU	5	16.1	24.1	38.7	20.3	38.3	30	41.6	52.5	26.4	15.7		27.4
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	385	384	470	390	184	188	186	368	259	416		462
Hydroxide Alkalinity	1 to 2			<1	<1	<1	<1	<1	<1	<1	<1		<2
pH (unitless)	0.01 to 0.1	8.24	8.22	8.4	8.4	8.19	8.41	8.33	8.29	8.37	8.35		8.19
Specific Conductivity µS/cm	2	794	811	997	862	388	415	399	767	528	816		905
Total Dissolved Solids	1 to 2	497	497	635	570	255	255	258	501	340	546		
Total Suspended Solids	3	10.4	<3	34	101	7.7	8	90.2	10.7	16.9	37.1		3.1
Turbidity NTU	0.1	2.72	1.53	13	47.3	6.98	4.13	37.1	5.53	6.11	7.98		1
Dissolved Anions													
Bromide	0.05 to 2.495	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.25	<0.05	<0.5		<1
Chloride	0.5 to 1	45.5	46.5	66	109	25.6	25.7	20.8	41.5	34	53.5		57
Fluoride	0.02 to 0.4	<0.2	0.21	<0.2	<0.2	0.148	0.144	0.174	0.22	0.186	<0.2		<0.4
Sulphate	0.5 to 1	36	35.4	67.1	64.6	21.1	20.3	19.3	55.7	20.4	42.1		47
Nutrients													
Ammonia (Total)	0.005 to 0.05	0.0383	0.0183	0.139	0.0228	<0.005	0.0068	0.0146	0.0329	0.0138	0.0209		0.0115
Nitrate (as N)	0.005 to 0.1	<0.05	<0.05	0.077	0.096	0.0123	<0.005	0.0412	1.04	0.0374	<0.05		<0.1
Nitrite (as N)	0.001 to 0.02	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	0.0012	0.0085	<0.001	<0.01		<0.02
Nitrogen (Dissolved)	0.05 to 0.1	0.59	0.41	1.01	0.43	0.37	0.29	0.48	2.1	0.47	0.49		0.62
Nitrogen (Total)	0.0025 to 0.11	0.59	0.531	1.4	1.14	0.511	0.317	0.738	2.09	0.459	0.468		0.61
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.461	0.531	1.33	1.05	0.499	0.317	0.696	1.04	0.421	0.468		0.606
Orthophosphate (Dissolved)	0.001 to 0.01												
Phosphorus - Dissolved	0.002 to 0.02	0.0681	0.099	0.0507	0.0538	0.0432	0.0315	0.0716	0.206	0.07	0.0636		0.0618
Phosphorus - Total	0.002 to 0.02	0.0872	0.119	0.169	0.207	0.0615	0.0464	0.234	0.233	0.103	0.116		0.0696
Cyanide													
Cyanide (Free)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005
Cyanide (Total)	0.005		0.0057	0.0113	<0.005	0.0097	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005
Cyanide (WAD)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005
Dissolved Metals													
Aluminum	0.001 to 0.025	<0.005	<0.01	<0.003	<0.003	0.0057	0.004	0.0044	0.0028	0.008	0.0016		0.002
Antimony	0.0001 to 0.0025	<0.0005	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00012	<0.0001	<0.0001		<0.0001
Arsenic	0.0001 to 0.0025	0.00112	0.0012	0.00114	0.00098	0.00075	0.00067	0.00089	0.00221	0.00134	0.00125		0.00104
Barium	5E-005 to 0.02	0.09	0.084	0.104	0.0967	0.0468	0.0512	0.0517	0.0803	0.0732	0.0938		0.0936
Beryllium	0.0001 to 0.005	<0.001	<0.002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001
Bismuth	0.0005 to 0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	0.01	<0.01	<0.01	<0.01	<0.01	0.013	<0.01	0.016		0.011
Cadmium	1E-005 to 8.5E-005	<0.000017	<0.000034	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001
Calcium	0.05 to 0.1	93.4	93.2	104	107	51.6	53.5	52.6	80	71.8	104		107
Chromium	0.0001 to 0.018	<0.001	<0.002	0.00024	<0.0001	0.00017	0.00041	0.00014	0.00019	<0.0001	0.00011		0.00021
Cobalt	0.0001 to 0.0015	<0.0003	<0.0006	0.00062	0.00015	<0.0001	<0.0001	0.00011	0.00029	0.00013	0.00022		0.00025
Copper	0.0002 to 0.006	0.0011	<0.002	0.00213	0.0018	0.00299	0.00261	0.00333	0.0047	0.00205	0.00155		0.00116
Dissolved Cadmium (by saltwater extraction)	0.00002												
Iron	0.01 to 0.03	0.053	0.114	0.242	<0.03	0.034	<0.03	<0.03	0.083	0.039	0.028		0.074
Lead	5E-005 to 0.0025	<0.0005	<0.001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005
Lithium	0.0005 to 0.025	0.0054	<0.01	0.006	0.005	0.00231	0.00262	0.00295	0.00345	0.00386	0.00562		0.00512
Magnesium	0.1	36.8	36.7	50.9	29.8	13.4	13.2	13.3	40.9	19.3	38		47.2
Manganese	5E-005 to 0.0015	0.144	0.115	0.235	0.0454	0.0124	0.0153	0.0161	0.0561	0.0321	0.124		0.0873
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001
Molybdenum	5E-005 to 0.005	0.0021	<0.002	0.00267	0.00215	0.00159	0.00158	0.00193	0.00364	0.00173	0.00249		0.0033
Nickel	0.0005 to 0.005	0.0022	<0.002	0.00261	0.00092	0.00075	0.00087	0.00099	0.00199	0.00113	0.0023		0.00225
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3		0.068
Potassium	0.05 to 2	11.7	12	13.8	8.71	4.77	4.64	5.41	12.8	6.59	11.9		13.2
Selenium	0.0001 to 0.006	<0.001	<0.002	0.00022	0.00049	0.00044	0.0003	0.00027	0.00039	0.00018	0.00014		0.00016
Silicon	0.05	10.8	11.4	11.3	7.37	6.56	6.66	7.88	11	8.26	11.1		11.7
Silver	1E-005 to 0.0001	<0.00002	<0.00004	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001
Sodium	0.05 to 2	33.6	34.5	41.5	35.2	14.2	14.6	13.6	34.7	19.5	30.9		34.4
Strontium	0.0001 to 0.005	0.412	0.437	0.5	0.379	0.164	0.176	0.201	0.379	0.265	0.422		0.416
Sulphur	0.5												15.7
Thallium	1E-005 to 0.001	<0.0002	<0.0004	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001
Tin	0.0001 to 0.0025	<0.0005	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001
Titanium	0.01	0.013	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01
Uranium	1E-005 to 0.001	0.00109	0.00094	0.00408	0.00157	0.000632	0.000633	0.000623	0.00151	0.000659	0.00111		0.00378
Vanadium	0.001 to 0.03	0.0016	<0.002	0.003	0.0031	0.0021	0.002	0.0028	0.004	0.0026	0.0021		0.0016
Zinc	0.001 to 0.006	<0.005	<0.005	0.0082	<0.003	0.0088	0.0036	0.0031	0.004	0.0312	0.0023		0.0014
Total Metals													
Aluminum	0.003 to 0.025	0.418	<0.03	0.665	2.21	0.262	0.187	1.33	0.2	0.311	0.357		0.0607
Antimony	0.0001 to 0.0025	<0.0005	<0.001	<0.0001	0.00012	0.0001	<0.0001	0.00012	0.00016	<0.0001	0.00021		<0.0001
Arsenic	0.0001 to 0.0025	0.00121	0.0012	0.0015	0.00157	0.00079	0.00077	0.00126	0.00211	0.00136	0.00138		0.00121
Barium	5E-005 to 0.02	0.101	0.086	0.112	0.124	0.048	0.0516	0.0683	0.079	0.0754	0.0983		0.0956
Beryllium	0.0001 to 0.005	<0.001	<0.002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001
Bismuth	0.0005 to 0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	0.014	0.011	<0.01	<0.01	0.013	0.017	0.013	0.019		0.013
Cadmium	1E-005 to 8.5E-005	<0.000017	<0.000034	0.000011	0.00002	<0.00001	<0.00001	0.000015	<0.00001	<0.00001	<0.00001		<0.00001
Calcium	0.05 to 0.1	96.2	93.6	104	111	51	52.4	54.4	78.5	70.8	100		108
Chromium	0.0001 to 0.005	0.0012	<0.002	0.00184	0.00571	0.00083	<0.0007	0.00332	0.00071	0.00102	0.00107		0.00036
Cobalt	0.0001 to 0.0015	0.00059	<0.0006	0.00105	0.00176	0.00027	0.00021	0.00105	0.00041	0.00033	0.00051		0.00032
Copper	0.0005 to 0.007	0.0037	<0.002	0.00635	0.0141	0.00538	0.00364	0.0116	0.00593	0.00407	0.00378		0.00183
Iron	0.01 to 0.03	0.698	0.246	1.47	3.09	0.406	0.283	1.98	0.38	0.424	0.621		0.218
Lead	5E-005 to 0.0025	<0.0005	<0.001	0.000145	0.000469	0.000069	<0.00005	0.000332	0.000056	0.00007	0.000088		<0.00005
Lithium	0.0005 to 0.025	0.0058	<0.01	0.00527	0.00561	0.00246	0.00256	0.00376	0.00328	0.00392	0.00562		0.00538
Magnesium	0.1	38	36.8	50.4	30.6	12.9	13.2	13.6	38.2	19.4	36.7		47.3
Manganese	5E-005 to 0.0015	0.203	0.127	0.24	0.143	0.0235	0.023	0.0886	0.067	0.0478	0.161		0.108
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001
Molybdenum	5E-005 to 0.005	0.0022	0.002	0.00285	0.00246	0.00169	0.0016	0.00202	0.00408	0.00174	0.00246		0.00346
Nickel	0.0005 to 0.005	0.0032	0.0021	0.00394	0.00588	0.00136	0.00114	0.00396	0.00235	0.00177	0.00314		0.00238
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3		0.078
Potassium	0.05 to 2	12.2	12.2	13.5	8.84	4.71	4.5	5.6	12.3	6.2	11.7		13.4
Selenium	0.0001 to 0.006	<0.001	<0.002	0.00027	0.00065	0.00042	0.00031	0.00034	0.0004	0.00019	0.00014		0.00018
Silicon	0.05	12.1	11.5	12.7	12.9	7.04	7	10.8	10.9	8.83	11.4		12
Silver	1E-005 to 0.0001	<0.00002	<0.00004	<0.00001	0.000015	<0.00001	<0.00001	0.000016	<0.00001	<0.00001	<0.00001		<0.00001
Sodium	0.05 to 2	34.9	34.9	40.1	34.5	14.2	14.3	13.6	33.2	18.9	30.1		36.1
Strontium	0.0001 to 0.005	0.43	0.445	0.442	0.388	0.174	0.175	0.211	0.372	0.263	0.421		0.429
Sulphur	0.5												16.2
Thallium	1E-005 to 0.001	<0.0002	<0.0004	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001
Tin	0.0001 to 0.0025	<0.0005	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001
Titanium	0.01	0.036	<0.01	0.033	0.091	0.017	<0.01	0.055	0.012	0.018	0.021		<0.01
Total Cadmium (by saltwater extraction)	0.00002												
Uranium	1E-005 to 0.001	0.00116	0.00094	0.00364	0.00172	0.000663	0.000654	0.000693	0.00157	0.000669	0.00113		0.00383
Vanadium	0.001 to 0.03	0.0029	<0.002	0.0053	0.0094	0.0027	0.0025	0.0065	0.0046	0.0035	0.0031		0.0019
Zinc	0.003 to 0.006	<0.005	<0.005	0.005	0.0084	0.0048	<0.003	0.0067	0.0032	0.0032	<0.003		<0.003
Organics													
Carbon Organic (Dissolved)	0.5 to 5	10.7	12.2	15.4	8.86	13.6	9.1	13.1	16.5	10.1	9.45		12.6
Carbon Organic (Total)	0.5 to 5	10.6	12.3	16.8	15.1	14.2	9.46	16.3	17.9	9.99	9.29		12.6
Nitrogen Organic (Dissolved)	0.05 to 0.26	0.552	0.392	0.794	0.311	0.353	0.283	0.423	1.02	0.419	0.469		0.609
Nitrogen Organic (Total)	0.05 to 0.3	0.552	0.432	1.19	1.02	0.499	0.31	0.681	1.01	0.407	0.447		0.594
ALS LAB ID		**L1053400**	**L1065234**	**L1133342**	**L1140194**	**L1142492**	**L1146570**	**L1148880**	**L1152500**	**L1176520**	**L1206738**		**L1235306**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		JC03	JC03	JC03	JC03	JC03	JC03
Analytes	**MDL**	**9-Jan-13**	**6-Feb-13**	**5-Mar-13**	**4-Apr-13**	**7-May-13**	**3-Jul-13**
In Situ Parameters							
Conductivity µS/cm	...	596	585	498	576	396	417
Oxygen Dissolved %	...	57.1	67		83.4	85.9	
Oxygen Dissolved	...	7.95	9.36		8.78	8.69	
pH (unitless)	...	7.91	7.59	7.85	8.38	8.09	8.14
Redox Potential mV	...	102	67	76.9	103	177	113
Salinity ppt	...	0.52	0.52	0.44	0.47	0.25	0.26
Specific Conductivity µS/cm	...	1068	1058	902	951	514	517
Temperature °C	...	1.88	1.61	1.52	4.39	13	14.8
Total Dissolved Solids	...	694	688	586	618	335	336
Turbidity NTU	...	0.6	0.7	6.1	36	18	9.4
Physical Tests							
Acidity to pH 8.3 (as CaCO3)	1						
Alkalinity (Total as CaCO3)	1 to 2	427	439	379	252	197	219
Bicarbonate Alkalinity	1 to 2	427	439	379		197	205
Carbonate Alkalinity	1 to 2	<2	<2	<2		<1	14.5
Color TCU	5	27.7	32.8	34.7	13.5	40.5	44
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	512	493	458	368	219	223
Hydroxide Alkalinity	1 to 2	<2	<2	<2		<1	<1
pH (unitless)	0.01 to 0.1	8.06	7.97	8.28	8.4	8.39	8.48
Specific Conductivity µS/cm	2	1020	978	959	871	478	498
Total Dissolved Solids	1 to 2	650	649	589	536	293	337
Total Suspended Solids	3	3.7	<3	10.7	58.3	15.3	23.7
Turbidity NTU	0.1	1.21	1.32	8.36	27.2	21.4	6.28
Dissolved Anions							
Bromide	0.05 to 2.495	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05
Chloride	0.5 to 1	65.8	64.7	71.6	116	34	24.3
Fluoride	0.02 to 0.4	0.36	<0.2	0.31	<0.2	0.19	0.234
Sulphate	0.5 to 1	73.7	59.5	68.4	56.2	22.4	12.8
Nutrients							
Ammonia (Total)	0.005 to 0.05	0.043	0.0346	0.0598	0.031	0.0126	0.0225
Nitrate (as N)	0.005 to 0.1	<0.05	<0.05	0.168	0.138	0.0198	0.0559
Nitrite (as N)	0.001 to 0.02	<0.01	<0.01	<0.01	<0.01	0.0011	0.0012
Nitrogen (Dissolved)	0.05 to 0.1	0.674	0.652	0.857	0.364		
Nitrogen (Total)	0.0025 to 0.11	0.685	0.676	1.14	0.695	0.636	0.568
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.721	0.705	1.08	0.558	0.6	0.511
Orthophosphate (Dissolved)	0.001 to 0.01						
Phosphorus - Dissolved	0.002 to 0.02	0.0368	0.0311	0.138	0.0469	0.0721	0.127
Phosphorus - Total	0.002 to 0.02	0.0447	0.0387	0.178	0.169	0.144	0.177
Cyanide							
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals							
Aluminum	0.001 to 0.025	0.0014	0.0024	0.0018	0.0013	0.0059	0.003
Antimony	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.001	0.00106	0.00139	0.00073	0.00104	0.00182
Barium	5E-005 to 0.02	0.103	0.089	0.078	0.0884	0.0483	0.0594
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.01	<0.01	<0.01	<0.01	<0.01	0.012
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	118	113	102	97.4	55.2	53
Chromium	0.0001 to 0.018	0.00017	0.00018	0.00015	<0.0001	<0.0001	0.00016
Cobalt	0.0001 to 0.0015	0.00051	0.00054	0.00036	0.00011	0.00014	0.00015
Copper	0.0002 to 0.006	0.00126	0.00111	0.00143	0.00125	0.00287	0.00248
Dissolved Cadmium (by saltwater extraction)	0.00002						
Iron	0.01 to 0.03	0.153	0.195	0.125	0.016	0.036	0.073
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00589	0.00551	0.00508	0.00463	0.00284	0.00191
Magnesium	0.1	52.9	51.3	49	30.4	19.7	22
Manganese	5E-005 to 0.0015	0.147	0.144	0.0975	0.0361	0.0241	0.0341
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00381	0.0026	0.00261	0.00156	0.00211	0.00208
Nickel	0.0005 to 0.005	0.0025	0.00246	0.00151	0.0008	0.00088	0.00106
Phosphorus	0.05 to 0.3	<0.05	<0.05	0.153	<0.05	0.074	0.136
Potassium	0.05 to 2	14.2	13.2	14.4	7.87	6.82	6.64
Selenium	0.0001 to 0.006	0.00023	0.00023	0.00037	0.00037	0.00034	0.00022
Silicon	0.05	11.4	12.1	10.5	7.35	8.34	9.98
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	42.3	42.6	38.8	35.6	20.3	21.7
Strontium	0.0001 to 0.005	0.507	0.459	0.467	0.374	0.232	0.231
Sulphur	0.5	24.7	20.3	22.4	18.8	7.68	4.55
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00752	0.00521	0.00296	0.00139	0.000835	0.000579
Vanadium	0.001 to 0.03	0.0017	0.0017	0.0027	0.0021	0.003	0.0029
Zinc	0.001 to 0.006	0.0013	0.0085	0.0018	<0.001	0.0018	0.0013
Total Metals							
Aluminum	0.003 to 0.025	0.0131	0.0113	0.51	1.08	1.02	0.514
Antimony	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00011
Arsenic	0.0001 to 0.0025	0.00104	0.00107	0.00163	0.00112	0.00126	0.00191
Barium	5E-005 to 0.02	0.108	0.0917	0.0867	0.103	0.0654	0.0653
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.01	0.01	<0.01	<0.01	0.013	0.015
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	0.000011	<0.00001
Calcium	0.05 to 0.1	117	113	106	98	54.5	49.9
Chromium	0.0001 to 0.005	0.00021	0.00022	0.00143	0.00265	0.00258	0.00141
Cobalt	0.0001 to 0.0015	0.00056	0.00058	0.00076	0.00096	0.00082	0.00054
Copper	0.0005 to 0.007	0.0018	0.00156	0.00502	0.00857	0.00917	0.00546
Iron	0.01 to 0.03	0.198	0.234	0.939	1.59	1.53	0.815
Lead	5E-005 to 0.0025	<0.00005	<0.00005	0.00012	0.000228	0.000214	0.000128
Lithium	0.0005 to 0.025	0.0062	0.00548	0.00574	0.00496	0.0034	0.0022
Magnesium	0.1	53.1	50.5	48.4	28.9	19.4	20.7
Manganese	5E-005 to 0.0015	0.152	0.15	0.118	0.0919	0.0731	0.0725
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00392	0.00259	0.00292	0.00165	0.00203	0.0021
Nickel	0.0005 to 0.005	0.00272	0.00259	0.00274	0.00343	0.00301	0.00215
Phosphorus	0.05 to 0.3	<0.05	<0.05	0.223	0.137	0.154	0.164
Potassium	0.05 to 2	14.1	12.9	14.8	8.04	6.56	6.23
Selenium	0.0001 to 0.006	0.00023	0.00018	0.00037	0.00037	0.00031	0.00028
Silicon	0.05	11.4	11.9	12.1	9.64	10.5	10.5
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	45	44	39.6	35.9	20.9	20.3
Strontium	0.0001 to 0.005	0.517	0.429	0.489	0.372	0.22	0.227
Sulphur	0.5	25.5	21	23.9	18.9	7.53	4.41
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	0.017	0.035	0.038	0.018
Total Cadmium (by saltwater extraction)	0.00002						
Uranium	1E-005 to 0.001	0.00762	0.00535	0.00314	0.00148	0.000796	0.000587
Vanadium	0.001 to 0.03	0.002	0.0019	0.0047	0.0052	0.006	0.0043
Zinc	0.003 to 0.006	<0.003	<0.003	0.0034	0.0048	0.0054	<0.003
Organics							
Carbon Organic (Dissolved)	0.5 to 5	12	11.7	12	6.8	12.4	16.2
Carbon Organic (Total)	0.5 to 5	12.4	12.1	12.2	7.5	12.4	17
Nitrogen Organic (Dissolved)	0.05 to 0.26				0.196		
Nitrogen Organic (Total)	0.05 to 0.3	0.678	0.67	1.02	0.527		
ALS LAB ID		**L1256679**	**L1265999**	**L1275746**	**L1286585**	**L1298960**	**L1327102**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C3.23 - KC03
PAGE 1 OF 1

Site ID		KC03	KC03	KC03	KC03	KC03	KC03	
Analytes	MDL	21-Mar-14	10-Apr-14	24-Apr-14	7-May-14	23-May-14	4-Jun-14	
In Situ Parameters								
Conductivity µS/cm	...	829	939	828	963	997	993	
Oxygen Dissolved %	...		52.3	58.5	70.8	78.4	61.5	35.6
Oxygen Dissolved	...		7.02	7.4	9.27	9.8	7.44	4.37
pH (unitless)	...	7.91	7.94	8.03	8.12	7.99	7.87	
Redox Potential mV	...	75.2	-38	150	216	74.5	214	
Salinity ppt	...	0.71	0.76	0.69	0.77	0.77	0.78	
Specific Conductivity µS/cm	...	1434	1511	1386	1537	1534	1542	
Temperature °C	...	2.93	5.18	3.92	5.5	6.68	6.34	
Total Dissolved Solids	...	932	982	901	1001	997	1003	
Turbidity NTU	...							
Physical Tests								
Acidity to pH 8.3 (as CaCO3)	1							
Alkalinity (Total as CaCO3)	1 to 2	533	610	501	553	565	576	
Bicarbonate Alkalinity	1 to 2	533	610	473	525	565	576	
Carbonate Alkalinity	1 to 2	<1	<20	27.2	28	<20	<1	
Color TCU	5				32.6			
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	684	706	628	694	713	739	
Hydroxide Alkalinity	1 to 2	<1	<20	<1	<1	<20	<1	
pH (unitless)	0.01 to 0.1	8.43	8.24	8.43	8.31	8.25	8.33	
Specific Conductivity µS/cm	2	1460	1500	1370	1490	1490	1480	
Total Dissolved Solids	1 to 2	979	1010	963	1060	1010	988	
Total Suspended Solids	3	<3	<3	3.8	<3	<3	15.1	
Turbidity NTU	0.1	0.6	0.44	0.43	0.42	0.37	3.76	
Dissolved Anions								
Bromide	0.05 to 2.495	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Chloride	0.5 to 1	17.1	16.1	17.8	19.1	17.2	21	
Fluoride	0.02 to 0.4	0.3	0.3	0.26	0.27	0.29	0.26	
Sulphate	0.5 to 1	351	344	308	348	336	320	
Nutrients								
Ammonia (Total)	0.005 to 0.05	0.01	0.0059	0.0104	0.0078	0.0092	0.0073	
Nitrate (as N)	0.005 to 0.1	0.092	0.198	0.162	0.113	0.067	<0.05	
Nitrite (as N)	0.001 to 0.02	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	
Nitrogen (Dissolved)	0.05 to 0.1							
Nitrogen (Total)	0.0025 to 0.11							
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.726	0.691	0.874	0.678	0.689	0.588	
Orthophosphate (Dissolved)	0.001 to 0.01	0.129	0.0912	0.19	0.134	0.106	0.0956	
Phosphorus - Dissolved	0.002 to 0.02	0.163	0.0963	0.223	0.16	0.124	0.097	
Phosphorus - Total	0.002 to 0.02	0.18	0.0967	0.209	0.164	0.124	0.145	
Cyanide								
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Dissolved Metals								
Aluminum	0.001 to 0.025	0.0012	<0.001	0.0019	0.0012	0.0012	<0.001	
Antimony	0.0001 to 0.0025	0.00017	0.00016	0.00019	0.0002	0.0002	0.00018	
Arsenic	0.0001 to 0.0025	0.00676	0.00618	0.0054	0.00573	0.00547	0.00542	
Barium	5E-005 to 0.02	0.0724	0.0764	0.0659	0.0738	0.0752	0.079	
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Boron	0.01 to 0.1	0.104	0.105	0.1	0.116	0.133	0.119	
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	
Calcium	0.05 to 0.1	70.8	74.3	65.9	72.1	71.9	74.4	
Chromium	0.0001 to 0.018	0.00052	0.00044	0.00044	0.00049	0.00046	0.00041	
Cobalt	0.0001 to 0.0015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Copper	0.0002 to 0.006	0.0068	0.0057	0.00606	0.00574	0.00537	0.0049	
Dissolved Cadmium (by saltwater extraction)	0.00002							
Iron	0.01 to 0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	
Lithium	0.0005 to 0.025	0.0125	0.0121	0.0123	0.0136	0.0143	0.0132	
Magnesium	0.1	123	126	113	125	129	134	
Manganese	5E-005 to 0.0015	0.000301	0.000188	0.00059	0.00017	0.000208	0.000217	
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
Molybdenum	5E-005 to 0.005	0.0138	0.0112	0.0131	0.0138	0.0136	0.012	
Nickel	0.0005 to 0.005	0.00168	0.00145	0.00171	0.0015	0.00146	0.00147	
Phosphorus	0.05 to 0.3	0.142	0.1	0.188	0.152	0.102	0.11	
Potassium	0.05 to 2	21.8	22	21.6	21.8	22.7	22.9	
Selenium	0.0001 to 0.006	0.00767	0.00833	0.00563	0.00649	0.0058	0.00437	
Silicon	0.05	9.58	9.82	9.03	9.29	9.79	9.65	
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
Sodium	0.05 to 2	97.3	101	91.6	98.7	98.5	98.9	
Strontium	0.0001 to 0.005	1.18	1.18	1.13	1.26	1.26	1.26	
Sulphur	0.5	109	114	99.1	116	111	110	
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Uranium	1E-005 to 0.001	0.00544	0.00518	0.00488	0.00581	0.0056	0.00525	
Vanadium	0.001 to 0.03	0.0074	0.0075	0.0065	0.0073	0.0071	0.0066	
Zinc	0.001 to 0.006	<0.001	<0.001	<0.001	<0.001	0.0011	<0.001	
Total Metals								
Aluminum	0.003 to 0.025	0.0044	0.0073	0.0047	0.0034	0.0043	0.0356	
Antimony	0.0001 to 0.0025	0.0002	0.00017	0.00021	0.00019	0.0002	0.00019	
Arsenic	0.0001 to 0.0025	0.00612	0.00557	0.00512	0.00499	0.00533	0.00483	
Barium	5E-005 to 0.02	0.0708	0.0772	0.0673	0.0695	0.0743	0.0759	
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Boron	0.01 to 0.1	0.104	0.11	0.1	0.099	0.129	0.122	
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
Calcium	0.05 to 0.1	69.8	72.8	65.8	69.3	70.9	70.5	
Chromium	0.0001 to 0.005	0.0006	0.0006	0.00042	0.0005	0.0005	0.00056	
Cobalt	0.0001 to 0.0015	<0.0001	<0.0001	<0.0001	<0.0001	0.00026	<0.0001	
Copper	0.0005 to 0.007	0.0074	0.00589	0.00652	0.00568	0.00546	0.0055	
Iron	0.01 to 0.03	0.012	0.01	<0.01	<0.01	<0.01	0.045	
Lead	5E-005 to 0.0025	0.00012	0.000059	<0.00005	<0.00005	<0.00005	<0.00005	
Lithium	0.0005 to 0.025	0.0119	0.012	0.0125	0.012	0.0132	0.0135	
Magnesium	0.1	118	123	111	114	128	129	
Manganese	5E-005 to 0.0015	0.000509	0.000675	0.00101	0.00024	0.000376	0.00388	
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
Molybdenum	5E-005 to 0.005	0.0141	0.0127	0.0143	0.0129	0.0138	0.0124	
Nickel	0.0005 to 0.005	0.0018	0.00154	0.00178	0.00145	0.00154	0.00164	
Phosphorus	0.05 to 0.3	0.147	0.092	0.201	0.136	0.114	0.13	
Potassium	0.05 to 2	21.4	21.3	21.6	20.6	22.6	21.7	
Selenium	0.0001 to 0.006	0.00859	0.00687	0.00469	0.00538	0.00495	0.00366	
Silicon	0.05	9.52	9.8	9.04	8.82	9.78	9.42	
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
Sodium	0.05 to 2	99.4	100	94	95.3	95.9	95	
Strontium	0.0001 to 0.005	1.15	1.23	1.17	1.11	1.23	1.25	
Sulphur	0.5	113	116	103	117	113	108	
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Total Cadmium (by saltwater extraction)	0.00002							
Uranium	1E-005 to 0.001	0.00557	0.0052	0.00517	0.00533	0.00606	0.00531	
Vanadium	0.001 to 0.03	0.0077	0.0078	0.0068	0.0072	0.0073	0.0067	
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	
Organics								
Carbon Organic (Dissolved)	0.5 to 5	14.2	12.6	17.5	13.8	12.3	11.6	
Carbon Organic (Total)	0.5 to 5	14.2	12.9	18.2	14.7	12.1	11.7	
Nitrogen Organic (Dissolved)	0.05 to 0.26							
Nitrogen Organic (Total)	0.05 to 0.3							
ALS LAB ID		L1435186	L1442672	L1447300	L1452368	L1459728	L1465478	

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C3.24 - MAKAOO-01
PAGE 1 OF 1

Site ID		MAKAOO-01	MAKAOO-01	MAKAOO-01	MAKAOO-01	MAKAOO-01	MAKAOO-01	MAKAOO-01
Analytes	MDL	5-Jun-14	18-Jun-14	4-Jul-14	15-Jul-14	28-Jul-14	13-Aug-14	2-Sep-14
In Situ Parameters								
Conductivity µS/cm	...	1217	1356	5259	1595	1758	2025	
Oxygen Dissolved %	...			84.9		108		
Oxygen Dissolved	...			6.92		9.53		
pH (unitless)	...	8.56	9.24	9.57	9.67	9.89	9.78	9.94
Redox Potential mV	...	132	58.6	-63.7	-61.7	67.8	-10.1	
Salinity ppt	...	0.67	0.77	2.87	0.84	0.96	1.02	
Specific Conductivity µS/cm	...	1342	1528	5272	1657	1891	2013	
Temperature °C	...	20.1	19.1	24.6	23.1	21.3	25.3	15.6
Total Dissolved Solids	...	872	993	3459	1077	1229	1310	
Turbidity NTU	...	1.7						
Physical Tests								
Acidity to pH 8.3 (as CaCO3)	1	1.1						
Alkalinity (Total as CaCO3)	1 to 2	160	179	208	205	204	181	197
Bicarbonate Alkalinity	1 to 2	160	167	162	105	85	55.1	73.6
Carbonate Alkalinity	1 to 2	<2	12.6	45.7	99.4	119	126	124
Color TCU	5							
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	566	675	746	806	866	891	891
Hydroxide Alkalinity	1 to 2	<2	<1	<1	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1	8.23	8.53	8.97	9.53	9.68	9.81	9.62
Specific Conductivity µS/cm	2	1330	1530	1690	1770	1930	1980	2040
Total Dissolved Solids	1 to 2	979	1150	1250	982	1520	1770	1680
Total Suspended Solids	3	14	3.3	3.1	8	5.4	6	9.7
Turbidity NTU	0.1	1.98	1.52	1.14	1.48	1.5	1.8	2.3
Dissolved Anions								
Bromide	0.05 to 2.495	<0.5	<0.5	<0.5	<1	<1	<1	<1
Chloride	0.5 to 1	8.4	11	10	12	13	15	14
Fluoride	0.02 to 0.4	0.039	0.043	0.053	0.036	0.053	0.051	0.054
Sulphate	0.5 to 1	616	739	818	917	972	1030	1100
Nutrients								
Ammonia (Total)	0.005 to 0.05	0.0566	0.0985	0.0222	0.0357	0.029	0.0284	0.0314
Nitrate (as N)	0.005 to 0.1	<0.05	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Nitrite (as N)	0.001 to 0.02	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02
Nitrogen (Dissolved)	0.05 to 0.1							
Nitrogen (Total)	0.0025 to 0.11							
Nitrogen Kjeldahl (Total)	0.05 to 0.2	1.79	1.76	1.93	1.63	1.76	2.21	1.92
Orthophosphate (Dissolved)	0.001 to 0.01	1.28	1.41	1.5	0.447	0.394	0.199	0.258
Phosphorus - Dissolved	0.002 to 0.02	1.52	1.77	1.48	0.567	0.44	0.306	0.368
Phosphorus - Total	0.002 to 0.02	1.56	1.76	1.53	0.692	0.558	0.304	0.368
Cyanide								
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals								
Aluminum	0.001 to 0.025	0.0108	0.0055	0.0024	0.0016	0.0029	0.0014	<0.001
Antimony	0.0001 to 0.0025	0.00028	0.00027	0.00028	0.00027	0.00033	0.00034	0.00037
Arsenic	0.0001 to 0.0025	0.00292	0.00282	0.00296	0.00286	0.00368	0.00365	0.00338
Barium	5E-005 to 0.02	0.0198	0.0208	0.0221	0.0181	0.0177	0.00809	0.00281
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.064	0.074	0.086	0.086	0.067	0.067	0.063
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	76.8	90	104	106	113	120	114
Chromium	0.0001 to 0.018	<0.0001	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015	0.00024	0.00024	0.00021	0.0002	0.00019	0.00018	0.00015
Copper	0.0002 to 0.006	0.00183	0.00121	0.00097	0.0009	0.00091	0.00117	0.00071
Dissolved Cadmium (by saltwater extraction)	0.00002							
Iron	0.01 to 0.03	0.08	0.076	0.034	0.014	0.011	<0.01	<0.01
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00099	0.00149	0.00124	0.00151	0.00215	0.00241	0.0021
Magnesium	0.1	90.9	109	118	131	141	144	147
Manganese	5E-005 to 0.0015	0.0786	0.0395	0.0333	0.0118	0.0219	0.0212	0.0153
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00375	0.00304	0.00347	0.00317	0.00379	0.00413	0.00437
Nickel	0.0005 to 0.005	0.00137	0.00135	0.00141	0.0012	0.00134	0.00125	0.00126
Phosphorus	0.05 to 0.3	1.39	1.69	1.51	0.544	0.527	0.321	0.328
Potassium	0.05 to 2	29.3	32.8	41.2	40.5	50.1	45.9	51.2
Selenium	0.0001 to 0.006	0.00021	0.00022	0.00022	0.00023	0.00027	0.00027	0.00027
Silicon	0.05	4.45	1.25	0.16	0.525	0.448	1.65	2.99
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	88.6	102	115	116	134	161	162
Strontium	0.0001 to 0.005	1.04	1.02	1.4	1.32	1.53	1.59	1.65
Sulphur	0.5	199	220	267	285	309	319	349
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.000473	0.000402	0.00052	0.000525	0.000675	0.000719	0.000711
Vanadium	0.001 to 0.03	0.0028	0.0021	0.0023	0.0025	0.003	0.0033	0.0024
Zinc	0.001 to 0.006	0.001	0.0026	<0.001	<0.001	<0.001	0.0011	0.0013
Total Metals								
Aluminum	0.003 to 0.025	0.0579	0.021	0.0108	0.0046	0.0089	0.0148	0.0628
Antimony	0.0001 to 0.0025	0.00031	0.00034	0.00029	0.00028	0.00031	0.00035	0.00037
Arsenic	0.0001 to 0.0025	0.00298	0.00298	0.00305	0.003	0.00347	0.00364	0.00325
Barium	5E-005 to 0.02	0.0204	0.0209	0.0221	0.0181	0.0168	0.00892	0.00369
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.067	0.087	0.098	0.083	0.068	0.074	0.067
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	76.2	89	98.7	104	104	119	109
Chromium	0.0001 to 0.005	0.00028	0.00026	0.00021	0.00013	0.00013	0.00013	0.00022
Cobalt	0.0001 to 0.0015	0.00029	0.00025	0.00022	0.0002	0.00019	0.00022	0.00019
Copper	0.0005 to 0.007	0.00241	0.00147	0.00112	0.001	0.00101	0.00142	0.00117
Iron	0.01 to 0.03	0.161	0.111	0.048	0.022	0.019	0.026	0.078
Lead	5E-005 to 0.0025	0.000066	0.000091	<0.00005	<0.00005	<0.00005	<0.00005	0.000051
Lithium	0.0005 to 0.025	0.00115	0.00152	0.00128	0.00145	0.00184	0.00242	0.00208
Magnesium	0.1	91.8	105	116	127	130	146	140
Manganese	5E-005 to 0.0015	0.0906	0.046	0.044	0.0184	0.0287	0.032	0.02
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00407	0.0037	0.00361	0.00324	0.00364	0.00462	0.00439
Nickel	0.0005 to 0.005	0.00151	0.00147	0.00144	0.00132	0.00138	0.00135	0.00138
Phosphorus	0.05 to 0.3	1.54	1.69	1.52	0.653	0.553	0.41	0.36
Potassium	0.05 to 2	29.1	31.7	38.4	39.2	43.7	45.9	48.6
Selenium	0.0001 to 0.006	0.00024	0.00023	0.00025	0.00021	0.00025	0.00029	0.00027
Silicon	0.05	4.62	1.32	0.198	0.551	0.421	1.74	3.05
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	91.7	105	116	113	129	163	156
Strontium	0.0001 to 0.005	1.08	1.12	1.39	1.29	1.44	1.64	1.61
Sulphur	0.5	199	222	264	282	283	330	333
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002							
Uranium	1E-005 to 0.001	0.000501	0.000474	0.000548	0.000554	0.000658	0.000807	0.000742
Vanadium	0.001 to 0.03	0.0029	0.0023	0.0025	0.0026	0.0031	0.0034	0.0025
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics								
Carbon Organic (Dissolved)	0.5 to 5	14.8	16.3	21.3	18.4	20.8	22.3	21.9
Carbon Organic (Total)	0.5 to 5	15.7	16.2	19.9	17.9	20.9	22.7	22.3
Nitrogen Organic (Dissolved)	0.05 to 0.26							
Nitrogen Organic (Total)	0.05 to 0.3							
ALS LAB ID		**L1466704**	**L1473820**	**L1481825**	**L1488139**	**L1494516**	**L1502299**	**L1511699**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C3.25 - NSP
PAGE 1 OF 2

Site ID		NSP	NSP	NSP	NSP	NSP	NSP	NSP	NSP	NSP	NSP	NSP	NSP
Analytes	MDL	31-Aug-10	28-Sep-11	25-Apr-12	2-May-12	10-Jul-12	7-Aug-12	12-Oct-12	6-Nov-12	5-Jun-13	3-Jul-13	7-Aug-13	5-Sep-13
In Situ Parameters													
Conductivity µS/cm	...	4343		4458	3914		5200	4123	618	5210	5496	5732	
Oxygen Dissolved %	...	96		94.9	73.3			77.6					
Oxygen Dissolved	...	9.77		8.71	7.51			8.77					
pH (unitless)	...	8.97	9.21	8.84	9.03		9.22	9.36	9.43	9.16	9.3	9.3	9.15
Redox Potential mV	...	-6.4	-112	142	146		58.9	-276	-94.1	94.2	39.7	130	64
Salinity ppt	...	0.00301		2.73	2.71		2.35	3.22	0.48	3.09	3.14	3.26	3.53
Specific Conductivity µS/cm	...	5533	4082	5065	5021		5297	5906	974	5687	5780	5989	6441
Temperature °C	...	13.7	14.8	18.6	13.4		24	9.2	6.2	20.7	22.4	22.8	18.4
Total Dissolved Solids	...	3597		3292	3262		3443	3839	628	3697	3758	3893	4186
Turbidity NTU	...		2.4	23.5	3.5		1.6	6.8	8.4	2.9	0	0.3	
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1		<1					<1	<1				<1
Alkalinity (Total as CaCO3)	1 to 2	1310	1240	1080	1110	1210	1220	1260	1300	1210	1210	1210	1400
Bicarbonate Alkalinity	1 to 2		775	727	777	749	617	642	714	661	617	603	723
Carbonate Alkalinity	1 to 2		465	357	330	456	601	615	588	550	591	610	676
Color TCU	5	47.7	36.8	50.1	47.4	35.8	34.6	35.4	35.6	35.2	31.2	29.6	29.1
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	2550	2480	2350	2310	2540	2490	2790	2710	2580	2590	2720	3000
Hydroxide Alkalinity	1 to 2		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1	8.93	9.11	9.01	8.94	9.11	9.28	9.22	9.2	9.16	9.28	9.29	9.28
Specific Conductivity µS/cm	2	5280	5430	4920	4970	5130	5160	5640	5770	5630	5600	5770	6160
Total Dissolved Solids	1 to 2	4760	4460	4570	4740	4990	4860	5160	5590	5250	5180	5330	6090
Total Suspended Solids	3	24.5	6.7	19.3	7.7	6.2	8.5	4.8	91	18.9	9	11	12.6
Turbidity NTU	0.1	8.81		3.71	1.28	1.07	1.35	1.84	21.7	3.53	0.78	0.67	0.99
Dissolved Anions													
Bromide	0.05 to 2.495	<2.5	<2.5	<1	<1	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	1.5
Chloride	0.5 to 1	43	48	49	50	49	49	54	55	50	59	54	72
Fluoride	0.02 to 0.4	<1	<1	<0.4	<0.4	<1	<1	<1	<1	1.2	<1	<1	<0.4
Sulphate	0.5 to 1	2530	2700	2460	2490	2640	2690	3010	3060	2970	2910	3200	3310
Nutrients													
Ammonia (Total)	0.005 to 0.05	0.084	0.178	0.348	0.75	0.0849	0.0734	0.136	0.049	0.12	0.0883	0.101	0.114
Nitrate (as N)	0.005 to 0.1	<0.25	<0.25	0.12	<0.1	<0.25	<0.25	<0.25	0.33	<0.25	<0.25	<0.25	0.12
Nitrite (as N)	0.001 to 0.02	<0.05	<0.05	<0.02	0.034	<0.05	<0.05	<0.05	0.052	<0.05	<0.05	<0.05	0.036
Nitrogen (Dissolved)	0.05 to 0.1		4.82	4.55	4.84	5.07	6.04	5.25	4.25			4.78	
Nitrogen (Total)	0.0025 to 0.11	4.97	4.92	5.63	5.47	4.28	4.39	5.26	6.56	4.82	0.95	4.92	20.8
Nitrogen Kjeldahl (Total)	0.05 to 0.2	4.67	4.92	5.51	5.43	4.28	4.39	5.26	6.18	1.01	0.947	5.27	5.36
Orthophosphate (Dissolved)	0.001 to 0.01	0.904	0.305	0.49				0.0376	0.0148	0.322	0.183		0.0952
Phosphorus - Dissolved	0.002 to 0.02	0.975	0.438	0.611	0.689	0.827	0.551	0.141	0.13	0.515	0.317	0.276	0.276
Phosphorus - Total	0.002 to 0.02	1.1	0.441	0.662	0.911	0.838	0.572	0.175	0.319	0.502	0.345	0.298	0.273
Cyanide													
Cyanide (Free)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01
Cyanide (Total)	0.005	0.014	0.0174	<0.005	0.012	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01
Cyanide (WAD)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01
Dissolved Metals													
Aluminum	0.001 to 0.025	<0.05	<0.05	<0.015	<0.015	<0.005	<0.005	<0.005	<0.005	0.0069	<0.005	<0.005	<0.005
Antimony	0.0001 to 0.0025	<0.005	<0.005	<0.0005	<0.0005	0.00057	0.00084	0.00073	0.00074	0.0008	0.00085	0.00124	0.00136
Arsenic	0.0001 to 0.0025	0.0103	0.0106	0.00775	0.00798	0.0087	0.0109	0.0113	0.0125	0.0115	0.0126	0.0156	0.016
Barium	5E-005 to 0.02	0.208	0.098	0.0503	0.0574	0.0282	0.0183	0.0138	0.019	0.0404	0.0181	0.0272	0.0203
Beryllium	0.0001 to 0.005	<0.01	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Bismuth	0.0005 to 0.2		<0.2	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Boron	0.01 to 0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Cadmium	1E-005 to 8.5E-005	<0.00017	0.00036	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Calcium	0.05 to 0.1	54.1	26.6	22.2	23.5	33.3	31.1	21.4	19.1	24.4	28.3	25.6	24.5
Chromium	0.0001 to 0.018	<0.01	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Cobalt	0.0001 to 0.0015	<0.003	<0.003	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Copper	0.0002 to 0.006	<0.01	<0.01	<0.0025	<0.0025	0.001	<0.001	<0.001	<0.001	0.0013	<0.001	0.001	<0.001
Dissolved Cadmium (by saltwater extraction)	0.00002												
Iron	0.01 to 0.03	<0.03	<0.03	<0.03	0.031	<0.05	<0.05	<0.05	0.014	0.014	<0.01	<0.02	<0.02
Lead	5E-005 to 0.0025	<0.005	<0.005	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025
Lithium	0.0005 to 0.025	<0.05	<0.05	<0.0025	0.003	0.0032	0.0028	0.004	0.003	0.0036	<0.0025	0.0026	0.0038
Magnesium	0.1	586	586	557	546	596	586	664	648	611	613	646	715
Manganese	5E-005 to 0.0015	0.0654	0.0665	0.138	0.165	0.0113	0.0446	0.0879	0.0935	0.0872	0.0101	0.0299	0.0627
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.021	0.025	0.022	0.022	0.0239	0.0226	0.0233	0.0223	0.017	0.0179	0.0175	0.0166
Nickel	0.0005 to 0.005	<0.01	<0.01	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Phosphorus	0.05 to 0.3		0.4	0.63	0.69	0.71	0.57	<0.3	0.153	0.481	0.325	0.3	0.24
Potassium	0.05 to 2	105	106	92.1	89.3	101	113	121	122	115	110	117	131
Selenium	0.0001 to 0.006	<0.01	<0.01	0.00089	0.00088	0.00083	0.00095	0.00057	0.0009	0.00106	0.0009	0.001	0.00086
Silicon	0.05		0.383	2.3	2.74	0.556	1.06	2.57	3.06	4.42	5.16	4.77	4.94
Silver	1E-005 to 0.0001	<0.0002	<0.0002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Sodium	0.05 to 2	578	630	549	530	586	635	696	747	613	631	754	744
Strontium	0.0001 to 0.005		3.63	3.07	3.06	3.41	3.76	3.93	3.69	3.54	3.45	3.92	3.99
Sulphur	0.5								0.913	844	839	982	1050
Thallium	1E-005 to 0.001	<0.002	<0.002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Tin	0.0001 to 0.0025	<0.005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05
Uranium	1E-005 to 0.001	0.0068	0.0067	0.00582	0.00579	0.00606	0.00576	0.00568	0.00533	0.00512	0.005	0.00509	0.00496
Vanadium	0.001 to 0.03	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Zinc	0.001 to 0.006	<0.005	<0.005	<0.015	<0.015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Metals													
Aluminum	0.003 to 0.025	0.067	<0.05	0.078	0.066	0.016	0.022	0.068	0.115	0.08	<0.015	0.133	<0.015
Antimony	0.0001 to 0.0025	<0.005	<0.005	<0.0005	<0.0005	0.00058	0.00107	0.00081	0.00076	0.00084	0.00101	0.00132	0.00141
Arsenic	0.0001 to 0.0025	0.0107	0.0103	0.00801	0.00796	0.00869	0.011	0.0112	0.0124	0.0118	0.0138	0.016	0.0159
Barium	5E-005 to 0.02	0.184	0.088	0.0535	0.0617	0.028	0.0196	0.0154	0.0215	0.0421	0.0194	0.0291	0.0238
Beryllium	0.0001 to 0.005	<0.01	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Bismuth	0.0005 to 0.2		<0.2	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Boron	0.01 to 0.1	<0.1	<0.1	<0.05	0.057	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Cadmium	1E-005 to 8.5E-005	<0.00017	0.0003	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Calcium	0.05 to 0.1	55.3	26.4	22.5	23.3	33.6	30.9	22	19.3	24.3	28.6	27.5	25.6
Chromium	0.0001 to 0.005	<0.01	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Cobalt	0.0001 to 0.0015	<0.003	<0.003	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Copper	0.0005 to 0.007	<0.01	<0.01	<0.0025	<0.0025	<0.0025	<0.0025	0.0036	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Iron	0.01 to 0.03	0.063	<0.03	0.089	0.082	<0.05	<0.05	0.078	0.095	0.077	0.014	0.103	<0.02
Lead	5E-005 to 0.0025	<0.005	<0.005	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025
Lithium	0.0005 to 0.025	<0.05	<0.05	<0.0025	0.0029	0.0035	0.0028	0.004	0.0032	0.0044	0.0027	0.0028	0.0046
Magnesium	0.1	590	580	561	528	590	584	668	654	604	624	675	741
Manganese	5E-005 to 0.0015	0.0914	0.0689	0.146	0.179	0.0203	0.0516	0.096	0.105	0.0984	0.0158	0.0372	0.0683
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.022	0.025	0.0229	0.0232	0.0234	0.0228	0.0244	0.0267	0.0177	0.019	0.0181	0.0172
Nickel	0.0005 to 0.005	<0.01	<0.01	<0.0025	<0.0025	<0.0025	<0.0025	0.0026	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Phosphorus	0.05 to 0.3		0.41	0.65	0.72	0.7	0.57	<0.3	0.208	0.479	0.34	0.35	0.26
Potassium	0.05 to 2	105	105	92.9	90.9	98.4	110	120	120	109	110	126	135
Selenium	0.0001 to 0.006	<0.01	<0.01	0.00099	0.00092	0.0008	0.00095	0.00068	0.00098	0.001	0.0009	0.00098	0.00086
Silicon	0.05		0.417	2.57	2.78	0.572	1.1	2.81	3.37	4.67	5.36	5.43	5.24
Silver	1E-005 to 0.0001	<0.0002	<0.0002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Sodium	0.05 to 2	580	624	555	540	583	645	689	760	617	691	761	782
Strontium	0.0001 to 0.005		3.59	3.19	3.18	3.36	3.83	4.05	3.83	3.58	3.87	4.16	4.09
Sulphur	0.5								941	873	885	1050	1120
Thallium	1E-005 to 0.001	<0.002	<0.002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Tin	0.0001 to 0.0025	<0.005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05
Total Cadmium (by saltwater extraction)	0.00002												
Uranium	1E-005 to 0.001	0.0071	0.0067	0.00612	0.00612	0.00573	0.0058	0.00587	0.00588	0.00531	0.00529	0.00523	0.00523
Vanadium	0.001 to 0.03	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Zinc	0.003 to 0.006	<0.005	0.0062	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Organics													
Carbon Organic (Dissolved)	0.5 to 5	57.4	12.2	53.4	54.4	54.6	54.9	64	59.9	64.8	64.8	27.2	62.8
Carbon Organic (Total)	0.5 to 5		12.1	53.1	54.7	53.8	55	65	59.8	62.1	64.5	28.1	63.7
Nitrogen Organic (Dissolved)	0.05 to 0.26		4.64	4.08	4.06	4.99	5.97	5.11	3.82				
Nitrogen Organic (Total)	0.05 to 0.3		4.74	5.16	4.69	4.19	4.32	5.13	6.13				
ALS LAB ID		L927439	L1066047	L1140194	L1142492	L1176520	L1190914	L1223406	I1234688	L1312719	L1327102	L1344180	L1358626

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		NSP	NSP	NSP	NSP	NSP	NSP	NSP	NSP	NSP	NSP	
Analytes	MDL	9-Oct-13	7-Nov-13	8-Jan-14	4-Feb-14	10-Apr-14	8-May-14	5-Jun-14	2-Jul-14	28-Jul-14	2-Sep-14	
In Situ Parameters												
Conductivity µS/cm	...	4.36	2375	3969	4485	2058	2932	3693	4504	4654		
Oxygen Dissolved %	...	66	60	6.62	8	18.4		27.6	86.4	8.92	107	41.6
Oxygen Dissolved	...	7.42	8.07	47.1	1.07	2.63		2.83	8.28	7.72	9.29	4.24
pH (unitless)	...	9.23	9.16	9.05	8.98	9.42	9.48	9.5	9.43	9.3	9.16	
Redox Potential mV	...	-67.5	126	-195	-47.6	-42.2	83.4	55.6	57.9	125		
Salinity ppt	...	2.33	2.18	4.09	3.67	1.5	2.01	2.36	2.57	2.69		
Specific Conductivity µS/cm	...	3.04	4165	7629	6904	2878	3785	400	4796	5008		
Temperature °C	...	9.8	2.49	-0.1	-0.44	10.9	13.2	16.6	21.8	21.3	16.9	
Total Dissolved Solids	...	2835	2708	4956	4481	1871	2457	2860	3117	3255		
Turbidity NTU	...	9.8	3.7	3.7								
Physical Tests												
Acidity to pH 8.3 (as CaCO3)	1											
Alkalinity (Total as CaCO3)	1 to 2	1390	1310	1510	1520	546	708	883	989	1060	1120	
Bicarbonate Alkalinity	1 to 2	890	864	1040	1210	322	353	444	518	578	721	
Carbonate Alkalinity	1 to 2	503	447	477	306	224	355	439	471	483	398	
Color TCU	5	33.9		35.4								
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	3030	2970	3480	3610	1230	1590	1910	2130	2220	2210	
Hydroxide Alkalinity	1 to 2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	
pH (unitless)	0.01 to 0.1	9.09	8.94	8.85	8.87	9.32	9.21	9.25	9.27	9.22	8.99	
Specific Conductivity µS/cm	2	6510	6320	7170	7400	2830	3740	4190	4610	5060	5150	
Total Dissolved Solids	1 to 2	5890	5970	7200	7290	2540	3390	3940	4160	4590	4750	
Total Suspended Solids	3	15.3	4.7	<3	8.7	17	9.1	3.4	9	9.2	10.5	
Turbidity NTU	0.1	6.1	2.88	2.78	24.8	7.45	1.22	0.68	3.1	1.18	4.2	
Dissolved Anions												
Bromide	0.05 to 2.495	<2.5	<2.5	<2.5	<2.5	<1	<1	1.1	1.2	1.6	<2.5	
Chloride	0.5 to 1	61	61	89	95	30	34	38	41	50	47	
Fluoride	0.02 to 0.4	1	<1	<1	<1	<0.4	<0.4	0.056	0.058	0.065	0.07	
Sulphate	0.5 to 1	3500	3280	3970	4010	1360	1870	2160	2390	2680	2710	
Nutrients												
Ammonia (Total)	0.005 to 0.05	0.843	2.17	2.72	3.68	0.0382	0.0913	0.0985	0.0814	0.0994	0.064	
Nitrate (as N)	0.005 to 0.1	<0.25	<0.25	<0.25	0.34	<0.1	<0.1	<0.1	<0.1	4.32	<0.25	
Nitrite (as N)	0.001 to 0.02	<0.05	0.06	<0.05	<0.05	<0.02	<0.02	<0.02	<0.02	0.027	<0.05	
Nitrogen (Dissolved)	0.05 to 0.1											
Nitrogen (Total)	0.0025 to 0.11	7.05	7.57									
Nitrogen Kjeldahl (Total)	0.05 to 0.2	7.13	8.98	8.95	12.5	15.3	3.25	3.5	4.25	4.3	5.15	
Orthophosphate (Dissolved)	0.001 to 0.01	0.381	0.551	0.701	0.751	0.24	0.257	0.218	0.208	0.301	0.382	
Phosphorus - Dissolved	0.002 to 0.02	0.572	0.716	0.827	1	0.331	0.401	0.332	0.332	0.408	0.602	
Phosphorus - Total	0.002 to 0.02	0.606	0.732	0.883	1.06	0.613	0.43	0.347	0.35	0.422	0.602	
Cyanide												
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Dissolved Metals												
Aluminum	0.001 to 0.025	<0.005	<0.005	<0.005	<0.005	0.0172	<0.002	<0.002	0.0023	<0.002	0.0034	
Antimony	0.0001 to 0.0025	0.00136	0.00125	0.001	0.00117	0.00048	0.00064	0.0008	0.00102	0.00124	0.00133	
Arsenic	0.0001 to 0.0025	0.0186	0.0161	0.0168	0.0169	0.00697	0.00966	0.0108	0.013	0.0164	0.0151	
Barium	5E-005 to 0.02	0.0325	0.0334	0.0399	0.0422	0.0271	0.037	0.0398	0.0438	0.0521	0.0563	
Beryllium	0.0001 to 0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Bismuth	0.0005 to 0.2	<0.0025	<0.0025	<0.0025	<0.0025	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	
Boron	0.01 to 0.1	<0.05	<0.05	<0.05	<0.05	0.029	0.032	0.021	0.021	0.021	0.048	
Cadmium	1E-005 to 8.5E-005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	
Calcium	0.05 to 0.1	25.4	24.7	29.8	31.1	23.5	32.5	33.8	34	34.7	35.3	
Chromium	0.0001 to 0.018	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Cobalt	0.0001 to 0.0015	<0.0005	<0.0005	<0.0005	<0.0005	0.00016	0.00021	0.00023	0.00025	<0.0002	<0.0002	
Copper	0.0002 to 0.006	<0.001	<0.001	<0.001	<0.001	0.00226	0.00278	0.00208	0.00153	0.00109	0.00074	
Dissolved Cadmium (by saltwater extraction)	0.00002						<0.00002	<0.00002	<0.00002	<0.00002		
Iron	0.01 to 0.03	0.024	0.019	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Lead	5E-005 to 0.0025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00005	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	
Lithium	0.0005 to 0.025	0.004	0.0027	0.0059	0.0041	0.00246	0.0024	0.0028	0.0037	0.0029	0.0033	
Magnesium	0.1	719	707	827	858	284	366	442	498	517	514	
Manganese	5E-005 to 0.0015	0.0878	0.0896	0.112	0.113	0.0452	0.0365	0.00885	0.0247	0.0416	0.106	
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
Molybdenum	5E-005 to 0.005	0.0209	0.0195	0.0177	0.0156	0.00973	0.0126	0.0131	0.014	0.0143	0.0122	
Nickel	0.0005 to 0.005	<0.0025	<0.0025	<0.0025	<0.0025	0.0009	<0.001	0.0011	0.0011	0.001	<0.001	
Phosphorus	0.05 to 0.3	0.511	0.677	0.79	0.84	0.337	0.452	0.343	0.341	0.435	0.453	
Potassium	0.05 to 2	137	127	143	147	52.4	68.3	79.6	90.8	96.4	97.1	
Selenium	0.0001 to 0.006	0.00106	0.00099	0.00077	0.00163	0.00144	0.0019	0.00154	0.00147	0.00186	0.00135	
Silicon	0.05	6.3	6.36	7.25	7.5	4.48	4.66	4.1	3.33	5.53	7.01	
Silver	1E-005 to 0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	
Sodium	0.05 to 2	752	689	846	876	295	395	445	527	588	1030	
Strontium	0.0001 to 0.005	4.23	4.03	4.86	5.1	1.82	2.36	2.72	3.02	3.43	3.29	
Sulphur	0.5	1030	961	1220	1370	443	553	658	723	751	799	
Thallium	1E-005 to 0.001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Titanium	0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	
Uranium	1E-005 to 0.001	0.00561	0.00573	0.00629	0.00662	0.00264	0.0035	0.00398	0.00431	0.00437	0.00379	
Vanadium	0.001 to 0.03	<0.005	<0.005	<0.005	<0.005	0.0031	0.0036	0.0036	0.0035	0.0024	<0.002	
Zinc	0.001 to 0.006	<0.005	<0.005	<0.005	<0.005	0.0012	<0.002	<0.002	<0.002	<0.002	<0.002	
Total Metals												
Aluminum	0.003 to 0.025	0.218	0.075	<0.015	<0.015	0.0534	0.0247	0.02	0.0476	0.0202	0.0163	
Antimony	0.0001 to 0.0025	0.00142	0.0012	0.00109	0.00131	0.00047	0.00066	0.00085	0.00108	0.00127	0.00135	
Arsenic	0.0001 to 0.0025	0.0175	0.0161	0.0172	0.0181	0.00684	0.00889	0.0109	0.0128	0.0142	0.0164	
Barium	5E-005 to 0.02	0.0355	0.0353	0.0402	0.0414	0.0273	0.0369	0.0418	0.0443	0.0499	0.059	
Beryllium	0.0001 to 0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Bismuth	0.0005 to 0.2	<0.0025	<0.0025	<0.0025	<0.0025	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	
Boron	0.01 to 0.1	<0.05	<0.05	<0.05	0.055	0.033	0.035	0.024	0.026	0.021	0.05	
Cadmium	1E-005 to 8.5E-005	<0.00005	<0.00005	<0.00005	<0.00005	0.000012	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	
Calcium	0.05 to 0.1	24.8	24.2	30.8	32.4	22.5	32.5	34.1	34	34.7	38	
Chromium	0.0001 to 0.005	<0.0005	<0.0005	<0.0005	<0.0005	0.00023	<0.0002	<0.0002	0.00021	<0.0002	<0.0002	
Cobalt	0.0001 to 0.0015	<0.0005	<0.0005	<0.0005	<0.0005	0.00025	0.00024	0.00026	0.00026	<0.0002	<0.0002	
Copper	0.0005 to 0.007	<0.0025	<0.0025	<0.0025	<0.0025	0.0034	0.003	0.0026	0.0021	0.0015	<0.001	
Iron	0.01 to 0.03	0.212	0.081	0.031	0.041	0.062	0.023	0.043	0.046	0.024	0.016	
Lead	5E-005 to 0.0025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Lithium	0.0005 to 0.025	0.0041	0.0028	0.0048	0.0045	0.00236	0.0026	0.0027	0.0039	0.0027	0.0042	
Magnesium	0.1	694	669	866	883	259	367	445	500	518	553	
Manganese	5E-005 to 0.0015	0.105	0.0987	0.114	0.119	0.0722	0.0408	0.0156	0.0289	0.0443	0.119	
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
Molybdenum	5E-005 to 0.005	0.0212	0.0196	0.0178	0.0186	0.00915	0.0131	0.0139	0.0145	0.0137	0.0131	
Nickel	0.0005 to 0.005	<0.0025	<0.0025	<0.0025	<0.0025	0.00113	0.001	0.0011	0.0011	0.0011	<0.001	
Phosphorus	0.05 to 0.3	0.527	0.672	0.86	0.9	0.502	0.417	0.343	0.326	0.42	0.56	
Potassium	0.05 to 2	128	120	148	155	49.5	67.6	79.8	86.4	94.7	103	
Selenium	0.0001 to 0.006	0.00097	0.00108	0.00091	0.00077	0.00153	0.0017	0.00162	0.00164	0.00168	0.00164	
Silicon	0.05	6.64	6.4	7.5	7.88	4.43	4.67	4.15	3.5	5.59	7.62	
Silver	1E-005 to 0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	
Sodium	0.05 to 2	759	688	857	905	285	393	473	524	541	586	
Strontium	0.0001 to 0.005	4.37	4.07	4.75	5.51	1.73	2.4	2.86	3.08	3.22	3.75	
Sulphur	0.5	1050	982	1280	1340	412	560	665	767	796	858	
Thallium	1E-005 to 0.001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Titanium	0.01	<0.05	<0.05	<0.05	<0.05	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	
Total Cadmium (by saltwater extraction)	0.00002						<0.00002	<0.00002	<0.00002	<0.00002		
Uranium	1E-005 to 0.001	0.00593	0.00574	0.00647	0.00699	0.00214	0.00354	0.00432	0.00438	0.00429	0.0042	
Vanadium	0.001 to 0.03	<0.005	<0.005	<0.005	<0.005	0.0035	0.0037	0.0039	0.0036	0.0023	<0.002	
Zinc	0.003 to 0.006	<0.015	<0.015	<0.015	<0.015	<0.003	<0.006	<0.006	<0.006	<0.006	<0.006	
Organics												
Carbon Organic (Dissolved)	0.5 to 5	48.7	65.8	74.5	85.4	31.8	38.6	47.2	47.5	54	55.4	
Carbon Organic (Total)	0.5 to 5	55	67.9	75.2	79.9	32.8	42.9	48.2	47.6	53.3	54.7	
Nitrogen Organic (Dissolved)	0.05 to 0.26											
Nitrogen Organic (Total)	0.05 to 0.3											
ALS LAB ID		L1375698	L1389979	L1410216	L1418933	L1442672	L1453031	L1466627	L1481215	L1494516	L1511703	

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C3.26 - PC02
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Site ID		PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02
Analytes	MDL	28-Apr-08	7-Jul-08	6-Sep-08	29-Mar-11	14-Apr-11	21-Apr-11	28-Apr-11	5-May-11	12-May-11	30-May-11	28-Jun-11
In Situ Parameters												
Conductivity µS/cm	...	1376	1118	969	968	1095	1226	1192	1316	1089	961	916
Oxygen Dissolved %	...	92.4	90.7	85.5	77.2	70.5	73.2	64.7	74.3	85.7	63.6	81.7
Oxygen Dissolved	...	10.7	9.52	9.41	10	9.45	10.3	8.45	8.91	10.1	6.77	8.3
pH (unitless)	...		8.08	7.79	7.89	7.34	7.67	7.57	7.58	7.69	7.14	7.88
Redox Potential mV	...		-102	-70.3	122	154	65.8	106	128	62.8	326	183
Salinity ppt	...						1.15	1.01	1.02	0.82	0.64	0.57
Specific Conductivity µS/cm	...	1993	1451	1326	1608	1896	2276	2000	1997	1618	1266	1146
Temperature °C	...	8.79	13	10.9	4.14	2.89	1.07	3.84	7.14	7.87	12.4	14.5
Total Dissolved Solids	...				1050	1230	1476	1300	1298	1050	823	745
Turbidity NTU	...										37.9	45
Physical Tests												
Acidity to pH 8.3 (as CaCO3)	1											
Alkalinity (Total as CaCO3)	1 to 2	421	413	446	395	448	448	437	430	394	327	333
Bicarbonate Alkalinity	1 to 2						448					
Carbonate Alkalinity	1 to 2						<2					
Color TCU	5	7.7	22	8.3	15.1	8.7	8.1	6.6	6.3	22.3	23.2	31.7
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	931	654	780	753	866	880	914	917	1040	540	486
Hydroxide Alkalinity	1 to 2						<2					
pH (unitless)	0.01 to 0.1	8.12	8.33	8.3	8.12	8.2	8.11	8.1	8.22		8.18	8.33
Specific Conductivity µS/cm	2	1990	1450	1850	1580	1880	1880	1880	1920	2230	1230	1070
Total Dissolved Solids	1 to 2	1420	999	1320	1120	1370	1410	1380	1370	1710	782	714
Total Suspended Solids	3	19.3	15.3	4.7	<3	3.2	4.7	<3	3.3	7	99.5	14.4
Turbidity NTU	0.1	0.71	5.64	2.29	1.19	1.08	2.07	0.75	1.2	2.81		5.65
Dissolved Anions												
Bromide	0.05 to 2.495	<0.5	0.067	0.077	<2.1	<2.5	<1	<1	<1	<1	<1	<0.5
Chloride	0.5 to 1	125	80.1	113	86.5	132	133	130	142	129	78	65.1
Fluoride	0.02 to 0.4	0.24	0.243	0.244	<0.2	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	0.33
Sulphate	0.5 to 1	582	324	476	422	499	523	485	507	775	256	192
Nutrients												
Ammonia (Total)	0.005 to 0.05	0.021	0.021	0.041	0.0248	0.0197	0.0196	0.0233	0.0178	0.0163	0.0344	0.0269
Nitrate (as N)	0.005 to 0.1	0.442	0.0931	0.167	0.408	0.47	0.36	0.37	0.37	0.36	<0.1	<0.05
Nitrite (as N)	0.001 to 0.02	0.019	0.0011	0.0036	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01
Nitrogen (Dissolved)	0.05 to 0.1							0.81	0.58	1.25	0.79	0.97
Nitrogen (Total)	0.0025 to 0.11				0.916	0.797	0.46	0.751	0.69	1.34	0.79	1.01
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.563	0.637	0.365	0.508	0.331	<0.1	0.382	0.359	0.856	0.79	1.01
Orthophosphate (Dissolved)	0.001 to 0.01	0.0277	0.073		0.0646						0.0548	0.0896
Phosphorus - Dissolved	0.002 to 0.02					0.0323	0.0353	0.0376	0.03	0.125	0.0628	0.092
Phosphorus - Total	0.002 to 0.02	0.0326	0.08		0.0794	0.0369	0.0415	0.0354	0.0365	0.141	0.217	0.117
Cyanide												
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	0.0071		<0.005		<0.005	<0.005	<0.005	<0.005	0.0086	0.0081
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	0.0073		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals												
Aluminum	0.001 to 0.025	<0.025	<0.01	<0.025	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.005
Antimony	0.0001 to 0.0025	<0.0025	<0.001	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005
Arsenic	0.0001 to 0.0025	<0.0025	0.0025	<0.0025	0.0019	0.0017	0.0018	<0.002	0.0017	0.0027	0.0019	0.00287
Barium	5E-005 to 0.02	0.065	0.056	0.056	0.053	0.057	0.058	0.057	0.059	0.074	0.053	0.056
Beryllium	0.0001 to 0.005	<0.005	<0.002	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001
Bismuth	0.0005 to 0.2				<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	1E-005 to 8.5E-005	<0.000085	0.000052	<0.000085	0.000201	0.000039	0.000064	<0.000034	<0.000034	0.000045	0.000045	<0.00003
Calcium	0.05 to 0.1	147	102	132	116	142	141	149	147	148	86.1	78.9
Chromium	0.0001 to 0.018	<0.005	<0.002	<0.005	<0.002	<0.002	<0.003	<0.018	<0.002	<0.002	<0.002	<0.003
Cobalt	0.0001 to 0.0015	<0.0015	<0.0006	<0.0015	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0003
Copper	0.0002 to 0.006	<0.005	0.0028	<0.005	0.0027	0.0021	<0.006	0.002	0.002	<0.006	0.0028	0.0024
Dissolved Cadmium (by saltwater extraction)	0.00002											
Iron	0.01 to 0.03	0.031	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.038	<0.03	<0.03	0.036
Lead	5E-005 to 0.0025	<0.0025	<0.001	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005
Lithium	0.0005 to 0.025	<0.025	<0.01	<0.025	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0073
Magnesium	0.1	137	96.7	110	112	124	128	132	133	163	78.9	70.2
Manganese	5E-005 to 0.0015	0.0589	0.0432	0.117	0.0444	0.107	0.112	0.0984	0.102	0.021	0.189	0.0628
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.011	0.0147	0.0121	0.011	0.0092	0.0086	0.0081	0.0084	0.0138	0.0126	0.0105
Nickel	0.0005 to 0.005	<0.005	0.0029	0.0054	0.0029	0.0044	0.0036	0.0036	0.0039	0.0022	0.0021	0.0029
Phosphorus	0.05 to 0.3				<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	20.4	19	20.4	17.7	20.1	20	20.6	20.7	24.8	16.8	16.1
Selenium	0.0001 to 0.006	<0.005	<0.002	<0.005	<0.002	0.0024	0.0029	<0.006	<0.002	<0.002	<0.002	0.0011
Silicon	0.05				7.89	8.36	8.15	8.71	8.59	8.22	5.94	6.79
Silver	1E-005 to 0.0001	<0.0001	<0.00004	<0.0001	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00002
Sodium	0.05 to 2	109	83.7	101	86.5	108	108	111	114	154	73	66
Strontium	0.0001 to 0.005				1.08	1.24	1.3	1.3	1.34	1.47	0.766	0.712
Sulphur	0.5											
Thallium	1E-005 to 0.001	<0.001	<0.0004	<0.001	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0002
Tin	0.0001 to 0.0025	<0.0025	<0.001	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005
Titanium	0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	0.011	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.0038	0.00234	0.0035	0.00271	0.00325	0.00308	0.00311	0.00329	0.00439	0.00219	0.00158
Vanadium	0.001 to 0.03	<0.005	0.0037	<0.005	0.0031	0.0039	0.0035	<0.006	0.0034	0.0038	0.0033	0.003
Zinc	0.001 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Metals												
Aluminum	0.003 to 0.025	<0.025	0.174	0.043	0.044	0.042	0.072	0.02	0.02	0.146	2.04	0.277
Antimony	0.0001 to 0.0025	<0.0025	<0.001	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005
Arsenic	0.0001 to 0.0025	<0.0025	0.0026	<0.0025	0.0017	0.0016	0.0016	<0.0018	0.0016	0.0026	0.0025	0.00246
Barium	5E-005 to 0.02	0.065	0.054	0.057	0.053	0.059	0.06	0.059	0.062	0.075	0.081	0.055
Beryllium	0.0001 to 0.005	<0.005	<0.002	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001
Bismuth	0.0005 to 0.2				<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	1E-005 to 8.5E-005	<0.000085	0.000058	<0.000085	0.000183	0.000047	0.000072	<0.000034	0.000037	0.000053	0.000071	<0.00004
Calcium	0.05 to 0.1	146	100	132	114	140	141	146	150	144	85.2	79.6
Chromium	0.0001 to 0.005	<0.005	<0.002	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.0055	0.0015
Cobalt	0.0001 to 0.0015	<0.0015	<0.0006	<0.0015	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	0.00187	0.00046
Copper	0.0005 to 0.007	<0.005	0.0045	<0.005	0.0036	0.003	<0.006	0.0027	0.0027	<0.007	0.0119	0.0042
Iron	0.01 to 0.03	0.05	0.249	0.099	0.1	0.089	0.131	0.066	0.079	0.211	2.67	0.43
Lead	5E-005 to 0.0025	<0.0025	<0.001	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005
Lithium	0.0005 to 0.025	<0.025	<0.01	<0.025	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0065
Magnesium	0.1	137	94.1	112	110	128	132	133	137	160	79.1	71.4
Manganese	5E-005 to 0.0015	0.0603	0.0702	0.123	0.0488	0.121	0.127	0.109	0.114	0.0353	0.375	0.0997
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.011	0.0147	0.0119	0.0116	0.0096	0.0093	0.0086	0.0092	0.0144	0.0129	0.0113
Nickel	0.0005 to 0.005	<0.005	0.0043	0.0056	0.003	0.0047	0.0043	0.004	0.0041	0.0026	0.0102	0.0045
Phosphorus	0.05 to 0.3				<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	20.5	18.9	20.6	17.3	20.7	20.3	21.1	21.7	24.6	17.3	16.2
Selenium	0.0001 to 0.006	<0.005	<0.002	<0.005	<0.002	0.0021	0.0026	<0.006	<0.002	<0.002	<0.002	<0.001
Silicon	0.05				7.8	8.5	8.41	8.77	8.89	8.46	11.6	7.8
Silver	1E-005 to 0.0001	<0.0001	<0.00004	<0.0001	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00002
Sodium	0.05 to 2	109	82.6	104	84.9	111	110	113	118	152	73.7	66.8
Strontium	0.0001 to 0.005				1.06	1.28	1.32	1.34	1.39	1.46	0.795	0.723
Sulphur	0.5											
Thallium	1E-005 to 0.001	<0.001	<0.0004	<0.001	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0002
Tin	0.0001 to 0.0025	<0.0025	<0.001	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005
Titanium	0.01	<0.01	0.012	0.012	<0.01	<0.01	0.01	0.011	0.012	0.015	0.098	0.021
Total Cadmium (by saltwater extraction)	0.00002											
Uranium	1E-005 to 0.001	0.0038	0.00237	0.0034	0.00279	0.00349	0.0034	0.00334	0.00352	0.00459	0.00235	0.00172
Vanadium	0.001 to 0.03	<0.005	0.0044	<0.005	0.0033	0.0044	0.004	<0.006	0.0036	0.0043	0.0088	0.004
Zinc	0.003 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0095	<0.005
Organics												
Carbon Organic (Dissolved)	0.5 to 5	6.93	11.2	6.44	9.05	6.52	6.61	5.87	6.83	15.7	13.4	15.7
Carbon Organic (Total)	0.5 to 5					6.52	6.7	5.89	6.62	15.4	13.7	15.9
Nitrogen Organic (Dissolved)	0.05 to 0.26							0.42	0.19	0.877	0.756	0.943
Nitrogen Organic (Total)	0.05 to 0.3					0.311		0.359	0.3	0.839	0.756	0.983
ALS LAB ID		L623545	L652819	L679672	L990459	L995583	L997645	L999654	L1002049	L1005044	L1011001	L1025075

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02
Analytes	MDL	28-Jul-11	30-Aug-11	28-Sep-11	25-Oct-11	5-Dec-11	9-Jan-12	13-Feb-12	6-Mar-12	10-Apr-12	25-Apr-12	2-May-12	9-May-12
In Situ Parameters													
Conductivity µS/cm	...	990	792		1225	1124	1017	1055	559	1042	1138	704	1187
Oxygen Dissolved %	...	77.1		67.7	48.7	64.5	65.8	70.8	73.9	77	85.9	83	82.9
Oxygen Dissolved	...	8.09		7.37	5.66	8.59	8.43	9.42	10.3	9.54	10.1	10.1	9.83
pH (unitless)	...	7.91	8.05	7.64	7.31	7.57	7.54	7.31	8.05	7.6	7.47	7.78	7.81
Redox Potential mV	...	104	138	25.9	76.5	48.2	8.2	69.9	96.9	140	118	145	135
Salinity ppt	...	0.65	0.52		0.91	0.97	0.84	0.91	0.5	0.83	0.85	0.54	0.94
Specific Conductivity µS/cm	...	1284	1041	1913	1786	1925	1665	1816	1030	1637	1679	1085	1850
Temperature °C	...	13	12.5	11.3	8.54	3.22	4.66	3.05	1.05	5.98	8.15	6.59	6.24
Total Dissolved Solids	...	835	678		1163	1251	1081	1181	670	1064	1091	705	1203
Turbidity NTU	...	15.1		4.9		3.3	0.7	0.1	4.8		0.6	8	1.7
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1	4		4.5	7.2								
Alkalinity (Total as CaCO3)	1 to 2	370	328	449	468	458	444	447	254	414	409	410	418
Bicarbonate Alkalinity	1 to 2			449	468		444	447	254	395	409	410	418
Carbonate Alkalinity	1 to 2			<2	<2		<2	<2	<2	18.9	<2	<1	<2
Color TCU	5	26.3	36.8	10	9.6	9	7	6.7	63.6	7.5	7	12	12.1
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	537	439	803	821	816	774	785	423	757	762	803	853
Hydroxide Alkalinity	1 to 2			<2	<2		<2	<2	<2	<1	<2	<1	<2
pH (unitless)	0.01 to 0.1	8.21	8.4	8.19	8.12	8.32	8.16	8.14	7.94	8.41	8.26	8.2	8.29
Specific Conductivity µS/cm	2	1240	1020	1850	1900	1800	1820	1730	956	1640	1630	1670	1820
Total Dissolved Solids	1 to 2	832	644	1280	1240	1240	1320	1240	646	1160	1150	1230	1360
Total Suspended Solids	3	38.1	62.7	8.7	7.1	<3	6.7	6	8	<3	<3	<3	3.8
Turbidity NTU	0.1	14.7	15.4		2.42	2.76	2.31	0.98	5.52	0.59	1.03	1.34	1.01
Dissolved Anions													
Bromide	0.05 to 2.495	<0.5	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<0.5	<1	<1
Chloride	0.5 to 1	78.1	62.7	129	122	125	130	126	54.2	113	123	101	110
Fluoride	0.02 to 0.4	0.42	0.23	<0.4	<0.4	<0.4	<0.4	<0.4	<0.2	<0.4	0.24	<0.4	<0.4
Sulphate	0.5 to 1	232	138	444	433	427	438	412	203	380	406	469	535
Nutrients													
Ammonia (Total)	0.005 to 0.05	0.0207	0.0184	0.028	0.0199	0.019	0.022	<0.05	0.0577	0.0213	0.0157	0.0087	0.0179
Nitrate (as N)	0.005 to 0.1	0.116	<0.05	<0.1	0.15	0.18	0.43	0.6	0.34	0.63	0.483	0.73	0.38
Nitrite (as N)	0.001 to 0.02	<0.01	<0.01	<0.02	0.028	<0.02	<0.02	<0.02	<0.01	<0.02	0.01	<0.02	<0.02
Nitrogen (Dissolved)	0.05 to 0.1	0.75	1.15	0.55	0.34		0.68	1.05	1.26	0.94	0.73	0.95	0.83
Nitrogen (Total)	0.0025 to 0.11	0.85	1.14	0.55	0.595	0.49	0.91	0.956	1.52	0.951	0.888	1.2	0.87
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.734	0.917	0.55	0.42	0.434	0.483	0.35	1.18	0.318	0.394	0.467	0.49
Orthophosphate (Dissolved)	0.001 to 0.01	0.105											
Phosphorus - Dissolved	0.002 to 0.02	0.105	0.0915	0.0463	0.0374	0.0427	0.0328	0.0307	0.348	0.0344	0.0303	0.081	0.0802
Phosphorus - Total	0.002 to 0.02	0.151	0.144	0.0724	0.0627	0.0562	0.0516	0.041	0.436	0.0404	0.0372	0.0897	0.0847
Cyanide													
Cyanide (Free)	0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	0.0081		<0.005	<0.005	<0.005	<0.005	<0.005	0.015	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005		<0.005	0.0078	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	0.001 to 0.025	<0.005	<0.005	<0.01	<0.003	<0.003	<0.003	<0.003	0.0032	<0.006	<0.003	<0.006	0.0136
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	0.00012
Arsenic	0.0001 to 0.0025	0.00261	0.00242	0.0016	0.00145	0.00154	0.00124	0.00122	0.00184	0.0014	0.00152	0.00211	0.00218
Barium	5E-005 to 0.02	0.048	0.047	0.063	0.0638	0.0625	0.0545	0.0554	0.0362	0.0541	0.0522	0.0601	0.0653
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001
Bismuth	0.0005 to 0.2	<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	0.077	0.079	0.074	0.065	0.037	0.065	0.063	0.052	0.059
Cadmium	1E-005 to 8.5E-005	<0.000017	<0.000017	<0.000034	<0.00001	<0.00001	0.000011	0.000016	0.00001	0.00002	0.000014	<0.00002	0.000012
Calcium	0.05 to 0.1	88.7	73.2	129	134	129	122	124	67.4	114	120	118	126
Chromium	0.0001 to 0.018	<0.001	<0.001	<0.002	0.00011	<0.0001	0.00011	<0.0001	0.00014	<0.0002	0.00018	<0.0002	0.00029
Cobalt	0.0001 to 0.0015	<0.0003	<0.0003	<0.0006	0.00024	0.00028	0.00024	0.00027	0.00028	<0.0002	0.00018	<0.0002	0.00012
Copper	0.0002 to 0.006	0.0017	0.0027	<0.002	0.00165	0.00119	0.0015	0.00173	0.00397	0.0021	0.0021	0.0027	0.00278
Dissolved Cadmium (by saltwater extraction)	0.00002												
Iron	0.01 to 0.03	0.039	0.033	0.035	0.061	0.043	0.04	0.049	0.107	0.033	<0.03	<0.03	<0.03
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.0001	<0.00005
Lithium	0.0005 to 0.025	0.0086	0.0072	0.01	0.00867	0.0108	0.00931	0.00892	0.00461	0.0088	0.00877	0.009	0.0107
Magnesium	0.1	76.6	62.1	116	118	120	114	115	62	115	112	124	130
Manganese	5E-005 to 0.0015	0.0805	0.0519	0.165	0.174	0.229	0.106	0.0932	0.102	0.0908	0.087	0.0327	0.0345
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
Molybdenum	5E-005 to 0.005	0.0103	0.0137	0.0104	0.0091	0.00865	0.00832	0.00863	0.00995	0.00984	0.00862	0.0123	0.0125
Nickel	0.0005 to 0.005	0.0021	0.0025	0.0043	0.00425	0.00398	0.00378	0.00424	0.00297	0.0038	0.00389	0.0027	0.00273
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.38	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	17.3	17	22.2	22.1	25.3	20.7	20.1	16.8	18.3	19.3	19.4	19.8
Selenium	0.0001 to 0.006	<0.001	<0.001	<0.002	0.00021	0.00022	0.00041	0.00063	0.0005	0.00162	0.00229	0.00159	0.00148
Silicon	0.05	8.39	8.02	10.4	10.3	9.76	8.93	8.92	6.01	8.59	8.21	7.84	7.94
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00004	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00002	<0.00001
Sodium	0.05 to 2	74.3	56.1	114	108	122	109	101	46.3	92	101	95.1	117
Strontium	0.0001 to 0.005	0.786	0.646	1.2	1.17	1.35	1.16	1.14	0.577	1.07	0.967	1.11	1.16
Sulphur	0.5												
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.0004	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00002	<0.00001
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	0.013	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00143	0.00137	0.0035	0.00306	0.00293	0.00292	0.00311	0.00158	0.00318	0.00268	0.00344	0.00345
Vanadium	0.001 to 0.03	0.0027	0.0036	0.0029	0.0026	0.0024	0.0023	0.0028	0.0029	0.0036	0.0034	0.0035	0.0037
Zinc	0.001 to 0.006	<0.005	<0.005	<0.005	<0.003	0.0033	<0.003	<0.003	<0.003	<0.006	<0.003	<0.006	0.0037
Total Metals													
Aluminum	0.003 to 0.025	0.576	1.05	0.081	0.0395	0.0777	0.0562	0.0258	0.288	0.0171	0.01	0.0786	0.0787
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	0.00013	<0.0002	0.00018
Arsenic	0.0001 to 0.0025	0.00248	0.00251	0.0018	0.00141	0.00149	0.00131	0.00131	0.00198	0.00156	0.0016	0.00216	0.00228
Barium	5E-005 to 0.02	0.055	0.062	0.065	0.065	0.0606	0.0566	0.0604	0.039	0.0557	0.0533	0.0592	0.0673
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001
Bismuth	0.0005 to 0.2	<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	0.1	0.089	0.08	0.081	0.074	0.044	0.071	0.079	0.057	0.058
Cadmium	1E-005 to 8.5E-005	<0.000017	<0.000017	0.000046	0.000013	<0.00001	0.000011	0.00002	0.000015	0.000022	0.000017	<0.00002	<0.00001
Calcium	0.05 to 0.1	87.5	73.1	132	139	124	127	124	67.7	117	120	115	129
Chromium	0.0001 to 0.005	0.0021	0.003	<0.002	0.00039	0.00034	0.00035	0.00032	0.00088	0.00024	0.00029	0.00068	0.00056
Cobalt	0.0001 to 0.0015	0.00054	0.00093	<0.0006	0.00029	0.00033	0.00031	0.0003	0.00045	<0.0002	0.00018	<0.0002	0.00018
Copper	0.0005 to 0.007	0.0047	0.0072	0.0031	0.00269	0.00207	0.00238	0.00248	0.00579	0.0029	0.00291	0.0038	0.00349
Iron	0.01 to 0.03	0.855	1.32	0.212	0.16	0.165	0.185	0.114	0.404	0.078	0.072	0.128	0.127
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.001	<0.00005	<0.00005	<0.00005	0.000066	0.00009	<0.0001	<0.00005	<0.0001	<0.00005
Lithium	0.0005 to 0.025	0.0069	0.0077	0.011	0.00964	0.0106	0.00923	0.00884	0.00467	0.0088	0.00957	0.0091	0.00952
Magnesium	0.1	76	62.9	119	122	119	125	119	62.9	117	114	120	134
Manganese	5E-005 to 0.0015	0.114	0.119	0.181	0.178	0.23	0.131	0.102	0.116	0.0944	0.0905	0.0366	0.0419
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
Molybdenum	5E-005 to 0.005	0.0108	0.0149	0.0107	0.00962	0.00881	0.00911	0.00901	0.0111	0.0104	0.0102	0.0122	0.0133
Nickel	0.0005 to 0.005	0.0044	0.0066	0.0049	0.00468	0.00422	0.00435	0.00464	0.00411	0.0039	0.00406	0.003	0.00307
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.44	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	17.2	17.5	22.6	22.8	24.4	21.6	21.1	17.6	18.8	19.5	19.1	20.2
Selenium	0.0001 to 0.006	<0.001	<0.001	<0.002	0.0002	0.00021	0.00037	0.00068	0.00049	0.0016	0.00219	0.0015	0.00145
Silicon	0.05	9.94	11.1	10.8	10.7	9.77	9.81	9.15	6.66	8.84	8.35	7.89	8.34
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00004	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00002	<0.00001
Sodium	0.05 to 2	73.1	56.7	117	113	118	115	107	48.3	94.7	102	94.8	110
Strontium	0.0001 to 0.005	0.789	0.659	1.23	1.22	1.34	1.23	1.16	0.59	1.09	1.12	1.11	1.19
Sulphur	0.5												
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.0004	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00002	<0.00001
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001
Titanium	0.01	0.035	0.055	<0.01	<0.01	0.015	0.015	<0.01	0.014	<0.01	<0.01	0.013	<0.01
Total Cadmium (by saltwater extraction)	0.00002												
Uranium	1E-005 to 0.001	0.0016	0.0015	0.00356	0.00323	0.00292	0.00314	0.00315	0.00167	0.00324	0.00311	0.00337	0.00366
Vanadium	0.001 to 0.03	0.0045	0.0061	0.0034	0.0029	0.0026	0.0027	0.0031	0.0036	0.0037	0.0036	0.0038	0.004
Zinc	0.003 to 0.006	<0.005	<0.005	<0.005	<0.003	<0.003	<0.003	0.004	0.0048	<0.006	<0.003	<0.006	<0.003
Organics													
Carbon Organic (Dissolved)	0.5 to 5	13.2	15.9	9.42	8.96	8.3	7.09	7.29	16.7	6.96	6.44	8.3	8.82
Carbon Organic (Total)	0.5 to 5	14.3	17.6	9.23	9.78	8.34	6.99	7.36	19.6	6.66	6.21	8.28	8.91
Nitrogen Organic (Dissolved)	0.05 to 0.26	0.613	1.13	0.522	0.145		0.23	0.42	0.862	0.28	0.22	0.21	0.43
Nitrogen Organic (Total)	0.05 to 0.3	0.713	1.12	0.522	0.165	0.288	0.461	0.35	1.12	0.296	0.379	0.459	0.472
ALS LAB ID		**L1038168**	**L1052387**	**L1066047**	**L1076994**	**L1092368**	**L1102695**	**L1114029**	**L1122039**	**L1133342**	**L1140194**	**L1142492**	**L1145681**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02
Analytes	MDL	16-May-12	24-May-12	10-Jul-12	7-Aug-12	5-Sep-12	11-Oct-12	5-Nov-12	4-Dec-12	8-Jan-13	5-Feb-13	6-Mar-13	2-Apr-13
In Situ Parameters													
Conductivity µS/cm	...	994	1006	972	820	1211	1163	1136	714	921	0.532	916	1166
Oxygen Dissolved %	...	82.1	77.6	78	85.5	83.1	65.1	65.5	60.5	73.8	73	88	
Oxygen Dissolved	...	9.02	8.98	7.59	8.15	8.86	7.35	7.51	7.6	9.89	9.42	12.4	
pH (unitless)	...	8.24	7.93	8.06	8.05	7.79	7.55	7.53	7.66	8.21	7.8	7.79	7.72
Redox Potential mV	...	191	83.2	201	81.7	49.2	-243	-0.2	21.1	73.8	47.4	17.4	43.3
Salinity ppt	...	0.68	0.74		0.47	0.81	0.83	0.83	0.57	0.8	0.43	0.76	0.88
Specific Conductivity µS/cm	...	1357	1459	1161	956	1601	1643	1634	1138	1592	875	1525	1724
Temperature °C	...	11	8.72	16.5	17.5	12.3	9.71	9.03	5.5	2.94	4.49	4.08	8.03
Total Dissolved Solids	...	882	949		622	1041	1068	1062	740	1035	569	991	1121
Turbidity NTU	...	73.7	4.8	7.1	12.7	4	2.6	1.4	0	4.5	1.5	0.5	0.4
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1					<1							
Alkalinity (Total as CaCO3)	1 to 2	429	413	363	346	441	463	468	467	481	446	451	433
Bicarbonate Alkalinity	1 to 2	429	401	360	336	441	463	468	467	481	446	451	433
Carbonate Alkalinity	1 to 2	<1	12.4	3.4	10.5	<1	<2	<2	<2	<2	<2	<1	<1
Color TCU	5	43.7	17.6	27.5	36.1	9.8	9	9.8	8	6.2	6.8	6.1	6.5
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	662	666	517	434	690	748	706	742	711	718	730	745
Hydroxide Alkalinity	1 to 2	<1	<1	<1	<1	<1	<2	<2	<2	<2	<2	<1	<1
pH (unitless)	0.01 to 0.1	8.4	8.32	8.49	8.35	8.39	8.1	8.26	8.19	8.14	8.14	8.32	8.13
Specific Conductivity µS/cm	2	1400	1430	1090	956	1560	1570	1610	1600	1560	1590	1650	1680
Total Dissolved Solids	1 to 2	990	1030	784	636	1100	1140	1130	1120	1070	1240	1100	1150
Total Suspended Solids	3	245	11.8	16.2	53.5	4.1	<3	<3	<3	8.3	<3	4.3	3.3
Turbidity NTU	0.1	75.7	4	5.71	14.5	2.01	1.2	0.82	0.59	3.23	1.34	0.45	1.03
Dissolved Anions													
Bromide	0.05 to 2.495	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	<1	<1
Chloride	0.5 to 1	76.2	80.1	67.5	59.8	106	112	110	112	114	118	124	125
Fluoride	0.02 to 0.4	<0.2	0.23	0.24	0.26	0.25	<0.4	0.51	<0.4	0.4	<0.4	<0.4	0.45
Sulphate	0.5 to 1	315	353	187	133	347	361	359	361	345	341	351	392
Nutrients													
Ammonia (Total)	0.005 to 0.05	0.0227	0.0141	0.0165	0.0164	0.0283	0.0168	0.0152	0.0276	0.0209	0.0159	0.0174	0.0146
Nitrate (as N)	0.005 to 0.1	0.138	0.155	0.091	0.062	0.104	<0.1	0.13	0.31	0.76	1.17	1.14	0.96
Nitrite (as N)	0.001 to 0.02	<0.01	<0.01	<0.01	<0.01	0.012	0.029	<0.02	0.028	<0.02	<0.02	<0.02	0.031
Nitrogen (Dissolved)	0.05 to 0.1	1.09	0.61	0.83	0.82	0.5	0.45	0.44	0.678	1.13	1.34	1.19	1.3
Nitrogen (Total)	0.0025 to 0.11	1.81	0.708	0.815	0.883		0.45	0.5	0.76	1.06	1.34	1.29	1.39
Nitrogen Kjeldahl (Total)	0.05 to 0.2	1.67	0.553	0.724	0.821	0.411	0.42	0.373	0.424	0.482	0.423	0.475	0.4
Orthophosphate (Dissolved)	0.001 to 0.01						0.0432						
Phosphorus - Dissolved	0.002 to 0.02	0.124	0.0745	0.114	0.121	0.0524	0.046	0.0504	0.0422	0.0586	0.0282	0.0256	0.0329
Phosphorus - Total	0.002 to 0.02	0.648	0.091	0.139	0.195	0.0613	0.0539	0.0568	0.0488		0.0346	0.0295	0.0318
Cyanide													
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	0.001 to 0.025	<0.003	0.001	0.0019	0.0018	0.0013	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Antimony	0.0001 to 0.0025	0.00015	0.00012	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00011
Arsenic	0.0001 to 0.0025	0.00271	0.00226	0.00259	0.00275	0.00197	0.0015	0.00154	0.00119	0.00124	0.00121	0.0012	0.00165
Barium	5E-005 to 0.02	0.0529	0.0509	0.0434	0.0436	0.0552	0.054	0.0607	0.0537	0.0499	0.0494	0.0495	0.0548
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.035	0.044	0.05	0.046	0.09	0.095	0.092	0.078	0.075	0.074	0.071	0.072
Cadmium	1E-005 to 8.5E-005	0.000014	<0.00001	0.000019	<0.00001	0.000012	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001
Calcium	0.05 to 0.1	102	102	83.9	70.4	112	119	115	114	111	112	117	120
Chromium	0.0001 to 0.018	0.00015	0.00016	<0.0001	0.00013	0.00016	0.00012	<0.0001	0.00012	<0.0001	0.00014	0.00012	0.00013
Cobalt	0.0001 to 0.0015	0.00027	0.00015	0.00016	0.00016	0.00021	0.00019	0.00022	0.00023	0.00023	0.00019	0.00019	0.00016
Copper	0.0002 to 0.006	0.00275	0.00236	0.0022	0.00199	0.00134	0.00176	0.00181	0.0014	0.00159	0.00178	0.00195	0.00228
Dissolved Cadmium (by saltwater extraction)	0.00002												
Iron	0.01 to 0.03	0.035	0.016	0.02	0.038	0.025	0.029	0.037	0.04	0.033	0.032	0.029	0.022
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00786	0.0065	0.00753	0.00679	0.0104	0.00977	0.00917	0.00842	0.00887	0.00853	0.0083	0.00896
Magnesium	0.1	98.6	99.7	74.6	62.8	99.8	110	101	111	106	106	106	108
Manganese	5E-005 to 0.0015	0.138	0.0475	0.0414	0.0394	0.168	0.14	0.148	0.123	0.0836	0.0719	0.0615	0.0645
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0119	0.0137	0.011	0.00923	0.0121	0.0102	0.00886	0.00849	0.00907	0.0089	0.00858	0.0107
Nickel	0.0005 to 0.005	0.00305	0.00273	0.00272	0.00272	0.00428	0.00438	0.00436	0.0039	0.00406	0.00395	0.00404	0.00397
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	0.059	<0.3	<0.3	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	0.05 to 2	19.5	17.2	15.3	15.1	21.9	20.5	22.7	20.9	20.3	19.8	19.9	20.6
Selenium	0.0001 to 0.006	0.00042	0.00083	0.00028	0.00023	0.00026	0.0002	0.00022	0.0003	0.00073	0.00103	0.00119	0.00267
Silicon	0.05	7.53	7.47	7.33	7.8	9.85	10.2	10.1	9.72	8.95	8.96	8.72	8.5
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	77.7	80.9	60.5	53.1	104	102	105	104	102	96.9	92.6	97.2
Strontium	0.0001 to 0.005	0.928	0.915	0.706	0.627	1.01	1.04	1.06	1.01	1.1	1.03	0.979	1.08
Sulphur	0.5								112	110	106	113	117
Thallium	1E-005 to 0.001	<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00204	0.00231	0.00132	0.000839	0.00271	0.00262	0.00249	0.00249	0.00275	0.00272	0.00272	0.00334
Vanadium	0.001 to 0.03	0.0042	0.0031	0.0026	0.0023	0.0033	0.0026	0.0021	0.0021	0.0025	0.0025	0.0027	0.0047
Zinc	0.001 to 0.006	<0.003	0.0032	0.001	0.0028	0.0019	<0.001	<0.001	<0.001	<0.001	0.005	<0.001	0.0013
Total Metals													
Aluminum	0.003 to 0.025	3.45	0.196	0.302	0.534	0.102	0.0517	0.0234	0.0139	0.0474	0.0214	0.058	0.0269
Antimony	0.0001 to 0.0025	0.00024	0.00014	0.00012	0.00011	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00015	0.00013
Arsenic	0.0001 to 0.0025	0.004	0.0023	0.00263	0.00285	0.00202	0.0015	0.00145	0.00123	0.00131	0.00133	0.00133	0.00161
Barium	5E-005 to 0.02	0.106	0.0516	0.0459	0.0487	0.0567	0.0549	0.0532	0.0515	0.0497	0.0515	0.0523	0.0558
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.046	0.05	0.055	0.048	0.095	0.104	0.105	0.081	0.084	0.08	0.082	0.078
Cadmium	1E-005 to 8.5E-005	0.000059	0.000012	0.000016	0.000019	0.000017	0.000014	<0.00001	<0.00001	<0.00001	0.000012	0.000013	0.000011
Calcium	0.05 to 0.1	101	104	83.3	68	110	114	110	110	112	113	121	117
Chromium	0.0001 to 0.005	0.011	0.00083	0.00118	0.00169	0.00058	0.0003	0.00018	0.00021	0.00028	0.00033	0.00032	0.00028
Cobalt	0.0001 to 0.0015	0.00335	0.00031	0.0004	0.00062	0.00031	0.00023	0.00021	0.00022	0.00025	0.00022	0.00025	0.00019
Copper	0.0005 to 0.007	0.0204	0.00359	0.00406	0.00496	0.0032	0.00274	0.00229	0.00418	0.00321	0.00268	0.00278	0.00288
Iron	0.01 to 0.03	4.88	0.294	0.412	0.739	0.192	0.129	0.087	0.078	0.121	0.086	0.133	0.065
Lead	5E-005 to 0.0025	0.00128	0.000086	0.00011	0.000196	0.000066	<0.00005	<0.00005	<0.00005	0.000069	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.0101	0.00686	0.0074	0.0068	0.0105	0.00977	0.00945	0.00853	0.00971	0.00864	0.00927	0.00922
Magnesium	0.1	99.6	96.8	73	59.9	99.6	107	98.7	106	109	107	107	105
Manganese	5E-005 to 0.0015	0.62	0.0648	0.086	0.103	0.187	0.143	0.14	0.12	0.0872	0.0726	0.0705	0.0675
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0131	0.0144	0.0111	0.00917	0.0127	0.0103	0.0097	0.00833	0.00983	0.00896	0.00976	0.0113
Nickel	0.0005 to 0.005	0.0197	0.00365	0.00411	0.00508	0.00496	0.0045	0.00401	0.00381	0.00432	0.00405	0.00443	0.00418
Phosphorus	0.05 to 0.3	0.38	<0.3	<0.3	<0.3	0.071	<0.3	<0.3	0.056	<0.05	<0.05	<0.05	<0.05
Potassium	0.05 to 2	19.4	16.9	14.7	14.5	22	20.1	20.4	19.6	21	19.7	20.6	21.5
Selenium	0.0001 to 0.006	0.00059	0.00076	0.00028	0.00024	0.00021	0.00025	0.00027	0.00027	0.00068	0.00102	0.0012	0.00246
Silicon	0.05	16.1	8.1	7.99	9	10.1	10.1	9.77	9.35	9.4	9.06	9.16	8.53
Silver	1E-005 to 0.0001	0.000045	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	76.2	80.6	59.5	52	107	97.7	98.2	97.2	103	100	96.8	103
Strontium	0.0001 to 0.005	1.01	0.917	0.696	0.607	1.06	1.01	1.03	0.992	1.16	1.05	1.09	1.07
Sulphur	0.5								111	117	112	119	119
Thallium	1E-005 to 0.001	0.000023	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	0.14	0.013	0.019	0.031	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002												
Uranium	1E-005 to 0.001	0.0024	0.00243	0.00134	0.000839	0.00269	0.00268	0.00259	0.00247	0.00286	0.00284	0.00304	0.00332
Vanadium	0.001 to 0.03	0.0134	0.0039	0.0035	0.0038	0.0041	0.0028	0.0021	0.0023	0.0029	0.003	0.0032	0.0049
Zinc	0.003 to 0.006	0.0182	<0.003	0.0036	0.0038	0.0035	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics													
Carbon Organic (Dissolved)	0.5 to 5	16.9	10.2	11.9	14.2	7.94	8.15	7.82	7.36	7.58	7.23	7.11	7.35
Carbon Organic (Total)	0.5 to 5	24.7	10.8	12.4	14.7	8.15	8.36	7.93	7.4	7.12	7.05	6.97	7.03
Nitrogen Organic (Dissolved)	0.05 to 0.26	0.929	0.44	0.723	0.741	0.356	0.404	0.294	0.31			<0.24	0.29
Nitrogen Organic (Total)	0.05 to 0.3	1.65	0.539	0.707	0.805	0.383	0.403	0.357	0.397	0.461	0.407	<0.26	0.385
ALS LAB ID		**L1148880**	**L1152500**	**L1176520**	**L1190914**	**L1205273**	**L1222966**	**L1233797**	**L1245799**	**L1256678**	**I1265809**	**L1276517**	**L1285503**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02
Analytes	MDL	7-May-13	5-Jun-13	2-Jul-13	7-Aug-13	4-Sep-13	9-Oct-13	6-Nov-13	4-Dec-13	8-Jan-14	4-Feb-14	12-Mar-14	19-Mar-14
In Situ Parameters													
Conductivity µS/cm	...	801	725	856	794		1.69	1029	972	986	908	356	719
Oxygen Dissolved %	...	84.7	77.5	87.2	68.5	67.8	77.5	55	68.1	75.2	73.5	78.8	82.6
Oxygen Dissolved	...	8.8	7.84	7.61	6.73	7.15	9.27	6.86	9.43	1.15	10.6	11.2	11.1
pH (unitless)	...	8.26	8.22	8.25	8.15	7.6	7.58	7.66	7.75	7.69	7.3	7.96	7.98
Redox Potential mV	...	115	70.3	104	286	177	46.7	30.8	-7.2	4.5	-61.3	14.4	4
Salinity ppt	...	0.51	0.45	0.45	0.47	0.85	0.85	0.82	0.87	0.86	0.85	0.32	0.62
Specific Conductivity µS/cm	...	1025	902	908	955	1678	1.12	1633	1747	1725	1714	658	1243
Temperature °C	...	13.5	14.7	22.1	16.2	12.7	7.38	5.65	1.75	2.55	0.39	0.95	2.92
Total Dissolved Solids	...	666	586	590	621	1091	1096	1061	1134	1121	1114	428	808
Turbidity NTU	...	12.1	7.8	7	6.4		2.5	0.6	3.8	2.2			
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1							3					
Alkalinity (Total as CaCO3)	1 to 2	317	283	287	322	432	475	459	466	448	455	160	319
Bicarbonate Alkalinity	1 to 2	311	279	272	317	432	475	459	466	448	455	160	319
Carbonate Alkalinity	1 to 2	5.9	4	15.3	5.1	<2	<2	<2	<2	<2	<2	<2	<2
Color TCU	5	27.6	27	35.6	33.5	9.7	8.6	9.3	7.9	7.3			
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	433	393	410	435	712	759	715	740	746	760	282	567
Hydroxide Alkalinity	1 to 2	<1	<1	<1	<1	<2	<2	<2	<2	<2	<2	<2	<2
pH (unitless)	0.01 to 0.1	8.49	8.42	8.43	8.37	8.14	8.18	8.17	7.97	8.12	8.17	7.93	8.19
Specific Conductivity µS/cm	2	963	877	912	937	1610	1660	1670	1630	1650	1710	625	1220
Total Dissolved Solids	1 to 2	628	553	599	603	1100	1100	1130	1110	1130	1000	421	818
Total Suspended Solids	3	20	12.9	23.5	11.5	16.7	9.3	<3	7	9.8	<3	61.4	<3
Turbidity NTU	0.1	13.3	7.8	3.5	2.05	9.36	6.09	1	4.15	4.68	0.67	29	1.35
Dissolved Anions													
Bromide	0.05 to 2.495	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	<1	0.051	<0.5
Chloride	0.5 to 1	63.9	57.4	57.9	61	113	117	120	129	133	137	27.8	67.3
Fluoride	0.02 to 0.4	0.31	0.35	0.24	0.4	0.44	0.67	<0.4	<0.4	<0.4	<0.4	0.105	<0.2
Sulphate	0.5 to 1	157	121	126	132	337	357	373	376	378	380	141	295
Nutrients													
Ammonia (Total)	0.005 to 0.05	0.0119	0.01	0.0177	0.0189	0.0328	0.0207	0.013	0.0244	0.0221	0.0201	0.268	0.1
Nitrate (as N)	0.005 to 0.1	<0.05	<0.05	<0.05	0.069	<0.1	0.11	<0.1	0.31	0.76	1.18	0.381	0.677
Nitrite (as N)	0.001 to 0.02	<0.01	<0.01	<0.01	<0.01	0.021	<0.02	0.035	<0.02	<0.02	0.025	0.0097	<0.01
Nitrogen (Dissolved)	0.05 to 0.1				0.773	0.92							
Nitrogen (Total)	0.0025 to 0.11	0.953	0.815	0.907	0.826	0.597	0.487	0.429					
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.815	0.699	0.907	0.964	0.572	0.44	0.417	0.382	0.417	0.375	1.64	0.695
Orthophosphate (Dissolved)	0.001 to 0.01						0.0385	0.0327	0.0296	0.0273	0.0212	0.432	0.0953
Phosphorus - Dissolved	0.002 to 0.02	0.0724	0.062	0.122	0.123	0.0899	0.0427	0.0347	0.0314	0.0293	0.0246	0.502	0.115
Phosphorus - Total	0.002 to 0.02	0.124	0.0895	0.0909	0.146		0.0614	0.0432	0.0489	0.0475	0.0292	0.671	0.117
Cyanide													
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	0.001 to 0.025	0.0015	0.0018	0.0044	0.002	0.0013	0.001	<0.001	<0.001	0.0011	<0.001	0.004	0.0021
Antimony	0.0001 to 0.0025	0.00013	<0.0001	0.00012	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	0.00011
Arsenic	0.0001 to 0.0025	0.00188	0.00166	0.0023	0.00273	0.00185	0.00167	0.00139	0.00115	0.00121	0.00122	0.00175	0.00174
Barium	5E-005 to 0.02	0.0437	0.0424	0.0486	0.0456	0.061	0.0565	0.0585	0.0552	0.0536	0.0562	0.0256	0.0475
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.036	0.032	0.038	0.043	0.082	0.098	0.086	0.073	0.079	0.078	0.029	0.039
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	71.3	68.3	70.5	70.6	111	119	108	114	119	117	44.9	89.2
Chromium	0.0001 to 0.018	0.00014	0.0001	0.00012	0.00013	<0.0001	0.00012	0.00012	<0.0001	<0.0001	<0.0001	0.00012	0.00015
Cobalt	0.0001 to 0.0015	0.00011	0.00011	0.00015	0.00014	0.00024	0.00027	0.00023	0.00026	0.00024	0.00024	0.00025	0.00018
Copper	0.0002 to 0.006	0.00254	0.00227	0.00487	0.0021	0.00152	0.00128	0.00129	0.001	0.00119	0.0015	0.00374	0.00257
Dissolved Cadmium (by saltwater extraction)	0.00002												
Iron	0.01 to 0.03	0.019	0.021	0.024	0.029	0.018	0.037	0.046	0.047	0.034	0.039	0.073	0.036
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00675	0.00568	0.00603	0.00649	0.0094	0.0111	0.0102	0.00861	0.00963	0.00879	0.00307	0.00615
Magnesium	0.1	62	54	56.8	62.8	105	112	108	111	109	114	41.2	83.6
Manganese	5E-005 to 0.0015	0.0226	0.0305	0.0337	0.0266	0.251	0.195	0.135	0.166	0.112	0.0853	0.108	0.0793
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0137	0.007	0.00827	0.00922	0.0114	0.0101	0.00822	0.00791	0.0089	0.00881	0.00835	0.0152
Nickel	0.0005 to 0.005	0.00184	0.00174	0.00209	0.00254	0.00417	0.00577	0.00411	0.00388	0.00413	0.00421	0.00218	0.00254
Phosphorus	0.05 to 0.3	0.063	0.059	0.083	0.123	0.056	<0.05	<0.05	<0.05	<0.05	<0.05	0.528	0.111
Potassium	0.05 to 2	15	14	14.7	15.2	23.4	22.2	21.9	21.4	19.4	19.8	13.1	16.2
Selenium	0.0001 to 0.006	0.00039	0.00046	0.0003	0.00028	0.00032	0.00027	0.00028	0.00044	0.00097	0.00139	0.00058	0.00101
Silicon	0.05	5.53	4.06	6.05	8.95	10.5	10.4	10.2	9.45	9.1	9.34	4.5	7.3
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	49.7	42.4	46.2	51.3	99.8	98.8	104	95.8	103	103	29.3	62.3
Strontium	0.0001 to 0.005	0.641	0.511	0.58	0.605	1.05	1.1	1.07	1.02	1.09	1.04	0.372	0.798
Sulphur	0.5	50.6	38.7	40.4	42.7	106	114	122	116	116	123	46.9	95.2
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000025	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00154	0.00108	0.00117	0.000906	0.00258	0.0025	0.00233	0.00235	0.00265	0.00302	0.000916	0.00221
Vanadium	0.001 to 0.03	0.0031	0.0022	0.0028	0.0024	0.0036	0.0027	0.0022	0.0021	0.0024	0.0027	0.0026	0.0031
Zinc	0.001 to 0.006	0.0022	0.001	0.0037	0.0012	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0017	0.0033
Total Metals													
Aluminum	0.003 to 0.025	0.684	0.335	0.501	0.289	0.605	0.544	0.0459	0.177	0.0787	0.0234	1.36	0.0608
Antimony	0.0001 to 0.0025	0.00015	0.00011	0.00013	0.00015	0.00011	0.0001	0.00013	<0.0001	<0.0001	0.0001	0.00013	0.00012
Arsenic	0.0001 to 0.0025	0.00196	0.00178	0.00241	0.00278	0.00205	0.0017	0.00152	0.00129	0.00132	0.00129	0.0022	0.00176
Barium	5E-005 to 0.02	0.0506	0.0457	0.0531	0.0508	0.0671	0.0616	0.0617	0.0575	0.0542	0.0555	0.0416	0.0465
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.039	0.033	0.04	0.048	0.088	0.095	0.093	0.082	0.085	0.084	0.031	0.04
Cadmium	1E-005 to 8.5E-005	0.000012	<0.00001	0.000012	0.000012	0.000012	0.000012	<0.00001	<0.00001	0.000011	0.000012	0.000025	<0.00001
Calcium	0.05 to 0.1	69.4	64.2	65.3	73.8	115	119	107	115	125	117	44.3	87.3
Chromium	0.0001 to 0.005	0.0021	0.00108	0.00153	0.00101	0.00211	0.00182	0.00035	0.00068	0.00041	0.00027	0.00367	0.00041
Cobalt	0.0001 to 0.0015	0.00071	0.00042	0.00058	0.00037	0.00066	0.00065	0.00028	0.00037	0.00029	0.00025	0.00137	0.00021
Copper	0.0005 to 0.007	0.00647	0.00412	0.00501	0.00374	0.00702	0.00527	0.00222	0.00257	0.00252	0.00241	0.0111	0.00328
Iron	0.01 to 0.03	0.934	0.483	0.651	0.412	0.9	0.717	0.123	0.294	0.172	0.088	1.87	0.126
Lead	5E-005 to 0.0025	0.000241	0.000131	0.000178	0.000128	0.000203	0.000165	<0.00005	0.000064	<0.00005	<0.00005	0.000483	<0.00005
Lithium	0.0005 to 0.025	0.00707	0.00562	0.00587	0.00698	0.00983	0.0105	0.0102	0.00944	0.00964	0.00924	0.0036	0.00602
Magnesium	0.1	59.1	51.6	54	64.4	105	113	105	109	112	113	40.5	79.5
Manganese	5E-005 to 0.0015	0.127	0.0907	0.119	0.0795	0.28	0.221	0.168	0.176	0.116	0.0866	0.237	0.082
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0141	0.00683	0.00798	0.0101	0.012	0.0107	0.00932	0.00916	0.00934	0.00948	0.0087	0.0162
Nickel	0.0005 to 0.005	0.00478	0.00332	0.00406	0.00391	0.00687	0.00682	0.00436	0.00481	0.0044	0.00454	0.00815	0.00284
Phosphorus	0.05 to 0.3	0.109	0.091	0.119	0.153	0.088	0.085	<0.05	<0.05	<0.05	<0.05	0.661	0.129
Potassium	0.05 to 2	14.5	13.4	14.1	16	23.9	22	22.9	22.4	20.4	19.6	12.7	15.5
Selenium	0.0001 to 0.006	0.00041	0.00044	0.00033	0.00028	0.00038	0.00026	0.00025	0.00041	0.00092	0.0013	0.00064	0.00093
Silicon	0.05	7.17	4.68	6.95	10.1	13.3	11.9	10.4	10.3	9.77	9.54	7.78	7.18
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	0.000028	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000018	<0.00001
Sodium	0.05 to 2	48.6	42.2	45.2	54.4	100	103	106	100	105	103	28.7	59.7
Strontium	0.0001 to 0.005	0.634	0.491	0.549	0.628	1.09	1.19	1.14	1.09	1.13	1.07	0.381	0.801
Sulphur	0.5	50.1	37.7	38.9	46.3	114	121	127	125	122	127	45.5	96.6
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	0.028	0.015	0.02	0.012	0.029	0.026	<0.01	<0.01	<0.01	<0.01	0.051	<0.01
Total Cadmium (by saltwater extraction)	0.00002												
Uranium	1E-005 to 0.001	0.00161	0.00105	0.00114	0.001	0.00264	0.00262	0.00251	0.00258	0.0028	0.003	0.00101	0.00223
Vanadium	0.001 to 0.03	0.0049	0.0031	0.0042	0.0033	0.0051	0.0043	0.003	0.0027	0.0029	0.003	0.0061	0.0033
Zinc	0.003 to 0.006	0.0046	0.003	0.0042	0.0032	0.0031	<0.003	<0.003	<0.003	<0.003	<0.003	0.0074	<0.003
Organics													
Carbon Organic (Dissolved)	0.5 to 5	12	7.26	16.5	14.5	8.69	7.8	8.29	7.6	7.19	7	13.3	8.56
Carbon Organic (Total)	0.5 to 5	12.2	14.3	16.8	15	10	8.18	8.33	7.77	7.61	6.93	15.3	9.03
Nitrogen Organic (Dissolved)	0.05 to 0.26					0.87							
Nitrogen Organic (Total)	0.05 to 0.3					0.539							
ALS LAB ID		L1298960	L1312719	L1326032	L1344180	L1358222	L1375698	L1388680	L1399806	L1410216	L1418933	L1432163	L1434695

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02
Analytes	MDL	26-Mar-14	2-Apr-14	9-Apr-14	23-Apr-14	06/May/2014	21-May-14	3-Jun-14	18-Jun-14	3-Jul-14	16-Jul-14	30-Jul-14	12-Aug-14
In Situ Parameters													
Conductivity µS/cm	...	852	964	929	1302	1067	873	888	807	975	873	821	966
Oxygen Dissolved %	...	70.4	79.4	80.2	86.1	107	93.3	86.8	84	86.4	80.3	72.2	84.7
Oxygen Dissolved	...	9.22	9.96	9.9	10.6	12.3	9.38	8.52	8.85	8.42	7.54	7.44	8.12
pH (unitless)	...	7.83	7.98	7.84	8.12	8.33	8.35	8.31	8.33	8.27	8.53	8.19	8.33
Redox Potential mV	...	8.5	38.9	-1.1	88.1	195	60.1	166	85.1	84.8	126	126	78.9
Salinity ppt	...	0.71	0.77	0.73	1.04	0.78	0.54	0.53	0.52	0.58	0.5	0.52	0.57
Specific Conductivity µS/cm	...	1429	1533	1454	2031	1540	1079	1070	1049	1666	1001	1043	1135
Temperature °C	...	3.85	5.57	6.08	6.21	8.9	15	16.1	12.9	16.4	18.3	13.8	17.2
Total Dissolved Solids	...	929	996	945	1320	1001	702	695	682	758	651	679	738
Turbidity NTU	...												
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1												
Alkalinity (Total as CaCO3)	1 to 2	381	388	367	375	390	286	304	326	428	401	381	388
Bicarbonate Alkalinity	1 to 2	381	388	367	375	390	286	299	312	408	375	381	360
Carbonate Alkalinity	1 to 2	<2	<2	<2	<1	<2	<1	4.6	13.6	19.4	25.2	<2	28.1
Color TCU	5												
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	691	674	690	911	760	485	478	482	551	507	591	535
Hydroxide Alkalinity	1 to 2	<2	<2	<2	<1	<2	<1	<1	<1	<1	<1	<2	<1
pH (unitless)	0.01 to 0.1	8.17	8.18	8.14	8.32	8.25	8.36	8.46	8.4	8.54	8.48	8.25	8.45
Specific Conductivity µS/cm	2	1450	1400	1470	2030	1500	1040	1050	1040	1130	1080	1360	1130
Total Dissolved Solids	1 to 2	1010	1000	1050	1510	1030	697	699	689	732	716	633	781
Total Suspended Solids	3	4.5	<3	<3	4.9	9.8	33.1	14.4	9.9	13.3	11.2	7.8	32.3
Turbidity NTU	0.1	0.95	0.67	0.43	2.38	20.4	7.97	4.5	1.23	3.06	2.55	1.88	10
Dissolved Anions													
Bromide	0.05 to 2.495	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	0.5 to 1	88.9	85	96.6	107	63.3	64.4	62.8	62.3	56.1	60.3	84	65.4
Fluoride	0.02 to 0.4	<0.2	0.2	0.21	<0.4	0.23	0.21	0.23	0.257	0.42	0.27	0.265	0.313
Sulphate	0.5 to 1	362	363	375	734	442	218	199	183	179	146	280	186
Nutrients													
Ammonia (Total)	0.005 to 0.05	0.0359	0.0199	0.0155	0.0156	0.0131	0.0118	0.0137	0.0173	0.0242	0.019	0.0363	0.0291
Nitrate (as N)	0.005 to 0.1	0.893	0.697	0.633	0.44	0.067	<0.05	<0.05	<0.05	0.06	0.09	0.149	<0.05
Nitrite (as N)	0.001 to 0.02	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.015	<0.01
Nitrogen (Dissolved)	0.05 to 0.1												
Nitrogen (Total)	0.0025 to 0.11						0.779						
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.514	0.461	0.387	0.989	1.07	0.803	0.76	0.751	1.01	0.905	0.618	1.32
Orthophosphate (Dissolved)	0.001 to 0.01	0.0648	0.0553	0.0415	0.178	0.0751	0.0696	0.0736	0.0877	0.106	0.133	0.0933	0.152
Phosphorus - Dissolved	0.002 to 0.02	0.0746	0.0646	0.0503	0.198	0.0855	0.0836	0.0828	0.0914	0.127	0.154	0.0981	0.174
Phosphorus - Total	0.002 to 0.02	0.0868	0.0708	0.0452	0.22	0.252	0.128	0.104	0.122	0.143	0.172	0.112	0.223
Cyanide													
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	0.001 to 0.025	0.0011	0.0153	<0.001	<0.001	0.0017	0.0016	0.0015	0.0016	0.0015	0.0026	0.0013	0.0019
Antimony	0.0001 to 0.0025	<0.0001	0.00012	0.00012	0.00016	0.00014	0.00013	0.00012	<0.0001	0.00013	0.0001	<0.0001	0.00014
Arsenic	0.0001 to 0.0025	0.0017	0.00187	0.00171	0.00303	0.00211	0.00215	0.00226	0.00242	0.00295	0.00304	0.00262	0.00322
Barium	5E-005 to 0.02	0.0527	0.0545	0.0533	0.0567	0.0638	0.0509	0.0507	0.0435	0.0501	0.0479	0.0516	0.0557
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.05	0.054	0.057	0.043	0.035	0.042	0.036	0.037	0.045	0.047	0.057	0.045
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	104	107	108	111	121	78.1	78.7	77.7	86.7	80.8	91.1	88.6
Chromium	0.0001 to 0.018	0.00017	0.00021	0.00022	0.00021	0.00011	0.00014	0.00012	0.00013	0.00013	0.00014	0.00012	0.00015
Cobalt	0.0001 to 0.0015	0.00016	0.00015	0.00013	0.00017	0.00015	0.00012	0.00012	0.00013	0.00018	0.00016	0.00017	0.00021
Copper	0.0002 to 0.006	0.0023	0.00242	0.00218	0.00259	0.00221	0.00269	0.00261	0.00209	0.00295	0.00235	0.00196	0.00224
Dissolved Cadmium (by saltwater extraction)	0.00002												
Iron	0.01 to 0.03	0.028	0.061	0.024	0.022	0.018	0.015	0.02	0.019	0.02	0.025	0.023	0.038
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00711	0.00801	0.00812	0.00979	0.00701	0.00726	0.0062	0.00588	0.00853	0.00763	0.0087	0.00825
Magnesium	0.1	105	98.9	102	154	111	70.4	68.4	70	81.1	74.2	88.2	76.2
Manganese	5E-005 to 0.0015	0.084	0.0796	0.0782	0.0371	0.0689	0.0309	0.0316	0.0298	0.0291	0.0276	0.108	0.0483
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0138	0.0137	0.0121	0.0122	0.0147	0.014	0.0116	0.0104	0.0128	0.0116	0.0125	0.0152
Nickel	0.0005 to 0.005	0.00265	0.00263	0.00297	0.00225	0.00233	0.0018	0.00205	0.00228	0.00266	0.00284	0.0032	0.00281
Phosphorus	0.05 to 0.3	0.079	0.075	0.053	0.19	0.093	0.085	0.085	0.096	0.118	0.151	0.106	0.18
Potassium	0.05 to 2	17.8	16.1	17.4	26.6	18.2	15.1	14.7	14.4	18.7	16.8	20.1	16.8
Selenium	0.0001 to 0.006	0.0015	0.00166	0.00211	0.00113	0.00058	0.00041	0.00036	0.00027	0.00031	0.00029	0.00029	0.00029
Silicon	0.05	8.18	7.53	7.37	7.4	6.89	5.04	5.46	5.93	6.38	7.41	8.67	10.8
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	76.3	78.3	85.9	127	74.2	58.8	52.1	53.3	61.2	58.9	79.9	61.3
Strontium	0.0001 to 0.005	0.889	0.939	1.02	1.24	0.99	0.672	0.675	0.619	0.749	0.715	0.847	0.77
Sulphur	0.5	112	113	119	236	136	74.3	68.8	56.5	58.6	47.7	89.7	59.7
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00269	0.00246	0.00259	0.00379	0.00237	0.00177	0.00156	0.00132	0.00187	0.00139	0.00195	0.00133
Vanadium	0.001 to 0.03	0.0035	0.0037	0.004	0.0033	0.0029	0.0033	0.0028	0.0024	0.003	0.0027	0.0029	0.0035
Zinc	0.001 to 0.006	0.0028	0.0014	0.0018	0.0019	0.0011	0.0014	0.0018	0.0014	0.0012	<0.001	<0.001	0.0012
Total Metals													
Aluminum	0.003 to 0.025	0.0443	<0.003	0.0266	0.215	1.63	0.493	0.262	0.203	0.108	0.216	0.0993	0.673
Antimony	0.0001 to 0.0025	<0.0001	0.00013	0.00011	0.00018	0.0002	0.00016	0.00014	<0.0001	0.00013	0.00014	0.00011	0.00018
Arsenic	0.0001 to 0.0025	0.00185	0.00174	0.00171	0.00308	0.00264	0.00215	0.00234	0.00237	0.00286	0.0032	0.00247	0.00355
Barium	5E-005 to 0.02	0.0528	0.0547	0.0551	0.0594	0.0802	0.0536	0.0524	0.0449	0.0535	0.0513	0.053	0.0652
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.051	0.058	0.059	0.046	0.037	0.042	0.04	0.043	0.044	0.051	0.06	0.055
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	0.000012	0.000027	0.000014	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	0.00001
Calcium	0.05 to 0.1	103	103	103	114	115	74.5	75.5	75.7	83	80.6	90.4	89.7
Chromium	0.0001 to 0.005	0.00029	0.00022	0.00034	0.00084	0.00476	0.00152	0.00088	0.00073	0.00049	0.00074	0.00052	0.00194
Cobalt	0.0001 to 0.0015	0.00019	0.00014	0.00016	0.00034	0.00159	0.00054	0.00038	0.00029	0.00034	0.00036	0.00024	0.0008
Copper	0.0005 to 0.007	0.00287	0.00221	0.00276	0.0039	0.00992	0.00511	0.00414	0.00323	0.0041	0.00369	0.00292	0.00556
Iron	0.01 to 0.03	0.1	0.02	0.065	0.313	2.24	0.616	0.4	0.28	0.184	0.322	0.158	0.871
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	0.000084	0.000611	0.000182	0.000116	0.00007	0.000107	0.000085	<0.00005	0.00025
Lithium	0.0005 to 0.025	0.00728	0.00786	0.00788	0.00995	0.00752	0.00717	0.00612	0.0067	0.00767	0.00781	0.00866	0.00851
Magnesium	0.1	101	95.6	97.9	157	106	67.3	66	65.6	79.5	75.1	88.5	77.6
Manganese	5E-005 to 0.0015	0.089	0.0786	0.0793	0.0563	0.361	0.0977	0.0802	0.0662	0.0872	0.0781	0.123	0.211
Mercury	1E-005 to 5E-005	0.000025	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0148	0.0143	0.012	0.0132	0.0142	0.0141	0.0117	0.0111	0.0127	0.0127	0.013	0.0161
Nickel	0.0005 to 0.005	0.00303	0.00264	0.00307	0.00336	0.00955	0.00382	0.00329	0.00311	0.0036	0.00384	0.00361	0.00577
Phosphorus	0.05 to 0.3	0.083	0.054	0.056	0.237	0.227	0.113	0.096	0.114	0.145	0.169	0.102	0.247
Potassium	0.05 to 2	17.2	15.5	16.5	27.7	16.9	14.8	14.1	13.6	17.8	17	20.3	17.4
Selenium	0.0001 to 0.006	0.00148	0.00162	0.00197	0.00109	0.0006	0.00038	0.00037	0.00026	0.0003	0.00031	0.00025	0.00034
Silicon	0.05	8.23	7.32	7.12	8.24	10.7	6.07	5.98	6.23	6.53	7.97	8.95	12.4
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	0.000014	0.000033	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	78.8	81.6	83.5	130	71.5	55.5	52.2	52.1	61.3	61.3	80.3	62.7
Strontium	0.0001 to 0.005	0.929	0.902	0.989	1.26	0.979	0.654	0.646	0.634	0.774	0.728	0.878	0.802
Sulphur	0.5	117	111	117	242	140	70.9	67.1	56.1	59.8	49.3	92	62.2
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	0.067	0.02	0.011	<0.01	<0.01	<0.01	<0.01	0.026
Total Cadmium (by saltwater extraction)	0.00002												
Uranium	1E-005 to 0.001	0.00287	0.00258	0.00262	0.00399	0.0024	0.00179	0.00162	0.00133	0.00189	0.00155	0.00205	0.00147
Vanadium	0.001 to 0.03	0.0038	0.0036	0.004	0.004	0.0073	0.0049	0.0036	0.0034	0.0035	0.0033	0.0034	0.0054
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	0.0077	0.0035	<0.003	<0.003	<0.003	<0.003	<0.003	0.0051
Organics													
Carbon Organic (Dissolved)	0.5 to 5	7.61	7.65	7.21	14.6	11.5	12.7	12.7	11.9	14.9	15.3	11.1	18.1
Carbon Organic (Total)	0.5 to 5	7.71	7.53	6.84	17.3	13.9	13.4	12.9	12.2	15	15.6	12.9	19
Nitrogen Organic (Dissolved)	0.05 to 0.26												
Nitrogen Organic (Total)	0.05 to 0.3												
ALS LAB ID		L1437439	L1439467	L1441961	L1446462	L1451608	L1458340	L1465108	L1473827	L1481215	L1488886	L1495443	L1502292

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		PC02	PC02
Analytes	**MDL**	**4-Sep-14**	**17-Sep-14**
In Situ Parameters			
Conductivity µS/cm	...		1154
Oxygen Dissolved %	...		72.5
Oxygen Dissolved	...		7.88
pH (unitless)	...	7.95	7.71
Redox Potential mV	...		78.4
Salinity ppt	...		0.079
Specific Conductivity µS/cm	...		1558
Temperature °C	...	11.4	11.4
Total Dissolved Solids	...		1013
Turbidity NTU	...		
Physical Tests			
Acidity to pH 8.3 (as CaCO3)	1		
Alkalinity (Total as CaCO3)	1 to 2	396	439
Bicarbonate Alkalinity	1 to 2	390	439
Carbonate Alkalinity	1 to 2	5.7	<1
Color TCU	5		
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	580	702
Hydroxide Alkalinity	1 to 2	<1	<1
pH (unitless)	0.01 to 0.1	8.31	8.27
Specific Conductivity µS/cm	2	1320	1610
Total Dissolved Solids	1 to 2	876	1200
Total Suspended Solids	3	7	6.7
Turbidity NTU	0.1	2.47	2.17
Dissolved Anions			
Bromide	0.05 to 2.495	<0.5	<0.5
Chloride	0.5 to 1	83	109
Fluoride	0.02 to 0.4	0.253	0.23
Sulphate	0.5 to 1	255	369
Nutrients			
Ammonia (Total)	0.005 to 0.05	0.026	0.0248
Nitrate (as N)	0.005 to 0.1	0.099	0.113
Nitrite (as N)	0.001 to 0.02	0.012	0.013
Nitrogen (Dissolved)	0.05 to 0.1		
Nitrogen (Total)	0.0025 to 0.11		
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.571	0.457
Orthophosphate (Dissolved)	0.001 to 0.01	0.084	0.0448
Phosphorus - Dissolved	0.002 to 0.02	0.0917	0.0509
Phosphorus - Total	0.002 to 0.02	0.0763	0.0529
Cyanide			
Cyanide (Free)	0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005
Dissolved Metals			
Aluminum	0.001 to 0.025	0.0011	0.0012
Antimony	0.0001 to 0.0025	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00236	0.00176
Barium	5E-005 to 0.02	0.0505	0.0569
Beryllium	0.0001 to 0.005	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005
Boron	0.01 to 0.1	0.067	0.085
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001
Calcium	0.05 to 0.1	92.6	112
Chromium	0.0001 to 0.018	0.00011	0.00012
Cobalt	0.0001 to 0.0015	0.00017	0.00019
Copper	0.0002 to 0.006	0.00181	0.00193
Dissolved Cadmium (by saltwater extraction)	0.00002		
Iron	0.01 to 0.03	0.031	0.022
Lead	5E-005 to 0.0025	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00849	0.0105
Magnesium	0.1	84.6	103
Manganese	5E-005 to 0.0015	0.103	0.196
Mercury	1E-005 to 5E-005	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0119	0.0119
Nickel	0.0005 to 0.005	0.00329	0.0041
Phosphorus	0.05 to 0.3	0.099	0.062
Potassium	0.05 to 2	18.6	21.1
Selenium	0.0001 to 0.006	0.00023	0.00023
Silicon	0.05	9.79	9.98
Silver	1E-005 to 0.0001	<0.00001	<0.00001
Sodium	0.05 to 2	79.6	103
Strontium	0.0001 to 0.005	0.807	1.06
Sulphur	0.5	82.8	116
Thallium	1E-005 to 0.001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00187	0.00268
Vanadium	0.001 to 0.03	0.0028	0.0034
Zinc	0.001 to 0.006	<0.001	0.0013
Total Metals			
Aluminum	0.003 to 0.025	0.198	0.0715
Antimony	0.0001 to 0.0025	0.00013	<0.0001
Arsenic	0.0001 to 0.0025	0.00236	0.00185
Barium	5E-005 to 0.02	0.0528	0.058
Beryllium	0.0001 to 0.005	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005
Boron	0.01 to 0.1	0.068	0.092
Cadmium	1E-005 to 8.5E-005	<0.00001	0.000011
Calcium	0.05 to 0.1	91.6	112
Chromium	0.0001 to 0.005	0.00067	0.00049
Cobalt	0.0001 to 0.0015	0.00034	0.00025
Copper	0.0005 to 0.007	0.00326	0.00331
Iron	0.01 to 0.03	0.271	0.138
Lead	5E-005 to 0.0025	0.000087	<0.00005
Lithium	0.0005 to 0.025	0.00815	0.0107
Magnesium	0.1	84.4	104
Manganese	5E-005 to 0.0015	0.133	0.212
Mercury	1E-005 to 5E-005	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0125	0.013
Nickel	0.0005 to 0.005	0.00414	0.00444
Phosphorus	0.05 to 0.3	0.112	0.056
Potassium	0.05 to 2	18.6	21.3
Selenium	0.0001 to 0.006	0.00022	0.00028
Silicon	0.05	10.2	10.3
Silver	1E-005 to 0.0001	<0.00001	<0.00001
Sodium	0.05 to 2	81.1	106
Strontium	0.0001 to 0.005	0.83	1.13
Sulphur	0.5	84.2	121
Thallium	1E-005 to 0.001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002		
Uranium	1E-005 to 0.001	0.00197	0.00287
Vanadium	0.001 to 0.03	0.0033	0.0041
Zinc	0.003 to 0.006	<0.003	<0.003
Organics			
Carbon Organic (Dissolved)	0.5 to 5	11.6	8.79
Carbon Organic (Total)	0.5 to 5	11.3	8.9
Nitrogen Organic (Dissolved)	0.05 to 0.26		
Nitrogen Organic (Total)	0.05 to 0.3		
ALS LAB ID		**L1513418**	**L1519657**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		PC02WH
Analytes	**MDL**	**12-Aug-14**
In Situ Parameters		
Conductivity µS/cm	...	
Oxygen Dissolved %	...	
Oxygen Dissolved	...	
pH (unitless)	...	
Redox Potential mV	...	
Salinity ppt	...	
Specific Conductivity µS/cm	...	
Temperature °C	...	
Total Dissolved Solids	...	
Turbidity NTU	...	
Physical Tests		
Acidity to pH 8.3 (as CaCO3)	1	
Alkalinity (Total as CaCO3)	1 to 2	383
Bicarbonate Alkalinity	1 to 2	383
Carbonate Alkalinity	1 to 2	<2
Color TCU	5	
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	738
Hydroxide Alkalinity	1 to 2	<2
pH (unitless)	0.01 to 0.1	7.94
Specific Conductivity µS/cm	2	1670
Total Dissolved Solids	1 to 2	1240
Total Suspended Solids	3	90
Turbidity NTU	0.1	83
Dissolved Anions		
Bromide	0.05 to 2.495	<0.5
Chloride	0.5 to 1	127
Fluoride	0.02 to 0.4	0.273
Sulphate	0.5 to 1	418
Nutrients		
Ammonia (Total)	0.005 to 0.05	0.0153
Nitrate (as N)	0.005 to 0.1	0.172
Nitrite (as N)	0.001 to 0.02	<0.01
Nitrogen (Dissolved)	0.05 to 0.1	
Nitrogen (Total)	0.0025 to 0.11	
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.449
Orthophosphate (Dissolved)	0.001 to 0.01	0.0012
Phosphorus - Dissolved	0.002 to 0.02	0.0045
Phosphorus - Total	0.002 to 0.02	0.0325
Cyanide		
Cyanide (Free)	0.005	<0.005
Cyanide (Total)	0.005	<0.005
Cyanide (WAD)	0.005	<0.005
Dissolved Metals		
Aluminum	0.001 to 0.025	0.004
Antimony	0.0001 to 0.0025	0.00014
Arsenic	0.0001 to 0.0025	0.00174
Barium	5E-005 to 0.02	0.0429
Beryllium	0.0001 to 0.005	<0.0001
Bismuth	0.0005 to 0.2	<0.0005
Boron	0.01 to 0.1	0.091
Cadmium	1E-005 to 8.5E-005	0.000016
Calcium	0.05 to 0.1	125
Chromium	0.0001 to 0.018	<0.0001
Cobalt	0.0001 to 0.0015	0.00033
Copper	0.0002 to 0.006	0.00239
Dissolved Cadmium (by saltwater extraction)	0.00002	
Iron	0.01 to 0.03	0.069
Lead	5E-005 to 0.0025	<0.00005
Lithium	0.0005 to 0.025	0.0106
Magnesium	0.1	103
Manganese	5E-005 to 0.0015	0.00952
Mercury	1E-005 to 5E-005	<0.00001
Molybdenum	5E-005 to 0.005	0.00976
Nickel	0.0005 to 0.005	0.00512
Phosphorus	0.05 to 0.3	<0.05
Potassium	0.05 to 2	19.9
Selenium	0.0001 to 0.006	0.00091
Silicon	0.05	10
Silver	1E-005 to 0.0001	<0.00001
Sodium	0.05 to 2	104
Strontium	0.0001 to 0.005	0.984
Sulphur	0.5	127
Thallium	1E-005 to 0.001	<0.00001
Tin	0.0001 to 0.0025	<0.0001
Titanium	0.01	<0.01
Uranium	1E-005 to 0.001	0.00247
Vanadium	0.001 to 0.03	0.0097
Zinc	0.001 to 0.006	0.0034
Total Metals		
Aluminum	0.003 to 0.025	0.0645
Antimony	0.0001 to 0.0025	0.00023
Arsenic	0.0001 to 0.0025	0.00278
Barium	5E-005 to 0.02	0.0449
Beryllium	0.0001 to 0.005	<0.0001
Bismuth	0.0005 to 0.2	<0.0005
Boron	0.01 to 0.1	0.101
Cadmium	1E-005 to 8.5E-005	0.000061
Calcium	0.05 to 0.1	122
Chromium	0.0001 to 0.005	0.00043
Cobalt	0.0001 to 0.0015	0.00106
Copper	0.0005 to 0.007	0.00917
Iron	0.01 to 0.03	2.69
Lead	5E-005 to 0.0025	0.000737
Lithium	0.0005 to 0.025	0.0108
Magnesium	0.1	103
Manganese	5E-005 to 0.0015	0.0117
Mercury	1E-005 to 5E-005	<0.00001
Molybdenum	5E-005 to 0.005	0.015
Nickel	0.0005 to 0.005	0.013
Phosphorus	0.05 to 0.3	0.066
Potassium	0.05 to 2	19.6
Selenium	0.0001 to 0.006	0.00085
Silicon	0.05	9.98
Silver	1E-005 to 0.0001	<0.00001
Sodium	0.05 to 2	102
Strontium	0.0001 to 0.005	1.04
Sulphur	0.5	132
Thallium	1E-005 to 0.001	0.000014
Tin	0.0001 to 0.0025	<0.0001
Titanium	0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002	
Uranium	1E-005 to 0.001	0.00313
Vanadium	0.001 to 0.03	0.041
Zinc	0.003 to 0.006	0.0123
Organics		
Carbon Organic (Dissolved)	0.5 to 5	7.15
Carbon Organic (Total)	0.5 to 5	7.13
Nitrogen Organic (Dissolved)	0.05 to 0.26	
Nitrogen Organic (Total)	0.05 to 0.3	
ALS LAB ID		**L1502292**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C3.28 - PC02.3
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Site ID		PC02.3	PC02.3	PC02.3	PC02.3	PC02.3	PC02.3	PC02.3	PC02.3
Analytes	MDL	4-Jun-14	18-Jun-14	3-Jul-14	16-Jul-14	30-Jul-14	12-Aug-14	4-Sep-14	17-Sep-14
In Situ Parameters									
Conductivity µS/cm	...	695	709	933	774	783	739		751
Oxygen Dissolved %	...	88.7	89.4	96.3	89.3	79.6	87.5		97.9
Oxygen Dissolved	...	8.62	8.96	9.24	8.26	7.74	8.21		10.9
pH (unitless)	...	8.41	8.48	8.34	8.61	8.74	8.24	8.5	8.38
Redox Potential mV	...	154	96	87.3	134	121	45.4		84.5
Salinity ppt	...	0.41	0.43	0.55	0.43	0.46	0.42		0.52
Specific Conductivity µS/cm	...	827	875	1096	875	933	848		1044
Temperature °C	...	16.7	15.1	17.2	19	16.6	18.3	12.3	10.3
Total Dissolved Solids	...	537	568	713	569	607	551		678
Turbidity NTU	...								
Physical Tests									
Acidity to pH 8.3 (as CaCO3)	1								
Alkalinity (Total as CaCO3)	1 to 2	279	301	449	395	404	282	390	404
Bicarbonate Alkalinity	1 to 2	270	286	428	368	377	265	364	374
Carbonate Alkalinity	1 to 2	8.3	15.7	20.6	27	27.3	16.3	25.4	30.1
Color TCU	5								
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	369	402	527	445	459	375	465	497
Hydroxide Alkalinity	1 to 2	<1	<1	<1	<1	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1	8.48	8.44	8.55	8.54	8.5	8.41	8.5	8.54
Specific Conductivity µS/cm	2	799	855	1060	945	1020	845	1020	1080
Total Dissolved Solids	1 to 2	498	553	641	617	911	580	665	732
Total Suspended Solids	3	7.8	8.6	11.7	11.8	5.5	17.8	3	4.1
Turbidity NTU	0.1	4.7	2.91	2.86	3.29	1.27	5.53	1.38	0.76
Dissolved Anions									
Bromide	0.05 to 2.495	<0.25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	0.5 to 1	54.4	52.4	49	52.1	54.6	59.9	57	57.5
Fluoride	0.02 to 0.4	0.22	0.235	0.44	0.274	0.277	0.274	0.269	0.25
Sulphate	0.5 to 1	87.4	109	130	80.7	118	108	127	160
Nutrients									
Ammonia (Total)	0.005 to 0.05	0.0099	0.021	0.0219	0.0177	0.0279	0.0191	0.0202	0.014
Nitrate (as N)	0.005 to 0.1	<0.025	<0.05	<0.05	<0.05	0.137	<0.05	0.177	0.137
Nitrite (as N)	0.001 to 0.02	<0.005	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	<0.01
Nitrogen (Dissolved)	0.05 to 0.1								
Nitrogen (Total)	0.0025 to 0.11								
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.784	0.856	1.09	1.04	0.956	1.16	0.778	0.617
Orthophosphate (Dissolved)	0.001 to 0.01	0.0385	0.0317	0.0824	0.0999	0.108	0.0831	0.105	0.104
Phosphorus - Dissolved	0.002 to 0.02	0.0505	0.0432	0.0975	0.124	0.119	0.105	0.148	0.123
Phosphorus - Total	0.002 to 0.02	0.0734	0.0567	0.13	0.137	0.127	0.141	0.161	0.0945
Cyanide									
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals									
Aluminum	0.001 to 0.025	0.0018	0.0069	0.0017	0.0026	0.0016	0.003	0.002	0.0015
Antimony	0.0001 to 0.0025	0.00011	<0.0001	0.00014	0.00012	<0.0001	0.00014	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00175	0.00158	0.00224	0.00226	0.0025	0.00207	0.00203	0.00213
Barium	5E-005 to 0.02	0.0519	0.0493	0.0596	0.0527	0.05	0.0535	0.0526	0.0517
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.03	0.029	0.033	0.036	0.033	0.04	0.032	0.035
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	65.2	69.1	83.7	72.3	74.6	67.9	78.2	82.3
Chromium	0.0001 to 0.018	<0.0001	0.00013	0.00012	0.00012	0.00011	0.00013	0.00013	0.00012
Cobalt	0.0001 to 0.0015	0.0001	0.0001	0.00014	0.00013	0.00014	0.00012	0.00014	<0.0001
Copper	0.0002 to 0.006	0.00234	0.00218	0.00332	0.00241	0.00252	0.00221	0.00207	0.00249
Dissolved Cadmium (by saltwater extraction)	0.00002								
Iron	0.01 to 0.03	0.016	0.018	0.025	0.026	0.012	0.026	0.022	0.017
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00561	0.00532	0.00845	0.00668	0.00728	0.00677	0.00664	0.00772
Magnesium	0.1	50	55.7	77.2	64.1	66.3	49.8	65.6	70.8
Manganese	5E-005 to 0.0015	0.00792	0.00799	0.0113	0.00896	0.00903	0.018	0.0293	0.0335
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00992	0.00923	0.0123	0.0098	0.0147	0.0192	0.0149	0.0184
Nickel	0.0005 to 0.005	0.00168	0.00175	0.00212	0.0021	0.0025	0.00186	0.0023	0.00218
Phosphorus	0.05 to 0.3	0.053	<0.05	0.107	0.118	0.126	0.096	0.115	0.109
Potassium	0.05 to 2	12.7	12.2	18.7	15.3	17.5	12.7	16	16.3
Selenium	0.0001 to 0.006	0.00022	0.0002	0.00038	0.00031	0.00027	0.0002	0.00018	0.00018
Silicon	0.05	4.94	4.33	7.09	8.15	8.07	8.79	10.8	9.64
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	39.2	42.1	54.7	50.3	54	44	53.5	56.8
Strontium	0.0001 to 0.005	0.472	0.49	0.669	0.591	0.627	0.526	0.612	0.71
Sulphur	0.5	30.9	34.8	43.2	27	38.2	34.8	41.4	51.6
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00108	0.00106	0.00176	0.00115	0.00132	0.00116	0.00112	0.00127
Vanadium	0.001 to 0.03	0.0027	0.0025	0.0028	0.002	0.003	0.0029	0.0024	0.0026
Zinc	0.001 to 0.006	<0.001	<0.001	<0.001	<0.001	0.0013	<0.001	<0.001	<0.001
Total Metals									
Aluminum	0.003 to 0.025	0.307	0.193	0.131	0.225	0.0823	0.329	0.0612	0.041
Antimony	0.0001 to 0.0025	0.00014	0.00011	0.00014	0.00014	0.00012	0.00017	0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00172	0.00166	0.0023	0.00219	0.00232	0.00217	0.00204	0.00217
Barium	5E-005 to 0.02	0.0513	0.0494	0.0615	0.0539	0.0499	0.0565	0.0549	0.0527
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.031	0.033	0.036	0.038	0.036	0.047	0.036	0.04
Cadmium	1E-005 to 8.5E-005	<0.00001	0.000012	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	62.1	65	79.8	70.1	73.4	67.4	78.2	82.7
Chromium	0.0001 to 0.005	0.00071	0.00053	0.00041	0.00059	0.0003	0.0008	0.00042	0.0003
Cobalt	0.0001 to 0.0015	0.00032	0.00025	0.00028	0.00033	0.00021	0.0004	0.0002	0.00013
Copper	0.0005 to 0.007	0.00434	0.00376	0.00473	0.00401	0.00329	0.00585	0.0027	0.00311
Iron	0.01 to 0.03	0.403	0.279	0.218	0.366	0.13	0.477	0.113	0.074
Lead	5E-005 to 0.0025	0.000097	0.000053	0.000057	0.000066	<0.00005	0.000102	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.0054	0.00579	0.00741	0.0066	0.00722	0.00695	0.00646	0.00785
Magnesium	0.1	47.7	51.7	75.2	62.8	66.1	49.2	66	71.5
Manganese	5E-005 to 0.0015	0.0384	0.0277	0.036	0.0479	0.0223	0.0701	0.0458	0.0413
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00969	0.00955	0.0123	0.0102	0.0153	0.0188	0.0158	0.0204
Nickel	0.0005 to 0.005	0.00236	0.00224	0.00272	0.00265	0.0027	0.00277	0.00269	0.00252
Phosphorus	0.05 to 0.3	0.081	0.068	0.105	0.14	0.128	0.121	0.131	0.111
Potassium	0.05 to 2	11.8	11.5	17.4	14.7	17.7	12.7	15.9	16.3
Selenium	0.0001 to 0.006	0.00024	0.00022	0.00037	0.00026	0.00024	0.00023	0.00018	0.00018
Silicon	0.05	5.39	4.58	7.22	8.4	8.17	9.5	10.9	9.73
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	39.2	40.9	57.3	49.3	52.4	43.6	54.2	59.5
Strontium	0.0001 to 0.005	0.448	0.493	0.657	0.589	0.626	0.518	0.636	0.738
Sulphur	0.5	30.2	33.9	43.6	27.1	39	35	42.4	53.8
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	0.013	0.011	<0.01	<0.01	<0.01	0.013	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002								
Uranium	1E-005 to 0.001	0.00111	0.00107	0.00173	0.00123	0.00136	0.0012	0.00123	0.00138
Vanadium	0.001 to 0.03	0.0035	0.0032	0.0034	0.0026	0.0034	0.004	0.0028	0.0032
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics									
Carbon Organic (Dissolved)	0.5 to 5	12.9	13.2	17.1	17.2	15.6	16.9	14.3	11.9
Carbon Organic (Total)	0.5 to 5	13.6	13.2	16.7	17	15.8	17.1	14.3	12.1
Nitrogen Organic (Dissolved)	0.05 to 0.26								
Nitrogen Organic (Total)	0.05 to 0.3								
ALS LAB ID		**L1465478**	**L1473827**	**L1481215**	**L1488886**	**L1495443**	**L1502292**	**L1513418**	**L1519657**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C3.29 - PC02.5
PAGE 1 OF 4

Site ID		PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5
Analytes	**MDL**	**14-Apr-11**	**28-Jun-11**	**30-Aug-11**	**28-Sep-11**	**25-Oct-11**	**5-Dec-11**	**9-Jan-12**	**6-Mar-12**	**10-Apr-12**	**25-Apr-12**	**2-May-12**	**9-May-12**
In Situ Parameters													
Conductivity µS/cm	...	718	679	659		756	783	698	205	512	801	786	456
Oxygen Dissolved %	...	66.4	74.7	70.8	57.5	46	66.8	64.3	79.9	65.4	65.5	69.3	65.8
Oxygen Dissolved	...	8.97	7.27	7.39	6.48	5.95	9.66	9.24	11.7	9.03	7.07	8.09	7.56
pH (unitless)	...	7.58	7.82	7.75	7.78	7.77	7.8	7.76	7.71	7.69	7.66	7.99	7.57
Redox Potential mV	...	117	155	146	30.2	154	47.1	30.3	76.4	110	109	133	123
Salinity ppt	...		0.4			0.62	0.73	0.65	0.19	0.45	0.85	0.58	0.32
Specific Conductivity µS/cm	...	1252	809	848	1166	1247	1472	316	394	914	1074	1153	653
Temperature °C	...	2.66	16.6	13.3	9.86	4.37	0.49	0.41	0.05	1.99	11.7	8.34	9.2
Total Dissolved Solids	...	814	526			811	957	857	256	594	698	749	424
Turbidity NTU	...		-0.7	3.2	10.2	12.6	5.8	5.5	13.6		9.5	3.8	6
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1				2.2	1.4							
Alkalinity (Total as CaCO3)	1 to 2	409	277	289	444	489	550	530	131	319	381	413	444
Bicarbonate Alkalinity	1 to 2				444	489		530	131	312	381	413	444
Carbonate Alkalinity	1 to 2				<2	<2		<1	<2	7.5	<1	<1	<1
Color TCU	5	31.4	37.9	43.1	42.6	38.1	32.2	23.7	100	21.4	32.9	35.3	36.5
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	579	340	347	495	574	644	613	157	422	509	541	578
Hydroxide Alkalinity	1 to 2				<2	<2		<1	<2	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1	8.31	8.27	8.31	8.24	8.27	8.39	8.23	8	8.41	8.32	8.23	8.34
Specific Conductivity µS/cm	2	1220	758	832	1140	1280	1370	1360	393	908	1060	1130	1220
Total Dissolved Solids	1 to 2	831	475	508	704	788	868	823	272	588	693	761	804
Total Suspended Solids	3	3.2	6.4	7.3	27.3	34.4	5	6.7	14.7	5.3	15.3	49.7	7.8
Turbidity NTU	0.1	2.51	1.51	2.25		13.1	4.18	7.22	12.2	3.66	5.41	12.1	5.16
Dissolved Anions													
Bromide	0.05 to 2.495	<1.2	<0.25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.25	<0.5	<0.5	<0.5	<0.5
Chloride	0.5 to 1	52.9	49.4	55.3	66.7	73	77.2	73.1	15.6	40.4	53.7	57	61.4
Fluoride	0.02 to 0.4	<0.2	0.27	0.22	0.26	0.28	0.24	0.23	<0.1	<0.2	0.24	0.22	0.23
Sulphate	0.5 to 1	241	70.7	77.9	109	139	154	152	51.8	147	176	178	188
Nutrients													
Ammonia (Total)	0.005 to 0.05	0.0581	0.0204	0.0252	0.0429	0.0243	0.164	0.151	0.108	0.142	0.0455	0.0346	0.0356
Nitrate (as N)	0.005 to 0.1	0.051	<0.025	<0.05	<0.05	0.062	0.06	<0.05	0.139	<0.05	0.108	0.063	<0.05
Nitrite (as N)	0.001 to 0.02	<0.01	<0.005	<0.01	<0.01	<0.01	0.013	0.012	0.0104	<0.01	0.01	<0.01	<0.01
Nitrogen (Dissolved)	0.05 to 0.1		1.03	1.21	0.97	0.7		0.66	1.58	0.64	0.84	0.83	0.82
Nitrogen (Total)	0.0025 to 0.11	0.802	1.05	1.24	1.02	1.09	0.93	0.834	1.99	0.849	1.21	0.806	0.873
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.751	1.05	0.999	1.02	1.02	1.05	0.822	1.84	0.849	1.09	0.743	0.873
Orthophosphate (Dissolved)	0.001 to 0.01		0.035										
Phosphorus - Dissolved	0.002 to 0.02	0.118	0.0529	0.0805	0.237	0.237	0.248	0.166	0.77	0.0779	0.111	0.122	0.135
Phosphorus - Total	0.002 to 0.02	0.138	0.0661	0.0953	0.289	0.323	0.291	0.234	0.965	0.116	0.152	0.22	0.171
Cyanide													
Cyanide (Free)	0.005		<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005		0.0085		0.0144	0.0111	0.0071	0.0066	0.019	0.0082	<0.005	0.0056	<0.005
Cyanide (WAD)	0.005		<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	0.001 to 0.025	<0.005	<0.005	<0.005	<0.005	<0.003	<0.003	<0.003	0.0092	<0.003	<0.003	<0.003	<0.003
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	0.0001	0.00011
Arsenic	0.0001 to 0.0025	0.00161	0.00159	0.00172	0.00251	0.00235	0.00203	0.00166	0.00136	0.00123	0.00209	0.00213	0.00228
Barium	5E-005 to 0.02	0.055	0.051	0.05	0.066	0.0632	0.0723	0.0715	0.0233	0.0539	0.0692	0.0642	0.0692
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.2	<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	0.031	0.029	0.029	0.026	0.023	0.031	0.031	0.034
Cadmium	1E-005 to 8.5E-005	0.000033	0.000025	<0.000017	<0.000017	<0.00001	<0.00001	<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	94.9	60.4	58.3	81.3	94.9	101	98.2	25.9	65.4	82.7	86.1	95.3
Chromium	0.0001 to 0.018	<0.0015	<0.002	<0.001	<0.001	0.00017	0.00016	0.00014	0.00014	0.0001	<0.0001	0.00012	0.00016
Cobalt	0.0001 to 0.0015	<0.0003	<0.0003	<0.0003	<0.0003	0.00033	0.00037	0.00031	0.0003	0.00022	0.00019	0.00017	0.0002
Copper	0.0002 to 0.006	0.0016	0.0021	0.0015	0.0013	0.00116	0.00091	0.00083	0.00489	0.00091	0.00154	0.00186	0.00164
Dissolved Cadmium (by saltwater extraction)	0.00002												
Iron	0.01 to 0.03	0.063	0.042	0.043	0.089	0.119	0.129	0.101	0.137	0.105	0.061	0.068	0.07
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	<0.005	0.0061	0.0061	0.0072	0.00624	0.00828	0.00684	0.00173	0.00474	0.00549	0.00633	0.0073
Magnesium	0.1	83	46	48.9	71	81.9	94.9	89.4	22.4	62.9	73.4	79.2	82.5
Manganese	5E-005 to 0.0015	0.149	0.0266	0.0416	0.384	0.616	0.826	0.721	0.162	0.423	0.177	0.129	0.178
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
Molybdenum	5E-005 to 0.005	0.0087	0.0058	0.0085	0.0051	0.00459	0.00372	0.00469	0.00994	0.0103	0.0104	0.00775	0.0069
Nickel	0.0005 to 0.005	0.0024	0.0021	0.0015	0.0024	0.00239	0.00221	0.00209	0.00253	0.00168	0.00234	0.00235	0.00248
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.83	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	14.9	12.7	14.8	16.8	16.3	20.8	16.4	15.6	11.8	15.6	16.4	16.6
Selenium	0.0001 to 0.006	<0.001	<0.001	<0.001	<0.001	0.00019	0.00017	0.00015	0.00018	0.00012	0.00016	0.00017	0.00017
Silicon	0.05	8.97	3.87	7.29	13	14.1	12.8	12	4.35	6.7	7.78	8.06	8.8
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	63.8	44.4	43	62.1	63.4	81.2	70.2	15.2	42.6	55	60.3	68.4
Strontium	0.0001 to 0.005	0.75	0.473	0.491	0.696	0.745	0.955	0.818	0.208	0.537	0.647	0.702	0.748
Sulphur	0.5												
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.012	0.011	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00132	0.00069	0.00077	0.00086	0.001	0.000842	0.000812	0.000405	0.00124	0.00142	0.00127	0.00122
Vanadium	0.001 to 0.03	0.0024	0.0014	0.0016	0.0022	0.002	0.0016	0.0013	0.0026	0.002	0.0031	0.0027	0.0029
Zinc	0.001 to 0.006	<0.005	<0.005	<0.005	<0.005	0.0073	<0.003	<0.003	<0.003	<0.003	0.0035	<0.003	<0.003
Total Metals													
Aluminum	0.003 to 0.025	0.0672	0.059	0.107	0.512	0.5	0.117	0.169	0.512	0.149	0.303	0.126	0.209
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	0.00013	0.00013	0.00014
Arsenic	0.0001 to 0.0025	0.0014	0.0015	0.00163	0.00253	0.00253	0.00188	0.0016	0.0014	0.00132	0.00213	0.00213	0.00221
Barium	5E-005 to 0.02	0.057	0.049	0.053	0.067	0.0684	0.0734	0.0717	0.0276	0.0558	0.0715	0.0633	0.0686
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.2	<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	0.037	0.031	0.031	0.032	0.028	0.036	0.036	0.037
Cadmium	1E-005 to 8.5E-005	<0.000017	0.000026	<0.000017	<0.000017	0.000012	<0.00001	<0.00001	<0.00001	0.000014	<0.00001	<0.00001	0.00001
Calcium	0.05 to 0.1	93.8	59.9	57.9	80.3	96.6	96.4	93.5	25.9	66.6	81.6	84.7	89.4
Chromium	0.0001 to 0.005	<0.001	<0.001	<0.001	0.0014	0.00121	0.00037	0.00056	0.0012	0.00048	0.00087	0.00047	0.0007
Cobalt	0.0001 to 0.0015	<0.0003	<0.0003	<0.0003	0.00064	0.00073	0.00048	0.00044	0.00065	0.00033	0.00044	0.00028	0.00036
Copper	0.0005 to 0.007	0.0022	0.0027	0.0023	0.0047	0.00468	0.00186	0.0019	0.0084	0.00209	0.00382	0.00364	0.00315
Iron	0.01 to 0.03	0.183	0.131	0.189	0.841	0.858	0.342	0.375	0.736	0.36	0.527	0.275	0.395
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	0.000151	<0.00005	0.00006	0.00015	<0.00005	0.000086	<0.00005	0.000076
Lithium	0.0005 to 0.025	0.005	0.0059	0.0062	0.0072	0.00727	0.00749	0.00616	0.00183	0.00449	0.00532	0.00638	0.00682
Magnesium	0.1	82.7	46.3	49.3	70.2	83.9	93.4	87.6	22.7	63.8	72.7	76.7	77
Manganese	5E-005 to 0.0015	0.168	0.0472	0.0561	0.488	0.797	0.849	0.742	0.182	0.445	0.236	0.161	0.208
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
Molybdenum	5E-005 to 0.005	0.01	0.0067	0.0093	0.0054	0.00485	0.00403	0.00459	0.0109	0.0109	0.0111	0.00793	0.0068
Nickel	0.0005 to 0.005	0.0028	0.0029	0.0018	0.0035	0.00356	0.00246	0.00245	0.00407	0.00212	0.00294	0.00273	0.00295
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	0.37	0.3	<0.3	0.91	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	14.9	12.5	15.4	16.8	16.5	20.1	16.1	15.5	11.9	15.3	16	15.9
Selenium	0.0001 to 0.006	<0.001	<0.001	<0.001	<0.001	0.00021	0.00017	0.00016	0.00023	0.00015	0.00018	0.00019	0.00018
Silicon	0.05	9.09	4.01	7.59	14.1	15.6	12.8	12.1	5.86	7.13	8.5	8.22	8.78
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	63.6	42.8	45.7	61	64.5	80.5	69.1	15	43	53.5	59.5	65.6
Strontium	0.0001 to 0.005	0.754	0.468	0.497	0.694	0.771	0.941	0.771	0.212	0.55	0.649	0.695	0.714
Sulphur	0.5												
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	0.01	<0.01	0.01	0.023	0.025	0.016	0.018	0.027	0.012	0.016	0.013	0.012
Total Cadmium (by saltwater extraction)	0.00002												
Uranium	1E-005 to 0.001	0.00144	0.00076	0.00083	0.0009	0.00105	0.000857	0.000783	0.000444	0.00128	0.00153	0.00129	0.00123
Vanadium	0.001 to 0.03	0.0027	0.0018	0.0018	0.0035	0.0035	0.0019	0.0018	0.0038	0.0024	0.0039	0.0032	0.0034
Zinc	0.003 to 0.006	<0.005	<0.005	0.0056	<0.005	0.0055	0.0065	<0.003	0.0049	<0.003	<0.003	0.0032	0.0032
Organics													
Carbon Organic (Dissolved)	0.5 to 5	12.2	16.6	18.3	17.5	16.9	15	12	25.4	10.3	12.8	14.1	14.6
Carbon Organic (Total)	0.5 to 5	12.4	17.1	18.6	18.3	17.2	16	12.8	28.8	10.8	13.8	14.5	15.1
Nitrogen Organic (Dissolved)	0.05 to 0.26		1.01	1.18	0.927	0.613		0.497	1.32	0.498	0.677	0.732	0.784
Nitrogen Organic (Total)	0.05 to 0.3	0.693	1.03	1.21	0.977	0.583	0.693	0.672	1.73	0.707	1.05	0.709	0.838
ALS LAB ID		**L995583**	**L1025075**	**L1052387**	**L1066047**	**L1076994**	**L1092368**	**L1102695**	**L1122039**	**L1133342**	**L1140194**	**L1142492**	**L1145681**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C3.29 - PC02.5
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Site ID		PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5
Analytes	**MDL**	**16-May-12**	**24-May-12**	**10-Jul-12**	**7-Aug-12**	**5-Sep-12**	**4-Dec-12**	**8-Jan-13**	**5-Feb-13**	**6-Mar-13**	**2-Apr-13**	**7-May-13**	**5-Jun-13**
In Situ Parameters													
Conductivity µS/cm	...	1111	811	793	726	749	643	644	0.649	572	797	696	629
Oxygen Dissolved %	...	76.2	75	69	58.5	66.9	68.6	66.3	63	79.1		75.4	68.4
Oxygen Dissolved	...	8.17	7.97	6.17	5.31	6.98	9.72	9.66	9.1	11.4		7.7	6.78
pH (unitless)	...	8.08	8.13	8.01	7.74	7.92	7.93	8.25	7.84	7.88	8.1	8.01	7.82
Redox Potential mV	...	136	51	171	138	61.8	10.2	45.3	93.7	65.4	103	101	121
Salinity ppt	...	0.75	0.53		0.39	0.48	0.58	0.6	0.6	0.53	0.6	0.43	0.38
Specific Conductivity µS/cm	...	1479	1066	867	803	966	1188	1235	1228	1080	1194	876	764
Temperature °C	...	12	12.5	20.6	20	13.3	0.99	0	0.29	0.4	7.6	14.3	15.7
Total Dissolved Solids	...	961			522	628	772	802	799	702	776	570	497
Turbidity NTU	...	3.1	1.8	1.6	2	4.4	1.3	2.1	1.8	3.2	3.2	1.1	1.2
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1					<1							
Alkalinity (Total as CaCO3)	1 to 2	428	365	313	305	389	452	430	483	434	386	273	251
Bicarbonate Alkalinity	1 to 2	428	347	313	305	389	452	430	483	434	386	273	251
Carbonate Alkalinity	1 to 2	<1	18	<2	<1	<1	<1	<20	<1	<1	<1	<1	<1
Color TCU	5	48.5	35.7	41.7	44.6	42	24.7	20.6	19.6	26.5	19.8	27.3	27.9
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	691	482	381	353	422	527	554	588	549	550	358	323
Hydroxide Alkalinity	1 to 2	<1	<1	<2	<1	<1	<1	<20	<1	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1	8.38	8.37	8.26	8.25	8.44	8.32	8.21	8.16	8.35	8.18	8.4	8.3
Specific Conductivity µS/cm	2	1440	1040	813	786	945	1130	1130	1210	1140	1130	817	736
Total Dissolved Solids	1 to 2	1050	682	532	516	597	717	714	745	673	756	295	445
Total Suspended Solids	3	8.8	3.8	4.9	4.9	6.1	<3	4.3	18.6	<3	6.7	<3	<3
Turbidity NTU	0.1	2.71	2.41	1.84	1.65	3.37	2.3	2.62	3.64	1.67	3.64	2.46	1.25
Dissolved Anions													
Bromide	0.05 to 2.495	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	0.5 to 1	57.3	58.4	53.4	52.5	59.9	67.8	65.4	65.9	60.1	52.6	57.4	52.5
Fluoride	0.02 to 0.4	0.24	0.23	0.23	0.24	0.28	0.23	0.37	<0.2	0.34	0.31	0.27	0.36
Sulphate	0.5 to 1	371	176	76.7	69.5	65.2	119	122	138	150	208	97.8	63.8
Nutrients													
Ammonia (Total)	0.005 to 0.05	0.0198	0.0179	0.019	0.0253	0.0528	0.0846	0.203	0.185	0.122	0.0415	0.0158	0.01
Nitrate (as N)	0.005 to 0.1	0.064	<0.05	<0.05	<0.05	0.073	0.1	0.1	0.099	0.095	0.065	<0.05	<0.05
Nitrite (as N)	0.001 to 0.02	<0.01	<0.01	<0.01	<0.01	<0.01	0.025	0.018	<0.01	<0.01	0.012	<0.01	<0.01
Nitrogen (Dissolved)	0.05 to 0.1	1.11	0.73	1.08	0.89	0.94	0.902	0.836	0.89	0.74	0.65		
Nitrogen (Total)	0.0025 to 0.11	1.15	0.833	0.897	0.947		1	0.95	0.853	0.805	0.827	0.872	0.727
Nitrogen Kjeldahl (Total)	0.05 to 0.2	1.09	0.833	0.897	0.947	1.03	0.875	0.863	0.807	0.855	0.749	0.893	0.734
Orthophosphate (Dissolved)	0.001 to 0.01												
Phosphorus - Dissolved	0.002 to 0.02	0.0856	0.0715	0.0746	0.0799	0.112	0.081	0.177	0.134	0.102	0.0646	0.0511	0.0325
Phosphorus - Total	0.002 to 0.02	0.094	0.0851	0.0909	0.097	0.129	0.11		0.183	0.125	0.0801	0.0653	0.0389
Cyanide													
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	0.001 to 0.025	<0.003	0.0016	0.0018	0.0018	0.0024	0.002	0.0018	0.0017	0.0013	0.0016	0.0016	0.0013
Antimony	0.0001 to 0.0025	0.00012	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00153	0.0014	0.00155	0.0016	0.00194	0.00129	0.00139	0.00125	0.00115	0.00113	0.00129	0.00129
Barium	5E-005 to 0.02	0.0706	0.048	0.0492	0.0489	0.0462	0.061	0.0617	0.0658	0.0584	0.061	0.0497	0.0428
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.036	0.03	0.032	0.034	0.027	0.026	0.025	0.025	0.023	0.025	0.033	0.026
Cadmium	1E-005 to 8.5E-005	0.000017	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	102	77.2	64.4	57.7	67.8	86.6	87.8	93.6	85	90.8	61	60.1
Chromium	0.0001 to 0.018	0.00014	0.00013	<0.0001	<0.0001	0.00018	0.00015	0.00016	0.00016	0.00011	<0.0001	<0.0001	0.00011
Cobalt	0.0001 to 0.0015	0.00018	0.00014	0.00012	0.00011	0.00017	0.00016	0.00019	0.0002	0.00018	0.0001	<0.0001	<0.0001
Copper	0.0002 to 0.006	0.00187	0.00195	0.00141	0.00104	0.00066	0.00124	0.00089	0.00082	0.00131	0.00131	0.0019	0.00183
Dissolved Cadmium (by saltwater extraction)	0.00002												
Iron	0.01 to 0.03	0.052	0.032	0.03	0.037	0.054	0.099	0.095	0.078	0.081	0.036	0.024	0.021
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00821	0.00508	0.00619	0.00597	0.0073	0.00667	0.00637	0.00696	0.00585	0.00533	0.00634	0.00515
Magnesium	0.1	106	70.2	53.4	50.8	61.5	75.4	81.4	86.1	81.8	78.4	50	41.9
Manganese	5E-005 to 0.0015	0.0598	0.0444	0.0409	0.039	0.142	0.228	0.408	0.387	0.172	0.0752	0.0355	0.0151
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0218	0.0119	0.00495	0.00416	0.0055	0.00648	0.00527	0.00495	0.00648	0.0144	0.0108	0.00477
Nickel	0.0005 to 0.005	0.00197	0.00184	0.00156	0.00151	0.00201	0.00172	0.00192	0.00194	0.00173	0.00163	0.00124	0.0013
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	0.129	0.122	0.168	0.148	0.115	0.06	0.054	<0.05
Potassium	0.05 to 2	20.2	14.6	12.8	13.2	16.7	16.2	15.6	15.2	17.1	15.9	13.3	12.5
Selenium	0.0001 to 0.006	0.00024	0.00019	0.0002	0.00021	0.0002	0.00013	0.00013	0.00013	0.00015	0.00014	0.00016	0.00017
Silicon	0.05	7.6	4.77	2.71	5.82	8.15	11.5	11.5	12	10.5	7.34	4.34	2.69
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	78.2	55.2	43.2	42.2	56.4	60.8	59.6	68.3	53.4	53.5	42.5	36.1
Strontium	0.0001 to 0.005	0.925	0.613	0.49	0.478	0.552	0.676	0.762	0.8	0.662	0.691	0.501	0.398
Sulphur	0.5						39.5	40.4	43.9	49.6	65.1	32.9	20.5
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00207	0.00103	0.000445	0.000295	0.000459	0.000721	0.000654	0.00071	0.000821	0.00158	0.00115	0.000821
Vanadium	0.001 to 0.03	0.0027	0.0021	0.0012	<0.001	0.0014	0.0016	0.0013	0.0013	0.0019	0.0026	0.0023	0.0017
Zinc	0.001 to 0.006	<0.003	0.0037	0.0095	0.0031	0.0016	0.0011	0.0015	0.0063	0.0019	0.001	0.0019	0.0019
Total Metals													
Aluminum	0.003 to 0.025	0.128	0.0754	0.0637	0.0661	0.151	0.07	0.0421	0.0398	0.0665	0.114	0.0901	0.0409
Antimony	0.0001 to 0.0025	0.00013	0.00012	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	0.00011	<0.0001
Arsenic	0.0001 to 0.0025	0.00158	0.0014	0.00157	0.0017	0.00176	0.00138	0.00137	0.00134	0.00122	0.00119	0.00125	0.00126
Barium	5E-005 to 0.02	0.0721	0.0476	0.0499	0.0499	0.049	0.0611	0.0631	0.0676	0.0615	0.0617	0.0475	0.043
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.04	0.035	0.037	0.04	0.032	0.028	0.028	0.031	0.026	0.028	0.034	0.028
Cadmium	1E-005 to 8.5E-005	0.000021	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	101	73.7	63	58.2	65.9	83.4	86.2	95.4	87.3	85.7	59.3	58.6
Chromium	0.0001 to 0.005	0.00056	0.00038	0.0004	0.00038	0.0006	0.00038	0.00029	0.0003	0.00028	0.00039	0.00031	0.00025
Cobalt	0.0001 to 0.0015	0.00029	0.00021	0.00018	0.00017	0.00029	0.00021	0.00023	0.00024	0.00025	0.00021	0.00016	0.00011
Copper	0.0005 to 0.007	0.00328	0.00264	0.00216	0.00173	0.00229	0.00392	0.00187	0.00183	0.00201	0.00259	0.00295	0.00246
Iron	0.01 to 0.03	0.227	0.147	0.121	0.128	0.264	0.245	0.204	0.19	0.235	0.223	0.15	0.083
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	0.000058	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00782	0.00506	0.00581	0.00638	0.0072	0.00672	0.00661	0.00722	0.00622	0.00532	0.00621	0.00502
Magnesium	0.1	105	67.1	52.7	49.6	59.9	72.4	81.5	86.3	81.1	73.9	48.4	41.1
Manganese	5E-005 to 0.0015	0.0893	0.0766	0.0642	0.0731	0.215	0.252	0.455	0.424	0.207	0.103	0.0486	0.0229
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0213	0.0124	0.00503	0.00462	0.00587	0.00651	0.00562	0.00534	0.00713	0.0146	0.0111	0.00484
Nickel	0.0005 to 0.005	0.00238	0.00205	0.00181	0.00175	0.0023	0.00186	0.00217	0.0021	0.00201	0.00196	0.00149	0.00144
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	0.145	0.148	0.182	0.173	0.14	0.074	0.056	<0.05
Potassium	0.05 to 2	20.2	14.1	12.6	13.3	15.9	15.5	15.3	15.3	17.2	15.8	12.8	12.4
Selenium	0.0001 to 0.006	0.0003	0.00018	0.00019	0.00021	0.00017	0.00013	0.00014	0.00015	0.00014	0.00014	0.00016	0.00018
Silicon	0.05	7.71	4.75	2.8	5.99	8.31	11.1	11.5	12.2	10.8	7.48	4.43	2.77
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000094
Sodium	0.05 to 2	78.3	54.4	42.2	44.2	57.6	58.6	61.2	69.2	53	53.8	41.9	36.1
Strontium	0.0001 to 0.005	0.88	0.611	0.475	0.475	0.561	0.66	0.799	0.84	0.679	0.696	0.493	0.39
Sulphur	0.5						39.7	42	46.8	52.1	65.2	32.8	20.8
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002												
Uranium	1E-005 to 0.001	0.0021	0.0011	0.000452	0.000331	0.000476	0.000725	0.000666	0.000715	0.000887	0.0016	0.00117	0.000816
Vanadium	0.001 to 0.03	0.0031	0.0025	0.0016	0.0013	0.0021	0.002	0.0016	0.0016	0.0023	0.0029	0.0026	0.0019
Zinc	0.003 to 0.006	0.0033	0.0039	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics													
Carbon Organic (Dissolved)	0.5 to 5	17.6	15.3	15.8	17	17.1	11.9	11.2	11.9	11.2	10.4	12.7	14.5
Carbon Organic (Total)	0.5 to 5	21.2	15.4	15.8	16.5	17.2	13.5	12.3	11.7	11.6	10.9	12.8	14.6
Nitrogen Organic (Dissolved)	0.05 to 0.26	1.03	0.712	1.06	0.865	0.815	0.693			0.523	0.531		
Nitrogen Organic (Total)	0.05 to 0.3	1.07	0.816	0.878	0.921	0.975	0.791	0.66	0.622	0.588	0.708		
ALS LAB ID		**L1148880**	**L1152500**	**L1176520**	**L1190914**	**L1205273**	**L1245799**	**L1256678**	**I1265809**	**L1276517**	**L1285503**	**L1298960**	**L1312719**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5
Analytes	**MDL**	**2-Jul-13**	**7-Aug-13**	**4-Sep-13**	**9-Oct-13**	**6-Nov-13**	**4-Dec-13**	**13-Mar-14**	**21-Mar-14**	**26-Mar-14**	**2-Apr-14**	**9-Apr-14**	**23-Apr-14**
In Situ Parameters													
Conductivity µS/cm	...	813	679		671	662	489	257	564	667	774	866	849
Oxygen Dissolved %	...	100	48.2	61.4	62.6	72.7	72.4	76.6	66.8	69.2	79.6	80.9	87.4
Oxygen Dissolved	...	8.32	4.52	6.11	7.98	10.1	10.6	11.1	9.6	9.88	10.3	9.57	10.4
pH (unitless)	...	8.13	7.73	7.87	7.89	8.06	7.89	7.76	7.74	7.87	8.03	8.08	8.1
Redox Potential mV	...	110	287	199	76.5	60	64.9	50.1	180	59.9	47.2	-31.6	97.1
Salinity ppt	...	0.4	0.38	0.59	0.33	0.59	0.45	0.23	0.52	0.61	0.64	0.65	0.64
Specific Conductivity µS/cm	...	821	780	1185	415	1194	934	491	1060	1249	1277	1288	1269
Temperature °C	...	24.6	18.2	15.4	5.03	1.68	0.02	0.088	0.51	0.61	4.35	7.86	7.66
Total Dissolved Solids	...	535	507	770	437	776	609	319	589	812	830	837	825
Turbidity NTU	...	0	2.3		6	6	1.9						
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1					<1							
Alkalinity (Total as CaCO3)	1 to 2	278	310	442	475	442	606	130	321	397	387	413	387
Bicarbonate Alkalinity	1 to 2	265	310	442	475	442	606	130	321	397	387	413	366
Carbonate Alkalinity	1 to 2	13	<2	<1	<1	<1	<20	<2	<2	<2	<2	<2	20.2
Color TCU	5	35.8	38.7	40.9	32.6	25.9	21.7						
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	346	334	521	573	544	615	209	504	625	606	641	609
Hydroxide Alkalinity	1 to 2	<1	<2	<1	<1	<1	<20	<2	<2	<2	<2	<2	<1
pH (unitless)	0.01 to 0.1	8.41	8.22	8.28	8.31	8.32	8.09	7.93	8.18	8.21	8.22	8.23	8.36
Specific Conductivity µS/cm	2	778	737	1130	1190	1200	1260	469	1080	1260	1160	1240	1290
Total Dissolved Solids	1 to 2	504	462	727	770	786	833	306	715	850	821	895	875
Total Suspended Solids	3	3.7	3.9	18.5	16	6.6	5.1	20.3	3.2	5.6	<3	3.4	<3
Turbidity NTU	0.1	0.71	1.11	11.8	10.4	6.29	2.18	12.7	1.55	1.16	1.47	1.28	1.99
Dissolved Anions													
Bromide	0.05 to 2.495	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	0.5 to 1	51.7	52.6	59.3	66.5	65.5	70.5	16.1	41	48.4	46.2	50.6	48.1
Fluoride	0.02 to 0.4	0.23	0.28	0.37	0.36	0.26	0.27	0.087	<0.2	<0.2	<0.2	0.21	0.2
Sulphate	0.5 to 1	81	55.5	142	151	166	187	94	235	274	270	285	307
Nutrients													
Ammonia (Total)	0.005 to 0.05	0.0208	0.0447	0.0893	0.1	0.0598	0.155	0.255	0.298	0.128	0.0523	0.0576	0.0182
Nitrate (as N)	0.005 to 0.1	<0.05	<0.05	0.12	0.08	0.078	0.116	0.186	0.142	0.097	<0.05	0.058	0.056
Nitrite (as N)	0.001 to 0.02	<0.01	<0.01	0.018	<0.01	0.014	<0.01	0.0102	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen (Dissolved)	0.05 to 0.1		0.936	2.39									
Nitrogen (Total)	0.0025 to 0.11	0.861	0.995	1.42	1.61	1.19							
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.861	1.16	1.39	1.64	1.08	0.92	1.67	1.17	0.851	0.768	0.765	0.753
Orthophosphate (Dissolved)	0.001 to 0.01				0.126	0.119	0.104	0.418	0.0935	0.0545	0.035	0.0427	0.0399
Phosphorus - Dissolved	0.002 to 0.02	0.0665	0.121	0.242	0.189	0.164	0.117	0.511	0.113	0.0739	0.0538	0.0754	0.0538
Phosphorus - Total	0.002 to 0.02	0.0566	0.144		0.27	0.223	0.143	0.638	0.146	0.0926	0.0792	0.0609	0.0732
Cyanide													
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	0.001 to 0.025	0.0019	0.0026	0.0026	0.0025	0.0018	0.0119	0.0043	0.0015	0.0011	0.0012	0.0019	0.001
Antimony	0.0001 to 0.0025	0.00012	<0.0001	0.00013	0.0001	<0.0001	<0.0001	0.00011	0.00013	<0.0001	0.00014	0.00015	0.00013
Arsenic	0.0001 to 0.0025	0.00191	0.00196	0.00275	0.00255	0.00197	0.00168	0.00146	0.00147	0.00133	0.00141	0.00152	0.0015
Barium	5E-005 to 0.02	0.0502	0.0517	0.0715	0.0712	0.0672	0.0751	0.0274	0.0626	0.0691	0.0654	0.0719	0.0601
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.03	0.034	0.025	0.029	0.027	0.029	0.025	0.031	0.031	0.032	0.031	0.026
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	0.000013	<0.00001
Calcium	0.05 to 0.1	62.4	57.6	82	90.7	81.1	97.8	36.4	79.7	94.4	93	103	97.4
Chromium	0.0001 to 0.018	0.0001	0.00013	0.00014	0.00014	0.00016	0.00019	<0.0001	0.00013	0.00011	0.00012	0.00012	0.0001
Cobalt	0.0001 to 0.0015	0.0001	0.00014	0.0002	0.00022	0.0002	0.00015	0.00021	0.00022	0.0002	0.00017	0.00016	0.00016
Copper	0.0002 to 0.006	0.00195	0.00111	0.00101	0.00082	0.00098	0.00149	0.00539	0.00236	0.00189	0.00179	0.00185	0.002
Dissolved Cadmium (by saltwater extraction)	0.00002												
Iron	0.01 to 0.03	0.021	0.043	0.05	0.089	0.083	0.095	0.069	0.057	0.046	0.045	0.038	0.034
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00554	0.00581	0.00756	0.0072	0.00723	0.00699	0.00202	0.00544	0.00582	0.00626	0.0062	0.00649
Magnesium	0.1	46.1	46.3	76.8	84	82.9	90.1	28.6	74	94.5	90.9	93	88.8
Manganese	5E-005 to 0.0015	0.0104	0.142	0.255	0.368	0.295	0.258	0.0809	0.121	0.108	0.0828	0.0705	0.0791
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00574	0.00521	0.00806	0.00844	0.0069	0.0122	0.0142	0.0304	0.0305	0.03	0.0246	0.0196
Nickel	0.0005 to 0.005	0.0015	0.00152	0.00238	0.00222	0.0019	0.0024	0.00189	0.0021	0.00224	0.00219	0.00225	0.00216
Phosphorus	0.05 to 0.3	0.059	0.122	0.182	0.184	0.167	0.121	0.527	0.127	0.071	<0.05	0.074	<0.05
Potassium	0.05 to 2	13	13.3	19.2	17.5	16.3	17.2	12.2	15.6	16.5	15.7	16.8	16.6
Selenium	0.0001 to 0.006	0.0003	0.00023	0.00023	0.0002	0.00018	0.00023	0.00033	0.00039	0.0003	0.00036	0.00025	0.00032
Silicon	0.05	5.16	9	13.9	14.5	12.9	11.4	4.34	7.61	8.81	7.62	7.41	6.56
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	39.9	39.7	61.1	60.1	61.2	64	18.9	48.2	57.6	58.7	57.8	55.7
Strontium	0.0001 to 0.005	0.462	0.425	0.735	0.747	0.768	0.798	0.258	0.644	0.737	0.754	0.841	0.787
Sulphur	0.5	25.5	18.8	46.4	49.1	54.2	57.9	31.2	76.3	86.6	85.8	91.6	99
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.000826	0.000466	0.000827	0.00103	0.00105	0.00147	0.000865	0.0031	0.00316	0.00291	0.00283	0.00264
Vanadium	0.001 to 0.03	0.002	0.0011	0.003	0.0027	0.0021	0.0021	0.0027	0.0035	0.003	0.0032	0.0034	0.0029
Zinc	0.001 to 0.006	0.002	0.0017	<0.001	<0.001	<0.001	<0.001	0.0022	0.0024	<0.001	0.0011	0.0014	0.0015
Total Metals													
Aluminum	0.003 to 0.025	0.0762	0.0858	0.466	0.396	0.11	0.0574	0.465	0.0653	0.0308	0.0497	0.0841	0.102
Antimony	0.0001 to 0.0025	0.00015	0.00013	0.00015	0.00012	0.00012	<0.0001	0.00012	0.00015	0.0001	0.00016	0.00016	0.00013
Arsenic	0.0001 to 0.0025	0.00192	0.00205	0.00297	0.00248	0.00223	0.00162	0.00161	0.00148	0.00144	0.00139	0.00151	0.00152
Barium	5E-005 to 0.02	0.0532	0.0564	0.0816	0.0769	0.0671	0.0788	0.0331	0.0624	0.0713	0.065	0.0703	0.0612
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.033	0.038	0.029	0.03	0.031	0.033	0.028	0.031	0.034	0.034	0.035	0.027
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000014	<0.00001	<0.00001	<0.00002	0.000011	<0.00001
Calcium	0.05 to 0.1	63.2	60.2	82.8	89.7	84.6	101	35.5	78.2	94.9	89.8	98.1	98.8
Chromium	0.0001 to 0.005	0.00026	0.00036	0.00128	0.00098	0.00052	0.00033	0.00115	0.00028	0.0002	0.00023	0.00083	0.00036
Cobalt	0.0001 to 0.0015	0.00017	0.00021	0.00057	0.00052	0.00029	0.00019	0.00057	0.00027	0.00023	0.00022	0.00023	0.00028
Copper	0.0005 to 0.007	0.0026	0.00201	0.00437	0.00359	0.00196	0.002	0.0106	0.00331	0.00269	0.00243	0.00273	0.00331
Iron	0.01 to 0.03	0.123	0.174	0.78	0.736	0.304	0.173	0.633	0.171	0.138	0.149	0.189	0.193
Lead	5E-005 to 0.0025	<0.00005	<0.00005	0.000141	0.000116	0.000052	<0.00005	0.000133	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00576	0.00606	0.00818	0.00741	0.00596	0.00771	0.00227	0.00519	0.00642	0.00625	0.00641	0.00625
Magnesium	0.1	46.9	47.8	75.2	84.2	82.3	88.6	28.4	70.1	91.2	86.9	87.9	89.2
Manganese	5E-005 to 0.0015	0.0242	0.176	0.36	0.453	0.34	0.283	0.107	0.124	0.113	0.0858	0.091	0.0951
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0066	0.00583	0.00883	0.00956	0.00797	0.0132	0.0152	0.0318	0.0339	0.0325	0.0256	0.0199
Nickel	0.0005 to 0.005	0.00169	0.00188	0.00369	0.00327	0.00236	0.00262	0.00374	0.00227	0.00244	0.00229	0.00248	0.00266
Phosphorus	0.05 to 0.3	0.079	0.152	0.216	0.274	0.219	0.146	0.617	0.149	0.082	0.08	0.082	0.076
Potassium	0.05 to 2	13.5	14.8	19.4	17.1	17.6	18.3	11.8	15.1	16.4	15.1	15.7	16.8
Selenium	0.0001 to 0.006	0.00028	0.00023	0.00028	0.00021	0.0002	0.00018	0.00035	0.00038	0.00034	0.00028	0.00022	0.00031
Silicon	0.05	5.47	9.64	15.6	15.8	13.6	12	5.42	7.49	8.91	7.64	7.28	6.96
Silver	1E-005 to 0.0001	<0.00001	<0.00001	0.000057	<0.00001	0.000013	<0.00001	0.000015	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	39.1	41.9	63.7	61.7	64.8	65.2	18.4	47.6	59.2	56.6	56	55.5
Strontium	0.0001 to 0.005	0.514	0.459	0.761	0.803	0.768	0.837	0.27	0.641	0.777	0.764	0.832	0.767
Sulphur	0.5	26.7	20.4	49.2	52	58.9	63	31.2	78.2	90.9	90.2	88.9	102
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	0.021	0.017	<0.01	<0.01	0.017	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002												
Uranium	1E-005 to 0.001	0.000949	0.000498	0.000911	0.00116	0.00113	0.00153	0.000917	0.00311	0.00337	0.0031	0.00287	0.0027
Vanadium	0.001 to 0.03	0.0022	0.0014	0.0045	0.004	0.0026	0.0024	0.004	0.0037	0.0034	0.0035	0.0037	0.0035
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0033	<0.003
Organics													
Carbon Organic (Dissolved)	0.5 to 5	16.2	18.1	17.2	16	14.5	13.3	13.3	11.1	11.6	11.2	11.2	12.9
Carbon Organic (Total)	0.5 to 5	16.5	19.1	18.6	18.6	15.3	14	14	11.4	10.8	10.9	11.4	12.5
Nitrogen Organic (Dissolved)	0.05 to 0.26			2.17									
Nitrogen Organic (Total)	0.05 to 0.3			1.31									
ALS LAB ID		**L1326032**	**L1344180**	**L1358222**	**L1375698**	**L1388680**	**L1399806**	**L1432163**	**L1434695**	**L1437439**	**L1439467**	**L1441961**	**L1446462**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5
Analytes	**MDL**	**6-May-14**	**21-May-14**	**04/Jun/2014**	**18-Jun-14**	**3-Jul-14**	**16-Jul-14**	**30-Jul-14**	**12-Aug-14**	**4-Sep-14**	**17-Sep-14**
In Situ Parameters											
Conductivity µS/cm	...	1110	688	689	702	958	566	816	734		740
Oxygen Dissolved %	...	110	98.9	89.5	74.2	99.5	90.6	67.1	70.3		61.6
Oxygen Dissolved	...	12.3	9.48	8.64	7.41	9.4	8.32	6.26	6.55		6.92
pH (unitless)	...	8.25	8.25	8.19	8.14	8.1	8.32	8.26	7.92	8.05	7.9
Redox Potential mV	...	203	75.6	158	104	81	140	127	75.3		96
Salinity ppt	...	0.8	0.4	0.4	0.56	0.55	0.777	0.46	0.41		0.51
Specific Conductivity µS/cm	...	1573	808	814	861	1107	871	931	835		1033
Temperature °C	...	10.3	17.2	16.9	15.3	17.9	19.4	18.5	18.7	12.1	10.1
Total Dissolved Solids	...	825	525	529	702	720	430	605	542		672
Turbidity NTU	...										
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	1										
Alkalinity (Total as CaCO3)	1 to 2	413	263	272	301	458	385	420	272	401	450
Bicarbonate Alkalinity	1 to 2	413	263	272	293	436	363	407	266	389	433
Carbonate Alkalinity	1 to 2	<2	<1	<1	8.5	21.9	22.8	13.5	6.5	12.6	17
Color TCU	5										
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	775	358	360	389	524	442	454	367	452	483
Hydroxide Alkalinity	1 to 2	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1	8.23	8.33	8.41	8.35	8.49	8.49	8.3	8.32	8.39	8.42
Specific Conductivity µS/cm	2	1530	781	781	842	1070	934	1010	827	988	1070
Total Dissolved Solids	1 to 2	1080	496	427	533	692	531	626	569	610	735
Total Suspended Solids	3	5.9	<3	<3	4.8	5.1	6.2	5.6	4.8	5	13.3
Turbidity NTU	0.1	2.13	0.89	1.61	0.8	0.65	1.35	2.25	2.32	3.08	4.38
Dissolved Anions											
Bromide	0.05 to 2.495	<0.5	<0.5	<0.25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	0.5 to 1	55.7	55.3	53.6	52	48.2	52.4	53.6	59.5	55.4	55.7
Fluoride	0.02 to 0.4	0.22	0.21	0.22	0.232	0.42	0.273	0.284	0.273	0.278	0.3
Sulphate	0.5 to 1	442	90.7	80.4	101	127	77.2	94.6	104	94	106
Nutrients											
Ammonia (Total)	0.005 to 0.05	0.0139	0.0094	0.0144	0.0167	0.0255	0.0193	0.0862	0.0318	0.189	0.168
Nitrate (as N)	0.005 to 0.1	<0.05	<0.05	<0.025	<0.05	<0.05	<0.05	0.092	<0.05	0.138	0.211
Nitrite (as N)	0.001 to 0.02	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	0.012	<0.01	0.043	0.063
Nitrogen (Dissolved)	0.05 to 0.1										
Nitrogen (Total)	0.0025 to 0.11		0.713								
Nitrogen Kjeldahl (Total)	0.05 to 0.2	1.1	0.776	0.83	0.824	1.11	1.05	1.15	1.23	1.11	1.17
Orthophosphate (Dissolved)	0.001 to 0.01	0.0495	0.0265	0.0343	0.0283	0.0779	0.0892	0.131	0.0836	0.122	0.172
Phosphorus - Dissolved	0.002 to 0.02	0.0696	0.0401	0.0467	0.041	0.117	0.111	0.149	0.11	0.183	0.197
Phosphorus - Total	0.002 to 0.02	0.122	0.0493	0.0554	0.0488	0.121	0.127	0.167	0.13	0.194	0.248
Cyanide											
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals											
Aluminum	0.001 to 0.025	0.0022	0.0012	0.0017	<0.001	0.0016	0.0021	0.0016	0.0017	0.0015	0.0022
Antimony	0.0001 to 0.0025	0.00017	<0.0001	0.00011	<0.0001	0.00014	0.00012	0.00011	0.00014	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00181	0.00151	0.00174	0.00158	0.00212	0.00217	0.00249	0.00198	0.00205	0.00212
Barium	5E-005 to 0.02	0.0756	0.0527	0.0523	0.0496	0.0574	0.053	0.052	0.0547	0.0621	0.0646
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.036	0.027	0.031	0.029	0.036	0.036	0.033	0.037	0.03	0.03
Cadmium	1E-005 to 8.5E-005		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	123	65	64.3	67.8	81.5	71.6	74.3	67	76.1	79.6
Chromium	0.0001 to 0.018	0.00017	0.0001	0.00012	0.00012	0.00013	0.00016	0.00013	0.00011	0.00015	0.00017
Cobalt	0.0001 to 0.0015	0.00017	<0.0001	0.00011	<0.0001	0.00016	0.00015	0.00021	0.00012	0.00018	0.0002
Copper	0.0002 to 0.006	0.00266	0.00223	0.00227	0.00191	0.00315	0.00209	0.00177	0.00195	0.0012	0.00129
Dissolved Cadmium (by saltwater extraction)	0.00002	<0.00002									
Iron	0.01 to 0.03	0.039	0.017	0.023	0.023	0.029	0.029	0.03	0.036	0.035	0.042
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00745	0.00525	0.00564	0.00559	0.00681	0.00695	0.00721	0.00642	0.00626	0.0072
Magnesium	0.1	113	47.5	48.3	53.3	77.9	63.8	65.1	48.5	63.6	69.1
Manganese	5E-005 to 0.0015	0.0696	0.0134	0.0235	0.0202	0.0343	0.0341	0.241	0.0486	0.191	0.335
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0468	0.0109	0.00937	0.00873	0.0116	0.00967	0.0118	0.0185	0.0117	0.0148
Nickel	0.0005 to 0.005	0.0023	0.00133	0.00157	0.00168	0.00209	0.00201	0.00252	0.00174	0.00231	0.00298
Phosphorus	0.05 to 0.3	0.061	<0.05	<0.05	<0.05	0.102	0.115	0.165	0.096	0.151	0.181
Potassium	0.05 to 2	20.9	11.8	12.1	12.8	18.5	15	17.6	12.5	15.7	16.5
Selenium	0.0001 to 0.006	0.00054	0.0002	0.0002	0.0002	0.00037	0.00028	0.00032	0.0002	0.00018	0.00021
Silicon	0.05	6.56	3.6	4.61	4.07	6.84	7.69	8.38	8.69	11.9	11.5
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	76.9	41.3	40.8	41.4	57.8	49.6	52	42.4	52.4	58
Strontium	0.0001 to 0.005	0.919	0.375	0.461	0.484	0.675	0.587	0.607	0.497	0.605	0.672
Sulphur	0.5	144	32.3	28.7	32.1	41.7	26	30.5	34	31.5	34.7
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	0.000012	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00349	0.00109	0.00108	0.00101	0.00181	0.00113	0.00113	0.00113	0.00112	0.00133
Vanadium	0.001 to 0.03	0.0038	0.003	0.0026	0.0022	0.0027	0.0018	0.0026	0.0027	0.0026	0.0028
Zinc	0.001 to 0.006	0.0011	<0.001	<0.001	<0.001	0.0011	0.0012	<0.001	<0.001	<0.001	0.0028
Total Metals											
Aluminum	0.003 to 0.025	0.188	0.0762	0.0724	0.0578	0.0195	0.0762	0.106	0.0901	0.101	0.274
Antimony	0.0001 to 0.0025	0.00021	0.00011	0.00012	<0.0001	0.00016	0.00014	0.00012	0.00016	<0.0001	0.00014
Arsenic	0.0001 to 0.0025	0.00168	0.00155	0.00174	0.00163	0.00218	0.00212	0.00216	0.00206	0.00193	0.00229
Barium	5E-005 to 0.02	0.0741	0.0536	0.0524	0.0511	0.0582	0.0531	0.051	0.0557	0.0633	0.073
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.039	0.041	0.032	0.034	0.036	0.037	0.034	0.044	0.03	0.036
Cadmium	1E-005 to 8.5E-005		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	117	63.5	61.5	67	80	69.1	69.2	67.1	74.9	82.7
Chromium	0.0001 to 0.005	0.00056	0.00032	0.00031	0.00032	0.00019	0.0003	0.0004	0.00032	0.00039	0.00087
Cobalt	0.0001 to 0.0015	0.00033	0.00015	0.00017	0.00015	0.00017	0.00023	0.0003	0.00021	0.00025	0.0004
Copper	0.0005 to 0.007	0.00411	0.00322	0.003	0.00258	0.00354	0.00277	0.00268	0.00315	0.00218	0.00371
Iron	0.01 to 0.03	0.305	0.115	0.116	0.103	0.062	0.15	0.188	0.162	0.187	0.457
Lead	5E-005 to 0.0025	0.000062	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000087
Lithium	0.0005 to 0.025	0.00777	0.00622	0.00557	0.00588	0.00762	0.0068	0.00686	0.0068	0.00572	0.00767
Magnesium	0.1	107	45.6	45.9	51.8	76.8	62.1	61.6	48.6	63.7	72.2
Manganese	5E-005 to 0.0015	0.0906	0.0231	0.0368	0.0341	0.0456	0.061	0.274	0.0725	0.23	0.456
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0484	0.0145	0.00948	0.00932	0.013	0.01	0.0119	0.0197	0.0105	0.0169
Nickel	0.0005 to 0.005	0.00274	0.0016	0.00187	0.0019	0.00224	0.00221	0.00283	0.00206	0.00261	0.00398
Phosphorus	0.05 to 0.3	0.11	0.054	0.051	0.061	0.114	0.123	0.165	0.126	0.158	0.226
Potassium	0.05 to 2	19.7	11.7	11.3	12.4	17.9	14.4	16.2	12.7	15.7	17.2
Selenium	0.0001 to 0.006	0.00052	0.00017	0.00022	0.00022	0.00041	0.00028	0.00024	0.00022	0.00022	0.00022
Silicon	0.05	6.86	3.73	4.57	4.18	6.91	7.59	8.11	8.95	12.2	12.7
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	75.3	41.2	40.1	41.7	53.8	48.5	51	44.1	50.9	60.4
Strontium	0.0001 to 0.005	0.948	0.48	0.458	0.495	0.69	0.594	0.567	0.52	0.504	0.715
Sulphur	0.5	142	31.7	27.8	32.6	44.1	25.9	29.3	34.5	32.3	37.6
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01
Total Cadmium (by saltwater extraction)	0.00002	<0.00002									
Uranium	1E-005 to 0.001	0.00345	0.00148	0.00113	0.0011	0.00194	0.00118	0.00117	0.00123	0.000975	0.00149
Vanadium	0.001 to 0.03	0.0044	0.0038	0.0029	0.0029	0.0029	0.0021	0.0029	0.0032	0.003	0.0038
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics											
Carbon Organic (Dissolved)	0.5 to 5	14.5	13.1	13.3	13.6	17.4	17.3	18.1	16.5	15.7	7.48
Carbon Organic (Total)	0.5 to 5	16.6	12.8	13.5	13.6	17.5	17.2	18.7	16.7	15.9	7.85
Nitrogen Organic (Dissolved)	0.05 to 0.26										
Nitrogen Organic (Total)	0.05 to 0.3										
ALS LAB ID		**L1451608**	**L1458340**	**L1465478**	**L1473827**	**L1481215**	**L1488886**	**L1495443**	**L1502292**	**L1513418**	**L1519657**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C3.30 - PC03
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Site ID		PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03
Analytes	MDL	2-May-07	18-Jul-07	28-Apr-08	7-Jul-08	4-Sep-08	4-Jun-10	29-Mar-11	14-Apr-11	21-Apr-11	28-Apr-11	5-May-11	12-May-11
In Situ Parameters													
Conductivity µS/cm	...	652	824	1295	823	599	661	645	451	765	783	878	876
Oxygen Dissolved %	...			87.5		60.9	80.2	44	66.1	76.2	54.8	48.1	65.6
Oxygen Dissolved	...	7.87	4.37	9.61		6.22	8.59	6.2	8.57	10.7	6.65	5.43	7.03
pH (unitless)	...	8.09	7.59	8.32	8.11	7.8	8.27	7.71	7.79	8.09	7.92	7.79	7.77
Redox Potential mV	...	-60.8			-106	-71.4	-68.3	112	164	44.8	86.5	118	88.5
Salinity ppt	...									0.7	0.6	0.62	0.59
Specific Conductivity µS/cm	...	929	933	1780	909	782	872	1183	744	1443	1200	1238	1169
Temperature °C	...	9.4	18.9	10.7	20	12.8	12.2	1.18	4.35	0.33	6.79	9.79	11.9
Total Dissolved Solids	...							770	484		780	805	760
Turbidity NTU	...												
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1												
Alkalinity (Total as CaCO3)	1 to 2	253	276	471	339	326	241	366	314	340	385	380	374
Bicarbonate Alkalinity	1 to 2						241			340			
Carbonate Alkalinity	1 to 2						<1			<2			
Color TCU	5	21.3	35.2	27.1	44.2	37.3	30.8	25.6	22.2	22.7	27.5	32.2	35.1
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	425	371	880	391	364	385	532	459	510	537	570	582
Hydroxide Alkalinity	1 to 2						<1			<2			
pH (unitless)	0.01 to 0.1	8.25	8.29	8.34	8.37	8.28	8.42	7.94	8.22	8.27	8.23	8.26	
Specific Conductivity µS/cm	2	877	855	1790	896	867	863	1120	972	1080	1140	1180	1220
Total Dissolved Solids	1 to 2	572	544	1320	565	528	547	764	664	714	773	791	812
Total Suspended Solids	3	<3	4.6	3.3	4.5	3.3	<3	<3	<3	13.3	5.9	<3	105
Turbidity NTU	0.1			1.43	0.9	3.54	0.75	1.82	1.9	5.74	3.54	1.06	1.16
Dissolved Anions													
Bromide	0.05 to 2.495	<0.05	<0.05	<2.5	<0.05	<0.05	<0.5	<1.3	<1.1	<0.5	<0.5	<0.5	<0.5
Chloride	0.5 to 1	60.3	61.6	57	55.8	61.5	55.7	36.3	36.3	39.9	42.1	43.7	43.5
Fluoride	0.02 to 0.4	0.206		1.1	0.236	0.224	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Sulphate	0.5 to 1	145	92.9	568	99.3	70.6	138	266	213	237	249	245	262
Nutrients													
Ammonia (Total)	0.005 to 0.05	0.152	0.037	0.025	0.033	0.035	0.015	0.18	0.0668	0.065	0.16	0.326	0.207
Nitrate (as N)	0.005 to 0.1	<0.005	<0.005	0.76	<0.005	0.0546	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrite (as N)	0.001 to 0.02	<0.001	<0.001	0.157	<0.001	0.0293	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen (Dissolved)	0.05 to 0.1										1.12	0.91	1.12
Nitrogen (Total)	0.0025 to 0.11						0.88	0.877	0.734	0.37	0.983	0.88	1.21
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.852	1.1	0.836	1.01	0.746	0.878	0.877	0.734	0.37	0.983	0.88	0.908
Orthophosphate (Dissolved)	0.001 to 0.01	0.0067	0.0557	0.0117	0.0353	0.121	0.0069	0.0439					
Phosphorus - Dissolved	0.002 to 0.02								0.032	0.034	0.0875	0.154	0.095
Phosphorus - Total	0.002 to 0.02	0.0337	0.0847	0.045	0.0701	0.128	0.0282	0.0917	0.0522	0.0617	0.0855	0.186	0.118
Cyanide													
Cyanide (Free)	0.005			<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	0.0067	0.0109	0.0081	0.0101		0.0082	<0.005		0.0059	0.0083	0.0079	0.0078
Cyanide (WAD)	0.005			<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	0.001 to 0.025	<0.005	<0.01	<0.025	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Antimony	0.0001 to 0.0025	<0.0005	<0.001	<0.0025	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic	0.0001 to 0.0025	0.00136	0.002	<0.0025	0.0021	0.0022	0.00133	0.00093	0.00104	0.00116	0.00147	0.00203	0.00176
Barium	5E-005 to 0.02	0.045	0.04	0.096	0.059	0.062	0.028	0.06	0.056	0.063	0.065	0.075	0.075
Beryllium	0.0001 to 0.005	<0.001	<0.002	<0.005	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth	0.0005 to 0.2							<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	1E-005 to 8.5E-005	0.000023	0.000039	0.000143	0.00004	<0.000034	<0.000017	<0.000017	<0.000017	<0.00007	<0.00006	<0.000017	<0.000017
Calcium	0.05 to 0.1	69.2	59.7	126	62.6	58.7	57.2	77.7	73.1	79.4	83.7	87.9	88.7
Chromium	0.0001 to 0.018	<0.003	<0.002	<0.005	<0.002	<0.002	<0.001	<0.001	<0.0015	<0.002	<0.002	<0.0015	<0.001
Cobalt	0.0001 to 0.0015	<0.0003	<0.0006	<0.0015	<0.0006	<0.0006	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.00039	<0.0003
Copper	0.0002 to 0.006	0.0022	<0.002	<0.005	<0.002	<0.002	0.0016	<0.001	<0.001	0.001	0.001	<0.001	<0.002
Dissolved Cadmium (by saltwater extraction)	0.00002												
Iron	0.01 to 0.03	<0.03	0.068	0.037	0.058	0.035	<0.03	0.1	0.045	0.039	0.079	0.168	0.146
Lead	5E-005 to 0.0025	<0.0005	<0.001	<0.0025	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Lithium	0.0005 to 0.025	0.0077	<0.01	<0.025	<0.01	<0.01	0.0052	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Magnesium	0.1	61.3	53.9	137	57	52.7	58.8	82	67.1	75.6	79.7	85.1	87.5
Manganese	5E-005 to 0.0015	0.00817	0.062	0.115	0.0676	0.0991	0.008	0.21	0.106	0.107	0.294	0.518	0.401
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.023	0.0095	0.0438	0.0119	0.0111	0.0129	0.0278	0.0214	0.021	0.0184	0.0137	0.0115
Nickel	0.0005 to 0.005	0.0014	<0.002	<0.005	<0.002	<0.002	0.0011	0.0017	0.0016	0.0015	0.0019	0.0021	0.0018
Phosphorus	0.05 to 0.3							<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	13.1	12.2	19.8	16	15.2	15.7	14.3	13.4	14.9	15.7	17.2	17.8
Selenium	0.0001 to 0.006	<0.001	<0.002	<0.005	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon	0.05							7.35	4.98	5.23	5.64	6.73	5.9
Silver	1E-005 to 0.0001	<0.00002	<0.00004	<0.0001	<0.00004	<0.00004	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	0.05 to 2	52.4	48.5	97.4	50.3	48.8	50	57.1	47.9	55.5	58.5	66	66.5
Strontium	0.0001 to 0.005							0.705	0.59	0.676	0.695	0.77	0.801
Sulphur	0.5												
Thallium	1E-005 to 0.001	<0.0002	<0.0004	<0.001	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin	0.0001 to 0.0025	<0.0005	<0.001	<0.0025	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00179	0.00085	0.0031	0.00063	0.00105	0.00126	0.00141	0.0016	0.00164	0.00152	0.00124	0.00114
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.005	<0.002	0.0026	0.0016	0.0014	0.0022	0.0027	0.0029	0.0021	0.0023
Zinc	0.001 to 0.006	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Metals													
Aluminum	0.003 to 0.025	0.014	0.012	<0.025	0.012	0.072	0.0102	0.034	0.0449	0.161	0.209	0.126	0.0278
Antimony	0.0001 to 0.0025	<0.0005	<0.001	<0.0025	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic	0.0001 to 0.0025	0.00101	0.0017	<0.0025	0.002	0.002	0.00103	0.00091	0.0009	0.001	0.00125	0.00151	0.00158
Barium	5E-005 to 0.02	0.042	0.039	0.095	0.062	0.062	0.028	0.061	0.061	0.066	0.07	0.079	0.076
Beryllium	0.0001 to 0.005	<0.001	<0.002	<0.005	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth	0.0005 to 0.2							<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	1E-005 to 8.5E-005	<0.000017	0.000035	0.000137	0.000034	0.000053	<0.000017	0.000021	<0.000017	<0.00007	<0.00012	<0.000017	<0.000017
Calcium	0.05 to 0.1	66.9	58.6	128	62.7	55.6	56.9	77.6	72.1	75.7	83.6	86.2	86.6
Chromium	0.0001 to 0.005	<0.001	<0.002	<0.005	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	0.0001 to 0.0015	<0.0003	<0.0006	<0.0015	<0.0006	<0.0006	<0.0003	<0.0003	<0.0003	<0.0003	0.00044	0.00048	0.00031
Copper	0.0005 to 0.007	0.0025	<0.002	<0.005	<0.002	0.0022	0.0018	0.0016	0.0013	0.0026	0.0029	0.0023	<0.003
Iron	0.01 to 0.03	0.049	0.086	0.081	0.091	0.125	0.039	0.216	0.117	0.274	0.399	0.353	0.2
Lead	5E-005 to 0.0025	<0.0005	<0.001	<0.0025	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Lithium	0.0005 to 0.025	0.0068	<0.01	<0.025	<0.01	<0.01	0.0061	<0.005	<0.005	0.0052	<0.005	0.006	0.0055
Magnesium	0.1	58.7	52.3	137	56.3	50.4	58.2	81.4	67.6	73.5	79.9	84.4	87.8
Manganese	5E-005 to 0.0015	0.0153	0.0675	0.123	0.0715	0.109	0.00965	0.244	0.117	0.121	0.316	0.531	0.414
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0215	0.0094	0.0435	0.0114	0.011	0.0138	0.0303	0.0239	0.0227	0.0197	0.0146	0.0128
Nickel	0.0005 to 0.005	0.0015	<0.002	<0.005	<0.002	0.0026	0.0014	0.0021	0.002	0.0025	0.003	0.0026	0.0021
Phosphorus	0.05 to 0.3							<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	12.5	11.8	19.9	15.8	15	15.2	14.2	13.6	14.4	15.9	17.2	17.7
Selenium	0.0001 to 0.006	<0.001	<0.002	<0.005	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon	0.05							7.36	5.12	5.48	6.36	7.03	5.96
Silver	1E-005 to 0.0001	<0.00002	<0.00004	<0.0001	<0.00004	<0.00004	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	0.05 to 2	51.2	47	96.6	49.6	46.7	48.1	57	49	54.1	59.3	65.7	65.8
Strontium	0.0001 to 0.005							0.709	0.602	0.665	0.708	0.773	0.803
Sulphur	0.5												
Thallium	1E-005 to 0.001	<0.0002	<0.0004	<0.001	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin	0.0001 to 0.0025	<0.0005	<0.001	<0.0025	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	0.016	0.013	<0.01
Total Cadmium (by saltwater extraction)	0.00002												
Uranium	1E-005 to 0.001	0.00166	0.00083	0.0031	0.00061	0.00106	0.00135	0.00155	0.00183	0.00181	0.00161	0.00137	0.00128
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.005	<0.002	0.0027	0.0018	0.0017	0.0025	0.0032	0.0036	0.0025	0.0025
Zinc	0.003 to 0.006	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Organics													
Carbon Organic (Dissolved)	0.5 to 5		17	13.5	17.6	17.8	14.4	11.4	9.5	10.4	10.6	13.6	14.5
Carbon Organic (Total)	0.5 to 5	14.8							9.85	10.4	10.5	13.9	15.3
Nitrogen Organic (Dissolved)	0.05 to 0.26										0.96	0.58	0.913
Nitrogen Organic (Total)	0.05 to 0.3								0.667		0.823	0.55	0.701
ALS LAB ID		**L501627**	**L532402**	**L623545**	**L652819**	**L678833**	**L894162**	**L990459**	**L995583**	**L997645**	**L999654**	**L1002049**	**L1005044**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03
Analytes	MDL	30-May-11	28-Jun-11	28-Jul-11	30-Aug-11	28-Sep-11	25-Oct-11	5-Dec-11	6-Mar-12	10-Apr-12	25-Apr-12	2-May-12	11-May-12
In Situ Parameters													
Conductivity µS/cm	...	624	630	669	598		403	772	1007	606	315	540	135
Oxygen Dissolved %	...	91.5	86.9	40.8	79.9		85.6	23.4	60.7		94.5	88.9	93.7
Oxygen Dissolved	...	8.9	8.29	3.96	8.13		10.9	3.28	8.82	13	9.85	10.2	11.2
pH (unitless)	...	8.07	8.17	7.77	7.84	7.97	8.45	7.57	7.66	8.14	8.18	8.32	8.7
Redox Potential mV	...	407	157	107	153	-112	-21.7	-21.4	107	18.3	98.3	117	-9.8
Salinity ppt	...	0.37	0.36	0.36			0.32	0.71	0.96	0.45	0.2	0.38	0.1
Specific Conductivity µS/cm	...	744	735	796	749	895	653	1428	1926	902	413	772	202
Temperature °C	...	16.6	17.5	16.5	14.4	12.6	4.95	0.96	0	7.85	13.4	9.27	7.6
Total Dissolved Solids	...	484	478	518			424	928	1252	586	263	502	131
Turbidity NTU	...	0.7		0.8	1.3	2.4		12.2	65.7		0.9	0.6	0.9
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1			4.6		<1	<1						
Alkalinity (Total as CaCO3)	1 to 2	247	245	270	248	323	345	512	676	291	320	364	383
Bicarbonate Alkalinity	1 to 2					323	334		676	276	314	345	333
Carbonate Alkalinity	1 to 2					<2	10.9		<1	15	6.7	19	49.8
Color TCU	5	22.5	34.7	37.4	28.4	36.9	31.5	30.3	57.7	19.2	27.1	28.2	29.8
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	313	305	323	301	361	392	625	976	432	481	554	602
Hydroxide Alkalinity	1 to 2					<2	<1		<1	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1	8.2	8.34	8.16	8.21	8.3	8.46	8.1	7.96	8.48	8.5	8.39	8.54
Specific Conductivity µS/cm	2	704	685	764	711	872	947	1370	1940	913	989	1140	1270
Total Dissolved Solids	1 to 2	427	433	459	439	545	556	829	1420	597	657	767	850
Total Suspended Solids	3	<3	5.7	<3	<3	8.7	3.1	12.3	5.3	<3	<3	3.1	<3
Turbidity NTU	0.1		1.53	0.97	0.89		1.79	4.39	15.3	1.42	0.66	0.68	0.69
Dissolved Anions													
Bromide	0.05 to 2.495	<0.5	<0.05	<0.5	<0.25	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5
Chloride	0.5 to 1	52.9	48.8	51.6	51.3	60.1	62.9	66	79	30.2	39.4	43.4	48.1
Fluoride	0.02 to 0.4	<0.2	0.199	0.39	0.2	0.22	0.23	0.22	<0.4	<0.2	<0.2	<0.2	<0.2
Sulphate	0.5 to 1	69.6	67.3	76	63.8	67.5	84.8	169	435	193	216	264	303
Nutrients													
Ammonia (Total)	0.005 to 0.05	0.0209	0.0152	0.0567	0.0177	0.0891	0.093	0.349	2.26	0.0786	0.0259	0.0205	0.0128
Nitrate (as N)	0.005 to 0.1	<0.05	<0.005	<0.05	0.028	<0.05	0.067	<0.05	<0.1	<0.05	<0.05	<0.05	0.062
Nitrite (as N)	0.001 to 0.02	<0.01	<0.001	<0.01	<0.005	<0.01	<0.01	0.011	<0.02	<0.01	<0.01	<0.01	<0.01
Nitrogen (Dissolved)	0.05 to 0.1	0.78	1	1.01	1.13	1.18	0.93		3.27	0.68	0.68	0.72	0.84
Nitrogen (Total)	0.0025 to 0.11	0.76	1.09	1.03	1.19	1.19	1.15	1.55	3.37	0.895	0.934	0.783	0.609
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.76	1.09	1.03	0.996	1.19	1.09	1.42	3.37	0.895	0.934	0.783	0.547
Orthophosphate (Dissolved)	0.001 to 0.01	0.0052	0.0066	0.028									
Phosphorus - Dissolved	0.002 to 0.02	0.0179	0.0254	0.0489	0.0331	0.0703	0.0411	0.0585	0.561	0.0615	0.0424	0.0434	0.0325
Phosphorus - Total	0.002 to 0.02	0.0259	0.0387	0.0582	0.0421	0.0838	0.0562	0.096	0.647	0.0937	0.0532	0.0528	0.0381
Cyanide													
Cyanide (Free)	0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	0.0071	0.0078	0.0083		0.0069	0.0087	0.01	0.011	0.0055	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	0.001 to 0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	0.00011	0.0001	<0.0001	<0.0001	0.00011
Arsenic	0.0001 to 0.0025	0.0012	0.0015	0.00143	0.00147	0.00169	0.00122	0.00136	0.00265	0.00093	0.00139	0.00147	0.00148
Barium	5E-005 to 0.02	0.048	0.05	0.061	0.058	0.066	0.0617	0.112	0.139	0.0618	0.0675	0.079	0.0721
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.028	0.034	0.046	0.028	0.035	0.039	0.04
Cadmium	1E-005 to 8.5E-005	0.000024	0.000025	<0.000017	<0.000017	<0.000017	<0.00001	<0.00001	<0.00001	0.000023	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	56.2	53.4	55	51.8	57	60.1	95.9	143	64	72	84.1	83.5
Chromium	0.0001 to 0.018	<0.001	<0.001	<0.001	<0.001	<0.001	0.00016	0.00016	0.00023	0.00011	<0.0001	0.00015	0.00013
Cobalt	0.0001 to 0.0015	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0001	0.00018	0.0005	0.00013	0.00017	0.00014	0.00016
Copper	0.0002 to 0.006	0.0015	0.0015	<0.001	<0.001	<0.001	0.00132	<0.0005	0.00145	0.00079	0.00104	0.00101	0.00105
Dissolved Cadmium (by saltwater extraction)	0.00002												
Iron	0.01 to 0.03	<0.03	0.034	0.034	<0.03	0.051	<0.03	0.085	0.119	0.044	0.031	<0.03	<0.03
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.005	<0.005	0.0058	0.0055	0.0066	0.00561	0.00755	0.00887	0.00411	0.00472	0.00562	0.00542
Magnesium	0.1	42	41.7	45.1	41.6	53	58.8	93.7	150	66.1	73.1	83.6	95.5
Manganese	5E-005 to 0.0015	0.0075	0.0326	0.0491	0.0236	0.087	0.0503	1.67	1.11	0.107	0.0823	0.0553	0.0523
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0058	0.0054	0.0044	0.0062	0.0088	0.0113	0.00384	0.00974	0.017	0.0153	0.0132	0.0131
Nickel	0.0005 to 0.005	<0.001	0.0012	<0.001	0.0011	0.0018	0.00175	0.00153	0.00252	0.00105	0.00153	0.00159	0.00169
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.6	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	11.9	11.4	12.4	12.6	15.5	15	21.4	27.5	11.6	14.5	16.3	16.9
Selenium	0.0001 to 0.006	<0.001	<0.001	<0.001	<0.001	<0.001	0.00017	0.00024	0.00028	0.00014	0.00014	0.00015	0.00017
Silicon	0.05	1.37	2.77	2.76	5.61	5.74	5.24	12.6	13.6	3.9	2.91	3.71	0.998
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	39.7	39.3	40.7	38.2	48.4	51.6	77.8	100	41.7	51.6	58.3	63.7
Strontium	0.0001 to 0.005	0.408	0.407	0.442	0.417	0.487	0.487	0.94	1.19	0.573	0.619	0.757	0.763
Sulphur	0.5												
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00115	0.00077	0.00043	0.00077	0.00095	0.00113	0.000645	0.00118	0.00105	0.0012	0.00116	0.00127
Vanadium	0.001 to 0.03	0.002	0.0015	0.0011	0.0018	0.0028	0.003	0.0012	0.0019	0.0017	0.0026	0.0023	0.0023
Zinc	0.001 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.005	0.0083	0.0067	<0.003	<0.003	<0.003	0.0049	0.0034
Total Metals													
Aluminum	0.003 to 0.025	0.0232	0.0873	0.0184	0.0199	0.0279	0.0678	0.515	0.0784	0.01	0.005	0.0035	0.0075
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0001	<0.0001	0.00012	<0.0001	<0.0001	0.00011	0.00013
Arsenic	0.0001 to 0.0025	0.00117	0.00143	0.00141	0.00136	0.00156	0.00123	0.00153	0.00262	0.00092	0.00137	0.00137	0.0015
Barium	5E-005 to 0.02	0.05	0.055	0.064	0.057	0.064	0.0625	0.121	0.143	0.0627	0.0658	0.0757	0.0714
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.035	0.038	0.051	0.033	0.04	0.045	0.046
Cadmium	1E-005 to 8.5E-005	0.000029	0.000029	0.000018	<0.000017	<0.000017	<0.00001	0.000015	0.000014	0.000018	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	55.7	53.1	55.7	49.5	55.2	60.3	96	146	64.2	71.4	82.9	85.5
Chromium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	0.00043	0.00156	0.00065	0.00019	0.00032	0.00019	<0.0003
Cobalt	0.0001 to 0.0015	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.00016	0.00064	0.00058	0.00014	0.00017	0.00014	0.00017
Copper	0.0005 to 0.007	0.002	0.0025	0.0011	0.0012	0.0013	0.00194	0.00525	0.00255	0.00085	0.00121	0.00191	0.00143
Iron	0.01 to 0.03	0.042	0.162	0.065	0.046	0.084	0.112	0.797	0.355	0.099	0.043	0.035	<0.03
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	0.000168	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.0055	<0.005	0.006	0.0054	0.0065	0.00647	0.00722	0.00876	0.00389	0.00456	0.00568	0.00557
Magnesium	0.1	42.1	41.6	45.9	40.3	51.6	58.3	91.5	151	66.5	73.7	82.2	97.6
Manganese	5E-005 to 0.0015	0.0103	0.0829	0.0665	0.0302	0.0879	0.0677	1.92	1.11	0.108	0.0911	0.0598	0.0564
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0069	0.0061	0.005	0.0066	0.0095	0.0117	0.00417	0.0116	0.0173	0.0169	0.0137	0.0141
Nickel	0.0005 to 0.005	0.0012	0.0017	<0.001	0.0012	0.0019	0.00211	0.00385	0.00325	0.00116	0.00157	0.00165	0.00175
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.67	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	12.1	11.8	12.7	12.5	15.1	15.2	20.9	27.5	11.4	14	16	16.8
Selenium	0.0001 to 0.006	<0.001	<0.001	<0.001	<0.001	<0.001	0.00018	0.00024	0.00028	0.00015	0.00015	0.00016	0.00017
Silicon	0.05	1.45	3.04	2.81	5.49	5.61	5.37	13.5	14.2	3.88	2.94	3.66	1.08
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	39.5	40.4	42.7	38.3	47	52.6	74.7	99.4	41	50.3	58.4	64.4
Strontium	0.0001 to 0.005	0.413	0.419	0.463	0.41	0.478	0.492	0.931	1.22	0.568	0.63	0.744	0.79
Sulphur	0.5												
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.022	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002												
Uranium	1E-005 to 0.001	0.00137	0.0009	0.00054	0.00085	0.001	0.00117	0.000672	0.00125	0.0011	0.00134	0.00122	0.00137
Vanadium	0.001 to 0.03	0.0023	0.0019	0.0013	0.0018	0.0029	0.0032	0.0029	0.0021	0.0018	0.0026	0.0023	0.0024
Zinc	0.003 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.005	0.0036	0.0222	0.003	<0.003	<0.003	0.0034	<0.003
Organics													
Carbon Organic (Dissolved)	0.5 to 5	15	17.1	15.5	17.3	17.7	17.5	17	24.5	10	11.5	13.4	13.4
Carbon Organic (Total)	0.5 to 5	15	16.5	16.5	17.7	18.8	18.1	17.9	25.4	10.1	11.4	13.3	13.8
Nitrogen Organic (Dissolved)	0.05 to 0.26	0.759	0.985	0.953	1.08	1.09	0.77		1.01	0.601	0.654	0.7	0.766
Nitrogen Organic (Total)	0.05 to 0.3	0.739	1.07	0.973	1.14	1.1	0.8	1.19	1.1	0.816	0.908	0.762	0.534
ALS LAB ID		**L1011001**	**L1025075**	**L1038168**	**L1052387**	**L1066047**	**L1076994**	**L1092368**	**L1122039**	**L1133342**	**L1140194**	**L1142492**	**L1146570**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03
Analytes	MDL	16-May-12	24-May-12	10-Jul-12	7-Aug-12	4-Dec-12	8-Jan-13	5-Feb-13	6-Mar-13	2-Apr-13	7-May-13	5-Jun-13	2-Jul-13
In Situ Parameters													
Conductivity µS/cm	...	754	747	767	689	580	633	0.703	730	777	663	564	667
Oxygen Dissolved %	...	76	90.3			73.9	17	6.9	41.1		81.9	89.9	
Oxygen Dissolved	...	7.92	9.27			10.4	2.46	1	5.99		8.3	8.83	
pH (unitless)	...	8.1	8.15	8.71	8.16	7.83	7.94	7.56	7.57	8.2	8.21	8.42	8.54
Redox Potential mV	...	107	62.8	144	128		4.6	-73.6	29.7	-27.6	89.4	155	79.1
Salinity ppt	...	0.48	0.47		0.34	0.52	0.59	0.66	0.69	0.51	0.39	0.33	0.33
Specific Conductivity µS/cm	...	969	945	756	708	1056	1216	1349	1396	1032	789	678	677
Temperature °C	...	13.4	14	25.7	23.6	1.52	-0.08	-0.07	0.01	12.1	14.7	16.2	25.8
Total Dissolved Solids	...	630	614		460	688	790	877	908	670	513	441	440
Turbidity NTU	...	2.4	1.3	0.9	1.2	2.2	13.7	25	48.9	1.3	2.8	1.7	0
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1												
Alkalinity (Total as CaCO3)	1 to 2	290	314	263	255	417	468	488	700	325	250	243	226
Bicarbonate Alkalinity	1 to 2	290	298	244	245	417	468	488	700	325	247	243	208
Carbonate Alkalinity	1 to 2	<1	16.2	19.5	10.1	<2	<20	<1	<20	<1	2.5	<1	18.3
Color TCU	5	28.3	26.4	35.4	33	26.5	27.7	27.9	23.1	19	20.1	23.6	<5
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	419	416	325	303	482	571	633	748	494	326	307	276
Hydroxide Alkalinity	1 to 2	<1	<1	<1	<1	<2	<20	<1	<20	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1	8.38	8.36	8.57	8.36	8.23	8.01	8	8.25	8.24	8.46	8.39	8.55
Specific Conductivity µS/cm	2	947	923	707	688	993	1190	1270	1490	1060	737	699	643
Total Dissolved Solids	1 to 2	626	601	444	436	633	824	810	1000	707	455	428	384
Total Suspended Solids	3	4.2	<3	<3	<3	<3	<3	3.1	6.3	9.3	<3	<3	<3
Turbidity NTU	0.1	1.09	0.91	1.06	0.98	2.7	4.64	6.17	13.6	3.07	0.56	0.85	0.69
Dissolved Anions													
Bromide	0.05 to 2.495	<0.5	<0.5	<0.25	<0.25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.25	<0.5	<0.05
Chloride	0.5 to 1	56.6	57.2	50.4	51.7	61.7	61.3	62.8	60.2	39.2	56.9	51.8	49.4
Fluoride	0.02 to 0.4	0.2	0.21	0.2	0.22	<0.2	0.33	<0.2	0.34	0.28	0.23	0.33	0.226
Sulphate	0.5 to 1	173	148	69.3	61.6	92	159	176	312	247	78.5	58.3	48.9
Nutrients													
Ammonia (Total)	0.005 to 0.05	0.0243	0.0157	0.0139	0.0225	0.221	1	1.62	1.21	0.031	0.0093	0.0115	0.0217
Nitrate (as N)	0.005 to 0.1	<0.05	<0.05	<0.025	<0.025	0.073	<0.05	<0.05	<0.05	<0.05	<0.025	<0.05	0.0097
Nitrite (as N)	0.001 to 0.02	<0.01	<0.01	<0.005	<0.005	<0.01	0.01	<0.01	<0.01	<0.01	<0.005	<0.01	0.0013
Nitrogen (Dissolved)	0.05 to 0.1	1.06	0.81	1.03	0.89	1.15	1.91	2.1	1.89	0.597			
Nitrogen (Total)	0.0025 to 0.11	0.959	0.908	0.898	0.902	1.32	2.12	2.46	1.98	0.804	0.806	0.819	0.945
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.959	0.908	0.898	0.902	1.24	2.1	2.43	2.09	0.804	0.794	0.799	0.934
Orthophosphate (Dissolved)	0.001 to 0.01												
Phosphorus - Dissolved	0.002 to 0.02	0.0336	0.027	0.0344	0.0502	0.0763	0.326	0.35	0.148	0.0245	0.0235	0.0212	0.0422
Phosphorus - Total	0.002 to 0.02	0.0514	0.0396	0.0455	0.06	0.0954		0.405	0.215	0.107	0.0295	0.029	0.0321
Cyanide													
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	0.001 to 0.025	<0.003	0.0018	0.0019	0.0013	0.0013	0.0022	0.0018	0.001	0.0016	0.0014	0.0017	0.0019
Antimony	0.0001 to 0.0025	0.00015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	0.0001	<0.0001	0.0001
Arsenic	0.0001 to 0.0025	0.00129	0.00126	0.00154	0.00158	0.00091	0.00141	0.00128	0.00128	0.00094	0.00124	0.00123	0.0017
Barium	5E-005 to 0.02	0.053	0.0531	0.0463	0.049	0.0657	0.114	0.111	0.103	0.0633	0.0484	0.0437	0.0428
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.036	0.033	0.03	0.028	0.029	0.027	0.031	0.033	0.035	0.025	0.024	0.024
Cadmium	1E-005 to 8.5E-005	0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	62.8	66.2	54.7	49.6	73.7	88.6	98.1	115	74.3	57.8	58.2	51.1
Chromium	0.0001 to 0.018	<0.0001	0.00012	<0.0001	<0.0001	0.00019	0.00024	0.00025	0.00016	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015	0.00011	0.00011	0.00011	<0.0001	0.00013	0.00024	0.00018	0.00021	0.00012	<0.0001	<0.0001	0.00013
Copper	0.0002 to 0.006	0.0014	0.00123	0.00114	0.00066	0.00063	<0.0002	<0.0002	0.0003	0.00086	0.0013	0.00147	0.00161
Dissolved Cadmium (by saltwater extraction)	0.00002												
Iron	0.01 to 0.03	<0.03	0.039	0.03	0.023	0.043	0.243	0.192	0.128	0.036	0.015	0.018	0.017
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00672	0.0051	0.00601	0.0053	0.00545	0.00565	0.00616	0.00639	0.00437	0.00601	0.00478	0.00472
Magnesium	0.1	63.6	60.9	45.7	43.4	72.2	84.9	94.2	112	74.9	44.2	39.2	36
Manganese	5E-005 to 0.0015	0.0359	0.0514	0.0227	0.0437	0.317	1.98	1.45	0.867	0.122	0.0226	0.016	0.0153
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0249	0.0149	0.00585	0.00416	0.00384	0.00166	0.00102	0.0106	0.0301	0.00822	0.00423	0.00469
Nickel	0.0005 to 0.005	0.00127	0.00138	0.00125	0.00106	0.00158	0.0014	0.0013	0.0015	0.00134	0.00093	0.00101	0.00093
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	0.081	0.317	0.391	0.173	<0.05	<0.05	<0.05	<0.05
Potassium	0.05 to 2	14.4	13.4	11.2	11.8	16.7	16.7	16.8	18.3	14.3	12.1	11.9	11.1
Selenium	0.0001 to 0.006	0.00021	0.00021	0.00021	0.0002	0.00015	0.00017	0.00017	0.00019	0.00019	0.00017	0.00018	0.00019
Silicon	0.05	3.32	2.58	1.79	4.04	10.3	11.9	13.4	11.3	4.55	3.18	2.15	3.91
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	50.8	48.1	38.6	35.8	52.5	57.3	67.8	67.5	49	37.8	33.9	33
Strontium	0.0001 to 0.005	0.541	0.52	0.41	0.389	0.636	0.824	0.874	0.916	0.636	0.434	0.364	0.369
Sulphur	0.5					30.2	50.1	56.2	98.9	77.2	26.5	19	16.1
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00173	0.00123	0.000576	0.000412	0.000561	0.000368	0.000286	0.00106	0.00173	0.00121	0.000919	0.000958
Vanadium	0.001 to 0.03	0.0028	0.0023	0.0014	0.0012	0.0015	<0.001	<0.001	0.0012	0.0027	0.0023	0.0019	0.003
Zinc	0.001 to 0.006	<0.003	0.0044	0.0022	0.0011	<0.001	0.005	0.0046	<0.001	0.0035	0.0013	0.0024	0.0013
Total Metals													
Aluminum	0.003 to 0.025	0.0169	0.0164	0.0147	0.0366	0.0853	0.0406	0.0358	0.03	0.0375	0.013	0.0283	0.0164
Antimony	0.0001 to 0.0025	0.00015	0.00013	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00012	0.00011	0.0001	0.00014
Arsenic	0.0001 to 0.0025	0.00132	0.00125	0.00156	0.00164	0.00095	0.00153	0.00133	0.00144	0.00091	0.00123	0.00134	0.00172
Barium	5E-005 to 0.02	0.0533	0.0508	0.0447	0.0519	0.0664	0.118	0.109	0.104	0.0633	0.0488	0.0463	0.0435
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.045	0.037	0.034	0.034	0.027	0.03	0.035	0.037	0.037	0.027	0.026	0.026
Cadmium	1E-005 to 8.5E-005	0.000018	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	62.5	63.4	53.4	49.5	70.8	88.5	97.4	118	71.7	57.8	59.4	51.3
Chromium	0.0001 to 0.005	0.00025	0.00022	0.00027	0.00028	0.00046	0.00042	0.00039	0.00027	0.00024	0.00016	0.00023	0.00016
Cobalt	0.0001 to 0.0015	0.00014	0.00013	0.00012	0.00012	0.00022	0.0003	0.00021	0.00028	0.00015	<0.0001	0.00012	0.00015
Copper	0.0005 to 0.007	0.00227	0.00151	0.00165	0.00126	0.0038	0.00181	0.00079	0.00094	0.00146	0.00175	0.0021	0.00207
Iron	0.01 to 0.03	0.055	0.064	0.055	0.069	0.179	0.345	0.272	0.258	0.105	0.033	0.068	0.041
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00721	0.00502	0.00573	0.00567	0.00488	0.00601	0.00614	0.0069	0.00432	0.00609	0.005	0.00494
Magnesium	0.1	63.2	57.5	44.6	42.9	69.1	86.3	92.2	112	72.5	43.8	39.2	36.7
Manganese	5E-005 to 0.0015	0.0382	0.0528	0.0294	0.0531	0.317	2.04	1.49	0.905	0.122	0.0247	0.0227	0.0213
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0276	0.0153	0.00592	0.00457	0.00378	0.00197	0.00127	0.0131	0.0299	0.00897	0.00442	0.00494
Nickel	0.0005 to 0.005	0.00132	0.00149	0.00134	0.00126	0.00225	0.00177	0.00148	0.00163	0.00144	0.00101	0.00117	0.00107
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	0.109	0.346	0.408	0.226	0.059	<0.05	<0.05	<0.05
Potassium	0.05 to 2	14.5	12.9	10.9	12	16.2	16.9	16.3	18.8	14.4	12.1	12.1	11.6
Selenium	0.0001 to 0.006	0.00022	0.0002	0.00022	0.00021	0.00015	0.00017	0.00016	0.00023	0.00021	0.00018	0.00018	0.00019
Silicon	0.05	3.36	2.49	1.81	4.18	10.2	12.1	13.3	11.8	4.53	3.23	2.25	4.04
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000015	<0.00001
Sodium	0.05 to 2	52	46.5	37	37	50.6	59.7	69.5	68.4	47.4	37.9	36.7	33.9
Strontium	0.0001 to 0.005	0.577	0.517	0.397	0.408	0.607	0.854	0.922	0.961	0.62	0.446	0.377	0.385
Sulphur	0.5					29.5	52.9	57.1	105	76	27.1	19.6	16.6
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00298	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002												
Uranium	1E-005 to 0.001	0.00193	0.0013	0.000607	0.000459	0.000585	0.0004	0.000267	0.00113	0.00175	0.00129	0.000987	0.00103
Vanadium	0.001 to 0.03	0.003	0.0025	0.0016	0.0016	0.0021	0.0012	<0.001	0.0015	0.0029	0.0025	0.0022	0.0031
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	0.0044	0.0038	<0.003	<0.003	<0.003	<0.003	<0.003
Organics													
Carbon Organic (Dissolved)	0.5 to 5	15.8	15	15.2	15.6	12.6	14.2	13.6	12.4	10	12.1	14.7	15.1
Carbon Organic (Total)	0.5 to 5	16.1	15.1	15.5	15.9	14.1	13.9	14.5	12.9	10.7	12.2	14.9	15.8
Nitrogen Organic (Dissolved)	0.05 to 0.26	1.04	0.794	1.02	0.868	0.853			3.47	0.566			
Nitrogen Organic (Total)	0.05 to 0.3	0.935	0.893	0.884	0.88	1.02	1.1	0.81	0.77	0.773			
ALS LAB ID		L1148880	L1152500	L1176520	L1190914	L1245799	L1256678	I1265809	L1276517	L1285503	L1298960	L1312719	L1326032

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03
Analytes	MDL	7-Aug-13	9-Oct-13	6-Nov-13	13-Mar-14	21-Mar-14	27-Mar-14	3-Apr-14	10-Apr-14	23-Apr-14	6-May-14	21-May-14	3-Jun-14
In Situ Parameters													
Conductivity µS/cm	...	653	1.32	826	453	806	438	891	513	1174	673	655	831
Oxygen Dissolved %	...	69.8	80		81.4	53.9	95.7	89.5		108			55.4
Oxygen Dissolved	...	5.74	10.3		11.8	7.71	12.9	11.3		12.2			5.38
pH (unitless)	...	7.98	8.35	8.28	7.93	7.68	7.9	8.13	8.1	8.07	8.29	8.55	7.81
Redox Potential mV	...	281	135	87.7	67.4	58.3	77.5	27.9	-48.2	119	195	77.5	39.6
Salinity ppt	...	0.34	0.66	0.73	0.42	0.74	0.37	0.72	0.38	0.84	0.44	0.37	0.49
Specific Conductivity µS/cm	...	703	798	1467	867	1503	757	1435	764	1654	884	744	992
Temperature °C	...	21.2	4.44	2.13	0.02	0.7	2.89	5.17	7.78	9.82	12.5	18.7	16.5
Total Dissolved Solids	...	457	865	954	563	977	492	932	497	1175	572	484	645
Turbidity NTU	...	1.4	0	0.9									
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1			2									
Alkalinity (Total as CaCO3)	1 to 2	264	401	447	230	445	459	375	410	370	271	232	247
Bicarbonate Alkalinity	1 to 2	264	386	447	230	445	459	367	410	351	271	225	231
Carbonate Alkalinity	1 to 2	<2	14.2	<2	<2	<2	<2	8.1	<2	19.3	<2	6.3	16.2
Color TCU	5	31.1	34.9	23.2									
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	294	645	725	395	762	799	720	722	785	385	327	312
Hydroxide Alkalinity	1 to 2	<2	<1	<2	<2	<2	<2	<1	<2	<1	<2	<1	<1
pH (unitless)	0.01 to 0.1	8.24	8.41	8.22	7.99	8.26	8.22	8.33	8.23	8.32	8.27	8.37	8.57
Specific Conductivity µS/cm	2	662	1310	1480	832	1500	1570	1330	1440	1650	862	725	720
Total Dissolved Solids	1 to 2	394	906	1080	547	982	1020	969	1070	1200	532	450	444
Total Suspended Solids	3	4.4	3.5	<3	9.5	3.4	5.1	6.6	5.4	3.5	5.9	3.7	3
Turbidity NTU	0.1	0.9	0.94	0.9	4.79	2.11	1.74	2.64	2.92	1.34	1.76	1.11	1.34
Dissolved Anions													
Bromide	0.05 to 2.495	<0.25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.25	<0.05
Chloride	0.5 to 1	50	58.8	60.8	25.9	49.1	49.4	42.2	46	53	58.7	48.5	52.1
Fluoride	0.02 to 0.4	0.25	0.33	0.23	0.34	<0.2	0.2	0.2	0.22	<0.4	0.2	0.17	0.228
Sulphate	0.5 to 1	48	305	399	209	421	441	374	424	548	132	67.8	68.2
Nutrients													
Ammonia (Total)	0.005 to 0.05	0.043	0.0681	0.0609	0.404	0.464	0.179	0.149	0.195	0.121	0.0228	0.0098	0.0121
Nitrate (as N)	0.005 to 0.1	0.027	0.125	0.139	0.153	0.131	0.054	0.058	0.065	0.14	<0.05	<0.025	<0.005
Nitrite (as N)	0.001 to 0.02	0.0093	0.033	0.024	0.013	0.011	<0.01	<0.01	0.011	<0.02	<0.01	<0.005	<0.001
Nitrogen (Dissolved)	0.05 to 0.1	0.954											
Nitrogen (Total)	0.0025 to 0.11	1.02	1.25	0.918								0.693	
Nitrogen Kjeldahl (Total)	0.05 to 0.2	1.07	1.18	0.817	1.82	1.32	1.16	1.16	1.29	1.01	1.11	0.763	0.854
Orthophosphate (Dissolved)	0.001 to 0.01		0.0277	0.0183	0.171	0.0469	0.0214	0.0111	0.0213	0.016	0.0116	0.0073	0.0093
Phosphorus - Dissolved	0.002 to 0.02	0.0659	0.0504	0.0283	0.251	0.0702	0.0399	0.0939	0.0434	0.0337	0.0288	0.0239	0.0256
Phosphorus - Total	0.002 to 0.02	0.0755	0.0609	0.0359	0.294	0.15	0.0936	0.0333	0.092	0.0622	0.0538	0.0301	0.0419
Cyanide													
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	0.001 to 0.025	0.0013	0.0041	0.0012	0.0036	0.0019	0.0013	0.0012	0.0015	<0.001	0.0018	0.0015	0.0019
Antimony	0.0001 to 0.0025	0.00011	0.00034	0.00011	0.00011	0.00017	0.00011	0.00015	0.00015	0.00015	0.00019	0.00011	0.00011
Arsenic	0.0001 to 0.0025	0.00168	0.00228	0.00127	0.00144	0.00156	0.0013	0.00118	0.00141	0.0013	0.00145	0.00143	0.00165
Barium	5E-005 to 0.02	0.056	0.0812	0.093	0.0508	0.0772	0.0694	0.0655	0.0792	0.0729	0.0508	0.0563	0.0508
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.034	0.049	0.034	0.035	0.051	0.051	0.041	0.043	0.044	0.032	0.034	0.026
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00003	<0.00002	<0.00001	<0.00004	<0.00002	<0.00003	<0.00003	<0.00003	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	51.3	110	108	64.4	112	111	105	107	115	65.9	61.5	58.9
Chromium	0.0001 to 0.018	0.00011	0.00025	0.00022	0.00016	0.00012	0.00013	0.00013	<0.0001	0.00011	<0.0001	0.0001	<0.0001
Cobalt	0.0001 to 0.0015	0.0001	0.00019	0.00017	0.00036	0.00036	0.00029	0.00024	0.00023	0.00023	0.00013	<0.0001	0.00013
Copper	0.0002 to 0.006	0.00078	0.00306	0.00126	0.00437	0.00184	0.0016	0.00124	0.00125	0.00172	0.00187	0.00186	0.00181
Dissolved Cadmium (by saltwater extraction)	0.00002						<0.00002	<0.00002	<0.00002	<0.00002			
Iron	0.01 to 0.03	0.027	0.026	0.026	0.109	0.065	0.061	0.056	0.046	0.053	0.024	0.016	0.03
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00549	0.00782	0.00796	0.00432	0.00732	0.00785	0.0058	0.00667	0.00779	0.00572	0.00593	0.00532
Magnesium	0.1	40.2	90.1	110	56.8	117	127	111	110	121	53.6	42.1	39.9
Manganese	5E-005 to 0.0015	0.0439	0.047	0.0868	0.252	0.314	0.18	0.175	0.172	0.153	0.0376	0.0103	0.0241
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00581	0.103	0.0308	0.0273	0.0805	0.0771	0.0687	0.065	0.0705	0.0265	0.0117	0.00825
Nickel	0.0005 to 0.005	0.00118	0.00205	0.00161	0.00156	0.00211	0.00181	0.00167	0.0018	0.0018	0.00119	0.00104	0.00109
Phosphorus	0.05 to 0.3	0.071	<0.05	<0.05	0.225	0.073	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	0.05 to 2	11.7	21.7	19.2	15.1	19.2	18.3	16.3	16.3	19.2	12.5	10.9	10.4
Selenium	0.0001 to 0.006	0.00022	0.00048	0.00023	0.00042	0.00106	0.00079	0.00061	0.0007	0.0006	0.00042	0.00023	0.00023
Silicon	0.05	7.84	9.11	9.01	5.88	9.41	9.4	7.54	7.09	5.92	4.76	3.19	4.2
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	35.4	67.1	72.3	36	72.6	76.3	62.9	69.4	77	42.6	37.8	34.8
Strontium	0.0001 to 0.005	0.379	0.878	0.925	0.53	0.919	0.975	0.809	0.944	1	0.479	0.414	0.413
Sulphur	0.5	16.2	96.7	132	67.2	130	132	125	142	171	42	26.6	24.2
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.000758	0.00564	0.0036	0.00188	0.00494	0.0049	0.00445	0.0039	0.00393	0.00255	0.00132	0.00121
Vanadium	0.001 to 0.03	0.0021	0.0066	0.003	0.0036	0.0044	0.0039	0.0034	0.0038	0.0036	0.005	0.0034	0.0036
Zinc	0.001 to 0.006	<0.001	0.001	<0.001	0.0021	0.0013	<0.001	<0.001	<0.001	<0.001	<0.001	0.0012	<0.001
Total Metals													
Aluminum	0.003 to 0.025	0.0564	0.0141	0.0126	0.243	0.0487	0.0216	0.0451	0.0515	0.0371	0.0806	0.0488	0.0471
Antimony	0.0001 to 0.0025	0.00014	0.00034	0.00014	0.00013	0.00018	0.00011	0.00019	0.00016	0.00015	0.00021	0.00011	0.00011
Arsenic	0.0001 to 0.0025	0.00177	0.00211	0.00133	0.00145	0.00142	0.00135	0.00134	0.00139	0.0013	0.00136	0.00139	0.00164
Barium	5E-005 to 0.02	0.0582	0.0808	0.0985	0.0535	0.0761	0.0693	0.0666	0.0831	0.0752	0.0499	0.055	0.051
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.039	0.053	0.031	0.038	0.053	0.052	0.045	0.047	0.047	0.033	0.036	0.026
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00003	<0.00002	0.000012	<0.00004	<0.00002	<0.00003	<0.00003	<0.00003	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	53	106	110	64.8	107	106	97.5	110	115	62.5	59.6	56.5
Chromium	0.0001 to 0.005	0.00031	0.00042	0.00028	0.0007	0.00036	0.00022	0.00027	0.00029	0.00027	0.00033	0.00028	0.00026
Cobalt	0.0001 to 0.0015	0.00017	0.00022	0.0002	0.00058	0.00039	0.00031	0.0003	0.00029	0.00027	0.00019	0.00014	0.00016
Copper	0.0005 to 0.007	0.00156	0.00341	0.00162	0.0087	0.00335	0.00246	0.00242	0.00185	0.00269	0.003	0.00261	0.00249
Iron	0.01 to 0.03	0.106	0.043	0.058	0.395	0.192	0.146	0.227	0.17	0.138	0.135	0.077	0.095
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	0.000063	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00579	0.00861	0.00697	0.00436	0.00722	0.00764	0.00642	0.00683	0.00775	0.00551	0.00577	0.00478
Magnesium	0.1	40.8	90.3	108	57.1	111	117	103	112	123	47.7	40.5	38.3
Manganese	5E-005 to 0.0015	0.0546	0.0502	0.0916	0.267	0.301	0.181	0.189	0.177	0.158	0.0417	0.0131	0.0272
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00653	0.111	0.0285	0.0294	0.0823	0.0763	0.0747	0.0718	0.0742	0.0255	0.0124	0.0078
Nickel	0.0005 to 0.005	0.00151	0.00218	0.00182	0.00336	0.00226	0.00189	0.00195	0.00199	0.00208	0.00153	0.00125	0.00128
Phosphorus	0.05 to 0.3	0.088	0.058	<0.05	0.303	0.112	0.071	0.095	0.094	0.063	0.055	<0.05	<0.05
Potassium	0.05 to 2	12.4	21.1	19.1	15.2	18.1	17.2	15.3	17.1	18.9	11.7	10.6	10.2
Selenium	0.0001 to 0.006	0.00023	0.00041	0.00024	0.00044	0.00092	0.00075	0.00061	0.0006	0.00057	0.00037	0.0002	0.00022
Silicon	0.05	8.21	9.21	9.01	6.61	9.14	9.09	7.45	7.69	5.96	4.72	3.24	4.2
Silver	1E-005 to 0.0001	<0.00001	<0.00001	0.000033	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	38.1	69.3	74.8	36.8	71.8	73.5	64.7	71.9	77.6	40.4	37.5	34.3
Strontium	0.0001 to 0.005	0.397	0.919	0.813	0.532	0.924	0.95	0.83	1.01	1.02	0.456	0.418	0.393
Sulphur	0.5	17.7	101	138	69.1	132	136	124	148	177	41	25.9	23
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002						<0.00002	<0.00002	<0.00002	<0.00002			
Uranium	1E-005 to 0.001	0.000833	0.00608	0.00337	0.00197	0.00517	0.00498	0.00459	0.00405	0.00403	0.00253	0.00145	0.00117
Vanadium	0.001 to 0.03	0.0025	0.0071	0.004	0.0045	0.0047	0.0041	0.0042	0.0041	0.0039	0.0053	0.004	0.0038
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics													
Carbon Organic (Dissolved)	0.5 to 5	17.3	18.1	14.4	14.4	12.7	12.4	12.4	12.1	13.5	13.5	12.5	13.3
Carbon Organic (Total)	0.5 to 5	17.9	18.9	14.5	16.6	13.2	12.9	13.6	12.6	13.7	13.9	12.6	13.6
Nitrogen Organic (Dissolved)	0.05 to 0.26												
Nitrogen Organic (Total)	0.05 to 0.3												
ALS LAB ID		L1344180	L1375698	L1388680	L1432661	L1435186	L1437439	L1439655	L1442672	L1446462	L1451608	L1458340	L1465108

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		PC03	PC03	PC03	PC03	PC03	PC03
Analytes	MDL	18-Jun-14	3-Jul-14	16-Jul-14	30-Jul-14	12-Aug-14	4-Sep-14
In Situ Parameters							
Conductivity µS/cm	...	660	782	782	923	637	
Oxygen Dissolved %	...					82.9	
Oxygen Dissolved	...					7.59	
pH (unitless)	...	8.48	8.74	8.74	9.18	8.13	8.52
Redox Potential mV	...	103	79.5	79.5	126	79.5	
Salinity ppt	...	0.38	0.38	0.38	0.42	0.35	
Specific Conductivity µS/cm	...	775	780	780	863	710	
Temperature °C	...	17.2	25.1	25.1	28.7	19.6	18.4
Total Dissolved Solids	...	504	507	507	561	461	
Turbidity NTU	...						
Physical Tests							
Acidity to pH 8.3 (as CaCO3)	1						
Alkalinity (Total as CaCO3)	1 to 2	267	278	247	343	242	387
Bicarbonate Alkalinity	1 to 2	255	251	233	299	234	360
Carbonate Alkalinity	1 to 2	12.1	27	14.5	44	8.2	26.7
Color TCU	5						
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	341	348	309	414	311	500
Hydroxide Alkalinity	1 to 2	<1	<1	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1	8.42	8.72	8.5	8.78	8.37	8.51
Specific Conductivity µS/cm	2	758	753	691	930	707	1060
Total Dissolved Solids	1 to 2	470	441	440	598	470	695
Total Suspended Solids	3	5.4	8.9	<3	8.9	<3	7.5
Turbidity NTU	0.1	1.58	2.05	1.63	3.95	1.14	3.79
Dissolved Anions							
Bromide	0.05 to 2.495	<0.5	<0.25	<0.25	<0.5	<0.25	<0.5
Chloride	0.5 to 1	52.9	52.3	54.1	56.8	56.3	54.6
Fluoride	0.02 to 0.4	0.214	0.31	0.213	0.231	0.233	0.232
Sulphate	0.5 to 1	77	78.8	51.9	122	64.6	163
Nutrients							
Ammonia (Total)	0.005 to 0.05	0.0245	0.0231	0.0167	0.194	0.014	0.0408
Nitrate (as N)	0.005 to 0.1	0.064	<0.025	<0.025	<0.05	<0.025	0.065
Nitrite (as N)	0.001 to 0.02	0.018	<0.005	<0.005	0.021	<0.005	0.012
Nitrogen (Dissolved)	0.05 to 0.1						
Nitrogen (Total)	0.0025 to 0.11						
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.999	1.12	0.95	1.62	1.04	1.02
Orthophosphate (Dissolved)	0.001 to 0.01	0.0117	0.0265	0.0226	0.153	0.012	0.0339
Phosphorus - Dissolved	0.002 to 0.02	0.0275	0.0487	0.0442	0.191	0.0273	0.0548
Phosphorus - Total	0.002 to 0.02	0.0455	0.0495	0.059	0.208	0.034	0.0476
Cyanide							
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals							
Aluminum	0.001 to 0.025	0.0016	0.0034	0.003	0.0035	0.0019	0.0029
Antimony	0.0001 to 0.0025	<0.0001	0.00012	0.00011	0.00014	0.00013	<0.0001
Arsenic	0.0001 to 0.0025	0.00152	0.00204	0.00173	0.00338	0.00176	0.00184
Barium	5E-005 to 0.02	0.0461	0.0367	0.049	0.0578	0.0528	0.0486
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.027	0.034	0.028	0.037	0.028	0.037
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	62.3	59.4	56.1	65.6	58.9	83.6
Chromium	0.0001 to 0.018	0.00011	0.00016	<0.0001	0.00022	<0.0001	0.00018
Cobalt	0.0001 to 0.0015	0.00014	0.00018	0.00013	0.00029	0.00012	0.00019
Copper	0.0002 to 0.006	0.00131	0.00172	0.00143	0.00144	0.00174	0.00131
Dissolved Cadmium (by saltwater extraction)	0.00002						
Iron	0.01 to 0.03	0.035	0.04	0.033	0.035	0.029	0.032
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00521	0.00565	0.00517	0.00668	0.00582	0.00599
Magnesium	0.1	45	48.3	41	60.8	39.8	70.7
Manganese	5E-005 to 0.0015	0.0518	0.0753	0.0456	0.282	0.0184	0.0824
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00741	0.00975	0.00534	0.0129	0.0133	0.0142
Nickel	0.0005 to 0.005	0.00116	0.00148	0.00119	0.00208	0.00103	0.00155
Phosphorus	0.05 to 0.3	<0.05	0.053	<0.05	0.19	<0.05	0.056
Potassium	0.05 to 2	11	12.9	11	16.3	10.6	14.1
Selenium	0.0001 to 0.006	0.00025	0.00027	0.00022	0.00046	0.0002	0.00029
Silicon	0.05	4.6	5.61	7.26	12.9	7.25	12.3
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	36.5	39.7	35.8	51.8	36.1	53.5
Strontium	0.0001 to 0.005	0.429	0.439	0.391	0.533	0.395	0.649
Sulphur	0.5	24.4	26.6	17.7	39.2	21.2	54.1
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00112	0.000994	0.000842	0.00125	0.00127	0.00131
Vanadium	0.001 to 0.03	0.0031	0.0046	0.0032	0.0067	0.0036	0.0053
Zinc	0.001 to 0.006	<0.001	<0.001	0.0023	<0.001	<0.001	0.0027
Total Metals							
Aluminum	0.003 to 0.025	0.106	0.0657	0.0268	0.109	0.0319	0.157
Antimony	0.0001 to 0.0025	0.00013	0.00012	0.00019	0.00016	0.00014	0.00012
Arsenic	0.0001 to 0.0025	0.00152	0.00206	0.00186	0.0031	0.0017	0.00199
Barium	5E-005 to 0.02	0.0445	0.0399	0.0509	0.0595	0.0523	0.0563
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.03	0.037	0.03	0.038	0.035	0.042
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	58.7	58.6	56.5	61	59	83.3
Chromium	0.0001 to 0.005	0.00046	0.00034	0.00023	0.00051	0.00021	0.00066
Cobalt	0.0001 to 0.0015	0.00022	0.00023	0.00017	0.00036	0.00014	0.00032
Copper	0.0005 to 0.007	0.00251	0.00265	0.00198	0.00254	0.00241	0.00293
Iron	0.01 to 0.03	0.184	0.137	0.081	0.195	0.073	0.238
Lead	5E-005 to 0.0025	<0.00005	<0.00005	0.000074	<0.00005	<0.00005	0.000053
Lithium	0.0005 to 0.025	0.00518	0.00556	0.00512	0.00645	0.00517	0.00615
Magnesium	0.1	41.6	47.8	40.2	56.6	39.8	70.8
Manganese	5E-005 to 0.0015	0.0584	0.0849	0.0506	0.325	0.0201	0.0995
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00727	0.0105	0.00566	0.013	0.0134	0.0156
Nickel	0.0005 to 0.005	0.00149	0.0018	0.00137	0.00238	0.00124	0.00224
Phosphorus	0.05 to 0.3	<0.05	0.061	0.063	0.187	<0.05	0.073
Potassium	0.05 to 2	10.2	12.9	11.1	15.1	10.6	14
Selenium	0.0001 to 0.006	0.00028	0.00027	0.00024	0.00041	0.0002	0.00034
Silicon	0.05	4.58	5.78	7.46	12.4	7.36	12.8
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	34.3	39.8	36.8	47.9	34.9	54.6
Strontium	0.0001 to 0.005	0.42	0.45	0.401	0.513	0.382	0.665
Sulphur	0.5	23.8	27.3	17.9	36.7	21.6	54.9
Thallium	1E-005 to 0.001	<0.00001	<0.00001	0.000052	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002						
Uranium	1E-005 to 0.001	0.00112	0.00105	0.000939	0.00128	0.00131	0.00144
Vanadium	0.001 to 0.03	0.0036	0.005	0.0033	0.0067	0.0038	0.0062
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics							
Carbon Organic (Dissolved)	0.5 to 5	13.6	15	14.7	20	14.5	16.2
Carbon Organic (Total)	0.5 to 5	12.9	16.4	15	20.9	14.6	16.7
Nitrogen Organic (Dissolved)	0.05 to 0.26						
Nitrogen Organic (Total)	0.05 to 0.3						
ALS LAB ID		**L1473827**	**L1481215**	**L1488886**	**L1495443**	**L1502292**	**L1513418**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C3.31 - PC08
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Site ID		PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08
Analytes	MDL	2-May-07	17-Jul-07	14-Sep-07	28-Apr-08	7-Jul-08	4-Sep-08	1-Jun-10	1-Sep-10	22-Nov-10	29-Mar-11	14-Apr-11	21-Apr-11
In Situ Parameters													
Conductivity µS/cm	...	518		621	626	595	610	565	907	542	598	515	608
Oxygen Dissolved %	...				94.2	85.1	80.2		48.5	53.2	55.8	36.5	94.4
Oxygen Dissolved	...	11	9.4	8.02	10.1	7.84	8.44		5.16	6.39	6.85	4.76	10.9
pH (unitless)	...	8.6	8.44	7.05	8.26	8.34	8	8.97	6.81	6.82	7.86	7.14	7.81
Redox Potential mV	...	-88.4				-119	-75.2	-354	15.8	300	101	132	24.9
Salinity ppt	...								0.45				0.43
Specific Conductivity µS/cm	...	969	755	847	826	674	793	687	688	842	928	858	876
Temperature °C	...	8.01	23.2	11.1	12.3	19.3	12.9	15.7	12.4	6.44	6.38	4.1	8.94
Total Dissolved Solids	...								590	547	603	558	570
Turbidity NTU	...												
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1												
Alkalinity (Total as CaCO3)	1 to 2	231	238	315	295	220	314		308	308	317	309	292
Bicarbonate Alkalinity	1 to 2									308			292
Carbonate Alkalinity	1 to 2									<2			<2
Color TCU	5	14	16.1	21.7	14.5	20.2	23.7	19.2	24.6	22.4	15.9	15.4	14.4
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	342	319	344	370	296	335	286	380	357	393	369	360
Hydroxide Alkalinity	1 to 2									<2			<2
pH (unitless)	0.01 to 0.1	8.38	8.45	8.16	8.1	8.43	8.12	8.79	7.73	8.07	7.86	8.1	8.16
Specific Conductivity µS/cm	2	725	756	845	845	672	802	668	822	820	866	801	799
Total Dissolved Solids	1 to 2	455	441	502	515	416	478	432	506	497	531	498	498
Total Suspended Solids	3	7.5	7.6	18.7	6.8	4	10.8	3	3.4	3.7	3.5	40.9	10.5
Turbidity NTU	0.1				6.59	6.63	3.38	1	3.5	8.42	4.84	29.6	10.2
Dissolved Anions													
Bromide	0.05 to 2.495	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.25	<0.5	<0.5	<0.5
Chloride	0.5 to 1	60.7	61	61.2	60.5	52.8	58.7	55.3	59.2	57.6	62.5	58.9	58.7
Fluoride	0.02 to 0.4	0.192		0.274	0.237	0.194	0.264	0.174	0.24	0.22	<0.2	<0.2	0.21
Sulphate	0.5 to 1	85	83	54.5	80.2	64.9	51.3	73.2	55.4	58	68.2	64.8	64.1
Nutrients													
Ammonia (Total)	0.005 to 0.05	0.029	0.081	0.024	0.02	0.197	0.36	0.08	0.198	0.488	0.0102	0.029	0.0591
Nitrate (as N)	0.005 to 0.1	<0.005	0.005	<0.005	<0.005	0.0146	<0.005	<0.005	<0.05	<0.025	<0.05	<0.05	<0.05
Nitrite (as N)	0.001 to 0.02	<0.001	0.0024	<0.001	<0.001	0.0012	0.0014	<0.001	<0.01	<0.005	<0.01	<0.01	<0.01
Nitrogen (Dissolved)	0.05 to 0.1												
Nitrogen (Total)	0.0025 to 0.11							0.762	1.36	0.89	0.921	1.06	0.33
Nitrogen Kjeldahl (Total)	0.05 to 0.2	1	1.03	0.836	0.842	1.56	1.48	0.762	1.36	0.89	0.921	1.06	0.33
Orthophosphate (Dissolved)	0.001 to 0.01	0.0026	0.0027	0.0056	0.0024	<0.001	0.01	<0.001	0.0064	0.0037	<0.001		
Phosphorus - Dissolved	0.002 to 0.02			0.0158					0.0513			0.0059	0.0066
Phosphorus - Total	0.002 to 0.02	0.0433	0.0302	0.082	0.0435	0.031	0.0598	0.0197	0.0511	0.0629	0.056	0.097	0.0422
Cyanide													
Cyanide (Free)	0.005				<0.005	<0.005		<0.005	<0.005	<0.005	<0.005		<0.005
Cyanide (Total)	0.005	0.0057	0.006	0.0078	0.0065	0.0077		0.0066	0.0062	0.0059	0.0051		0.006
Cyanide (WAD)	0.005				<0.005	<0.005		<0.005	<0.005	<0.005	<0.005		<0.005
Dissolved Metals													
Aluminum	0.001 to 0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic	0.0001 to 0.0025	0.00105	0.00127	0.00158	0.0009	0.00133	0.0018	0.00166	0.00138	0.00118	0.00086	0.00111	0.00077
Barium	5E-005 to 0.02	0.05	0.043	0.044	0.072	0.048	0.062	<0.02	0.073	0.074	0.079	0.084	0.071
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth	0.0005 to 0.2										<0.2	<0.2	<0.2
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	1E-005 to 8.5E-005	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000034	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
Calcium	0.05 to 0.1	61.4	53.1	67.4	72.7	51.5	64.7	46.2	73.8	69.5	76.8	74.4	72.4
Chromium	0.0001 to 0.018	<0.001	<0.001	<0.001	0.0012	<0.001	<0.002	<0.002	<0.003	<0.001	<0.001	<0.0015	<0.001
Cobalt	0.0001 to 0.0015	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0006	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Copper	0.0002 to 0.006	<0.001	<0.001	<0.001	0.0013	<0.001	<0.002	0.0011	<0.001	<0.001	0.0012	<0.001	<0.001
Dissolved Cadmium (by saltwater extraction)	0.00002												
Iron	0.01 to 0.03	<0.03	<0.03	0.082	0.073	0.032	0.176	<0.03	0.046	0.751	0.081	0.071	<0.03
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Lithium	0.0005 to 0.025	0.0059	0.0076	0.0063	<0.005	0.0053	<0.01	0.0057	0.006	<0.005	<0.005	<0.005	<0.005
Magnesium	0.1	46	45.3	42.7	45.7	40.6	42.2	41.5	47.6	44.5	48.9	44.4	43.5
Manganese	5E-005 to 0.0015	0.00482	0.00425	0.183	0.185	0.0082	0.0955	0.00296	0.141	0.146	0.117	0.23	0.21
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0026	0.0029	0.003	0.0021	0.0024	0.0032	0.0032	0.0036	0.0028	0.0019	0.002	0.0021
Nickel	0.0005 to 0.005	<0.001	<0.001	0.0025	0.0017	<0.001	0.0022	<0.001	0.0024	0.0019	0.0019	0.0017	0.0015
Phosphorus	0.05 to 0.3										<0.3	<0.3	<0.3
Potassium	0.05 to 2	11.1	10.5	12.1	10.3	12	12.4	11.5	13.6	11.5	10.9	10.2	9.7
Selenium	0.0001 to 0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon	0.05										8.04	8.13	8
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00004	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	0.05 to 2	43.5	40.2	45.9	39	35.7	40.1	37.8	46.4	41.4	42.3	38.8	38.4
Strontium	0.0001 to 0.005										0.497	0.467	0.454
Sulphur	0.5												
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00122	0.0013	0.0004	0.00056	0.00107	0.00062	0.00137	0.00044	0.00048	0.0007	0.00058	0.00058
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.03	<0.001	0.0018	<0.002	0.003	0.0012	0.0024	<0.001	0.0014	<0.001
Zinc	0.001 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Metals													
Aluminum	0.003 to 0.025	0.111	0.0169	0.193	0.0559	0.0354	0.262	0.0233	0.0114	0.0137	0.0087	1.28	0.0806
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic	0.0001 to 0.0025	0.00108	0.00125	0.00191	0.0012	0.00154	0.002	0.00139	0.00136	0.00099	0.00097	0.00164	0.00097
Barium	5E-005 to 0.02	0.049	0.043	0.057	0.077	0.05	0.071	<0.02	0.074	0.07	0.091	0.103	0.077
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth	0.0005 to 0.2										<0.2	<0.2	<0.2
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	1E-005 to 8.5E-005	<0.000017	<0.000017	0.000018	<0.000017	<0.000017	<0.000034	<0.000017	<0.000017	<0.000017	0.00002	0.000023	<0.000017
Calcium	0.05 to 0.1	59.8	53.6	64.4	73.8	44.1	65.2	45.3	72.9	68	75.2	72.7	72.5
Chromium	0.0001 to 0.005	<0.001	<0.001	<0.001	0.0015	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	0.0031	<0.001
Cobalt	0.0001 to 0.0015	<0.0003	<0.0003	0.00037	<0.0003	<0.0003	<0.0006	<0.0003	<0.0003	<0.0003	<0.0003	0.00115	0.00033
Copper	0.0005 to 0.007	0.0015	<0.001	0.0028	0.0024	0.0015	0.0048	0.0014	<0.001	0.0013	0.0018	0.0093	0.0021
Iron	0.01 to 0.03	0.153	0.04	1.37	1.23	0.078	1.04	0.037	0.867	1.32	0.837	3.38	1.12
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Lithium	0.0005 to 0.025	0.0057	0.0071	0.0059	<0.005	0.0065	<0.01	0.0067	0.0063	0.0054	0.0055	<0.005	<0.005
Magnesium	0.1	44.4	46.8	41.3	46	40	42.2	40.9	47.2	44.4	48.2	43.1	44.1
Manganese	5E-005 to 0.0015	0.0121	0.00632	0.215	0.188	0.0159	0.102	0.00451	0.171	0.134	0.129	0.271	0.227
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0026	0.0026	0.0029	0.0021	0.0028	0.0031	0.0032	0.0038	0.0027	0.0021	0.0022	0.0024
Nickel	0.0005 to 0.005	0.0011	<0.001	0.0034	0.0018	<0.001	0.0031	<0.001	0.0025	0.0018	0.0024	0.0044	0.002
Phosphorus	0.05 to 0.3										<0.3	<0.3	<0.3
Potassium	0.05 to 2	10.9	10.6	11.6	10.2	12.8	12.9	11.3	13.3	11.5	10.8	9.7	9.8
Selenium	0.0001 to 0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon	0.05										7.95	11.3	8.37
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00004	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	0.05 to 2	42	40.4	44.3	39.1	38.9	38.7	37.2	45.5	41.7	41.9	36.4	39
Strontium	0.0001 to 0.005										0.496	0.457	0.459
Sulphur	0.5												
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium	0.01	<0.01	<0.01	0.013	<0.01	<0.01	0.017	<0.01	<0.01	<0.01	<0.01	0.061	<0.01
Total Cadmium (by saltwater extraction)	0.00002												
Uranium	1E-005 to 0.001	0.00125	0.00114	0.00036	0.00055	0.00126	0.00064	0.00155	0.00047	0.0005	0.0008	0.00067	0.00064
Vanadium	0.001 to 0.03	<0.03	<0.03	<0.03	0.002	0.0023	0.0032	0.0032	0.0019	0.0027	0.0015	0.0074	0.0023
Zinc	0.003 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Organics													
Carbon Organic (Dissolved)	0.5 to 5		14.8	13.2	11.7	15.9	14.7	13.6	11.6	12.6	12.7	10.8	10.7
Carbon Organic (Total)	0.5 to 5	14.9										14.4	10.8
Nitrogen Organic (Dissolved)	0.05 to 0.26												
Nitrogen Organic (Total)	0.05 to 0.3											1.03	
ALS LAB ID		**L501627**	**L532007**	**L554763**	**L623545**	**L652819**	**L678833**	**L892818**	**L927896**	**L956921**	**L990459**	**L995583**	**L997645**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08
Analytes	MDL	28-Apr-11	5-May-11	12-May-11	30-May-11	28-Jun-11	28-Jul-11	30-Aug-11	28-Sep-11	25-Oct-11	5-Dec-11	9-Jan-12	10-Apr-12
In Situ Parameters													
Conductivity µS/cm	...	571	624	595	563	530	712	558		532	481	453	411
Oxygen Dissolved %	...	72.5	79.9	89.4	91		71.8	68.1		105	49.8	60.7	52.9
Oxygen Dissolved	...	8.6	8.66	9.47	9.13		6.66	6.7		13.1	6.89	8.13	6.25
pH (unitless)	...	7.59	7.67	7.69	8.04	8.86	7.49	8.04	8.27	7.87	7.42	7.36	7.32
Redox Potential mV	...	89.7	113	67.3	427	183	140	152	86.7	169	46.4	82.3	37.2
Salinity ppt	...	0.42	0.41	0.38	0.34	0.3	0.39	0.33		0.41	0.42	0.38	0.3
Specific Conductivity µS/cm	...	854	840	780	694	622	803	675	812	840	863	786	607
Temperature °C	...	7.65	11.5	12.6	15.1	17.3	19	16	13.5	5.82	1.83	2.87	8.11
Total Dissolved Solids	...	555	545	507	451	404	522	438		546	561	511	394
Turbidity NTU	...				2.3	18.4	9.1		7.4	2.3	13.1	15.9	
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1						7		<1	2.4			
Alkalinity (Total as CaCO3)	1 to 2	300	296	283	231	223	295	223	314	328	357	306	314
Bicarbonate Alkalinity	1 to 2								305	328		306	302
Carbonate Alkalinity	1 to 2								9	<2		<2	12.2
Color TCU	5	14.8	14.8	15.5	20.2	25.9	18.4	20.4	18.6	19.9	19	21.3	23
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	388	369	350	291	268	325	268	333	344	362	332	359
Hydroxide Alkalinity	1 to 2								<1	<2		<2	<1
pH (unitless)	0.01 to 0.1	8.08	8.2		8.54	8.61	8.04	8.33	8.37	8.23	8.08	8	8.45
Specific Conductivity µS/cm	2	801	798	777	664	612	770	638	782	809	837	784	787
Total Dissolved Solids	1 to 2	496	484	471	392	389	460	395	466	457	474	442	486
Total Suspended Solids	3	4.9	4.5	33.8	4.6	11.1	4.8	3.3	6.7	21.7	22	4	4.7
Turbidity NTU	0.1	7.59	7.22	19.2		12.4	7.96	2.5		10.8	21.8	9.93	4.8
Dissolved Anions													
Bromide	0.05 to 2.495	<0.25	<0.5	<0.5	<0.25	<0.05	<0.5	<0.05	<0.25	<0.5	<0.5	<0.5	<0.5
Chloride	0.5 to 1	58.3	58.8	58.2	52.6	47.4	55.1	50.4	53.7	56	56.9	55.6	58.8
Fluoride	0.02 to 0.4	0.2	<0.2	<0.2	0.13	0.201	0.43	0.216	0.31	0.29	0.27	0.25	0.26
Sulphate	0.5 to 1	64.6	61.7	69.4	57.7	48.7	46.4	51.3	32.2	35	39.8	40	49.7
Nutrients													
Ammonia (Total)	0.005 to 0.05	0.0385	0.0193	0.06	0.0295	0.0464	0.347	0.162	0.194	0.181	0.389	0.239	0.0177
Nitrate (as N)	0.005 to 0.1	<0.025	<0.05	<0.05	<0.025	<0.005	0.06	0.0398	0.066	0.122	<0.05	<0.05	<0.05
Nitrite (as N)	0.001 to 0.02	<0.005	<0.01	<0.01	<0.005	<0.001	<0.01	0.0241	0.015	0.014	0.011	<0.01	0.018
Nitrogen (Dissolved)	0.05 to 0.1	0.72	0.48	0.82	0.77	1.24	1.26	1.39	0.96	0.78		0.73	0.53
Nitrogen (Total)	0.0025 to 0.11	0.669	0.46	0.86	0.8	1.87	1.2	1.52	0.9	3.68	1.03	0.886	0.538
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.669	0.46	1.03	0.8	1.87	1.14	1.17	0.819	3.55	1.1	0.886	0.521
Orthophosphate (Dissolved)	0.001 to 0.01				0.0039	<0.001	0.0042						
Phosphorus - Dissolved	0.002 to 0.02	0.0508	0.0069	0.0117	0.0256	0.0141	0.0119	0.0177	0.0123	0.0056	0.0068	0.0146	0.0149
Phosphorus - Total	0.002 to 0.02	0.0462	0.0498	0.0973	0.0321	0.0502	0.0585	0.0279	0.0316	0.0896	0.09	0.0999	0.047
Cyanide													
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	0.0054	0.0055	0.0064	0.0074	0.007	0.0066		0.0076	0.0065	0.0064	0.0062	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	0.001 to 0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.003	<0.003	<0.003	<0.003
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00092	0.00106	0.00094	0.00121	0.00128	0.00122	0.00135	0.00125	0.00093	0.00107	0.0009	0.00085
Barium	5E-005 to 0.02	0.075	0.071	0.067	0.05	0.059	0.078	0.061	0.063	0.0648	0.0677	0.0517	0.023
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.028	0.027	0.023	0.022
Cadmium	1E-005 to 8.5E-005	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	0.000149	<0.000017	<0.000017	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	76.8	73.6	66.7	54	51.3	64.7	49.3	65.7	68.9	70.5	65.9	68
Chromium	0.0001 to 0.018	<0.002	<0.0015	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00042	0.00045	0.00045	0.00043
Cobalt	0.0001 to 0.0015	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.00024	0.00038	0.00026	<0.0001
Copper	0.0002 to 0.006	<0.001	<0.001	0.0011	0.0012	0.0013	<0.001	<0.001	<0.001	0.00054	<0.0005	0.00071	0.00109
Dissolved Cadmium (by saltwater extraction)	0.00002												
Iron	0.01 to 0.03	<0.03	<0.03	0.039	<0.03	<0.03	0.101	<0.03	<0.03	0.078	0.216	0.19	0.241
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	<0.005	<0.005	0.0054	<0.005	<0.005	<0.005	0.0051	0.0061	0.00536	0.00591	0.00462	0.00525
Magnesium	0.1	47.7	45	44.5	38	34.1	39.7	35.2	41.1	41.8	45.1	40.8	46
Manganese	5E-005 to 0.0015	0.18	0.157	0.105	0.0052	0.00867	0.172	0.00417	0.0942	0.124	0.263	0.213	0.127
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.002	0.002	0.0024	0.0023	0.0021	0.0019	0.0025	0.0035	0.00308	0.00253	0.00197	0.00217
Nickel	0.0005 to 0.005	0.0016	0.0016	0.0011	<0.001	<0.001	<0.001	<0.001	0.0022	0.00234	0.00237	0.00184	0.00186
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	11	10.4	11.5	11.2	10.1	11.3	11	11.4	11	11.4	9.82	9.7
Selenium	0.0001 to 0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0001	0.00011	0.00011	0.00011
Silicon	0.05	8.7	8.28	5.54	2.45	3.67	8.37	4.32	10.1	9.42	10.2	8.78	9.32
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	42.1	39.6	40.8	36.1	33	38.8	34.2	40.5	38.5	43.5	36.1	36.1
Strontium	0.0001 to 0.005	0.503	0.47	0.444	0.369	0.337	0.432	0.353	0.441	0.433	0.516	0.412	0.466
Sulphur	0.5												
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00059	0.00054	0.00084	0.00114	0.00102	0.00047	0.00103	0.00056	0.000455	0.000459	0.000433	0.000542
Vanadium	0.001 to 0.03	<0.001	<0.001	0.0012	0.0022	0.0021	<0.001	0.0024	0.0018	0.0012	0.0013	<0.001	0.0012
Zinc	0.001 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.005	0.0073	<0.005	<0.005	0.0098	<0.003	<0.003	<0.003
Total Metals													
Aluminum	0.003 to 0.025	0.0755	0.12	0.191	0.055	0.122	0.145	0.0319	0.109	0.13	0.715	0.0432	0.0158
Antimony	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00101	0.00114	0.00117	0.00119	0.00124	0.00163	0.00133	0.00138	0.00107	0.00171	0.0012	0.00107
Barium	5E-005 to 0.02	0.074	0.078	0.075	0.051	0.06	0.089	0.062	0.069	0.0661	0.079	0.0566	0.0245
Beryllium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.033	0.029	0.027	0.026
Cadmium	1E-005 to 8.5E-005	<0.000017	<0.000017	<0.000017	<0.000017	0.000018	0.000025	<0.000017	<0.000017	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	73.4	71.9	68.6	53.9	51.8	67.9	47.9	67	68.4	70.2	65.8	67.3
Chromium	0.0001 to 0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0013	0.00099	0.00223	0.00076	0.00069
Cobalt	0.0001 to 0.0015	<0.0003	0.00033	<0.0003	<0.0003	<0.0003	0.00044	<0.0003	0.00033	0.00035	0.00094	0.00029	0.00011
Copper	0.0005 to 0.007	0.0019	0.002	0.0026	0.0017	0.0021	0.0019	<0.001	0.0013	0.00143	0.00556	0.00141	0.00151
Iron	0.01 to 0.03	0.978	1.11	1.03	0.078	0.184	1.27	0.051	0.513	0.767	2.71	1.77	1.18
Lead	5E-005 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	0.000138	<0.00005	<0.00005
Lithium	0.0005 to 0.025	<0.005	<0.005	0.0062	0.0053	<0.005	0.0065	0.005	0.0063	0.00596	0.00582	0.0044	0.00477
Magnesium	0.1	45.2	44.4	45.7	37.9	33.4	41.2	34.9	42	42.1	44	41.2	45.2
Manganese	5E-005 to 0.0015	0.178	0.168	0.127	0.00751	0.0162	0.248	0.00664	0.106	0.133	0.283	0.226	0.13
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0023	0.0022	0.0029	0.0028	0.0025	0.0021	0.0028	0.004	0.00323	0.00258	0.0021	0.00227
Nickel	0.0005 to 0.005	0.002	0.0027	0.0017	0.0011	0.0013	0.0014	<0.001	0.0026	0.00277	0.00419	0.00206	0.0019
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	0.05 to 2	10.1	10.3	11.6	11.3	10.3	12	11.4	11.6	11.1	11.1	10	9.49
Selenium	0.0001 to 0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00012	0.00012	0.0001	0.00013
Silicon	0.05	8.39	8.49	6.61	2.57	3.96	9.01	4.42	10.5	9.79	11.7	9.02	9.3
Silver	1E-005 to 0.0001	<0.00002	0.000032	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	38.3	39.1	41.8	36.4	33.6	40.3	34.5	41.4	39	42.5	37.4	35.5
Strontium	0.0001 to 0.005	0.467	0.472	0.462	0.372	0.344	0.461	0.353	0.452	0.435	0.512	0.424	0.454
Sulphur	0.5												
Thallium	1E-005 to 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	0.011	0.013	0.014	<0.01	<0.01	0.013	<0.01	<0.01	0.018	0.033	0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002												
Uranium	1E-005 to 0.001	0.00065	0.00061	0.001	0.00139	0.00115	0.00057	0.00116	0.0006	0.000487	0.000484	0.000452	0.000535
Vanadium	0.001 to 0.03	0.0019	0.002	0.0026	0.0026	0.0026	0.0022	0.0024	0.0027	0.0025	0.0056	0.0023	0.0021
Zinc	0.003 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0085	<0.003	0.0057	<0.003	<0.003
Organics													
Carbon Organic (Dissolved)	0.5 to 5	9.65	11.4	13.6	14.8	17.4	12.6	16.6	12.5	12.9	12.6	11.8	13.5
Carbon Organic (Total)	0.5 to 5	9.68	11.7	13.6	15.2	19.4	12.6	16.9	12.9	13.7	13.2	12.5	14.1
Nitrogen Organic (Dissolved)	0.05 to 0.26	0.681	0.461	0.76	0.74	1.19	0.854	1.16	0.685	0.46		0.491	0.495
Nitrogen Organic (Total)	0.05 to 0.3	0.63	0.441	0.973	0.77	1.82	0.79	1.29	0.625	0.59	0.63	0.647	0.503
ALS LAB ID		**L999654**	**L1002049**	**L1005044**	**L1011001**	**L1025075**	**L1038168**	**L1052387**	**L1066047**	**L1076994**	**L1092368**	**L1102695**	**L1133342**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08
Analytes	MDL	25-Apr-12	2-May-12	11-May-12	16-May-12	24-May-12	10-Jul-12	7-Aug-12	4-Dec-12	9-Jan-13	6-Feb-13	2-Apr-13	7-May-13
In Situ Parameters													
Conductivity µS/cm	...	686	313	527	536	534	659	600	416	475	0.449	666	568
Oxygen Dissolved %	...			69.6	110		106		82.9	11.3	77		
Oxygen Dissolved	...	13.7	14	8.27	11.4	10.6	9.1		11.2	1.6	10.6		
pH (unitless)	...	7.96	7.92	7.72	8.71	8.7	8.59	8.58	7.9	7.45	7.49	8.05	8.56
Redox Potential mV	...	110	117	22.9	131	72.4	184	122	71.4	97.4	72	98.5	170
Salinity ppt	...	0.39	0.21	0.39	0.33	0.34		0.3	0.35	0.43	0.39	0.43	0.35
Specific Conductivity µS/cm	...	798	426	801	682	683	691	624	721	883	801	866	711
Temperature °C	...	17.6	11.1	7.14	13.8	13.6	22.7	22.9	2.82	0.86	2.02	12.9	14.5
Total Dissolved Solids	...	518	277	520	443	444		406	468	573	520	563	462
Turbidity NTU	...	23.3	9.9	12.1	4.3	1.3	1	4	8.4	47.1	8.9	9.8	2
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1												
Alkalinity (Total as CaCO3)	1 to 2	320	313	305	239	250	238	221	312	308	311	318	242
Bicarbonate Alkalinity	1 to 2	320	313	305	215	219	220	202	312	308	311	318	232
Carbonate Alkalinity	1 to 2	<1	<1	<2	24.5	31	18	19	<2	<2	<2	<1	9.8
Color TCU	5	21.9	17.8	16.9	18.8	17.8	18.8	17.7	22.5	20.4	20.7	19	16
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	370	358	357	288	296	294	270	333	341	344	357	295
Hydroxide Alkalinity	1 to 2	<1	<1	<2	<1	<1	<1	<1	<2	<2	<2	<1	<1
pH (unitless)	0.01 to 0.1	8.4	8.16	8.28	8.56	8.54	8.6	8.55	8.29	7.95	7.94	8.19	8.54
Specific Conductivity µS/cm	2	785	787	802	673	667	631	610	743	755	743	799	672
Total Dissolved Solids	1 to 2	489	479	470	413	414	412	407	463	468	474	496	401
Total Suspended Solids	3	14.7	23.7	13.3	4.8	3.2	<3	5.7	<3	11.7	5	15.3	3.3
Turbidity NTU	0.1	10.4	11.7	11.9	4.32	1.4	1.36	3.28	10.1	27.3	10.5	11.6	1.35
Dissolved Anions													
Bromide	0.05 to 2.495	<0.05	<0.5	<0.5	<0.25	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5	<0.25
Chloride	0.5 to 1	57.2	57.3	58.3	52.8	52.7	49.4	49.7	56.8	57.1	56	60.8	55.5
Fluoride	0.02 to 0.4	0.312	0.25	0.24	0.18	0.209	0.212	0.212	0.27	0.37	0.21	0.4	0.24
Sulphate	0.5 to 1	47	48.4	50.2	58.7	58.9	51.7	51.6	37.6	35.9	40.4	49.3	55.4
Nutrients													
Ammonia (Total)	0.005 to 0.05	0.0093	<0.005	0.0129	0.0175	0.0212	0.0235	0.0277	0.165	0.516	0.23	0.0102	0.0244
Nitrate (as N)	0.005 to 0.1	<0.005	<0.05	0.062	<0.025	<0.005	<0.005	<0.005	0.05	<0.05	<0.05	<0.05	0.029
Nitrite (as N)	0.001 to 0.02	<0.001	<0.01	<0.01	<0.005	<0.001	0.001	<0.001	0.014	0.011	<0.01	<0.01	<0.005
Nitrogen (Dissolved)	0.05 to 0.1	0.65	0.49	0.54	0.88	0.77	0.93	0.92	0.881	1.17	0.825	0.535	
Nitrogen (Total)	0.0025 to 0.11	0.878	0.391	1.04	1.07	0.893	0.833	0.943	0.916	1.45	0.825	0.735	1.05
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.878	0.391	0.975	1.07	0.893	0.832	0.943	0.852	1.45	0.983	0.735	0.88
Orthophosphate (Dissolved)	0.001 to 0.01												
Phosphorus - Dissolved	0.002 to 0.02	0.014	0.0125	0.0182	0.0192	0.0185	0.0119	0.0128	0.0109	0.0275	0.0132	0.0111	0.0366
Phosphorus - Total	0.002 to 0.02	0.0794	0.219	0.106	0.0384	0.0349	0.022	0.0263	0.0603	0.266	0.0696	0.0744	0.0448
Cyanide													
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	0.001 to 0.025	<0.003	<0.003	<0.003	<0.003	0.0022	0.0016	0.0019	0.0011	0.0019	0.0018	0.0017	0.0012
Antimony	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00137	0.00104	0.00116	0.00116	0.00117	0.0012	0.00126	0.00088	0.00105	0.00074	0.00106	0.00116
Barium	5E-005 to 0.02	0.0259	0.0399	0.0579	0.0548	0.0535	0.0434	0.0488	0.0488	0.077	0.0459	0.046	0.046
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.025	0.024	0.024	0.017	0.016	0.018	0.02	0.03	0.023	0.023	0.025	0.019
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	72.8	70.7	68.8	52.4	54.9	56.4	48.2	67.6	66.8	66.3	71	56
Chromium	0.0001 to 0.018	0.00034	0.00033	0.00028	<0.0001	<0.0001	<0.0001	<0.0001	0.00053	0.00053	0.00045	0.0003	0.0001
Cobalt	0.0001 to 0.0015	0.00015	0.00016	0.00025	<0.0001	<0.0001	<0.0001	<0.0001	0.00012	0.00022	0.00013	0.00017	<0.0001
Copper	0.0002 to 0.006	0.00085	0.00089	0.00061	0.00102	0.00093	0.00096	0.00067	0.00074	0.00032	0.00056	0.00122	0.00085
Dissolved Cadmium (by saltwater extraction)	0.00002												
Iron	0.01 to 0.03	0.122	0.086	0.17	<0.03	0.015	0.016	0.014	0.142	0.632	0.15	0.16	0.011
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00481	0.00493	0.00468	0.00562	0.00479	0.00563	0.00509	0.00542	0.00445	0.00455	0.00432	0.00544
Magnesium	0.1	45.8	43.9	44.9	38	38.6	37.1	36.3	39.7	42.2	43.2	43.7	37.6
Manganese	5E-005 to 0.0015	0.202	0.163	0.284	0.00399	0.00374	0.0128	0.00412	0.16	0.25	0.145	0.138	0.00489
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0023	0.00196	0.00187	0.00216	0.00225	0.00221	0.00213	0.00261	0.00197	0.00217	0.0021	0.00228
Nickel	0.0005 to 0.005	0.00185	0.00178	0.00177	0.00066	0.00073	0.00079	0.00061	0.00154	0.00155	0.00147	0.00194	0.00066
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.05	0.068	<0.05	<0.05	<0.05
Potassium	0.05 to 2	10	9.95	9.72	10.9	10.6	10.5	10.2	10.7	11	10.1	11.6	11
Selenium	0.0001 to 0.006	0.00012	0.00013	0.00011	0.00014	0.00015	0.00013	0.00014	0.0001	0.00013	0.00011	0.00017	0.00013
Silicon	0.05	9.49	8.93	8.7	1.79	1.33	1.31	1.58	9.45	9.39	9.08	9.02	3.63
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	37.4	37.4	35.5	34.4	34.3	32.9	31.5	37.6	34.1	30.5	36	34.5
Strontium	0.0001 to 0.005	0.434	0.444	0.436	0.353	0.348	0.358	0.324	0.425	0.411	0.4	0.444	0.36
Sulphur	0.5								13	12.6	14	16.2	18.7
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00049	0.000488	0.000496	0.00103	0.00113	0.000998	0.000912	0.000369	0.000346	0.000445	0.000569	0.00111
Vanadium	0.001 to 0.03	0.0016	<0.001	<0.001	0.0022	0.0023	0.002	0.0019	0.0014	0.0014	0.0012	0.0013	0.0022
Zinc	0.001 to 0.006	<0.003	0.004	<0.003	0.0042	0.0014	0.0032	0.0013	<0.001	<0.001	0.0018	0.0013	0.0017
Total Metals													
Aluminum	0.003 to 0.025	0.342	0.0615	0.558	0.0532	0.0191	0.0232	0.0677	0.126	0.43	0.0834	0.161	0.0694
Antimony	0.0001 to 0.0025	<0.0001	0.0001	0.0001	0.00011	0.00012	<0.0001	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	0.0001
Arsenic	0.0001 to 0.0025	0.00194	0.00134	0.00164	0.00126	0.00117	0.00116	0.00133	0.00114	0.0014	0.00118	0.0013	0.00112
Barium	5E-005 to 0.02	0.0386	0.0451	0.073	0.0572	0.0517	0.0414	0.0507	0.0534	0.0962	0.0612	0.0491	0.0449
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.031	0.03	0.026	0.022	0.02	0.02	0.025	0.032	0.024	0.024	0.028	0.019
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000035	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	73	70.7	68.5	53.5	54.3	53.4	48.1	66.7	67.1	66.4	68.1	55.3
Chromium	0.0001 to 0.005	0.00114	0.00065	0.00167	0.00033	0.00018	0.00027	0.00034	0.00112	0.00166	0.00087	0.0008	0.00034
Cobalt	0.0001 to 0.0015	0.00043	0.00022	0.00071	0.00013	<0.0001	<0.0001	0.00013	0.00022	0.00061	0.00022	0.00031	0.00013
Copper	0.0005 to 0.007	0.00337	0.00255	0.00527	0.00193	0.00112	0.00134	0.00133	0.00443	0.00363	0.00181	0.00301	0.00193
Iron	0.01 to 0.03	1.8	1.31	2.5	0.084	0.043	0.041	0.115	1.43	2.45	1.43	1.09	0.122
Lead	5E-005 to 0.0025	0.000072	<0.00005	0.000103	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000095	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00486	0.00491	0.00415	0.00547	0.00469	0.00472	0.00546	0.00529	0.00476	0.00475	0.00451	0.00551
Magnesium	0.1	46.1	43.5	44.1	38.9	36.7	35.4	36	38.4	41.9	43.5	42.2	36.3
Manganese	5E-005 to 0.0015	0.223	0.168	0.281	0.00657	0.00535	0.00689	0.00946	0.16	0.27	0.173	0.138	0.00746
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00394	0.00206	0.00176	0.00229	0.00254	0.00196	0.00224	0.00256	0.00209	0.00221	0.00218	0.00246
Nickel	0.0005 to 0.005	0.00259	0.00192	0.00326	0.00091	0.00077	0.00077	0.00081	0.00198	0.00276	0.002	0.00234	0.00097
Phosphorus	0.05 to 0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.062	0.192	0.07	0.052	0.066
Potassium	0.05 to 2	9.99	9.69	9.37	11.2	10.2	9.89	10.8	10.5	11.1	10.2	11.6	10.8
Selenium	0.0001 to 0.006	0.00013	0.00014	0.00012	0.00017	0.00015	0.00013	0.00015	0.00011	0.00012	0.0001	0.00017	0.00015
Silicon	0.05	10.6	9.07	9.81	1.98	1.35	1.07	1.79	9.72	10.6	9.26	9.24	3.7
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	37.3	36.8	34.2	36.1	33.8	31.1	32.8	36.7	36.9	36	35.4	32.9
Strontium	0.0001 to 0.005	0.451	0.452	0.401	0.347	0.352	0.303	0.332	0.426	0.429	0.411	0.448	0.381
Sulphur	0.5								13.2	12.8	14.7	16	18.6
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	0.023	<0.01	0.027	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002												
Uranium	1E-005 to 0.001	0.000537	0.0005	0.000474	0.00121	0.00126	0.000934	0.00105	0.000367	0.000398	0.000455	0.000583	0.0012
Vanadium	0.001 to 0.03	0.0041	0.0023	0.0041	0.0026	0.0025	0.0021	0.0025	0.0034	0.0044	0.0028	0.0029	0.0025
Zinc	0.003 to 0.006	0.0039	0.0034	0.0042	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics													
Carbon Organic (Dissolved)	0.5 to 5	14.2	12.9	11.3	14.3	14.5	13.6	15.5	10.7	12.3	12.4	13.6	11.3
Carbon Organic (Total)	0.5 to 5	15.9	13.7	12.9	14.6	14.6	14.1	16.7	10.7	13.8	12.3	14.4	11.5
Nitrogen Organic (Dissolved)	0.05 to 0.26	0.641	0.485	0.465	0.863	0.749	0.906	0.892	0.652			0.525	
Nitrogen Organic (Total)	0.05 to 0.3	0.869	0.391	0.962	1.05	0.872	0.809	0.915	0.687	0.932	0.752	0.724	
ALS LAB ID		**L1140194**	**L1142492**	**L1146570**	**L1148880**	**L1152500**	**L1176520**	**L1190914**	**L1245799**	**L1256679**	**L1265999**	**L1285503**	**L1298960**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C3.31 - PC08
PAGE 4 OF 5

Site ID		PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08
Analytes	MDL	5-Jun-13	2-Jul-13	7-Aug-13	4-Sep-13	9-Oct-13	7-Nov-13	8-Jan-14	4-Feb-14	13-Mar-14	21-Mar-14	27-Mar-14	3-Apr-14
In Situ Parameters													
Conductivity µS/cm	...	564	622	603		779	509	290	362	383	481	438	538
Oxygen Dissolved %	...	89.9		54		75.6	93.6	26.6	45.5	60.7	91.8	95.7	87.9
Oxygen Dissolved	...	8.83		4.7		9.07	12.3	3.78	6.3	8.18	11.5	12.9	10.5
pH (unitless)	...	8.42	8.94	8.27	7.82	7.78	7.91	7.41	8.01	7.38	7.75	7.9	7.8
Redox Potential mV	...	155	100	265	-64.4	96.1	123	18.8	-48	21.9	15.3	77.5	116
Salinity ppt	...	0.33	0.31	0.31	0.38	0.38	0.42	0.26	0.31	0.32	0.38	0.37	0.4
Specific Conductivity µS/cm	...	678	633	637	769	415	850	535	690	664	767	757	812
Temperature °C	...	16.2	24.1	22.2	18	7.25	3.97	1	0.22	2.95	5.51	2.89	7.37
Total Dissolved Solids	...	441	412	414	500	506	553	347	445	431	500	492	527
Turbidity NTU	...	1.7	20.6	2.9		9.9	28.9	9.1					
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1												
Alkalinity (Total as CaCO3)	1 to 2	236	212	218	301	351	329	324	349	259	314	311	316
Bicarbonate Alkalinity	1 to 2	228	191	214	301	351	329	324	349	259	314	311	316
Carbonate Alkalinity	1 to 2	7.7	20.4	3.4	<1	<2	<2	<2	<2	<2	<1	<2	<2
Color TCU	5	21.9	21.1	21.4	23.2	20.5		19.4					
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	289	266	263	318	351	348	357	381	295	369	353	344
Hydroxide Alkalinity	1 to 2	<1	<1	<1	<1	<2	<2	<2	<2	<2	<1	<2	<2
pH (unitless)	0.01 to 0.1	8.5	8.6	8.39	8.38	8.24	8.25	7.87	8.03	7.86	8.34	8.24	8.26
Specific Conductivity µS/cm	2	656	606	601	716	772	781	771	848	632	792	780	754
Total Dissolved Solids	1 to 2	410	378	371	406	450	461	477	510	371	489	458	466
Total Suspended Solids	3	3.5	25.5	6.3	8.5	7.5	6.8	10.1	12.3	18.1	10.1	13.7	42.4
Turbidity NTU	0.1	1.62	22.6	1.36	7.48	11.5	10.4	8.9	13	10.5	9.97	10.3	19.1
Dissolved Anions													
Bromide	0.05 to 2.495	<0.25	<0.05	<0.05	<0.25	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5
Chloride	0.5 to 1	50.6	48.8	49.7	51.8	54	54.3	61.9	65.1	45.8	59.1	56.4	56.6
Fluoride	0.02 to 0.4	0.27	0.204	0.216	0.28	0.43	0.28	0.27	0.28	0.242	0.25	0.26	0.27
Sulphate	0.5 to 1	46.9	43.2	41.8	22.6	23.4	25.7	30.8	37.8	33.9	45.9	44.2	43.7
Nutrients													
Ammonia (Total)	0.005 to 0.05	0.0357	0.0233	0.146	0.0774	0.137	0.229	0.36	0.384	0.126	0.0264	0.0315	0.0104
Nitrate (as N)	0.005 to 0.1	<0.025	<0.005	0.0131	<0.025	<0.05	0.067	<0.05	<0.05	0.0168	<0.05	<0.05	<0.05
Nitrite (as N)	0.001 to 0.02	<0.005	<0.001	0.0116	0.0135	<0.01	0.013	0.016	<0.01	0.0016	<0.01	<0.01	<0.01
Nitrogen (Dissolved)	0.05 to 0.1			1.12	1.75								
Nitrogen (Total)	0.0025 to 0.11	0.876	1.69	1.2	0.865	0.909	0.931						
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.833	1.69	1.19	0.931	0.937	1.01	0.926	0.999	1.27	0.687	0.609	0.737
Orthophosphate (Dissolved)	0.001 to 0.01					0.0059	0.0064	0.0061	0.0023	0.022	0.0025	0.005	0.0033
Phosphorus - Dissolved	0.002 to 0.02	0.0429	0.052	0.0316	0.0714	0.014	0.0104	0.0101	0.0087	0.0377	0.0105	0.0094	0.136
Phosphorus - Total	0.002 to 0.02	0.0526	0.0143	0.0493		0.061	0.0487	0.0943	0.0759	0.192	0.0587	0.0501	0.008
Cyanide													
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	0.001 to 0.025	0.0027	0.0013	0.0024	0.0023	0.0019	<0.001	<0.001	0.0013	0.0019	<0.001	0.0016	0.0018
Antimony	0.0001 to 0.0025	<0.0001	0.00011	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.0013	0.00131	0.00145	0.00151	0.00105	0.00085	0.00089	0.00089	0.00099	0.00083	0.00069	0.00083
Barium	5E-005 to 0.02	0.04	0.0445	0.0644	0.0694	0.0561	0.0601	0.0661	0.0692	0.0549	0.0421	0.0351	0.036
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.017	0.02	0.026	0.029	0.032	0.029	0.029	0.03	0.023	0.025	0.024	0.022
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	58.2	50.8	46.3	59.7	67.8	66.3	70.5	73.2	58.6	72.3	65.3	66.7
Chromium	0.0001 to 0.018	<0.0001	<0.0001	<0.0001	0.00033	0.00036	0.00047	0.00053	0.00056	0.00032	0.00036	0.00033	0.00033
Cobalt	0.0001 to 0.0015	0.0001	<0.0001	<0.0001	0.00016	0.00018	0.00023	0.00027	0.00021	0.00052	0.00028	0.0002	0.00016
Copper	0.0002 to 0.006	0.00132	0.00115	0.00083	0.0005	0.00044	0.00067	0.00047	0.00042	0.00164	0.00099	0.00085	0.00103
Dissolved Cadmium (by saltwater extraction)	0.00002												
Iron	0.01 to 0.03	0.025	<0.01	0.018	0.079	0.097	0.086	0.343	0.305	0.358	0.066	0.169	0.159
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00425	0.00472	0.00513	0.00553	0.00567	0.00513	0.0051	0.00527	0.00447	0.00476	0.00483	0.00442
Magnesium	0.1	34.8	33.8	35.7	41	44.1	44.4	44	48.1	36.1	45.7	46.2	43.2
Manganese	5E-005 to 0.0015	0.0112	0.00599	0.00781	0.0739	0.0839	0.132	0.223	0.193	0.215	0.178	0.151	0.131
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00203	0.0023	0.00221	0.00287	0.00342	0.00298	0.00215	0.00254	0.00246	0.00253	0.00253	0.00277
Nickel	0.0005 to 0.005	0.00084	0.00069	0.00065	0.00169	0.00198	0.00199	0.0017	0.00165	0.00195	0.00202	0.00179	0.00187
Phosphorus	0.05 to 0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.058	<0.05	<0.05	<0.05
Potassium	0.05 to 2	11.3	10.5	11.1	11.9	11.6	11.9	10.9	11.1	11.1	10.8	10.1	9.63
Selenium	0.0001 to 0.006	0.00016	0.00016	0.00017	0.00013	0.00013	0.00012	0.00011	0.00012	0.00013	0.00015	0.0001	<0.0001
Silicon	0.05	4.32	4.05	6.12	10.1	9.93	9.87	9.53	10.5	7.52	8.93	8.75	8.25
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	30.8	31.2	32	39.3	37.2	35.3	36	39.1	27.9	36	35.1	35.5
Strontium	0.0001 to 0.005	0.319	0.337	0.317	0.417	0.456	0.439	0.455	0.486	0.378	0.454	0.447	0.427
Sulphur	0.5	15.4	14.1	14.1	8.16	8.39	9.04	11	13.7	11.4	15.6	14.8	15.2
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.000985	0.000992	0.000892	0.000435	0.00052	0.000489	0.000474	0.000519	0.000515	0.000609	0.000615	0.000611
Vanadium	0.001 to 0.03	0.0023	0.0024	0.0027	0.0017	0.0014	0.0014	0.0013	0.0015	0.0014	0.0011	0.0012	0.0014
Zinc	0.001 to 0.006	0.0014	0.0014	0.0018	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Metals													
Aluminum	0.003 to 0.025	0.0334	0.0347	0.0755	0.293	0.345	0.232	0.123	0.26	0.571	0.177	0.194	0.565
Antimony	0.0001 to 0.0025	0.00011	0.00014	0.00015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00012	<0.0001	<0.0001	0.00013
Arsenic	0.0001 to 0.0025	0.00135	0.00134	0.00149	0.00185	0.00131	0.00115	0.00116	0.00125	0.00151	0.00112	0.00105	0.00144
Barium	5E-005 to 0.02	0.0392	0.0452	0.0677	0.0668	0.0613	0.0644	0.0702	0.0809	0.0642	0.0463	0.0416	0.047
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.021	0.023	0.03	0.032	0.033	0.03	0.03	0.031	0.026	0.028	0.024	0.025
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	56.4	51.4	48.6	58	66.2	64.5	68.7	71	59.6	69.4	66.3	67.7
Chromium	0.0001 to 0.005	0.0002	0.0002	0.00032	0.00098	0.00131	0.00146	0.00104	0.00127	0.00147	0.0008	0.00091	0.00174
Cobalt	0.0001 to 0.0015	0.00013	0.00012	0.00016	0.00039	0.00048	0.00043	0.00039	0.00042	0.00103	0.00045	0.0004	0.00064
Copper	0.0005 to 0.007	0.00165	0.00179	0.00154	0.00288	0.0034	0.00349	0.0017	0.00285	0.00704	0.00299	0.00264	0.00548
Iron	0.01 to 0.03	0.077	0.064	0.133	0.869	1.24	1.11	1.84	1.76	1.79	1.24	1.51	2.1
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	0.000058	0.000078	0.000065	<0.00005	0.000054	0.000104	<0.00005	<0.00005	0.000117
Lithium	0.0005 to 0.025	0.00465	0.00479	0.00532	0.00563	0.00613	0.00498	0.0047	0.0049	0.00471	0.00491	0.00477	0.00471
Magnesium	0.1	34	33.4	36.1	39.6	42	41.2	43.3	46.1	37	43.1	44.2	44
Manganese	5E-005 to 0.0015	0.0154	0.00999	0.0114	0.0648	0.1	0.14	0.226	0.214	0.237	0.184	0.168	0.159
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00225	0.00264	0.00243	0.00301	0.00417	0.00301	0.0022	0.00254	0.00274	0.0031	0.00301	0.00324
Nickel	0.0005 to 0.005	0.00097	0.00098	0.00087	0.00234	0.00292	0.00272	0.00209	0.00238	0.00348	0.00267	0.00247	0.00341
Phosphorus	0.05 to 0.3	0.055	0.064	0.056	0.072	<0.05	0.052	0.111	0.06	0.182	0.061	<0.05	0.076
Potassium	0.05 to 2	11.2	10.7	11.7	12.3	11.1	11.8	10.5	10.5	11.2	10.3	9.99	9.8
Selenium	0.0001 to 0.006	0.00016	0.00018	0.00017	0.00016	0.00012	0.00017	0.0001	0.00014	0.00016	0.00011	0.00011	0.00012
Silicon	0.05	4.35	4.15	6.53	11	10.6	10.1	9.77	10.8	9.2	9.01	9.26	10.1
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	0.000013	<0.00001	<0.00001	<0.00001	<0.00001	0.000031	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	32.8	30.9	34.3	38.6	36.2	33	35.9	40.4	29.2	36	35.8	35.4
Strontium	0.0001 to 0.005	0.34	0.367	0.336	0.404	0.479	0.42	0.443	0.466	0.421	0.485	0.442	0.438
Sulphur	0.5	15.4	14.2	15	8.61	8.68	9	11.2	13.7	11.9	15.6	15.3	15.9
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	0.011	0.018	0.01	<0.01	0.012	0.024	<0.01	<0.01	0.026
Total Cadmium (by saltwater extraction)	0.00002												
Uranium	1E-005 to 0.001	0.00102	0.00111	0.00103	0.000463	0.000555	0.000484	0.000485	0.000516	0.00056	0.000655	0.000643	0.000688
Vanadium	0.001 to 0.03	0.0025	0.0024	0.0032	0.0033	0.0038	0.0039	0.0031	0.004	0.0042	0.0031	0.0033	0.0055
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics													
Carbon Organic (Dissolved)	0.5 to 5	15.1	15.1	17.4	13.6	12.6	12.2	12.2	13.1	12.7	11.7	11.9	12.1
Carbon Organic (Total)	0.5 to 5	15.1	18.1	18.1	13.7	13.3	11.9	13.3	13.5	14.9	12.2	11.6	13.5
Nitrogen Organic (Dissolved)	0.05 to 0.26				1.66								
Nitrogen Organic (Total)	0.05 to 0.3				0.853								
ALS LAB ID		**L1312719**	**L1326032**	**L1344180**	**L1358222**	**L1375698**	**L1389979**	**L1410216**	**L1418933**	**L1432661**	**L1435186**	**L1437439**	**L1439655**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C3.31 - PC08
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Site ID		PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08
Analytes	MDL	10-Apr-14	24-Apr-14	6-May-14	21-May-14	4-Jun-14	18-Jun-14	3-Jul-14	16-Jul-14	30-Jul-14	12-Aug-14
In Situ Parameters											
Conductivity µS/cm	...	513	529	567	549	591	595	633	560	577	610
Oxygen Dissolved %	...		73.3	103	106	88.8	89.1	105	108		93.1
Oxygen Dissolved	...		8.42	10.9	10.4	8.82	8.26	9.07	9.08		8.15
pH (unitless)	...	8.1	7.33	8.26	8.6	7.94	8.74	8.59	8.91	8.71	8.65
Redox Potential mV	...	-48.2	150	173	101	160	93.1	74.5	110	119	79.4
Salinity ppt	...	0.38	0.37	0.36	0.32	0.35	0.33	0.32	0.28	0.3	0.32
Specific Conductivity µS/cm	...	764	757	739	662	720	673	664	572	618	649
Temperature °C	...	7.78	9.21	12.8	16.1	15.6	18.9	22.5	23.9	21.5	21.8
Total Dissolved Solids	...	497	492	481	430	467	437	432	372	402	422
Turbidity NTU	...										
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	1										
Alkalinity (Total as CaCO3)	1 to 2	310	285	251	230	240	239	236	233	254	231
Bicarbonate Alkalinity	1 to 2	310	285	242	222	230	224	222	218	244	215
Carbonate Alkalinity	1 to 2	<2	<2	8.7	7.8	9.9	15.1	13.6	14.8	10.2	16.1
Color TCU	5										
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	339	334	310	291	301	289	290	290	290	283
Hydroxide Alkalinity	1 to 2	<2	<2	<1	<1	<1	<1	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1	8.24	8.25	8.43	8.47	8.51	8.51	8.61	8.54	8.42	8.58
Specific Conductivity µS/cm	2	729	714	701	654	662	662	640	647	676	645
Total Dissolved Solids	1 to 2	449	458	406	393	408	409	290	422	311	416
Total Suspended Solids	3	10	6.5	13.8	12	4.3	<3	5.1	4.6	4.5	<3
Turbidity NTU	0.1	12.7	4.28	4.68	3.06	5.66	1.76	2.06	2.48	2.87	1.79
Dissolved Anions											
Bromide	0.05 to 2.495	<0.25	<0.25	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05
Chloride	0.5 to 1	54.9	57.2	55.7	52.4	52.5	52.9	52.3	53.7	54.3	54.9
Fluoride	0.02 to 0.4	0.28	0.25	0.229	0.213	0.22	0.215	0.231	0.227	0.228	0.237
Sulphate	0.5 to 1	42.6	49.1	54.3	46.4	45.5	45.6	44.5	45.2	41.1	46.1
Nutrients											
Ammonia (Total)	0.005 to 0.05	0.007	0.0057	0.0144	0.0276	0.0195	0.0562	0.0875	0.0578	0.0414	0.0352
Nitrate (as N)	0.005 to 0.1	<0.025	<0.025	<0.005	<0.005	<0.005	0.0166	0.0646	0.0265	<0.025	0.0087
Nitrite (as N)	0.001 to 0.02	<0.005	<0.005	<0.001	<0.001	0.001	0.0057	0.0242	0.0078	0.0078	0.002
Nitrogen (Dissolved)	0.05 to 0.1										
Nitrogen (Total)	0.0025 to 0.11				0.763						
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.451	0.481	0.963	0.83	0.855	1.1	1.03	1	0.798	1.03
Orthophosphate (Dissolved)	0.001 to 0.01	0.0017	0.0029	0.0058	0.0096	<0.001	0.0016	0.0045	0.0016	0.01	<0.001
Phosphorus - Dissolved	0.002 to 0.02	0.0066	0.0394	0.021	0.0255	0.013	0.0156	0.0202	0.0176	0.021	0.0175
Phosphorus - Total	0.002 to 0.02	0.0461	0.0069	0.0569	0.0504	0.0331	0.0308	0.0363	0.04	0.0422	0.024
Cyanide											
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals											
Aluminum	0.001 to 0.025	0.002	<0.001	0.0069	0.0015	0.0021	0.0021	0.0019	0.0021	0.0017	0.0023
Antimony	0.0001 to 0.0025	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	0.00011	0.0001	<0.0001	0.00011
Arsenic	0.0001 to 0.0025	0.00075	0.00068	0.0012	0.00132	0.00123	0.00129	0.00131	0.00136	0.00129	0.00136
Barium	5E-005 to 0.02	0.0222	0.0521	0.0649	0.0586	0.0531	0.0538	0.054	0.0538	0.059	0.0425
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.023	0.021	0.02	0.018	0.019	0.019	0.022	0.02	0.021	0.021
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	65.7	65.9	59.4	60.6	60	57.9	57.2	55.8	54.2	54.3
Chromium	0.0001 to 0.018	0.00032	0.00023	<0.0001	<0.0001	0.00012	<0.0001	<0.0001	<0.0001	0.00014	<0.0001
Cobalt	0.0001 to 0.0015	0.00014	0.00017	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	<0.0001	0.00015	<0.0001
Copper	0.0002 to 0.006	0.00118	0.00109	0.00099	0.00112	0.00134	0.00112	0.00117	0.00092	0.00083	0.00085
Dissolved Cadmium (by saltwater extraction)	0.00002										
Iron	0.01 to 0.03	0.229	0.092	0.045	0.014	0.051	0.015	0.023	0.019	0.13	<0.01
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00444	0.00494	0.00489	0.00494	0.00481	0.00453	0.00556	0.00495	0.00539	0.00544
Magnesium	0.1	42.5	41.2	39.2	33.8	36.8	35	35.8	36.6	37.5	35.8
Manganese	5E-005 to 0.0015	0.11	0.122	0.0321	0.00635	0.0289	0.00723	0.0106	0.00857	0.0242	0.00258
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00236	0.00244	0.00253	0.0021	0.00246	0.00241	0.0025	0.00246	0.00271	0.00258
Nickel	0.0005 to 0.005	0.0018	0.00181	0.00091	0.00073	0.00107	0.00077	0.00074	0.00068	0.00131	0.00065
Phosphorus	0.05 to 0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	0.05 to 2	9.77	9.98	10.5	10.1	10.2	10	10.8	10.3	11.8	10.4
Selenium	0.0001 to 0.006	0.00011	0.00014	0.00016	0.00017	0.00015	0.00016	0.00016	0.00016	0.00014	0.00016
Silicon	0.05	8.6	8	4.92	5.01	5.59	5.18	5.71	6.27	6.53	6.65
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	34.8	35.3	35.2	33.5	32.8	29.9	31.2	32.7	33.5	33.7
Strontium	0.0001 to 0.005	0.426	0.457	0.351	0.305	0.353	0.337	0.348	0.354	0.368	0.348
Sulphur	0.5	15	17	18.1	15.6	15.8	14.6	15.1	15.2	13.8	15.5
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.000542	0.000594	0.00112	0.000965	0.00103	0.0011	0.000989	0.001	0.000786	0.00106
Vanadium	0.001 to 0.03	0.0013	0.001	0.0023	0.0027	0.0025	0.0026	0.0028	0.0029	0.0024	0.003
Zinc	0.001 to 0.006	<0.001	<0.001	<0.001	<0.001	<0.001	0.0016	<0.001	<0.001	<0.001	<0.001
Total Metals											
Aluminum	0.003 to 0.025	0.235	0.0421	0.198	0.142	0.0408	0.0342	0.0393	0.0972	0.0566	0.0317
Antimony	0.0001 to 0.0025	<0.0001	<0.0001	0.00015	<0.0001	0.00012	0.0001	0.0001	0.00011	<0.0001	0.00011
Arsenic	0.0001 to 0.0025	0.00109	0.00077	0.00122	0.00131	0.0013	0.00135	0.00129	0.00149	0.00137	0.00141
Barium	5E-005 to 0.02	0.0267	0.0529	0.0662	0.0582	0.0568	0.0535	0.0544	0.0538	0.0603	0.0425
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.027	0.021	0.022	0.018	0.023	0.023	0.022	0.022	0.024	0.026
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	65.1	64.1	58.1	59.2	60.2	57.7	54.8	55.1	52.2	52.3
Chromium	0.0001 to 0.005	0.00095	0.00036	0.00064	0.00058	0.00026	0.00023	0.00023	0.0004	0.00029	0.00015
Cobalt	0.0001 to 0.0015	0.00033	0.00021	0.00025	0.00019	0.00015	0.00012	0.00014	0.00019	0.00019	0.00011
Copper	0.0005 to 0.007	0.00327	0.00209	0.00273	0.00223	0.0017	0.00141	0.00151	0.00161	0.00145	0.00112
Iron	0.01 to 0.03	1.55	0.76	0.536	0.208	0.261	0.074	0.103	0.171	0.415	0.049
Lead	5E-005 to 0.0025	0.000054	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00446	0.00482	0.00521	0.00484	0.00513	0.00487	0.00458	0.00498	0.00523	0.00549
Magnesium	0.1	41.7	40.6	35.8	33.6	37	34	34.2	35.6	36.7	34.9
Manganese	5E-005 to 0.0015	0.128	0.113	0.0376	0.0108	0.0476	0.0107	0.0112	0.016	0.0275	0.00497
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00256	0.00249	0.00257	0.00219	0.0026	0.00255	0.00254	0.00261	0.00288	0.00265
Nickel	0.0005 to 0.005	0.00233	0.00174	0.00145	0.00131	0.00117	0.00087	0.00094	0.00107	0.00151	0.00077
Phosphorus	0.05 to 0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	0.05 to 2	9.57	9.71	10.1	10.1	10.5	9.92	10.7	10.2	11.5	10
Selenium	0.0001 to 0.006	0.00012	0.00013	0.00017	0.00014	0.00015	0.00016	0.00015	0.00016	0.00016	0.00015
Silicon	0.05	9.28	8	5.18	5.29	6.09	5.31	5.69	6.43	6.51	6.48
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	34.1	33.2	33.3	33	33.9	30.4	31.8	32.9	33.2	34.6
Strontium	0.0001 to 0.005	0.441	0.46	0.375	0.299	0.372	0.354	0.343	0.359	0.368	0.351
Sulphur	0.5	15.1	17.1	18	15.5	16.3	14.9	14.9	15.2	13.8	15.3
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002										
Uranium	1E-005 to 0.001	0.000576	0.000622	0.00116	0.00101	0.00109	0.00118	0.00103	0.00108	0.000826	0.00115
Vanadium	0.001 to 0.03	0.0033	0.0018	0.0033	0.0036	0.0027	0.0031	0.0031	0.0033	0.0033	0.0033
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics											
Carbon Organic (Dissolved)	0.5 to 5	12.3	10.9	12.7	12.5	12.8	13.4	13.3	14.1	12.8	14
Carbon Organic (Total)	0.5 to 5	13	11.4	13.5	13.3	12.8	13.8	13.6	13.9	13.5	14.4
Nitrogen Organic (Dissolved)	0.05 to 0.26										
Nitrogen Organic (Total)	0.05 to 0.3										
ALS LAB ID		L1442672	L1447300	L1451608	L1458340	L1465478	L1473827	L1481215	L1488886	L1495443	L1502292

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C3.32 - PC10
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Site ID		PC10	PC10	PC10	PC10	PC10	PC10	PC10	PC10	PC10	PC10	PC10	PC10
Analytes	MDL	13-Mar-14	21-Mar-14	28-Mar-14	3-Apr-14	9-Apr-14	24-Apr-14	7-May-14	23-May-14	4-Jun-14	18-Jun-14	3-Jul-14	16-Jul-14
In Situ Parameters													
Conductivity µS/cm	...	439	499	524	557	540	491	446	413	310	451	527	495
Oxygen Dissolved %	...		60.1	63.4	59.6	61.6	90.2	79.9	88.2	104	76.3	78	74
Oxygen Dissolved	...		8.66	8.8	7.91	8.33	11.5	9.52	9.39	11.8	8.46	8.32	7.51
pH (unitless)	...	7.83	7.77	7.73	7.85	8.14	8.07	8.17	8.27	8.06	8.13	7.81	8.18
Redox Potential mV	...	30.3	71.5	1.2	-17.7	-48.7	105	59.9	63.4	171	93.1	88.4	145
Salinity ppt	...	0.4	0.4	0.44	0.48	0.43	0.36	0.29	0.29	0.21	0.29	0.32	0.29
Specific Conductivity µS/cm	...	827	897	890	971	880	733	585	577	427	596	657	601
Temperature °C	...	0.42	1.75	3.44	2.7	4.8	7.72	12.5	10.2	10.7	12.3	14.7	15.8
Total Dissolved Solids	...	537	583	579	631	572	479	380	375	278	387	427	391
Turbidity NTU	...												
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1												
Alkalinity (Total as CaCO3)	1 to 2	286	338	344	342	287	215	206	243	254	259	285	286
Bicarbonate Alkalinity	1 to 2	286	338	344	342	287	213	206	243	254	250	278	278
Carbonate Alkalinity	1 to 2	<2	<1	<2	<2	<2	1.9	<2	<2	<1	8.8	6.2	7.6
Color TCU	5							30.7					
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	359	429	426	429	401	314	231	262	293	274	306	310
Hydroxide Alkalinity	1 to 2	<2	<1	<2	<2	<2	<1	<2	<2	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1	8	8.34	8.14	8.26	8.19	8.35	8.29	8.26	8.37	8.37	8.43	8.36
Specific Conductivity µS/cm	2	809	906	901	890	833	720	556	567	609	587	640	651
Total Dissolved Solids	1 to 2	519	577	538	587	571	470	372	381	331	381	364	413
Total Suspended Solids	3	4.5	<3	<3	3.4	5.4	19.1	13.3	17.6	17.7	13.9	<3	7.8
Turbidity NTU	0.1	1.54	0.98	1	0.66	3.04	7.42	6.83	7.26	8.64	5.85	1.34	3.62
Dissolved Anions													
Bromide	0.05 to 2.495	<0.5	<0.5	<0.5	<0.5	<0.5	<0.25	<0.05	<0.05	<0.05	<0.05	<0.05	0.051
Chloride	0.5 to 1	51.6	70.9	64	69	84.5	79.1	47.2	36.9	38.2	33	38.6	36.6
Fluoride	0.02 to 0.4	0.31	<0.2	<0.2	<0.2	<0.2	0.14	0.191	0.235	0.216	0.24	0.251	0.268
Sulphate	0.5 to 1	84.7	75	80	80.5	66.7	48.5	30.2	27.2	27.6	20.2	25.9	26.5
Nutrients													
Ammonia (Total)	0.005 to 0.05	0.44	0.0963	0.0436	0.033	0.0313	0.0127	0.0073	0.0186	0.0209	0.0166	0.0116	0.0235
Nitrate (as N)	0.005 to 0.1	0.254	0.258	0.174	0.173	0.184	0.051	0.03	0.0332	0.0334	0.038	0.0586	0.0671
Nitrite (as N)	0.001 to 0.02	0.014	<0.01	<0.01	<0.01	<0.01	<0.005	<0.001	<0.001	0.0011	0.0013	0.0014	0.0028
Nitrogen (Dissolved)	0.05 to 0.1												
Nitrogen (Total)	0.0025 to 0.11												
Nitrogen Kjeldahl (Total)	0.05 to 0.2	1.77	0.603	0.504	0.508	0.417	0.572	0.463	0.792	0.767	0.629	0.451	0.613
Orthophosphate (Dissolved)	0.001 to 0.01	0.309	0.0779	0.0666	0.0592	0.0608	0.0436	0.0342	0.135	0.155	0.0948	0.0903	0.0974
Phosphorus - Dissolved	0.002 to 0.02	0.413	0.0991	0.0804	0.0763	0.0829	0.0884	0.0455	0.161	0.165	0.113	0.0972	0.116
Phosphorus - Total	0.002 to 0.02	0.451	0.138	0.086	0.0697	0.0676	0.0519	0.0691	0.178	0.212	0.146	0.113	0.146
Cyanide													
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	0.001 to 0.025	0.0023	<0.001	<0.001	0.0016	0.0016	0.0015	0.0029	0.0036	0.0095	0.0018	0.0017	0.0029
Antimony	0.0001 to 0.0025	0.00015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00203	0.00149	0.00135	0.00129	0.0011	0.00097	0.00103	0.00179	0.00168	0.00165	0.00171	0.00177
Barium	5E-005 to 0.02	0.064	0.0781	0.0814	0.0765	0.0791	0.0711	0.058	0.0616	0.0662	0.061	0.0643	0.0631
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.022	0.013	0.012	0.012	0.01	<0.01	<0.01	0.015	0.015	0.012	0.016	0.017
Cadmium	1E-005 to 8.5E-005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	73.5	99.2	96.3	98.7	97.8	81.2	58.6	60.5	64.8	60.9	71.2	70.3
Chromium	0.0001 to 0.018	0.00012	0.00011	<0.0001	0.00011	0.00011	<0.0001	0.00011	0.00014	0.00015	0.00012	0.0001	<0.0001
Cobalt	0.0001 to 0.0015	0.00027	0.00017	0.00015	0.00015	0.00011	0.0001	<0.0001	0.00017	0.00021	0.00014	0.00012	0.00011
Copper	0.0002 to 0.006	0.00591	0.00274	0.0027	0.00244	0.0018	0.0022	0.00294	0.00358	0.00324	0.00241	0.0023	0.00216
Dissolved Cadmium (by saltwater extraction)	0.00002												
Iron	0.01 to 0.03	0.07	0.027	0.026	0.032	0.017	0.02	0.022	0.042	0.056	0.045	0.037	0.036
Lead	5E-005 to 0.0025	0.00009	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.00469	0.00449	0.00445	0.0048	0.00476	0.00421	0.00312	0.00303	0.00343	0.00327	0.00446	0.00418
Magnesium	0.1	42.6	44	45.1	44.3	38.1	27	20.7	27	31.8	29.6	31.2	32.7
Manganese	5E-005 to 0.0015	0.0403	0.0322	0.0263	0.0249	0.023	0.0132	0.0107	0.0212	0.055	0.0281	0.0198	0.0169
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.00358	0.0027	0.00261	0.00274	0.00233	0.00216	0.00201	0.00302	0.00268	0.00224	0.00218	0.00263
Nickel	0.0005 to 0.005	0.0015	0.00129	0.00123	0.00122	0.00108	0.00089	0.00081	0.00133	0.00131	0.00113	0.00116	0.00126
Phosphorus	0.05 to 0.3	0.364	0.093	0.075	0.069	0.08	<0.05	<0.05	0.15	0.176	0.106	0.099	0.132
Potassium	0.05 to 2	16.8	10.7	11	10.1	9.03	8.01	6.06	7.81	9.16	7.27	9.15	9.34
Selenium	0.0001 to 0.006	0.00142	0.00042	0.00028	0.00029	0.00035	0.00038	0.00032	0.00025	0.0002	0.00017	0.00016	0.00016
Silicon	0.05	8.2	9.43	9.5	9.02	8.38	7.72	7.29	10.4	10.1	9.49	10.3	11
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	34.6	36.5	36.1	38.2	35.8	33.1	24.7	24.1	26.6	23.7	29	29.8
Strontium	0.0001 to 0.005	0.477	0.471	0.482	0.486	0.461	0.357	0.273	0.321	0.344	0.298	0.319	0.379
Sulphur	0.5	28.5	24.2	26.9	26.9	22.3	17	10.6	9.72	9.98	6.65	8.87	8.96
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00201	0.0019	0.00188	0.00195	0.00172	0.00138	0.000897	0.000884	0.000884	0.000831	0.000785	0.000757
Vanadium	0.001 to 0.03	0.0039	0.0027	0.0026	0.0024	0.0026	0.0025	0.003	0.0034	0.0028	0.0029	0.003	0.0029
Zinc	0.001 to 0.006	0.0021	<0.001	0.002	<0.001	0.001	<0.001	<0.001	0.0011	0.0012	<0.001	<0.001	<0.001
Total Metals													
Aluminum	0.003 to 0.025	0.103	0.0651	0.0065	0.0088	0.129	0.379	0.256	0.352	0.699	0.399	0.0284	0.252
Antimony	0.0001 to 0.0025	0.00015	<0.0001	<0.0001	0.00011	<0.0001	<0.0001	<0.0001	0.00013	0.00012	<0.0001	<0.0001	<0.0001
Arsenic	0.0001 to 0.0025	0.00197	0.00142	0.00135	0.00128	0.00114	0.00103	0.00101	0.00188	0.00183	0.00172	0.00166	0.00182
Barium	5E-005 to 0.02	0.0645	0.0771	0.0804	0.0774	0.0806	0.0754	0.0565	0.0633	0.077	0.0654	0.0641	0.0649
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.022	0.015	0.013	0.012	0.013	<0.01	<0.01	0.016	0.017	0.016	0.014	0.019
Cadmium	1E-005 to 8.5E-005	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	0.05 to 0.1	71	95.6	94.6	94.2	95.9	78.6	58.4	58.1	62.9	59.2	66.4	68
Chromium	0.0001 to 0.005	0.00037	0.00032	0.00013	0.00016	0.00043	0.00096	0.00071	0.00102	0.00186	0.00117	0.00019	0.00074
Cobalt	0.0001 to 0.0015	0.00037	0.00022	0.00015	0.00016	0.00021	0.00037	0.00025	0.00044	0.00077	0.00043	0.00014	0.0003
Copper	0.0005 to 0.007	0.00691	0.0036	0.00308	0.00277	0.00277	0.00489	0.00434	0.00572	0.00765	0.0049	0.00257	0.00404
Iron	0.01 to 0.03	0.226	0.139	0.042	0.045	0.215	0.59	0.393	0.572	1.14	0.656	0.082	0.451
Lead	5E-005 to 0.0025	<0.00005	<0.00005	0.000543	<0.00005	<0.00005	0.000087	<0.00005	0.000097	0.000155	0.000081	<0.00005	0.000073
Lithium	0.0005 to 0.025	0.0045	0.00424	0.0046	0.00486	0.00469	0.00397	0.0031	0.00293	0.00368	0.00337	0.00364	0.00422
Magnesium	0.1	38.4	41.8	43.2	43.6	37.2	26.7	20.9	26.2	30.3	28.4	29.3	31.9
Manganese	5E-005 to 0.0015	0.0465	0.0397	0.0263	0.0258	0.0311	0.0356	0.0226	0.0444	0.11	0.0589	0.0224	0.0335
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0038	0.00287	0.0029	0.00283	0.00249	0.00223	0.0019	0.00306	0.0028	0.00228	0.00209	0.00266
Nickel	0.0005 to 0.005	0.00175	0.00146	0.00127	0.00131	0.00144	0.00171	0.00123	0.00204	0.00332	0.00201	0.00124	0.00177
Phosphorus	0.05 to 0.3	0.387	0.108	0.077	0.082	0.097	0.076	0.058	0.174	0.236	0.143	0.105	0.148
Potassium	0.05 to 2	15.9	10.3	10.9	9.57	8.8	7.88	6.11	7.77	8.93	6.99	8.62	9.19
Selenium	0.0001 to 0.006	0.00128	0.00038	0.00031	0.00032	0.00037	0.00039	0.0003	0.00026	0.00024	0.00021	0.00016	0.00017
Silicon	0.05	7.89	9.21	9.34	8.66	8.68	8.33	7.77	11	11.5	10.1	9.78	11.5
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	34.5	35.9	36.9	39	35.8	33.7	23.1	23	26.5	24.4	27.4	29.1
Strontium	0.0001 to 0.005	0.465	0.446	0.512	0.478	0.463	0.34	0.236	0.317	0.35	0.31	0.301	0.385
Sulphur	0.5	27.4	24.5	27.5	27.3	22.5	16.9	10.7	9.48	9.71	6.71	8.64	8.91
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.015	<0.01	0.015	0.025	0.014	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002												
Uranium	1E-005 to 0.001	0.00199	0.00198	0.002	0.00203	0.00176	0.00145	0.000823	0.000919	0.000905	0.000875	0.000719	0.000858
Vanadium	0.001 to 0.03	0.0044	0.003	0.0027	0.0027	0.0031	0.0037	0.0037	0.0044	0.0049	0.0044	0.0031	0.0038
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0041	<0.003	<0.003	<0.003
Organics													
Carbon Organic (Dissolved)	0.5 to 5	16.4	9.01	9.02	10.3	7.96	10.5	11.4	13.2	12.9	11.3	10	10.8
Carbon Organic (Total)	0.5 to 5	17.1	8.87	9.1	10.1	7.99	10.8	11.8	14	13.7	12.2	10.1	10.8
Nitrogen Organic (Dissolved)	0.05 to 0.26												
Nitrogen Organic (Total)	0.05 to 0.3												
ALS LAB ID		L1435532	L1435186	L1437642	L1439655	L1441961	L1447300	L1452368	L1459728	L1465478	L1473827	L1481215	L1488886

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		PC10		
Analytes	**MDL**	**30-Jul-14**		
In Situ Parameters				
Conductivity µS/cm	...	486		
Oxygen Dissolved %	...	62.5	79.5	
Oxygen Dissolved	...	6.2	8.16	
pH (unitless)	...	8.36		
Redox Potential mV	...	118		
Salinity ppt	...	0.3		
Specific Conductivity µS/cm	...	606		
Temperature °C	...	14.6		
Total Dissolved Solids	...	394		
Turbidity NTU	...			
Physical Tests				
Acidity to pH 8.3 (as CaCO3)	1			
Alkalinity (Total as CaCO3)	1 to 2	286		
Bicarbonate Alkalinity	1 to 2	277		
Carbonate Alkalinity	1 to 2	9.5		
Color TCU	5			
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	302		
Hydroxide Alkalinity	1 to 2	<1		
pH (unitless)	0.01 to 0.1	8.34		
Specific Conductivity µS/cm	2	659		
Total Dissolved Solids	1 to 2	388		
Total Suspended Solids	3	4.8		
Turbidity NTU	0.1	1.76		
Dissolved Anions				
Bromide	0.05 to 2.495	<0.05		
Chloride	0.5 to 1	40.7		
Fluoride	0.02 to 0.4	0.242		
Sulphate	0.5 to 1	27.7		
Nutrients				
Ammonia (Total)	0.005 to 0.05	0.0129		
Nitrate (as N)	0.005 to 0.1	0.0665		
Nitrite (as N)	0.001 to 0.02	0.0017		
Nitrogen (Dissolved)	0.05 to 0.1			
Nitrogen (Total)	0.0025 to 0.11			
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.496		
Orthophosphate (Dissolved)	0.001 to 0.01	0.104		
Phosphorus - Dissolved	0.002 to 0.02	0.119		
Phosphorus - Total	0.002 to 0.02	0.127		
Cyanide				
Cyanide (Free)	0.005	<0.005		
Cyanide (Total)	0.005	<0.005		
Cyanide (WAD)	0.005	<0.005		
Dissolved Metals				
Aluminum	0.001 to 0.025	0.0023		
Antimony	0.0001 to 0.0025	<0.0001		
Arsenic	0.0001 to 0.0025	0.00172		
Barium	5E-005 to 0.02	0.0638		
Beryllium	0.0001 to 0.005	<0.0001		
Bismuth	0.0005 to 0.2	<0.0005		
Boron	0.01 to 0.1	0.015		
Cadmium	1E-005 to 8.5E-005	<0.00001		
Calcium	0.05 to 0.1	67.9		
Chromium	0.0001 to 0.018	0.00261		
Cobalt	0.0001 to 0.0015	0.00011		
Copper	0.0002 to 0.006	0.00216		
Dissolved Cadmium (by saltwater extraction)	0.00002			
Iron	0.01 to 0.03	0.044		
Lead	5E-005 to 0.0025	<0.00005		
Lithium	0.0005 to 0.025	0.00408		
Magnesium	0.1	32.2		
Manganese	5E-005 to 0.0015	0.011		
Mercury	1E-005 to 5E-005	<0.00001		
Molybdenum	5E-005 to 0.005	0.00241		
Nickel	0.0005 to 0.005	0.00223		
Phosphorus	0.05 to 0.3	0.125		
Potassium	0.05 to 2	9.97		
Selenium	0.0001 to 0.006	0.00018		
Silicon	0.05	10		
Silver	1E-005 to 0.0001	<0.00001		
Sodium	0.05 to 2	29		
Strontium	0.0001 to 0.005	0.345		
Sulphur	0.5	9.29		
Thallium	1E-005 to 0.001	<0.00001		
Tin	0.0001 to 0.0025	<0.0001		
Titanium	0.01	<0.01		
Uranium	1E-005 to 0.001	0.00081		
Vanadium	0.001 to 0.03	0.0033		
Zinc	0.001 to 0.006	0.0014		
Total Metals				
Aluminum	0.003 to 0.025	0.105		
Antimony	0.0001 to 0.0025	<0.0001		
Arsenic	0.0001 to 0.0025	0.00168		
Barium	5E-005 to 0.02	0.0623		
Beryllium	0.0001 to 0.005	<0.0001		
Bismuth	0.0005 to 0.2	<0.0005		
Boron	0.01 to 0.1	0.016		
Cadmium	1E-005 to 8.5E-005	<0.00001		
Calcium	0.05 to 0.1	64.9		
Chromium	0.0001 to 0.005	0.00049		
Cobalt	0.0001 to 0.0015	0.00017		
Copper	0.0005 to 0.007	0.00293		
Iron	0.01 to 0.03	0.199		
Lead	5E-005 to 0.0025	<0.00005		
Lithium	0.0005 to 0.025	0.00405		
Magnesium	0.1	31.1		
Manganese	5E-005 to 0.0015	0.0179		
Mercury	1E-005 to 5E-005	<0.00001		
Molybdenum	5E-005 to 0.005	0.00242		
Nickel	0.0005 to 0.005	0.00142		
Phosphorus	0.05 to 0.3	0.133		
Potassium	0.05 to 2	9.48		
Selenium	0.0001 to 0.006	0.00017		
Silicon	0.05	9.88		
Silver	1E-005 to 0.0001	<0.00001		
Sodium	0.05 to 2	28.4		
Strontium	0.0001 to 0.005	0.335		
Sulphur	0.5	9.13		
Thallium	1E-005 to 0.001	<0.00001		
Tin	0.0001 to 0.0025	<0.0001		
Titanium	0.01	<0.01		
Total Cadmium (by saltwater extraction)	0.00002			
Uranium	1E-005 to 0.001	0.000827		
Vanadium	0.001 to 0.03	0.0037		
Zinc	0.003 to 0.006	<0.003		
Organics				
Carbon Organic (Dissolved)	0.5 to 5	11.2		
Carbon Organic (Total)	0.5 to 5	11.7		
Nitrogen Organic (Dissolved)	0.05 to 0.26			
Nitrogen Organic (Total)	0.05 to 0.3			
ALS LAB ID		**L1495443**		

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID	MDL	PC-EF-04	PC-EF-04	PC-EF-04	PC-EF-04
Date/Time Sampled		05/Jun/2010	02/Sep/2010	30-Aug-11	25-Oct-11
In Situ Parameters					
Conductivity (In Situ) µS/cm	...		1917	987	1268
Oxygen Dissolved (In Situ %) %	...		67.2		164
Oxygen Dissolved (In Situ)	...		7.39		20.2
pH (In Situ) pH	...		8.1	8.42	8.27
Redox Potential (In Situ) mV	...		7.8	117	56.8
Salinity (In Situ) ppt	...		0.98		1.01
Specific Conductivity (In Situ) µS/cm	...		1399	1309	1992
Temperature (In Situ) °C	...		10.9	12.1	6.02
Total Dissolved Solids (In Situ)	...				1295
Turbidity (In Situ) NTU	...				
Physical Tests					
Acidity to pH 8.3 (as CaCO3)	1	<1			<1
Alkalinity (Total as CaCO3)	1 to 2	<1	398	363	409
Bicarbonate Alkalinity	1 to 2	<1			397
Carbonate Alkalinity	1 to 2	<1			11.8
Color TCU	5	32.6	15.4	34.9	12.9
Hardness as CaCO3 (Dissolved)	0.5 to 9.6	658	825	567	868
Hydroxide Alkalinity	1 to 2	<1			<1
pH pH	0.01 to 0.1	8.54	8.3	8.57	8.37
Specific Conductivity µS/cm	2	1400	1860	1310	1970
Total Dissolved Solids	1 to 2	1000	1270	837	1350
Total Suspended Solids	3 to 5	11.5	<5	40	4.4
Turbidity NTU	0.1	2.71	0.43	18.7	0.97
Dissolved Anions					
Bromide (Dissolved)	0.05 to 152.5	<0.5	<0.5	<0.5	<1
Chloride (Dissolved)	0.5 to 25	97.1	142	88.3	157
Fluoride (Dissolved)	0.02 to 1	<0.2	<0.2	0.24	<0.4
Sulphate (Dissolved)	0.5 to 25	338	456	247	508
Nutrients					
Ammonia (Total)	0.005 to 0.13	0.015	<0.005	0.0138	0.0112
Nitrate (as N)	0.005 to 2.5	0.141	0.425	0.266	0.85
Nitrite (as N)	0.001 to 0.5	<0.01	<0.01	<0.01	0.028
Nitrogen (Dissolved)	0.05 to 1			1.35	1.06
Nitrogen (Total)	0.0025 to 1.4	0.8	1.12	1.7	1.37
Nitrogen Kjeldahl (Total)	0.05 to 1.25	0.656	0.691	0.796	0.497
Orthophosphate (Dissolved)	0.001 to 0.1	0.0554	0.0673		
Phosphorus (Nutrient) Dissolved	0.002 to 0.2	0.0837	0.0694	0.105	0.0693
Phosphorus (Nutrient) Total	0.002 to 0.2		0.0695	0.174	0.0739
Cyanide					
Cyanide (Free)	0.005	<0.005	<0.005		<0.005
Cyanide (Total)	0.005	0.0213	<0.005		0.0053
Cyanide (WAD)	0.005	<0.005	<0.005		<0.005
Dissolved Metals					
Aluminum (Dissolved)	0.001 to 0.5	<0.01	<0.01	<0.005	<0.003
Antimony (Dissolved)	0.0001 to 0.05	<0.001	<0.001	<0.0005	0.00014
Arsenic (Dissolved)	0.0001 to 0.05	0.0022	<0.004	0.00322	0.00296
Barium (Dissolved)	5E-005 to 0.4	0.052	0.076	0.048	0.0692
Beryllium (Dissolved)	0.0001 to 0.1	<0.002	<0.002	<0.001	<0.0001
Bismuth (Dissolved)	0.0005 to 4			<0.2	<0.0005
Boron (Dissolved)	0.01 to 2	<0.1	<0.1	<0.1	0.066
Cadmium (Dissolved)	1E-005 to 0.0017	0.000049	0.000045	<0.000017	<0.00001
Calcium (Dissolved)	0.05 to 2	100	120	91.3	132
Chromium (Dissolved)	0.0001 to 0.1	<0.002	<0.006	<0.001	0.00023
Cobalt (Dissolved)	0.0001 to 0.03	<0.0006	<0.0006	<0.0003	0.0001
Copper (Dissolved)	0.0002 to 0.15	0.0032	0.0023	0.0037	0.00227
Dissolved Cadmium (by saltwater extraction)	0.00002				
Iron (Dissolved)	0.01 to 0.6	<0.03	<0.03	<0.03	<0.03
Lead (Dissolved)	5E-005 to 0.05	<0.001	<0.001	<0.0005	<0.00005
Lithium (Dissolved)	0.0005 to 0.5	<0.01	0.013	0.0089	0.0106
Magnesium (Dissolved)	0.1 to 2	99	128	82.4	131
Manganese (Dissolved)	5E-005 to 0.03	0.00517	0.0394	0.0121	0.0247
Mercury (Dissolved)	1E-005 to 2E-005	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Dissolved)	5E-005 to 0.1	0.0183	0.0122	0.0149	0.0126
Nickel (Dissolved)	0.0005 to 0.1	0.0032	0.003	0.0034	0.00262
Phosphorus (Metal) Dissolved	0.05 to 6			<0.3	<0.3
Potassium (Dissolved)	0.05 to 4	21.6	22.8	20.3	21.8
Selenium (Dissolved)	0.0001 to 0.1	<0.002	<0.005	<0.001	0.00218
Silicon (Dissolved)	0.05 to 1			8.73	8.38
Silver (Dissolved)	1E-005 to 0.002	<0.00004	<0.00004	<0.00002	<0.00001
Sodium (Dissolved)	0.05 to 4	86.2	112	77.9	111
Strontium (Dissolved)	0.0001 to 0.1			0.88	1.37
Sulphur (Dissolved)	0.0005 to 1				
Thallium (Dissolved)	1E-005 to 0.02	<0.0004	<0.0004	<0.0002	<0.00001
Tin (Dissolved)	0.0001 to 0.05	<0.001	<0.001	<0.0005	<0.0001
Titanium (Dissolved)	0.01 to 1	<0.01	<0.01	<0.01	<0.01
Uranium (Dissolved)	1E-005 to 0.02	0.00261	0.00337	0.00214	0.00387
Vanadium (Dissolved)	0.001 to 0.3	0.0042	0.0038	0.0046	0.0031
Zinc (Dissolved)	0.001 to 0.5	<0.005	<0.005	0.0051	0.0037
Total Metals					
Aluminum (Total)	0.003 to 0.5	0.191	0.014	0.903	0.0154
Antimony (Total)	0.0001 to 0.05	<0.001	<0.001	<0.0005	0.00013
Arsenic (Total)	0.0001 to 0.05	0.0023	<0.004	0.00342	0.00272
Barium (Total)	5E-005 to 0.4	0.054	0.068	0.06	0.0682
Beryllium (Total)	0.0001 to 0.1	<0.002	<0.002	<0.001	<0.0001
Bismuth (Total)	0.0005 to 4			<0.2	<0.0005
Boron (Total)	0.01 to 2	<0.1	<0.1	<0.1	0.075
Cadmium (Total)	1E-005 to 0.0017	0.000056	0.000045	0.000019	<0.00001
Calcium (Total)	0.05 to 2	99.4	123	89.9	132
Chromium (Total)	0.0001 to 0.1	<0.002	<0.002	0.0033	0.00057
Cobalt (Total)	0.0001 to 0.03	<0.0006	<0.0006	0.001	0.00012
Copper (Total)	0.0005 to 0.15	0.0043	0.0024	0.0074	0.00234
Iron (Total)	0.01 to 0.6	0.27	0.037	1.32	0.038
Lead (Total)	5E-005 to 0.05	<0.001	<0.001	<0.0005	<0.00005
Lithium (Total)	0.0005 to 0.5	<0.01	0.014	0.0092	0.012
Magnesium (Total)	0.1 to 2	97.8	130	81.7	130
Manganese (Total)	5E-005 to 0.03	0.0199	0.0452	0.0896	0.0254
Mercury (Total)	1E-005 to 2E-005	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Total)	5E-005 to 0.1	0.0191	0.0136	0.0158	0.0131
Nickel (Total)	0.0005 to 0.1	0.0045	0.0034	0.0073	0.00265
Phosphorus (Metal) Total	0.05 to 6			<0.3	<0.3
Potassium (Total)	0.05 to 4	20.6	23.3	20.5	22.1
Selenium (Total)	0.0001 to 0.1	<0.002	<0.005	<0.001	0.00194
Silicon (Total)	0.05 to 1			11.3	8.38
Silver (Total)	1E-005 to 0.002	<0.00004	<0.00004	<0.00002	<0.00001
Sodium (Total)	0.05 to 4	82.8	114	77.2	114
Strontium (Total)	0.0001 to 0.1			0.885	1.39
Sulphur (Total)	0.5 to 1				
Thallium (Total)	1E-005 to 0.02	<0.0004	<0.0004	<0.0002	<0.00001
Tin (Total)	0.0001 to 0.05	<0.001	<0.001	<0.0005	<0.0001
Titanium (Total)	0.01 to 1	<0.01	<0.01	0.053	<0.01
Total Cadmium (by saltwater extraction)	0.00002				
Uranium (Total)	1E-005 to 0.02	0.00276	0.00371	0.00222	0.00408
Vanadium (Total)	0.001 to 0.3	0.0049	0.004	0.0075	0.0032
Zinc (Total)	0.003 to 0.5	<0.005	<0.005	0.0061	<0.003
Organics					
Carbon Organic (Dissolved)	0.2 to 1	12.3	7.78	16.6	8.66
Carbon Organic (Total)	0.5 to 1			16.7	8.69
Nitrogen Organic (Dissolved)	0.05 to 1			1.07	<0.21
Nitrogen Organic (Total)	0.05 to 1			1.42	<0.21
Lab ID		L894378	L927930	L1052387	L1076994

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C3.34 - PP01
PAGE 1 OF 1

Site ID		PP01	PP01	PP01	PP01	PP01	PP01
Analytes	MDL	2-May-07	18-Jul-07	17-Sep-07	29-Apr-08	7-Jul-08	6-Sep-08
In Situ Parameters							
Conductivity µS/cm	...	14466		23104		16536	27240
Oxygen Dissolved %	...				94.4		107
Oxygen Dissolved	...	8.68		6.89	9.47		9.23
pH (unitless)	...	8.42		8.43	7.82	8.58	8.63
Redox Potential mV	...					-133	-115
Salinity ppt	...						
Specific Conductivity µS/cm	...	19018		27261	24329	17411	32588
Temperature °C	...	12.4		17.1	11	22.4	16.4
Total Dissolved Solids	...						
Turbidity NTU	...						
Physical Tests							
Acidity to pH 8.3 (as CaCO3)	1				7.7		
Alkalinity (Total as CaCO3)	1 to 2	274	295	391	415	475	283
Bicarbonate Alkalinity	1 to 2				415		
Carbonate Alkalinity	1 to 2				<2		
Color TCU	5	9.5	9.9	16.1	8.4	10.4	11.2
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	9510	14500	17300	14100	16800	19400
Hydroxide Alkalinity	1 to 2				<2		
pH (unitless)	0.01 to 0.1	8.2	8.36	8.39	8.23	8.65	8.53
Specific Conductivity µS/cm	2	17800	26000	28000	25100	29300	33000
Total Dissolved Solids	1 to 2	23300	30300	37100	33300	40900	42400
Total Suspended Solids	3	22	10.8	19.6	51.6	32.7	41.3
Turbidity NTU	0.1				3.81	1.41	3.09
Dissolved Anions							
Bromide	0.05 to 2.495	<5	<25	<25	<5	<5	<25
Chloride	0.5 to 1	1500	2040	2300	1970	2450	2850
Fluoride	0.02 to 0.4	6.5		<10	2.1	<2	15
Sulphate	0.5 to 1	13000	18500	21800	17900	22700	27200
Nutrients							
Ammonia (Total)	0.005 to 0.05	0.063	0.026	0.009	0.063	<0.02	0.025
Nitrate (as N)	0.005 to 0.1	1.81	3	<2.5	<0.5	<0.5	<2.5
Nitrite (as N)	0.001 to 0.02	<0.1	1.33	<0.5	0.4	<0.1	1.17
Nitrogen (Dissolved)	0.05 to 0.1						
Nitrogen (Total)	0.0025 to 0.11						
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.902	2.83	2.73	1.58	1.84	2.8
Orthophosphate (Dissolved)	0.001 to 0.01	<0.001	<0.001	0.0014	<0.001	<0.001	
Phosphorus - Dissolved	0.002 to 0.02						
Phosphorus - Total	0.002 to 0.02	0.0553	0.065	0.065	0.0707	0.0515	
Cyanide							
Cyanide (Free)	0.005				<0.005	<0.005	<0.005
Cyanide (Total)	0.005	0.0055	0.0102	0.0123	0.0088	0.0077	
Cyanide (WAD)	0.005				<0.005	<0.005	<0.005
Dissolved Metals							
Aluminum	0.001 to 0.025	<0.25	<0.25	<0.5	<0.5	<0.5	<0.5
Antimony	0.0001 to 0.0025	<0.025	<0.025	<0.05	<0.05	<0.05	<0.05
Arsenic	0.0001 to 0.0025	<0.025	<0.025	<0.05	<0.05	<0.05	<0.05
Barium	5E-005 to 0.02	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2
Beryllium	0.0001 to 0.005	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Bismuth	0.0005 to 0.2						
Boron	0.01 to 0.1	1.43	2.2	2.5	2.1	2.7	3
Cadmium	1E-005 to 8.5E-005	<0.00085	<0.00085	<0.0017	<0.0017	<0.0017	<0.0017
Calcium	0.05 to 0.1	469	568	613	513	583	638
Chromium	0.0001 to 0.018	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Cobalt	0.0001 to 0.0015	<0.015	<0.015	<0.03	<0.03	<0.03	<0.03
Copper	0.0002 to 0.006	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Dissolved Cadmium (by saltwater extraction)	0.00002						
Iron	0.01 to 0.03	<0.15	<0.3	<0.3	<0.3	<0.3	<0.3
Lead	5E-005 to 0.0025	<0.025	<0.025	<0.05	<0.05	<0.05	<0.05
Lithium	0.0005 to 0.025	<0.25	<0.25	<0.5	<0.5	<0.5	<0.5
Magnesium	0.1	2020	3170	3830	3110	3710	4310
Manganese	5E-005 to 0.0015	0.051	0.015	0.045	0.089	<0.03	<0.03
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Molybdenum	5E-005 to 0.005	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Nickel	0.0005 to 0.005	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Phosphorus	0.05 to 0.3						
Potassium	0.05 to 2	196	310	340	283	342	394
Selenium	0.0001 to 0.006	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Silicon	0.05						
Silver	1E-005 to 0.0001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002
Sodium	0.05 to 2	2700	4280	4880	4200	5000	5850
Strontium	0.0001 to 0.005						
Sulphur	0.5						
Thallium	1E-005 to 0.001	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02
Tin	0.0001 to 0.0025	<0.025	<0.025	<0.05	<0.05	<0.05	<0.05
Titanium	0.01	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1
Uranium	1E-005 to 0.001	0.01	0.012	<0.02	<0.02	<0.02	<0.02
Vanadium	0.001 to 0.03	<0.15	<0.3	<0.3	<0.1	<0.1	<0.1
Zinc	0.001 to 0.006	<0.25	<0.25	<0.5	<0.05	<0.05	<0.1
Total Metals							
Aluminum	0.003 to 0.025	<0.25	<0.25	<0.5	<0.5	0.7	<0.5
Antimony	0.0001 to 0.0025	<0.025	<0.025	<0.05	<0.05	<0.05	<0.05
Arsenic	0.0001 to 0.0025	<0.025	<0.025	<0.05	<0.05	<0.05	<0.05
Barium	5E-005 to 0.02	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2
Beryllium	0.0001 to 0.005	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Bismuth	0.0005 to 0.2						
Boron	0.01 to 0.1	1.46	2.1	2.5	2.1	2.7	2.9
Cadmium	1E-005 to 8.5E-005	<0.00085	<0.00085	<0.0017	<0.0017	<0.0017	<0.0017
Calcium	0.05 to 0.1	464	574	626	494	609	628
Chromium	0.0001 to 0.005	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Cobalt	0.0001 to 0.0015	<0.015	<0.015	<0.03	<0.03	<0.03	<0.03
Copper	0.0005 to 0.007	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Iron	0.01 to 0.03	<0.15	<0.3	<0.3	<0.3	<0.3	<0.3
Lead	5E-005 to 0.0025	<0.025	<0.025	<0.05	<0.05	<0.05	<0.05
Lithium	0.0005 to 0.025	<0.25	<0.25	<0.5	<0.5	<0.5	<0.5
Magnesium	0.1	1970	3220	3900	3000	3660	4170
Manganese	5E-005 to 0.0015	0.094	0.054	0.083	0.087	<0.03	0.043
Mercury	1E-005 to 5E-005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Molybdenum	5E-005 to 0.005	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Nickel	0.0005 to 0.005	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Phosphorus	0.05 to 0.3						
Potassium	0.05 to 2	191	309	344	274	341	383
Selenium	0.0001 to 0.006	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Silicon	0.05						
Silver	1E-005 to 0.0001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002
Sodium	0.05 to 2	2620	4260	4910	3980	4960	5680
Strontium	0.0001 to 0.005						
Sulphur	0.5						
Thallium	1E-005 to 0.001	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02
Tin	0.0001 to 0.0025	<0.025	<0.025	<0.05	<0.05	<0.05	<0.05
Titanium	0.01	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1
Total Cadmium (by saltwater extraction)	0.00002						
Uranium	1E-005 to 0.001	0.01	0.012	<0.02	<0.02	<0.02	<0.02
Vanadium	0.001 to 0.03	<0.15	<0.3	<0.3	<0.1	<0.1	<0.1
Zinc	0.003 to 0.006	<0.25	<0.25	<0.5	<0.05	<0.05	<0.1
Organics							
Carbon Organic (Dissolved)	0.5 to 5		30.1	30.3	26	33.2	35.8
Carbon Organic (Total)	0.5 to 5	21.5					
Nitrogen Organic (Dissolved)	0.05 to 0.26						
Nitrogen Organic (Total)	0.05 to 0.3						
ALS LAB ID		L501627	L532402	L555226	L624228	L652819	L679672

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		S. CATCHMENT	S. CATCHMENT	S. CATCHMENT	S. CATCHMENT
Analytes	**MDL**	**10-Oct-13**	**14-Apr-14**	**2-Jul-14**	**2-Sep-14**
In Situ Parameters					
Conductivity µS/cm	...		1756	3114	
Oxygen Dissolved %	...				
Oxygen Dissolved	...				
pH (unitless)	...		9.12	9.69	8.89
Redox Potential mV	...		12.3	52.6	
Salinity ppt	...		1.33	1.72	
Specific Conductivity µS/cm	...		2559	3282	
Temperature °C	...		8.56	22.4	17.5
Total Dissolved Solids	...		1662	2136	
Turbidity NTU	...		4.9		
Physical Tests					
Acidity to pH 8.3 (as CaCO3)	1				
Alkalinity (Total as CaCO3)	1 to 2	1180	812	1080	1080
Bicarbonate Alkalinity	1 to 2	823	543	536	672
Carbonate Alkalinity	1 to 2	354	268	546	404
Color TCU	5	16.7			
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	1860	1350	1750	1740
Hydroxide Alkalinity	1 to 2	<1	<1	<1	<1
pH (unitless)	0.01 to 0.1	9.01	9.02	9.34	9.05
Specific Conductivity µS/cm	2	3470	2490	3130	3290
Total Dissolved Solids	1 to 2	3120	2150	2760	2810
Total Suspended Solids	3	8	12.5	45.7	23.9
Turbidity NTU	0.1	2.12	2.83	47.1	6.97
Dissolved Anions					
Bromide	0.05 to 2.495	<1	<1	<1	<1
Chloride	0.5 to 1	27	25	34	26
Fluoride	0.02 to 0.4	<0.4	<0.4	0.088	0.088
Sulphate	0.5 to 1	1400	1010	1320	1380
Nutrients					
Ammonia (Total)	0.005 to 0.05	0.262	0.0244	0.0428	0.115
Nitrate (as N)	0.005 to 0.1	<0.1	<0.1	<0.1	<0.1
Nitrite (as N)	0.001 to 0.02	<0.02	<0.02	<0.02	<0.02
Nitrogen (Dissolved)	0.05 to 0.1				
Nitrogen (Total)	0.0025 to 0.11	3.1			
Nitrogen Kjeldahl (Total)	0.05 to 0.2	3.1	2.73	3.38	2.42
Orthophosphate (Dissolved)	0.001 to 0.01	0.0098	<0.001	0.0013	0.0021
Phosphorus - Dissolved	0.002 to 0.02	0.0499	0.104	0.0369	0.0334
Phosphorus - Total	0.002 to 0.02	0.0645	0.0381	0.127	0.073
Cyanide					
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals					
Aluminum	0.001 to 0.025	0.003	<0.002	0.0024	<0.002
Antimony	0.0001 to 0.0025	0.00095	0.00048	0.00066	0.00079
Arsenic	0.0001 to 0.0025	0.0148	0.00951	0.0118	0.0149
Barium	5E-005 to 0.02	0.0109	0.012	0.00402	0.00891
Beryllium	0.0001 to 0.005	<0.0002	<0.0002	<0.0002	<0.0002
Bismuth	0.0005 to 0.2	<0.001	<0.001	<0.001	<0.001
Boron	0.01 to 0.1	0.594	0.368	0.482	0.557
Cadmium	1E-005 to 8.5E-005	<0.00002	<0.00003	<0.00005	<0.00002
Calcium	0.05 to 0.1	12	15.8	11.1	9.76
Chromium	0.0001 to 0.018	<0.0002	<0.0002	<0.0002	<0.0002
Cobalt	0.0001 to 0.0015	<0.0002	<0.0002	<0.0002	<0.0002
Copper	0.0002 to 0.006	<0.0004	0.00051	0.001	<0.0004
Dissolved Cadmium (by saltwater extraction)	0.00002		<0.00002	<0.00002	
Iron	0.01 to 0.03	0.021	0.016	<0.01	0.018
Lead	5E-005 to 0.0025	<0.0001	<0.0001	<0.0001	<0.0001
Lithium	0.0005 to 0.025	0.0095	0.0069	0.0091	0.0097
Magnesium	0.1	445	319	418	417
Manganese	5E-005 to 0.0015	0.0121	0.00997	0.00295	0.015
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0777	0.0517	0.0593	0.0597
Nickel	0.0005 to 0.005	0.0014	0.0012	0.0014	0.0011
Phosphorus	0.05 to 0.3	<0.05	<0.05	<0.05	0.053
Potassium	0.05 to 2	81.2	56.4	78.3	75
Selenium	0.0001 to 0.006	0.00087	0.00059	0.0008	0.00066
Silicon	0.05	5.89	4.68	2.38	4.6
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	0.05 to 2	300	189	274	275
Strontium	0.0001 to 0.005	0.159	0.25	0.121	0.113
Sulphur	0.5	435	302	427	410
Thallium	1E-005 to 0.001	<0.00002	<0.00002	<0.00002	<0.00002
Tin	0.0001 to 0.0025	<0.0002	<0.0002	<0.0002	<0.0002
Titanium	0.01	<0.02	<0.02	<0.02	<0.02
Uranium	1E-005 to 0.001	0.00437	0.00272	0.00331	0.00346
Vanadium	0.001 to 0.03	0.005	0.0033	0.0048	0.0041
Zinc	0.001 to 0.006	<0.002	0.003	<0.002	<0.002
Total Metals					
Aluminum	0.003 to 0.025	0.0315	0.0797	1.21	0.349
Antimony	0.0001 to 0.0025	0.00101	0.00046	0.0008	0.00081
Arsenic	0.0001 to 0.0025	0.0151	0.00865	0.0264	0.0135
Barium	5E-005 to 0.02	0.0121	0.0141	0.046	0.0115
Beryllium	0.0001 to 0.005	<0.0002	<0.0002	<0.0002	<0.0002
Bismuth	0.0005 to 0.2	<0.001	<0.001	<0.001	<0.001
Boron	0.01 to 0.1	0.6	0.354	0.505	0.557
Cadmium	1E-005 to 8.5E-005	<0.00002	<0.00003	<0.00005	<0.00002
Calcium	0.05 to 0.1	11.9	15.7	22.8	9.99
Chromium	0.0001 to 0.005	0.00026	0.00031	0.00255	0.00075
Cobalt	0.0001 to 0.0015	<0.0002	<0.0002	0.00087	0.00025
Copper	0.0005 to 0.007	<0.001	0.0013	0.0053	0.0015
Iron	0.01 to 0.03	0.048	0.099	1.32	0.317
Lead	5E-005 to 0.0025	<0.0001	<0.0001	0.00039	<0.0001
Lithium	0.0005 to 0.025	0.009	0.0065	0.0107	0.0103
Magnesium	0.1	438	296	407	412
Manganese	5E-005 to 0.0015	0.0143	0.0213	0.0866	0.0242
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.0842	0.0533	0.0818	0.0607
Nickel	0.0005 to 0.005	0.0015	0.0016	0.004	0.0017
Phosphorus	0.05 to 0.3	0.062	0.096	0.426	0.054
Potassium	0.05 to 2	77.4	53.9	77	73
Selenium	0.0001 to 0.006	0.00083	0.00058	0.0011	0.00065
Silicon	0.05	6.01	4.65	6.17	5.3
Silver	1E-005 to 0.0001	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	0.05 to 2	312	187	238	261
Strontium	0.0001 to 0.005	0.177	0.255	0.489	0.125
Sulphur	0.5	448	304	427	425
Thallium	1E-005 to 0.001	<0.00002	<0.00002	<0.00002	<0.00002
Tin	0.0001 to 0.0025	<0.0002	<0.0002	<0.0002	<0.0002
Titanium	0.01	<0.02	<0.02	0.044	<0.02
Total Cadmium (by saltwater extraction)	0.00002		<0.00002	<0.00002	
Uranium	1E-005 to 0.001	0.00469	0.00291	0.00416	0.00357
Vanadium	0.001 to 0.03	0.0055	0.0041	0.0065	0.0046
Zinc	0.003 to 0.006	<0.006	<0.006	<0.006	<0.006
Organics					
Carbon Organic (Dissolved)	0.5 to 5	32.9	25.2	32.7	33.3
Carbon Organic (Total)	0.5 to 5	32.2	26.9	36.1	33.9
Nitrogen Organic (Dissolved)	0.05 to 0.26				
Nitrogen Organic (Total)	0.05 to 0.3				
ALS LAB ID		**L1376790**	**L1443519**	**L1481215**	**L1511703**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C3.36 - WALL
PAGE 1 OF 1

Site ID	MDL	WALL	WALL	WALL	WALL
Date/Time Sampled		14-Apr-11	3-Apr-13	5-Jun-13	7-Nov-13
In Situ Parameters					
Conductivity (In Situ) µS/cm	...	25765	44890	71500	
Oxygen Dissolved (In Situ %) %	...			68.2	
Oxygen Dissolved (In Situ)	...			4.05	
pH (In Situ) pH	...	8.92	9.34	8.94	
Redox Potential (In Situ) mV	...	-50.4	78.6	-175	
Salinity (In Situ) ppt	...		34.1	44.3	
Specific Conductivity (In Situ) µS/cm	...	37682	51800	65390	
Temperature (In Situ) °C	...	8.42	17.9	29.8	
Total Dissolved Solids (In Situ)	...	2450	33660	42570	
Turbidity (In Situ) NTU	...		14.2	31.6	
Physical Tests					
Acidity to pH 8.3 (as CaCO3)	1				
Alkalinity (Total as CaCO3)	1 to 2	555	1420	832	171
Bicarbonate Alkalinity	1 to 2			501	171
Carbonate Alkalinity	1 to 2			331	<2
Color TCU	5	36	42.1	52.8	
Hardness as CaCO3 (Dissolved)	0.5 to 9.6	14800	21400	27700	3380
Hydroxide Alkalinity	1 to 2			<1	<2
pH pH	0.01 to 0.1	9.24	8.91	8.79	7.92
Specific Conductivity µS/cm	2	35800	49400	63000	12300
Total Dissolved Solids	1 to 2	47900	74200	111000	11500
Total Suspended Solids	3 to 5	57.9	30.7	203	46.2
Turbidity NTU	0.1	15.5	8.37	72.7	13.2
Dissolved Anions					
Bromide (Dissolved)	0.05 to 152.5	<150	<5	5.7	<2.5
Chloride (Dissolved)	0.5 to 25	1850	2490	2900	725
Fluoride (Dissolved)	0.02 to 1	0.061	<0.3	<0.3	<1
Sulphate (Dissolved)	0.5 to 25	30500	45300	63600	6950
Nutrients					
Ammonia (Total)	0.005 to 0.13	0.0881	0.2	0.138	1.25
Nitrate (as N)	0.005 to 2.5	<0.5	<0.5	<0.5	<0.25
Nitrite (as N)	0.001 to 0.5	<0.1	<0.1	<0.1	0.132
Nitrogen (Dissolved)	0.05 to 1		16.9		
Nitrogen (Total)	0.0025 to 1.4	14.7	19	23.8	5.48
Nitrogen Kjeldahl (Total)	0.05 to 1.25	14.7	19	24.6	5.5
Orthophosphate (Dissolved)	0.001 to 0.1	0.191		0.557	0.324
Phosphorus (Nutrient) Dissolved	0.002 to 0.2	0.733	1.16	1.92	0.411
Phosphorus (Nutrient) Total	0.002 to 0.2	1.54	1.66	2.65	0.509
Cyanide					
Cyanide (Free)	0.005		<0.005	<0.005	<0.005
Cyanide (Total)	0.005		<0.005	<0.005	<0.005
Cyanide (WAD)	0.005		<0.005	<0.005	<0.005
Dissolved Metals					
Aluminum (Dissolved)	0.001 to 0.5	<0.5	<0.05	<0.1	<0.01
Antimony (Dissolved)	0.0001 to 0.05	<0.05	<0.005	<0.01	<0.001
Arsenic (Dissolved)	0.0001 to 0.05	<0.05	0.0203	0.034	0.0071
Barium (Dissolved)	5E-005 to 0.4	<0.4	0.0161	0.0265	0.00249
Beryllium (Dissolved)	0.0001 to 0.1	<0.1	<0.005	<0.01	<0.001
Bismuth (Dissolved)	0.0005 to 4	<4	<0.025	<0.05	<0.005
Boron (Dissolved)	0.01 to 2	2.5	3.73	4.7	0.54
Cadmium (Dissolved)	1E-005 to 0.0017	<0.0017	<0.0005	<0.001	<0.0001
Calcium (Dissolved)	0.05 to 2	374	436	375	58
Chromium (Dissolved)	0.0001 to 0.1	<0.1	<0.005	<0.01	<0.001
Cobalt (Dissolved)	0.0001 to 0.03	<0.03	<0.005	<0.01	<0.001
Copper (Dissolved)	0.0002 to 0.15	<0.15	0.017	<0.02	<0.002
Dissolved Cadmium (by saltwater extraction)	0.00002				
Iron (Dissolved)	0.01 to 0.6	<0.6	<0.2	<0.2	<0.05
Lead (Dissolved)	5E-005 to 0.05	<0.05	<0.0025	<0.005	<0.0005
Lithium (Dissolved)	0.0005 to 0.5	<0.5	<0.025	<0.05	<0.005
Magnesium (Dissolved)	0.1 to 2	3360	4930	6490	786
Manganese (Dissolved)	5E-005 to 0.03	0.053	0.0686	0.149	0.00791
Mercury (Dissolved)	1E-005 to 2E-005	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Dissolved)	5E-005 to 0.1	<0.1	0.0672	0.027	0.00288
Nickel (Dissolved)	0.0005 to 0.1	<0.1	<0.025	<0.05	<0.005
Phosphorus (Metal) Dissolved	0.05 to 6	<6	1.3	1.8	0.54
Potassium (Dissolved)	0.05 to 4	436	572	744	160
Selenium (Dissolved)	0.0001 to 0.1	<0.1	0.01	<0.01	<0.001
Silicon (Dissolved)	0.05 to 1	<1	<1	<1	<0.25
Silver (Dissolved)	1E-005 to 0.002	<0.002	<0.0005	<0.001	<0.0001
Sodium (Dissolved)	0.05 to 4	8990	13600	18500	2530
Strontium (Dissolved)	0.0001 to 0.1	10.5	13.1	14.2	1.73
Sulphur (Dissolved)	0.0005 to 1		15200	19900	2620
Thallium (Dissolved)	1E-005 to 0.02	<0.02	<0.0005	<0.001	<0.0001
Tin (Dissolved)	0.0001 to 0.05	<0.05	<0.005	<0.01	<0.001
Titanium (Dissolved)	0.01 to 1	<0.2	<0.5	<1	<0.1
Uranium (Dissolved)	1E-005 to 0.02	<0.02	0.0093	0.0087	0.00067
Vanadium (Dissolved)	0.001 to 0.3	<0.1	<0.05	<0.1	<0.01
Zinc (Dissolved)	0.001 to 0.5	<0.1	0.069	<0.1	<0.01
Total Metals					
Aluminum (Total)	0.003 to 0.5	<0.5	<0.15	<0.3	0.074
Antimony (Total)	0.0001 to 0.05	<0.05	<0.005	<0.01	<0.001
Arsenic (Total)	0.0001 to 0.05	<0.05	0.0211	0.034	0.0072
Barium (Total)	5E-005 to 0.4	<0.4	0.0177	0.024	0.0034
Beryllium (Total)	0.0001 to 0.1	<0.1	<0.005	<0.01	<0.001
Bismuth (Total)	0.0005 to 4	<4	<0.025	<0.05	<0.005
Boron (Total)	0.01 to 2	2.6	3.52	4.2	0.53
Cadmium (Total)	1E-005 to 0.0017	<0.0017	<0.0005	<0.001	<0.0001
Calcium (Total)	0.05 to 2	380	434	357	57.6
Chromium (Total)	0.0001 to 0.1	<0.1	<0.005	<0.01	<0.001
Cobalt (Total)	0.0001 to 0.03	<0.03	<0.005	<0.01	<0.001
Copper (Total)	0.0005 to 0.15	<0.15	<0.025	<0.05	<0.005
Iron (Total)	0.01 to 0.6	<0.6	<0.2	0.37	0.119
Lead (Total)	5E-005 to 0.05	<0.05	<0.0025	<0.005	<0.0005
Lithium (Total)	0.0005 to 0.5	<0.5	<0.025	<0.05	<0.005
Magnesium (Total)	0.1 to 2	3410	4930	6170	781
Manganese (Total)	5E-005 to 0.03	0.063	0.0796	0.183	0.0157
Mercury (Total)	1E-005 to 2E-005	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Total)	5E-005 to 0.1	<0.1	0.0767	0.0241	0.00333
Nickel (Total)	0.0005 to 0.1	<0.1	<0.025	<0.05	<0.005
Phosphorus (Metal) Total	0.05 to 6	<6	1.4	2.1	0.64
Potassium (Total)	0.05 to 4	442	574	706	156
Selenium (Total)	0.0001 to 0.1	<0.1	<0.005	<0.01	<0.001
Silicon (Total)	0.05 to 1	<1	<1	<1	0.52
Silver (Total)	1E-005 to 0.002	<0.002	<0.0005	<0.001	<0.0001
Sodium (Total)	0.05 to 4	9120	15200	16800	2420
Strontium (Total)	0.0001 to 0.1	10.9	15.6	13	1.76
Sulphur (Total)	0.5 to 1		15200	18900	2590
Thallium (Total)	1E-005 to 0.02	<0.02	<0.0005	<0.001	<0.0001
Tin (Total)	0.0001 to 0.05	<0.05	<0.005	<0.01	<0.001
Titanium (Total)	0.01 to 1	<0.2	<0.5	<1	<0.1
Total Cadmium (by saltwater extraction)	0.00002				
Uranium (Total)	1E-005 to 0.02	<0.02	0.00958	0.0084	0.00075
Vanadium (Total)	0.001 to 0.3	<0.1	<0.05	<0.1	<0.01
Zinc (Total)	0.003 to 0.5	<0.1	<0.15	<0.3	<0.03
Organics					
Carbon Organic (Dissolved)	0.2 to 1	98.9	176	253	21.7
Carbon Organic (Total)	0.5 to 1	104	177	271	25.6
Nitrogen Organic (Dissolved)	0.05 to 1		16.7		
Nitrogen Organic (Total)	0.05 to 1	14.7	18.8		
Lab ID		L995583	L1286585	L1312719	L1389979

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE C3.37 - WR-SEEP
PAGE 1 OF 2

Site ID			WR-SEEP	WR-SEEP	WR-SEEP	WR-SEEP	WR-SEEP	WR-SEEP	WR-SEEP	WR-SEEP	WR-SEEP	WR-SEEP	WR-SEEP	WR-SEEP
Analytes	**MDL**		**28-Mar-11**	**10-Apr-12**	**25-Apr-12**	**24-May-12**	**11-Jul-12**	**7-Aug-12**	**7-May-13**	**5-Jun-13**	**3-Jul-13**	**7-Nov-13**	**10-Apr-14**	**8-May-14**
In Situ Parameters														
Conductivity µS/cm	...		1674	1113	1480	1930		1250	2898	11220	3426		853	1180
Oxygen Dissolved %	...		13.9	95.3	39	76.2		84.2	99.3		89.2		95.3	68.1
Oxygen Dissolved	...		1.56	10.1	3.86	7.75		7.04	9.35		7.87		9.9	7.12
pH (unitless)	...		7.26	8.38	7.6	8.24		7.73	8.16	8.83	8.36		8.4	8.46
Redox Potential mV	...		8	84.7	116	114		167	168	191	72.7		-60	58.7
Salinity ppt	...			0.74	0.92	1.26		0.63	1.77	7.18	1.96		0.54	0.77
Specific Conductivity µS/cm	...		2363	1460	1804	2420		1270	3336	12500	3709		1092	1520
Temperature °C	...		9.73	12.6	15.6	14.3		24.2	17.2	19.6	21		13.6	13.3
Total Dissolved Solids	...		1540	949	1173	1579		825	2186	8120	2411		709	988
Turbidity NTU	...				1.9	2.8		3.3	19.1	4.6	3.3			
Physical Tests														
Acidity to pH 8.3 (as CaCO3)	1													
Alkalinity (Total as CaCO3)	1 to 2			206	247	386	228	204	182	123	135	97.7	105	143
Bicarbonate Alkalinity	1 to 2			199	247	366	152	204	182	123	128	97.7	105	143
Carbonate Alkalinity	1 to 2			7.7	<2	20.4	76.4	<1	<2	<2	7.1	<2	<2	<2
Color TCU	5		566	29.3	32.4	30.1	36.5	27.2	12.7	11.3	17.2			
Hardness as CaCO3 (Dissolved)	0.5 to 1.1		522	715	900	1230		609	1730	1970	2090	2400	516	705
Hydroxide Alkalinity	1 to 2			<1	<2	<1	<1	<1	<2	<2	<1	<2	<2	<2
pH (unitless)	0.01 to 0.1		7.52	8.42	8.22	8.37	8.96	8.15	8.25	8.17	8.39	7.86	8.26	8.21
Specific Conductivity µS/cm	2		2380	1460	1760	2380	2430	1260	3410	3990	4270	3860	1090	1470
Total Dissolved Solids	1 to 2		2100	1130	1460	2060	2160	1020	3020	3770	2960	3570	862	1220
Total Suspended Solids	3		18.7	11.3	<3	<3	10	3.9	15.3	11.6	13.7	7.7	5.4	4.5
Turbidity NTU	0.1			3.15	1.87	3.48	16	3.59	17.7	2.12	1.56	1.96	5.51	2.35
Dissolved Anions														
Bromide	0.05 to 2.495			<0.5	<0.5	<1	<1	<0.5	<1	1.2	1	<1	<0.5	<0.5
Chloride	0.5 to 1			9.9	13.1	17	22	8.4	165	202	219	174	29.9	43.8
Fluoride	0.02 to 0.4			<0.2	<0.2	<0.4	<0.4	<0.2	<0.4	0.42	<0.4	<0.4	<0.2	<0.2
Sulphate	0.5 to 1			635	844	1200	1380	557	2010	2340	2390	2240	475	669
Nutrients														
Ammonia (Total)	0.005 to 0.05			0.0375	0.102	0.128	0.0735	0.0649	0.0181	0.016	0.0219	0.63	0.0083	0.0144
Nitrate (as N)	0.005 to 0.1			4.13	1.39	0.18	<0.1	0.394	<0.1	<0.1	<0.1	1.92	<0.05	<0.05
Nitrite (as N)	0.001 to 0.02			0.062	0.071	<0.02	<0.02	0.034	<0.02	<0.02	<0.02	0.091	<0.01	<0.01
Nitrogen (Dissolved)	0.05 to 0.1			5.13	2.72	1.8		1.28						
Nitrogen (Total)	0.0025 to 0.11			5.27	3.07	2	2.62	1.44	1.35	1.37	1.61	5.29		
Nitrogen Kjeldahl (Total)	0.05 to 0.2			1.08	1.6	1.83	2.62	1.01	1.4	1.38	1.61	2.85	0.505	0.802
Orthophosphate (Dissolved)	0.001 to 0.01		2.47							<0.001	<0.001	0.0029	<0.001	0.0019
Phosphorus - Dissolved	0.002 to 0.02			0.0187	0.0245	0.0336	0.0321	0.012	0.0177	0.0152	0.0127	0.0157	0.0091	0.0146
Phosphorus - Total	0.002 to 0.02		3.16	0.0472	0.0377	0.0489	0.066	0.037	0.0644	0.0264	0.0211	0.032	0.0237	0.0193
Cyanide														
Cyanide (Free)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005		0.0215	0.0077	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals														
Aluminum	0.001 to 0.025		<0.01	<0.003	0.0031	0.0035		0.0016	0.0043	0.0029	0.0024	0.057	0.0027	0.006
Antimony	0.0001 to 0.0025		<0.001	0.00143	0.00147	0.00108		0.00121	0.00067	0.0006	0.00046	0.00162	0.00048	0.0006
Arsenic	0.0001 to 0.0025		<0.001	0.00285	0.00369	0.00483		0.00325	0.00178	0.00172	0.00236	0.00295	0.00112	0.00127
Barium	5E-005 to 0.02		0.053	0.0211	0.0256	0.0315		0.0684	0.0665	0.0488	0.0483	0.0258	0.0357	0.0425
Beryllium	0.0001 to 0.005		<0.002	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001
Bismuth	0.0005 to 0.2		<0.2	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.0005
Boron	0.01 to 0.1		0.17	0.155	0.214	0.35		0.223	0.317	0.338	0.375	0.165	0.082	0.153
Cadmium	1E-005 to 8.5E-005		<0.0005	<0.0003	<0.0011	<0.00038		<0.00075	<0.00005	<0.00004	<0.00005	<0.00025	<0.00002	<0.00003
Calcium	0.05 to 0.1		43.8	92.8	113	134		82.9	285	290	265	331	116	148
Chromium	0.0001 to 0.018		<0.002	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0002	<0.0002	0.0005	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015		<0.0006	0.0001	0.00021	0.00045		0.00015	0.00021	<0.0002	<0.0002	0.00051	<0.0001	<0.0001
Copper	0.0002 to 0.006		0.0086	0.0135	0.0189	0.0127		0.0137	0.0141	0.0124	0.0175	0.0637	0.0126	0.0133
Dissolved Cadmium (by saltwater extraction)	0.00002												<0.00002	<0.00002
Iron	0.01 to 0.03		0.03	<0.03	0.035	0.162		0.014	0.028	0.017	0.024	0.085	<0.01	0.013
Lead	5E-005 to 0.0025		<0.001	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005
Lithium	0.0005 to 0.025		<0.01	0.00796	0.00975	0.0139		0.00734	0.0669	0.0787	0.0955	0.0779	0.0136	0.0235
Magnesium	0.1		100	117	150	218		97.6	248	302	347	383	54.9	81.7
Manganese	5E-005 to 0.0015		0.923	0.00404	0.02	0.0337		0.0145	0.076	0.0173	0.0182	0.131	0.00137	0.00518
Mercury	1E-005 to 5E-005		<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005		0.14	0.981	1.35	2.03		0.952	0.195	0.166	0.12	0.525	0.0554	0.102
Nickel	0.0005 to 0.005		0.0022	0.00202	0.00355	0.00696		0.00268	0.00289	0.0025	0.0029	0.0058	0.00107	0.00142
Phosphorus	0.05 to 0.3		2.12	<0.3	<0.3	<0.3		<0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	0.05 to 2		86.3	24.9	31.1	41.6		21.2	56.2	58.1	69	64.6	17.1	23.4
Selenium	0.0001 to 0.006		<0.002	0.0272	0.0264	0.0149		0.0194	0.00231	0.00152	0.00145	0.0381	0.00197	0.0023
Silicon	0.05		12.3	6.71	4.09	2.21		3.54	0.248	0.237	1.01	3.6	3.62	3.89
Silver	1E-005 to 0.0001		<0.00004	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001
Sodium	0.05 to 2		113	73.7	93.3	145		56.1	212	263	276	293	39	61.3
Strontium	0.0001 to 0.005		0.877	1.19	1.48	2.02		1.32	4.95	5.58	5.12	6.56	1.69	2.23
Sulphur	0.5								580	725	725	821	160	207
Thallium	1E-005 to 0.001		<0.0004	<0.00001	<0.00001	<0.00001		<0.00001	0.000014	<0.00002	<0.00002	0.000031	<0.00001	<0.00001
Tin	0.0001 to 0.0025		<0.001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001
Titanium	0.01		<0.01	<0.01	<0.01	<0.01		<0.01	<0.01	<0.02	<0.02	<0.02	<0.01	<0.01
Uranium	1E-005 to 0.001		0.00094	0.00535	0.00711	0.0111		0.00353	0.0121	0.0071	0.00511	0.0237	0.00461	0.00657
Vanadium	0.001 to 0.03		<0.002	0.0035	0.0037	0.0056		0.0037	<0.001	<0.002	<0.002	<0.002	0.001	0.0011
Zinc	0.001 to 0.006		<0.005	0.0144	<0.003	0.0035		0.0017	0.0016	<0.002	<0.002	<0.002	<0.001	<0.001
Total Metals														
Aluminum	0.003 to 0.025		<0.01	0.121	0.0355	0.0402	0.268	0.0479	0.471	0.0408	0.0167	<0.006	0.171	0.0981
Antimony	0.0001 to 0.0025		<0.001	0.00146	0.00143	0.00105	0.00145	0.00121	0.00066	0.0006	0.00048	0.00131	0.00049	0.00061
Arsenic	0.0001 to 0.0025		0.001	0.00281	0.00364	0.00481	0.00813	0.0034	0.00203	0.00176	0.00223	0.00249	0.0012	0.00137
Barium	5E-005 to 0.02		0.053	0.0219	0.0266	0.0308	0.0267	0.0685	0.07	0.0476	0.0483	0.023	0.0359	0.0434
Beryllium	0.0001 to 0.005		<0.002	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001
Bismuth	0.0005 to 0.2		<0.2	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.0005
Boron	0.01 to 0.1		0.18	0.166	0.214	0.369	0.279	0.229	0.31	0.331	0.403	0.147	0.086	0.169
Cadmium	1E-005 to 8.5E-005		<0.0003	<0.0003	<0.0012	<0.00038	<0.0003	<0.00075	<0.00005	<0.00004	<0.00005	<0.00025	<0.00003	<0.00004
Calcium	0.05 to 0.1		43.4	92.5	112	130	42.8	79.9	274	291	261	302	111	146
Chromium	0.0001 to 0.005		<0.002	0.00066	0.00039	0.00037	0.00155	0.00031	0.00102	<0.0002	0.00022	0.00036	0.00041	0.00027
Cobalt	0.0001 to 0.0015		<0.0006	0.00022	0.00024	0.00047	0.00073	0.00024	0.00056	<0.0002	<0.0002	0.00039	0.00018	0.00013
Copper	0.0005 to 0.007		0.0123	0.0164	0.0209	0.0145	0.0312	0.0161	0.0202	0.0137	0.0182	0.0503	0.0152	0.0152
Iron	0.01 to 0.03		0.032	0.166	0.083	0.264	0.468	0.1	0.666	0.071	0.051	<0.01	0.225	0.123
Lead	5E-005 to 0.0025		<0.001	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	0.000107	<0.0001	<0.0001	<0.0001	0.000056	<0.00005
Lithium	0.0005 to 0.025		<0.01	0.00777	0.00938	0.0145	0.0156	0.00725	0.0645	0.0798	0.1	0.0612	0.0135	0.0241
Magnesium	0.1		103	117	151	205	252	95.3	246	303	349	321	52.3	81.3
Manganese	5E-005 to 0.0015		0.908	0.0175	0.0242	0.0346	0.0264	0.0512	0.104	0.0193	0.0303	0.12	0.00801	0.0113
Mercury	1E-005 to 5E-005		0.000015	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005		0.153	1.08	1.33	2.01	1.49	0.936	0.194	0.167	0.119	0.434	0.057	0.102
Nickel	0.0005 to 0.005		0.003	0.00255	0.00374	0.00696	0.0078	0.00287	0.00408	0.0029	0.0031	0.0045	0.0024	0.0017
Phosphorus	0.05 to 0.3		2.55	<0.3	<0.3	<0.3	<0.3	<0.3	0.06	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	0.05 to 2		90.9	24.7	31.8	39.2	38.1	21.1	53	57.7	68.1	57	15.8	23.6
Selenium	0.0001 to 0.006		<0.002	0.0245	0.0256	0.0146	0.0181	0.0186	0.00214	0.00153	0.00152	0.0327	0.00193	0.00192
Silicon	0.05		12.7	6.89	4.13	2.2	4.25	3.55	1.29	0.32	1.04	3.03	3.84	4.05
Silver	1E-005 to 0.0001		<0.00004	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	0.000011	<0.00002	<0.00002	<0.00002	0.000012	<0.00001
Sodium	0.05 to 2		119	72.6	96.4	138	172	55.2	206	268	282	242	37.7	63.1
Strontium	0.0001 to 0.005		0.882	1.29	1.46	1.98	0.704	1.32	4.97	5.49	5.02	5.85	1.69	2.21
Sulphur	0.5								606	707	727	731	155	206
Thallium	1E-005 to 0.001		<0.0004	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	0.000017	<0.00002	<0.00002	0.000026	<0.00001	0.00001
Tin	0.0001 to 0.0025		<0.001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001
Titanium	0.01		<0.01	0.013	<0.01	<0.01	0.014	0.011	0.023	<0.02	<0.02	<0.02	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002												<0.00002	<0.00002
Uranium	1E-005 to 0.001		0.00102	0.00596	0.00717	0.0113	0.00477	0.00351	0.0116	0.0072	0.00513	0.0186	0.00457	0.00661
Vanadium	0.001 to 0.03		<0.002	0.004	0.0041	0.0061	0.0139	0.0044	0.0028	<0.002	<0.002	<0.002	0.0017	0.0015
Zinc	0.003 to 0.006		<0.005	0.0128	0.0043	0.0033	<0.006	0.0037	<0.003	<0.006	<0.006	<0.006	<0.003	<0.003
Organics														
Carbon Organic (Dissolved)	0.5 to 5			10.4	13.2	18.3		9.81	16.1	17.4	26.3	14.6	10.2	10.6
Carbon Organic (Total)	0.5 to 5			11.4	13.9	17.9	24.1	10.1	16.5	17.7	27.5	22.6	10.4	10.7
Nitrogen Organic (Dissolved)	0.05 to 0.26			<1	1.15	1.49		0.79						
Nitrogen Organic (Total)	0.05 to 0.3			1.04	1.5	1.7	2.54	0.949						
ALS LAB ID			**L990458**	**L1133342**	**L1140194**	**L1152500**	**L1177597**	**L1190914**	**L1298960**	**L1312719**	**L1327102**	**L1389979**	**L1442672**	**L1453031**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

Site ID		WR-SEEP	WR-SEEP	WR-SEEP
Analytes	**MDL**	**4-Jun-14**	**3-Jul-14**	**28-Jul-14**
In Situ Parameters				
Conductivity µS/cm	...	1548	2812	3539
Oxygen Dissolved %	...	102	105	90.6
Oxygen Dissolved	...	9.15	7.85	7.07
pH (unitless)	...	8.52	8.52	8.64
Redox Potential mV	...	85.7	79.6	89.7
Salinity ppt	...	0.84	1.33	1.75
Specific Conductivity µS/cm	...	1669	2603	3366
Temperature °C	...	21.8	29.9	27.7
Total Dissolved Solids	...	1085	1693	2188
Turbidity NTU	...			
Physical Tests				
Acidity to pH 8.3 (as CaCO3)	1			
Alkalinity (Total as CaCO3)	1 to 2	99.3	144	98.2
Bicarbonate Alkalinity	1 to 2	94.9	133	89.8
Carbonate Alkalinity	1 to 2	4.4	10.6	8.4
Color TCU	5			
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	840	1190	1560
Hydroxide Alkalinity	1 to 2	<1	<1	<1
pH (unitless)	0.01 to 0.1	8.33	8.48	8.75
Specific Conductivity µS/cm	2	1750	2410	3310
Total Dissolved Solids	1 to 2	1450	2030	2990
Total Suspended Solids	3	<3	6.1	10.2
Turbidity NTU	0.1	2.17	2.71	3.36
Dissolved Anions				
Bromide	0.05 to 2.495	<0.5	<1	<1
Chloride	0.5 to 1	62.1	102	155
Fluoride	0.02 to 0.4	0.18	0.21	0.217
Sulphate	0.5 to 1	839	1280	1860
Nutrients				
Ammonia (Total)	0.005 to 0.05	0.0097	0.019	0.0184
Nitrate (as N)	0.005 to 0.1	<0.05	<0.1	0.1
Nitrite (as N)	0.001 to 0.02	<0.01	<0.02	<0.02
Nitrogen (Dissolved)	0.05 to 0.1			
Nitrogen (Total)	0.0025 to 0.11			
Nitrogen Kjeldahl (Total)	0.05 to 0.2	1.05	1.99	1.92
Orthophosphate (Dissolved)	0.001 to 0.01	<0.001	<0.001	<0.001
Phosphorus - Dissolved	0.002 to 0.02	0.0108	0.0175	0.0144
Phosphorus - Total	0.002 to 0.02	0.017	0.0312	0.0425
Cyanide				
Cyanide (Free)	0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005
Dissolved Metals				
Aluminum	0.001 to 0.025	0.0058	0.0071	0.0032
Antimony	0.0001 to 0.0025	0.00062	0.00054	0.00047
Arsenic	0.0001 to 0.0025	0.00151	0.0033	0.00334
Barium	5E-005 to 0.02	0.0378	0.0426	0.0449
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.183	0.313	0.302
Cadmium	1E-005 to 8.5E-005	<0.00004	<0.00005	<0.00005
Calcium	0.05 to 0.1	133	173	183
Chromium	0.0001 to 0.018	<0.0001	<0.0001	<0.0001
Cobalt	0.0001 to 0.0015	<0.0001	0.00011	0.00015
Copper	0.0002 to 0.006	0.0126	0.0194	0.0176
Dissolved Cadmium (by saltwater extraction)	0.00002	<0.00002	<0.00002	<0.00002
Iron	0.01 to 0.03	0.023	0.027	0.016
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.03	0.0577	0.0903
Magnesium	0.1	123	185	268
Manganese	5E-005 to 0.0015	0.00393	0.00742	0.0119
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.13	0.131	0.114
Nickel	0.0005 to 0.005	0.00161	0.0023	0.00231
Phosphorus	0.05 to 0.3	<0.05	<0.05	<0.05
Potassium	0.05 to 2	31.8	48.9	63.5
Selenium	0.0001 to 0.006	0.00158	0.0015	0.00154
Silicon	0.05	4.71	3.32	0.474
Silver	1E-005 to 0.0001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	89.1	139	208
Strontium	0.0001 to 0.005	2.58	3.54	4.56
Sulphur	0.5	281	425	575
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.00582	0.00605	0.00461
Vanadium	0.001 to 0.03	0.0025	0.0017	0.0013
Zinc	0.001 to 0.006	0.0019	<0.001	0.0011
Total Metals				
Aluminum	0.003 to 0.025	0.0458	0.0465	0.0913
Antimony	0.0001 to 0.0025	0.00061	0.00049	0.0005
Arsenic	0.0001 to 0.0025	0.00157	0.0033	0.00343
Barium	5E-005 to 0.02	0.0376	0.0413	0.0455
Beryllium	0.0001 to 0.005	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	0.191	0.291	0.308
Cadmium	1E-005 to 8.5E-005	<0.00004	<0.0001	<0.00005
Calcium	0.05 to 0.1	132	160	177
Chromium	0.0001 to 0.005	0.00016	0.00029	0.00031
Cobalt	0.0001 to 0.0015	0.00011	0.00016	0.00023
Copper	0.0005 to 0.007	0.0136	0.0203	0.0195
Iron	0.01 to 0.03	0.083	0.081	0.118
Lead	5E-005 to 0.0025	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to 0.025	0.0305	0.0495	0.0888
Magnesium	0.1	123	176	265
Manganese	5E-005 to 0.0015	0.0169	0.0236	0.0196
Mercury	1E-005 to 5E-005	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.134	0.116	0.112
Nickel	0.0005 to 0.005	0.00166	0.00237	0.00266
Phosphorus	0.05 to 0.3	<0.05	<0.05	<0.05
Potassium	0.05 to 2	30.7	45	62.7
Selenium	0.0001 to 0.006	0.00143	0.00138	0.00164
Silicon	0.05	4.76	3.29	0.636
Silver	1E-005 to 0.0001	0.00007	<0.00001	<0.00001
Sodium	0.05 to 2	92	137	214
Strontium	0.0001 to 0.005	2.64	2.99	4.48
Sulphur	0.5	279	405	571
Thallium	1E-005 to 0.001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extraction)	0.00002	<0.00002	<0.00002	<0.00002
Uranium	1E-005 to 0.001	0.00593	0.00549	0.00456
Vanadium	0.001 to 0.03	0.0027	0.0022	0.0019
Zinc	0.003 to 0.006	<0.003	<0.003	<0.003
Organics				
Carbon Organic (Dissolved)	0.5 to 5	13.9	23.6	27.6
Carbon Organic (Total)	0.5 to 5	14.1	23.4	28.4
Nitrogen Organic (Dissolved)	0.05 to 0.26			
Nitrogen Organic (Total)	0.05 to 0.3			
ALS LAB ID		**L1465478**	**L1481215**	**L1494516**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE C3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

APPENDIX C4

WILDLIFE GUIDELINES EXCEEDANCES

(Pages C4-1 to C4-7)

TABLE C4.1 - WILDLIFE GUIDELINES

Analytes	BCWQG-Wildlife [2]
Dissolved Anions	
Chloride	600
Fluoride	1.0 (mean); 1.5 (max)
Metals	
Aluminum	5 [4]
Arsenic	0.025
Boron	5
Copper	0.3
Lead	0.1
Mercury	0.00002
Molybdenum	0.05
Selenium	0.004

\\knightpiesold.local\VA-Prj$\1\01\00246\31\A\Report\3 - Baseline Water Quality - GW SW\Rev0\Appendix\Appendix C - SWQ Data Tables Rev0\[C4 - Wildlife Guideline Exceedances - FINAL.xlsx]C4.1 - WILDLIFE GUIDELINES

NOTES:

1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. BCWQG-Wildlife: BRITISH COLUMBIA WATER QUALITY GUIDELINES (APPROVED AND WORKING) - MAXIMUM LIMITS FOR DRINKING WATER FOR WILDLIFE.
3. INDICATES THE VALUE EXCEEDS THE LIMITS OF BCWQG-Wildlife.
4. GUIDELINE IS FOR TOTAL CONCENTRATION ONLY.
5. DETECTION LIMIT VALUES DISPLAYED WITH LESS THAN SYMBOL (<)

APPENDIX C4 - SURFACE WATER QUALITY DATA COMPARED WITH WILDLIFE GUIDELINES

TABLE C4.2 - GUIDELINE EXCEEDANCES
PAGE 1 OF 6

Site ID		PC02	PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC10	HUMPH02	HUMPH02	HUMPH02	HUMPH02	HUMPH02	HUMPH-10	HUMPH-10	HUMPH-10	HUMPH-10	HUMPH-10	HUMPH-10	HUMPH-10
Analytes	**MDL**	**26-Mar-14**	**28-Apr-08**	**9-Oct-13**	**21-Mar-14**	**27-Mar-14**	**3-Apr-14**	**10-Apr-14**	**23-Apr-14**	**28-Mar-14**	**21-Mar-14**	**26-Mar-14**	**3-Apr-14**	**10-Apr-14**	**24-Apr-14**	**2-Apr-14**	**9-Apr-14**	**23-Apr-14**	**3-Jun-14**	**29-Jul-14**	**11-Aug-14**	**3-Sep-14**
Dissolved Anions																						
Chloride	0.5 to 1	88.9	57	58.8	49.1	49.4	42.2	46	53	64	30.6	28.4	29.1	30.4	32.1	47.4	41	41.2	48.7	50.4	50.8	51
Fluoride	0.02 to 0.4	*0.1*	1.1	0.33	*0.1*	0.2	0.2	0.22	*0.2*	*0.1*	0.25	0.25	0.26	0.28	0.26	0.25	0.25	0.24	0.3	0.317	0.46	0.288
Dissolved Metals																						
Arsenic	0.0001 to 0.0025	0.0017	*0.00125*	0.00228	0.00156	0.0013	0.00118	0.00141	0.0013	0.00135	0.00352	0.00331	0.00325	0.00356	0.00345	0.00158	0.00143	0.00153	0.00243	0.00379	0.00312	0.00275
Boron	0.01 to 0.1	0.05	*0.05*	0.049	0.051	0.051	0.041	0.043	0.044	0.012	0.029	0.029	0.027	0.026	0.028	*0.005*	*0.005*	*0.005*	0.019	0.025	0.023	0.021
Copper	0.0002 to 0.006	0.0023	*0.0025*	0.00306	0.00184	0.0016	0.00124	0.00125	0.00172	0.0027	0.00632	0.00608	0.00629	0.00681	0.00635	0.00269	0.00296	0.00331	0.00286	0.00309	0.00417	0.00376
Lead	5E-005 to 0.0025	*0.000025*	*0.00125*	*0.000025*	*0.000025*	*0.000025*	*0.000025*	*0.000025*	*0.000025*	*0.000025*	*0.000025*	*0.000025*	*0.000025*	*0.000025*	*0.000025*	*0.000025*	*0.000025*	*0.000025*	*0.000025*	*0.000025*	*0.000025*	*0.000025*
Mercury	1E-005 to 5E-005	*0.000005*	*0.00001*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000025*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	0.000013	0.000012	0.00001	*0.000005*	0.000013	0.000015	0.000012
Molybdenum	5E-005 to 0.005	0.0138	0.0438	0.103	0.0805	0.0771	0.0687	0.065	0.0705	0.00261	0.0248	0.0245	0.0242	0.0239	0.0235	0.00498	0.00435	0.00463	0.00736	0.00484	0.00457	0.00431
Selenium	0.0001 to 0.006	0.0015	*0.0025*	0.00048	0.00106	0.00079	0.00061	0.0007	0.0006	0.00028	0.00618	0.00486	0.00505	0.00477	0.00448	0.00013	0.00012	0.00021	0.00015	0.00018	0.00016	0.00016
Total Metals																						
Aluminum	0.003 to 0.025	0.0443	*0.0125*	0.0141	0.0487	0.0216	0.0451	0.0515	0.0371	0.0065	0.345	0.36	0.205	0.18	0.156	0.121	0.47	0.0161	0.171	0.376	0.711	0.136
Arsenic	0.0001 to 0.0025	0.00185	*0.00125*	0.00211	0.00142	0.00135	0.00134	0.00139	0.0013	0.00135	0.00338	0.00326	0.00332	0.00333	0.00329	0.00161	0.00179	0.0016	0.00257	0.00384	0.00347	0.00297
Boron	0.01 to 0.1	0.051	*0.05*	0.053	0.053	0.052	0.045	0.047	0.047	0.013	0.032	0.032	0.03	0.029	0.028	0.014	0.014	*0.005*	0.019	0.026	0.03	0.023
Copper	0.0005 to 0.007	0.00287	*0.0025*	0.00341	0.00335	0.00246	0.00242	0.00185	0.00269	0.00308	0.0134	0.0143	0.0111	0.0112	0.0111	0.00611	0.00916	0.00646	0.00697	0.00885	0.0133	0.00821
Lead	5E-005 to 0.0025	*0.000025*	*0.00125*	*0.000025*	*0.000025*	*0.000025*	*0.000025*	*0.000025*	*0.000025*	0.000543	0.000132	0.000131	0.000074	0.000088	0.000071	*0.000025*	0.000121	*0.000025*	0.000053	0.000139	0.000215	0.000055
Mercury	1E-005 to 5E-005	0.000025	*0.00001*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000025*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	0.000025	0.000027	0.000023	0.000021	0.000029	0.000038	0.000027
Molybdenum	5E-005 to 0.005	0.0148	0.0435	0.111	0.0823	0.0763	0.0747	0.0718	0.0742	0.0029	0.0251	0.024	0.0253	0.0239	0.0238	0.00512	0.0041	0.00512	0.00689	0.00482	0.00475	0.00473
Selenium	0.0001 to 0.006	0.00148	*0.0025*	0.00041	0.00092	0.00075	0.00061	0.0006	0.00057	0.00031	0.0051	0.00477	0.00492	0.00443	0.00384	0.00012	0.00017	0.00021	0.00016	0.00018	0.00011	0.00014
ALS LAB ID		**L1437439**	**L623545**	**L1375698**	**L1435186**	**L1437439**	**L1439655**	**L1442672**	**L1446462**	**L1437642**	**L1435186**	**L1437439**	**L1439655**	**L1442672**	**L1447300**	**L1439467**	**L1441961**	**L1446462**	**L1465108**	**L1494491**	**L1500711**	**L1513418**

NOTES:
1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C4.1 FOR NOTES ON SHADING.

Site ID		AC02	JACL-D	S. CATCHMEN	S. CATCHMEN	S. CATCHMEN	S. CATCHMEN	KC03	KC03	KC03	KC03	KC03	KC03	AJWW-S	AJWW-S	AJWW-S	AJWW-S	AJWW-S	AJWW-S	AJWW-S	AJWW-S	AJWW-D	AJWW-D	AJWW-D
Analytes	**MDL**	**29-Apr-08**	**7-Sep-08**	**10-Oct-13**	**14-Apr-14**	**2-Jul-14**	**2-Sep-14**	**21-Mar-14**	**10-Apr-14**	**24-Apr-14**	**7-May-14**	**23-May-14**	**4-Jun-14**	**3-May-07**	**19-Jul-07**	**########**	**29-Apr-08**	**7-Jul-08**	**5-Sep-08**	**1-May-14**	**25-Sep-14**	**19-Jul-07**	**18-Sep-07**	**29-Apr-08**
Dissolved Anions																								
Chloride	0.5 to 1	26.7	62.5	27	25	34	26	17.1	16.1	17.8	19.1	17.2	21	35.7	35	33.6	35	35.5	34.5	36	33	35.8	38.4	33
Fluoride	0.02 to 0.4	0.17	0.198	*0.2*	*0.2*	0.088	0.088	0.3	0.3	0.26	0.27	0.29	0.26	0.4		0.22	*0.5*	0.27	*0.1*	*0.2*	0.209		0.24	1.3
Dissolved Metals																								
Arsenic	0.0001 to 0.0025	0.0028	0.0016	0.0148	0.00951	0.0118	0.0149	0.00676	0.00618	0.0054	0.00573	0.00547	0.00542	0.025	0.0226	0.0214	0.0264	0.0207	0.0204	0.0177	0.0164	0.02	0.0183	0.0212
Boron	0.01 to 0.1	*0.05*	*0.05*	0.594	0.368	0.482	0.557	0.104	0.105	0.1	0.116	0.133	0.119	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.065	0.073	*0.05*	*0.05*	*0.05*
Copper	0.0002 to 0.006	0.0026	*0.001*	*0.0002*	0.00051	0.001	*0.0002*	0.0068	0.0057	0.00606	0.00574	0.00537	0.0049	0.03	0.0311	0.028	0.035	0.031	0.032	0.0334	0.0338	0.0281	0.028	0.034
Lead	5E-005 to 0.0025	*0.0005*	*0.0005*	*0.00005*	*0.00005*	*0.00005*	*0.00005*	*0.000025*	*0.000025*	*0.000025*	*0.000025*	*0.000025*	*0.000025*	*0.0025*	*0.00125*	*0.0025*	*0.0025*	*0.0025*	*0.0025*	*0.000025*	*0.000025*	*0.00125*	*0.0025*	*0.0025*
Mercury	1E-005 to 5E-005	*0.00001*	*0.00001*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.00001*	*0.00001*	*0.00001*	*0.00001*	*0.00001*	*0.00001*	*0.000005*	*0.000005*	*0.00001*	*0.00001*	*0.00001*
Molybdenum	5E-005 to 0.005	0.0028	*0.001*	0.0777	0.0517	0.0593	0.0597	0.0138	0.0112	0.0131	0.0138	0.0136	0.012	3.41	3.28	3.23	4.09	3.21	3.48	4.56	4.15	3.3	3.29	3.4
Selenium	0.0001 to 0.006	*0.001*	0.0107	0.00087	0.00059	0.0008	0.00066	0.00767	0.00833	0.00563	0.00649	0.0058	0.00437	0.031	0.0293	0.029	0.042	0.029	0.032	0.0505	0.0485	0.0291	0.028	0.035
Total Metals																								
Aluminum	0.003 to 0.025	0.012	*0.005*	0.0315	0.0797	1.21	0.349	0.0044	0.0073	0.0047	0.0034	0.0043	0.0356	*0.025*	*0.0125*	*0.025*	*0.025*	*0.025*	*0.025*	*0.0015*	*0.0045*	*0.0125*	*0.025*	*0.025*
Arsenic	0.0001 to 0.0025	0.0028	0.0016	0.0151	0.00865	0.0264	0.0135	0.00612	0.00557	0.00512	0.00499	0.00533	0.00483	0.0237	0.0218	0.0209	0.0258	0.0231	0.0199	0.0174	0.0167	0.0192	0.0186	0.0211
Boron	0.01 to 0.1	*0.05*	*0.05*	0.6	0.354	0.505	0.557	0.104	0.11	0.1	0.099	0.129	0.122	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.07	0.082	*0.05*	*0.05*	*0.05*
Copper	0.0005 to 0.007	0.003	*0.001*	*0.0005*	0.0013	0.0053	0.0015	0.0074	0.00589	0.00652	0.00568	0.00546	0.0055	0.031	0.0309	0.028	0.036	0.031	0.031	0.0331	0.0358	0.0275	0.029	0.036
Lead	5E-005 to 0.0025	*0.0005*	*0.0005*	*0.00005*	*0.00005*	0.00039	*0.00005*	0.00012	0.000059	*0.000025*	*0.000025*	*0.000025*	*0.000025*	*0.0025*	*0.00125*	*0.0025*	*0.0025*	*0.0025*	*0.0025*	*0.000025*	*0.000025*	*0.00125*	*0.0025*	*0.0025*
Mercury	1E-005 to 5E-005	0.000041	*0.00001*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.00001*	*0.00001*	*0.00001*	*0.00001*	*0.00001*	*0.00001*	*0.000005*	*0.000005*	*0.00001*	*0.00001*	*0.00001*
Molybdenum	5E-005 to 0.005	0.0028	*0.001*	0.0842	0.0533	0.0818	0.0607	0.0141	0.0127	0.0143	0.0129	0.0138	0.0124	3.23	3.16	3.16	3.99	3.1	3.48	4.75	4.47	3.16	3.43	3.54
Selenium	0.0001 to 0.006	*0.001*	0.0171	0.00083	0.00058	0.0011	0.00065	0.00859	0.00687	0.00469	0.00538	0.00495	0.00366	0.027	0.0294	0.028	0.041	0.029	0.032	0.048	0.0502	0.0284	0.029	0.033
ALS LAB ID		**L624228**	**L679955**	**L1376790**	**L1443519**	**L1481215**	**L1511703**	**L1435186**	**L1442672**	**L1447300**	**L1452368**	**L1459728**	**L1465478**	**L502198**	**L532652**	**L556006**	**L624576**	**L653575**	**L679128**	**L1450350**	**L1523985**	**L532652**	**L556006**	**L624576**

NOTES:
1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C4.1 FOR NOTES ON SHADING.

Site ID		AJWW-D	AJWW-D	AJWW-D	AJWW-D	AJWE-S	AJWE-S	AJWE-S	AJWE-S	AJWE-S	AJWE-S	AJWE-S	AJWE-S	AJWE-S	AJWE-S	AJWE-S	AJWE-M	AJWE-D	AJWE-D	AJWE-D	AJWE-D	AJWE-D	AJWE-D
Analytes	**MDL**	**7-Jul-08**	**5-Sep-08**	**1-May-14**	**25-Sep-14**	**3-May-07**	**17-Jul-07**	**18-Sep-07**	**29-Apr-08**	**7-Jul-08**	**6-Sep-08**	**9-May-12**	**11-Jul-12**	**6-Nov-12**	**1-May-14**	**24-Sep-14**	**24-Sep-14**	**3-May-07**	**17-Jul-07**	**18-Sep-07**	**29-Apr-08**	**7-Jul-08**	**6-Sep-08**	**9-May-12**
Dissolved Anions																								
Chloride	0.5 to 1	36	39	38	32	25.3	*25*	24.6	*12.5*	24.6	30	25	30	29	20	26	26	26.6	*25*	25.3	*12.5*	24.1	34	30
Fluoride	0.02 to 0.4	0.38	*0.5*	*0.2*	0.206	0.38		0.21	1.4	0.154	*0.5*	*0.2*	*0.2*	*0.2*	*0.2*	0.184	0.185	0.37		0.22	1.2	0.144	*0.5*	*0.2*
Dissolved Metals																								
Arsenic	0.0001 to 0.0025	0.018	0.0193	0.0178	0.0154	0.0727	0.0614	0.0657	0.0763	0.0599	0.0613	0.0549	0.0547	0.0561	0.0381	0.0473	0.0468	0.0793	0.0829	0.0757	0.0714	0.0691	0.0725	0.0633
Boron	0.01 to 0.1	*0.05*	*0.05*	0.066	0.073	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.11	0.108	0.095	0.088	0.076	0.101	0.103	*0.05*	*0.05*	*0.05*	0.1	*0.05*	0.1	0.114
Copper	0.0002 to 0.006	0.031	0.0265	0.0384	0.0399	0.0213	0.0172	0.0163	0.0276	0.0193	0.0169	0.0197	0.0177	0.0178	0.0206	0.0162	0.0166	0.0292	0.0414	0.0365	*0.015*	0.0296	0.0364	0.0249
Lead	5E-005 to 0.0025	*0.0025*	*0.00125*	*0.00005*	*0.000025*	*0.00125*	*0.00125*	*0.00125*	*0.00125*	*0.00125*	*0.00125*	*0.000025*	*0.00005*	*0.000025*	*0.000025*	*0.000025*	*0.000025*	*0.00125*	*0.00125*	*0.00125*	*0.00125*	*0.00125*	*0.00125*	*0.00005*
Mercury	1E-005 to 5E-005	*0.00001*	*0.00001*	*0.000005*	*0.000005*	*0.00001*	*0.00001*	*0.00001*	*0.00001*	*0.00001*	*0.00001*		*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.00001*	*0.00001*	*0.00001*	*0.00001*	*0.00001*	*0.00001*	
Molybdenum	5E-005 to 0.005	3.15	3.37	4.84	4.11	2.21	2.03	2.26	2.47	1.93	1.99	2.16	2.33	2.17	1.98	2.2	2.26	2.25	2.24	2.17	2.18	1.95	1.99	2.35
Selenium	0.0001 to 0.006	0.028	0.0321	0.0522	0.0485	0.0165	0.0165	0.0177	0.0221	0.0159	0.0153	0.0174	0.0163	0.0178	0.0158	0.018	0.0182	0.0175	0.017	0.0164	0.0189	0.0155	0.0156	0.0195
Total Metals																								
Aluminum	0.003 to 0.025	*0.025*	*0.0125*	0.0088	*0.003*	*0.0125*	*0.0125*	*0.0125*	*0.0125*	*0.0125*	*0.0125*	0.007	*0.003*	0.0033	0.0089	*0.003*	*0.003*	*0.0125*	*0.0125*	*0.0125*	*0.0125*	*0.0125*	*0.0125*	0.0097
Arsenic	0.0001 to 0.0025	0.0176	0.0196	0.0177	0.0148	0.0715	0.0628	0.0654	0.0597	0.0588	0.0608	0.0545	0.0517	0.0567	0.0363	0.0482	0.0484	0.0745	0.0811	0.0758	0.0702	0.0726	0.0693	0.064
Boron	0.01 to 0.1	*0.05*	*0.05*	0.071	0.08	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.11	0.117	0.086	0.094	0.08	0.114	0.12	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.13
Copper	0.0005 to 0.007	0.032	0.0274	0.0438	0.0412	0.0218	0.0187	0.0173	0.0221	0.02	0.0172	0.0206	0.0178	0.0186	0.0216	0.0169	0.0179	0.0311	0.0407	0.0372	*0.015*	0.0313	0.0349	0.0262
Lead	5E-005 to 0.0025	*0.0025*	*0.00125*	*0.00005*	*0.000025*	*0.00125*	*0.00125*	*0.00125*	*0.00125*	*0.00125*	*0.00125*	*0.000025*	*0.00005*	*0.000025*	*0.000025*	*0.000025*	*0.000025*	0.0027	*0.00125*	*0.00125*	*0.00125*	*0.00125*	*0.00125*	*0.00005*
Mercury	1E-005 to 5E-005	*0.00001*	*0.00001*	*0.000005*	*0.000005*	*0.00001*	*0.00001*	*0.00001*	*0.00001*	*0.00001*	*0.00001*		*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.00001*	*0.00001*	*0.00001*	*0.00001*	*0.00001*	*0.00001*	
Molybdenum	5E-005 to 0.005	3.15	3.4	4.97	4.11	2.18	2.08	2.27	1.89	1.88	1.96	2.21	2.51	2.33	2	2.48	2.34	2.16	2.2	2.14	2.11	2.01	1.89	2.48
Selenium	0.0001 to 0.006	0.028	0.031	0.05	0.0477	0.0168	0.0167	0.0168	0.0165	0.0154	0.0154	0.0168	0.0149	0.018	0.0147	0.018	0.0183	0.0162	0.0165	0.016	0.0178	0.0176	0.0153	0.02
ALS LAB ID		**L653575**	**L679128**	**L1450350**	**L1523985**	**L502198**	**L532007**	**L556006**	**L624576**	**L653575**	**L679672**	**L1145681**	**L1177597**	**I1234688**	**L1450350**	**L1523985**	**L1523985**	**L502198**	**L532007**	**L556006**	**L624576**	**L653575**	**L679672**	**L1145681**

NOTES:
1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C4.1 FOR NOTES ON SHADING.

Site ID		AJWE-D	AJWE-D	AJWE-D	AJWE-D	NSP	NSP	NSP	NSP	WR-SEEP	WR-SEEP	WR-SEEP	WR-SEEP	WR-SEEP	WR-SEEP	WR-SEEP	WR-SEEP	WR-SEEP	WR-SEEP	WR-SEEP	WR-SEEP	WR-SEEP	WR-SEEP	CC02	CC02
Analytes	**MDL**	**11-Jul-12**	**6-Nov-12**	**1-May-14**	########	**31-Aug-10**	**28-Sep-11**	**5-Jun-13**	**9-Oct-13**	**28-Mar-11**	**10-Apr-12**	**25-Apr-12**	**24-May-12**	**11-Jul-12**	**7-Aug-12**	**7-May-13**	**5-Jun-13**	**3-Jul-13**	**7-Nov-13**	**10-Apr-14**	**8-May-14**	**4-Jun-14**	**3-Jul-14**	**28-Jul-14**	**12-May-11**	**26-Apr-12**
Dissolved Anions																										
Chloride	0.5 to 1	31	30	31	27	43	48	50	61		9.9	13.1	17	22	8.4	165	202	219	174	29.9	43.8	62.1	102	155	1.42	1.32
Fluoride	0.02 to 0.4	*0.2*	*0.2*	*0.2*	0.177	*0.5*	*0.5*	1.2	1		*0.1*	*0.1*	*0.2*	*0.2*	*0.1*	*0.2*	0.42	*0.2*	*0.2*	*0.1*	*0.1*	0.18	0.21	0.217	0.072	0.079
Dissolved Metals																										
Arsenic	0.0001 to 0.0025	0.0612	0.0572	0.0533	0.0512	0.0103	0.0106	0.0115	0.0186	*0.0005*	0.00285	0.00369	0.00483		0.00325	0.00178	0.00172	0.00236	0.00295	0.00112	0.00127	0.00151	0.0033	0.00334	0.0007	0.00052
Boron	0.01 to 0.1	0.097	0.091	0.098	0.105	*0.05*	*0.05*	*0.025*	*0.025*	0.17	0.155	0.214	0.35		0.223	0.317	0.338	0.375	0.165	0.082	0.153	0.183	0.313	0.302	*0.05*	*0.005*
Copper	0.0002 to 0.006	0.03	0.0175	0.0203	0.0182	*0.005*	*0.005*	0.0013	*0.0005*	0.0086	0.0135	0.0189	0.0127		0.0137	0.0141	0.0124	0.0175	0.0637	0.0126	0.0133	0.0126	0.0194	0.0176	0.0045	0.0042
Lead	5E-005 to 0.0025	*0.00005*	*0.000025*	*0.000025*	*0.000025*	*0.0025*	*0.0025*	*0.000125*	*0.000125*	*0.0005*	*0.000025*	*0.000025*	*0.000025*		*0.000025*	*0.000025*	*0.00005*	*0.00005*	*0.00005*	*0.000025*	*0.000025*	*0.000025*	*0.000025*	*0.000025*	*0.00025*	*0.000025*
Mercury	1E-005 to 5E-005	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*		*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*
Molybdenum	5E-005 to 0.005	2.34	2.19	2.67	2.2	0.021	0.025	0.017	0.0209	0.14	0.981	1.35	2.03		0.952	0.195	0.166	0.12	0.525	0.0554	0.102	0.13	0.131	0.114	0.0078	0.00803
Selenium	0.0001 to 0.006	0.0162	0.0182	0.0205	0.0184	*0.005*	*0.005*	0.00106	0.00106	*0.001*	0.0272	0.0264	0.0149		0.0194	0.00231	0.00152	0.00145	0.0381	0.00197	0.0023	0.00158	0.0015	0.00154	*0.0005*	0.00035
Total Metals																										
Aluminum	0.003 to 0.025	0.0063	0.0699	0.0076	*0.0015*	0.067	*0.025*	0.08	0.218	*0.005*	0.121	0.0355	0.0402	0.268	0.0479	0.471	0.0408	0.0167	*0.003*	0.171	0.0981	0.0458	0.0465	0.0913	11.5	8.32
Arsenic	0.0001 to 0.0025	0.0641	0.0572	0.0518	0.0525	0.0107	0.0103	0.0118	0.0175	0.001	0.00281	0.00364	0.00481	0.00813	0.0034	0.00203	0.00176	0.00223	0.00249	0.0012	0.00137	0.00157	0.0033	0.00343	0.00409	0.00304
Boron	0.01 to 0.1	0.105	0.095	0.104	0.126	*0.05*	*0.05*	*0.025*	*0.025*	0.18	0.166	0.214	0.369	0.279	0.229	0.31	0.331	0.403	0.147	0.086	0.169	0.191	0.291	0.308	*0.05*	0.017
Copper	0.0005 to 0.007	0.0327	0.023	0.0221	0.0201	*0.005*	*0.005*	*0.00125*	*0.00125*	0.0123	0.0164	0.0209	0.0145	0.0312	0.0161	0.0202	0.0137	0.0182	0.0503	0.0152	0.0152	0.0136	0.0203	0.0195	0.0658	0.0528
Lead	5E-005 to 0.0025	*0.00005*	0.000057	*0.000025*	*0.000025*	*0.0025*	*0.0025*	*0.000125*	*0.000125*	*0.0005*	*0.000025*	*0.000025*	*0.000025*	*0.00005*	*0.000025*	0.000107	*0.00005*	*0.00005*	*0.00005*	0.000056	*0.000025*	*0.000025*	*0.000025*	*0.000025*	0.00183	0.00142
Mercury	1E-005 to 5E-005	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	0.000015	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	0.000033	0.000035
Molybdenum	5E-005 to 0.005	2.45	2.32	2.73	2.47	0.022	0.025	0.0177	0.0212	0.153	1.08	1.33	2.01	1.49	0.936	0.194	0.167	0.119	0.434	0.057	0.102	0.134	0.116	0.112	0.0084	0.0106
Selenium	0.0001 to 0.006	0.0172	0.0183	0.0191	0.0191	*0.005*	*0.005*	0.001	0.00097	*0.001*	0.0245	0.0256	0.0146	0.0181	0.0186	0.00214	0.00153	0.00152	0.0327	0.00193	0.00192	0.00143	0.00138	0.00164	*0.0005*	0.0006
ALS LAB ID		**L1177597**	**l1234688**	**L1450350**	**L1523985**	**L927439**	**L1066047**	**L1312719**	**L1375698**	**L990458**	**L1133342**	**L1140194**	**L1152500**	**L1177597**	**L1190914**	**L1298960**	**L1312719**	**L1327102**	**L1389979**	**L1442672**	**L1453031**	**L1465478**	**L1481215**	**L1494516**	**L1005044**	**L1140194**

NOTES:
1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C4.1 FOR NOTES ON SHADING.

Site ID		CC02	GOOSE LAKE	GOOSE LAKE	GOOSE LAKE	CC08	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	PP01	PP01	PP01	PP01	PP01	PP01
Analytes	**MDL**	**6-May-13**	**11-Aug-14**	**3-Sep-14**	**18-Sep-14**	**28-Apr-08**	**05/Jun/2010**	**30-Aug-10**	**14-Apr-11**	**1-Jun-11**	**29-Jun-11**	**28-Jul-11**	**31-Aug-11**	**27-Sep-11**	**5-Jun-13**	**2-May-07**	**18-Jul-07**	**17-Sep-07**	**29-Apr-08**	**7-Jul-08**	**6-Sep-08**
Dissolved Anions																					
Chloride	0.5 to 1	1.24	169	148	162	0.95	345	376	285	352	393	431	420	382	502	1500	2040	2300	1970	2450	2850
Fluoride	0.02 to 0.4	0.101	*0.5*	*0.015*	*0.015*	0.094	*0.2*	*0.5*	*0.5*	*0.5*	1	*0.5*	*0.5*	*1*	1.1	6.5		*5*	2.1	*1*	15
Dissolved Metals																					
Arsenic	0.0001 to 0.0025	0.00061	0.0283	0.0302	0.0325	*0.00025*	0.0164	0.021	0.013	0.016	*0.01*	0.021	0.022	0.022	0.0173	*0.0125*	*0.0125*	*0.025*	*0.025*	*0.025*	*0.025*
Boron	0.01 to 0.1	*0.005*	0.32	0.314	0.326	*0.05*	1.58	1.79	1.25	1.66	1.8	1.89	1.96	2.12	2.15	1.43	2.2	2.5	2.1	2.7	3
Copper	0.0002 to 0.006	0.00391	*0.001*	*0.0005*	0.0014	0.0016	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	0.0025	*0.025*	*0.025*	*0.05*	*0.05*	*0.05*	*0.05*
Lead	5E-005 to 0.0025	*0.000025*	*0.00025*	*0.000125*	*0.000125*	*0.00025*	*0.0025*	*0.005*	*0.005*	*0.005*	*0.005*	*0.005*	*0.005*	*0.005*	*0.00025*	*0.0125*	*0.0125*	*0.025*	*0.025*	*0.025*	*0.025*
Mercury	1E-005 to 5E-005	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.00001*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.00001*	*0.00001*	*0.00001*	*0.00001*	*0.00001*	*0.00001*
Molybdenum	5E-005 to 0.005	0.00982	0.00495	0.00456	0.00439	0.0103	0.03	0.029	0.02	0.027	0.029	0.03	0.032	0.032	0.0347	*0.025*	*0.025*	*0.05*	*0.05*	*0.05*	*0.05*
Selenium	0.0001 to 0.006	0.00024	*0.0005*	*0.00025*	*0.00025*	*0.0005*	*0.005*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.0005*	*0.025*	*0.025*	*0.05*	*0.05*	*0.05*	*0.05*
Total Metals																					
Aluminum	0.003 to 0.025	7.23	*0.015*	0.031	*0.0075*	0.0737	*0.025*	*0.05*	0.17	*0.05*	*0.05*	*0.05*	0.42	*0.05*	0.065	*0.125*	*0.125*	*0.25*	*0.25*	0.7	*0.25*
Arsenic	0.0001 to 0.0025	0.00301	0.0271	0.0294	0.0309	*0.00025*	0.017	0.021	0.013	0.017	*0.015*	0.022	0.021	0.021	0.0173	*0.0125*	*0.0125*	*0.025*	*0.025*	*0.025*	*0.025*
Boron	0.01 to 0.1	0.011	0.3	0.298	0.341	*0.05*	1.59	1.74	1.29	1.76	1.89	2.03	2	2.05	2.16	1.46	2.1	2.5	2.1	2.7	2.9
Copper	0.0005 to 0.007	0.0483	*0.0025*	*0.00125*	*0.00125*	0.0027	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.0025*	*0.025*	*0.025*	*0.05*	*0.05*	*0.05*	*0.05*
Lead	5E-005 to 0.0025	0.00132	*0.00025*	*0.000125*	*0.000125*	*0.00025*	*0.0025*	*0.005*	*0.005*	*0.005*	*0.005*	*0.005*	*0.005*	*0.005*	*0.00025*	*0.0125*	*0.0125*	*0.025*	*0.025*	*0.025*	*0.025*
Mercury	1E-005 to 5E-005	0.000029	*0.000005*	*0.000005*	*0.000005*	0.000494	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.000005*	*0.00001*	*0.00001*	*0.00001*	*0.00001*	*0.00001*	*0.00001*
Molybdenum	5E-005 to 0.005	0.00835	0.00464	0.00432	0.00438	0.0099	0.032	0.027	*0.01*	0.029	0.03	0.031	0.033	0.031	0.036	*0.025*	*0.025*	*0.05*	*0.05*	*0.05*	*0.05*
Selenium	0.0001 to 0.006	0.00042	*0.0005*	*0.00025*	*0.00025*	*0.0005*	*0.005*	*0.01*	*0.01*	*0.01*	*0.015*	*0.01*	*0.01*	*0.01*	*0.0005*	*0.025*	*0.025*	*0.05*	*0.05*	*0.05*	*0.05*
ALS LAB ID		**L1298960**	**L1500711**	**L1513418**	**L1520952**	**L623545**	**L894378**	**L927439**	**L995583**	**L1012627**	**L1025917**	**L1038168**	**L1052924**	**L1065234**	**L1312719**	**L501627**	**L532402**	**L555226**	**L624228**	**L652819**	**L679672**

NOTES:
1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C4.1 FOR NOTES ON SHADING.

Site ID		WALL	WALL	WALL	WALL
Analytes	**MDL**	**14-Apr-11**	**3-Apr-13**	**5-Jun-13**	**7-Nov-13**
Dissolved Anions					
Chloride	0.5 to 1	1850	2490	2900	725
Fluoride	0.02 to 0.4	0.061	*0.15*	*0.15*	*0.5*
Dissolved Metals					
Arsenic	0.0001 to 0.0025	*0.025*	0.0203	0.034	0.0071
Boron	0.01 to 0.1	2.5	3.73	4.7	0.54
Copper	0.0002 to 0.006	*0.075*	0.017	*0.01*	*0.001*
Lead	5E-005 to 0.0025	*0.025*	*0.00125*	*0.0025*	*0.00025*
Mercury	1E-005 to 5E-005	*0.000005*	*0.000005*	*0.000005*	*0.000005*
Molybdenum	5E-005 to 0.005	*0.05*	0.0672	0.027	0.00288
Selenium	0.0001 to 0.006	*0.05*	0.01	*0.005*	*0.0005*
Total Metals					
Aluminum	0.003 to 0.025	*0.25*	*0.075*	*0.15*	0.074
Arsenic	0.0001 to 0.0025	*0.025*	0.0211	0.034	0.0072
Boron	0.01 to 0.1	2.6	3.52	4.2	0.53
Copper	0.0005 to 0.007	*0.075*	*0.0125*	*0.025*	*0.0025*
Lead	5E-005 to 0.0025	*0.025*	*0.00125*	*0.0025*	*0.00025*
Mercury	1E-005 to 5E-005	*0.000005*	*0.000005*	*0.000005*	*0.000005*
Molybdenum	5E-005 to 0.005	*0.05*	0.0767	0.0241	0.00333
Selenium	0.0001 to 0.006	*0.05*	*0.0025*	*0.005*	*0.0005*
ALS LAB ID		**L995583**	**L1286585**	**L1312719**	**L1389979**

NOTES:
1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C4.1 FOR NOTES ON SHADING.

APPENDIX C5

RECREATION GUIDELINES EXCEEDANCES

(Pages C5-1 to C5-36)

TABLE C5.1 - RECREATIONAL GUIDELINES

Analytes	BCWQG-Rec[2]	HC-Rec[6]
Physical Tests		
pH		5 to 9
Color (TCU)	15	
Conductivity (µS/cm)		
Total Dissolved Solids		
Turbidity (NTU)		50[8]
Dissolved Anions		
Chlorate		
Chloride		
Fluoride		
Sulphate		
Nutrients		
Nitrate (as N)		
Dissolved Nitrate+Nitrite	10	
Nitrite (as N)	1	
Metals		
Aluminum	0.2[6]	
Arsenic		
Beryllium		
Boron		
Cadmium		
Calcium		
Chromium		
Chromium III		
Chromium VI		
Cobalt		
Copper	1[7]	
Lead	0.05[7]	
Lithium		
Manganese		
Mercury	0.001	
Molybdenum		
Nickel		
Selenium		
Uranium		
Vanadium		
Zinc	5[7]	

\\knightpiesold.local\VA-Prj$\1\01\00246\31\A\Report\3 - Baseline Water Quality - GW SW\Rev0\Appendix\Appendix C - SWQ Data Tables Rev0\[C5 - Recreation Guideline Exceedances - FINAL.xlsx]C5.1 - RECREATIONAL GUIDELINES

NOTES:

1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. BCWQG-Rec: BC WATER QUALITY GUIDELINE FOR RECREATIONAL WATER USE.
3. HC-Rec: HEALTH CANADA GUIDELINE FOR RECREATIONAL WATER USE.
4. THIS SHADING INDICATES THE VALUE EXCEEDS THE LIMITS OF BCWQG-Rec.
5. THIS SHADING INDICATES THE VALUE EXCEEDS THE LIMITS OF HC-Rec.
6. GUIDELINE APPLIES TO THE DISSOLVED CONCENTRATION ONLY.
7. GUIDELINE APPLIES TO THE TOTAL CONCENTRATION ONLY.
8. GUIDELINE IS BASED ON AESTHETIC OBJECTIVES.
9. DETECTION LIMIT VALUES ARE DISPLAYED WITH LESS THAN SYMBOL (<).

TABLE C5.2 - GUIDELINE EXCEEDANCES

Site ID		PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02
Analytes	**MDL**	**7-Jul-08**	**29-Mar-11**	**12-May-11**	**30-May-11**	**28-Jun-11**	**28-Jul-11**	**30-Aug-11**	**6-Mar-12**	**16-May-12**	**24-May-12**
In Situ Parameters											
pH (unitless)	...	8.08	7.89	7.69	7.14	7.88	7.91	8.05	8.05	8.24	7.93
Turbidity NTU	...				37.9	45	15.1		4.8	73.7	4.8
Physical Tests											
Color TCU	5	22	15.1	22.3	23.2	31.7	26.3	36.8	63.6	43.7	17.6
pH (unitless)	0.01 to 0.1	8.33	8.12		8.18	8.33	8.21	8.4	7.94	8.4	8.32
Turbidity NTU	0.1	5.64	1.19	2.81		5.65	14.7	15.4	5.52	75.7	4
Nutrients											
Nitrite (as N)	0.001 to 0.02	0.0011	<.01	<.02	<.02	<.01	<.01	<.01	<.01	<.01	<.01
Nitrogen (Dissolved)	0.05 to 0.1			1.25	0.79	0.97	0.75	1.15	1.26	1.09	0.61
Dissolved Metals											
Aluminum	0.001 to 0.025	<.01	<.01	<.01	<.01	<.005	<.005	<.005	0.0032	<.003	0.001
Copper	0.0002 to 0.006	0.0028	0.0027	<.006	0.0028	0.0024	0.0017	0.0027	0.00397	0.00275	0.00236
Lead	5E-005 to 0.0025	<.001	<.001	<.001	<.001	<.0005	<.0005	<.0005	<.00005	<.00005	<.00005
Mercury	1E-005 to 5E-005	<.00002	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.001 to 0.006	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.003	<.003	0.0032
Total Metals											
Aluminum	0.003 to 0.025	0.174	0.044	0.146	2.04	0.277	0.576	1.05	0.288	3.45	0.196
Copper	0.0005 to 0.007	0.0045	0.0036	<.007	0.0119	0.0042	0.0047	0.0072	0.00579	0.0204	0.00359
Lead	5E-005 to 0.0025	<.001	<.001	<.001	<.001	<.0005	<.0005	<.0005	0.00009	0.00128	0.000086
Mercury	1E-005 to 5E-005	<.00002	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.003 to 0.006	<.005	<.005	<.005	0.0095	<.005	<.005	<.005	0.0048	0.0182	<.003
ALS LAB ID		**L652819**	**L990459**	**L1005044**	**L1011001**	**L1025075**	**L1038168**	**L1052387**	**L1122039**	**L1148880**	**L1152500**

NOTES:

1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C5.1 FOR NOTES ON SHADING.

TABLE C5.2 - GUIDELINE EXCEEDANCES
PAGE 2 OF 35

Site ID		PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02	PC02
Analytes	**MDL**	**10-Jul-12**	**7-Aug-12**	**7-May-13**	**5-Jun-13**	**2-Jul-13**	**7-Aug-13**	**4-Sep-13**	**9-Oct-13**	**12-Mar-14**	**23-Apr-14**
In Situ Parameters											
pH (unitless)	...	8.06	8.05	8.26	8.22	8.25	8.15	7.6	7.58	7.96	8.12
Turbidity NTU	...	7.1	12.7	12.1	7.8	7	6.4		2.5		
Physical Tests											
Color TCU	5	27.5	36.1	27.6	27	35.6	33.5	9.7	8.6		
pH (unitless)	0.01 to 0.1	8.49	8.35	8.49	8.42	8.43	8.37	8.14	8.18	7.93	8.32
Turbidity NTU	0.1	5.71	14.5	13.3	7.8	3.5	2.05	9.36	6.09	29	2.38
Nutrients											
Nitrite (as N)	0.001 to 0.02	<.01	<.01	<.01	<.01	<.01	<.01	0.021	<.02	0.0097	<.02
Nitrogen (Dissolved)	0.05 to 0.1	0.83	0.82				0.773	0.92			
Dissolved Metals											
Aluminum	0.001 to 0.025	0.0019	0.0018	0.0015	0.0018	0.0044	0.002	0.0013	0.001	0.004	<.001
Copper	0.0002 to 0.006	0.0022	0.00199	0.00254	0.00227	0.00487	0.0021	0.00152	0.00128	0.00374	0.00259
Lead	5E-005 to 0.0025	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.001 to 0.006	0.001	0.0028	0.0022	0.001	0.0037	0.0012	<.001	<.001	0.0017	0.0019
Total Metals											
Aluminum	0.003 to 0.025	0.302	0.534	0.684	0.335	0.501	0.289	0.605	0.544	1.36	0.215
Copper	0.0005 to 0.007	0.00406	0.00496	0.00647	0.00412	0.00501	0.00374	0.00702	0.00527	0.0111	0.0039
Lead	5E-005 to 0.0025	0.00011	0.000196	0.000241	0.000131	0.000178	0.000128	0.000203	0.000165	0.000483	0.000084
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.003 to 0.006	0.0036	0.0038	0.0046	0.003	0.0042	0.0032	0.0031	<.003	0.0074	<.003
ALS LAB ID		**L1176520**	**L1190914**	**L1298960**	**L1312719**	**L1326032**	**L1344180**	**L1358222**	**L1375698**	**L1432163**	**L1446462**

NOTES:
1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C5.1 FOR NOTES ON SHADING.

TABLE C5.2 - GUIDELINE EXCEEDANCES

Site ID		PC02	PC02	PC02	PC02	PC02	PC02	PC02WH	PC02.3	PC02.3	PC02.3
Analytes	**MDL**	**06/May/2014**	**21-May-14**	**3-Jun-14**	**18-Jun-14**	**16-Jul-14**	**12-Aug-14**	**12-Aug-14**	**4-Jun-14**	**16-Jul-14**	**12-Aug-14**
In Situ Parameters											
pH (unitless)	...	8.33	8.35	8.31	8.33	8.53	8.33		8.41	8.61	8.24
Turbidity NTU	...										
Physical Tests											
Color TCU	5										
pH (unitless)	0.01 to 0.1	8.25	8.36	8.46	8.4	8.48	8.45	7.94	8.48	8.54	8.41
Turbidity NTU	0.1	20.4	7.97	4.5	1.23	2.55	10	83	4.7	3.29	5.53
Nutrients											
Nitrite (as N)	0.001 to 0.02	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.005	<.01	<.01
Nitrogen (Dissolved)	0.05 to 0.1										
Dissolved Metals											
Aluminum	0.001 to 0.025	0.0017	0.0016	0.0015	0.0016	0.0026	0.0019	0.004	0.0018	0.0026	0.003
Copper	0.0002 to 0.006	0.00221	0.00269	0.00261	0.00209	0.00235	0.00224	0.00239	0.00234	0.00241	0.00221
Lead	5E-005 to 0.0025	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.001 to 0.006	0.0011	0.0014	0.0018	0.0014	<.001	0.0012	0.0034	<.001	<.001	<.001
Total Metals											
Aluminum	0.003 to 0.025	1.63	0.493	0.262	0.203	0.216	0.673	0.0645	0.307	0.225	0.329
Copper	0.0005 to 0.007	0.00992	0.00511	0.00414	0.00323	0.00369	0.00556	0.00917	0.00434	0.00401	0.00585
Lead	5E-005 to 0.0025	0.000611	0.000182	0.000116	0.00007	0.000085	0.00025	0.000737	0.000097	0.000066	0.000102
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.003 to 0.006	0.0077	0.0035	<.003	<.003	<.003	0.0051	0.0123	<.003	<.003	<.003
ALS LAB ID		**L1451608**	**L1458340**	**L1465108**	**L1473827**	**L1488886**	**L1502292**	**L1502292**	**L1465478**	**L1488886**	**L1502292**

NOTES:
1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C5.1 FOR NOTES ON SHADING.

TABLE C5.2 - GUIDELINE EXCEEDANCES
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Site ID		PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5
Analytes	**MDL**	**14-Apr-11**	**28-Jun-11**	**30-Aug-11**	**28-Sep-11**	**25-Oct-11**	**5-Dec-11**	**9-Jan-12**	**6-Mar-12**	**10-Apr-12**	**25-Apr-12**
In Situ Parameters											
pH (unitless)	...	7.58	7.82	7.75	7.78	7.77	7.8	7.76	7.71	7.69	7.66
Turbidity NTU	...		-0.7	3.2	10.2	12.6	5.8	5.5	13.6		9.5
Physical Tests											
Color TCU	5	31.4	37.9	43.1	42.6	38.1	32.2	23.7	100	21.4	32.9
pH (unitless)	0.01 to 0.1	8.31	8.27	8.31	8.24	8.27	8.39	8.23	8	8.41	8.32
Turbidity NTU	0.1	2.51	1.51	2.25		13.1	4.18	7.22	12.2	3.66	5.41
Nutrients											
Nitrite (as N)	0.001 to 0.02	<.01	<.005	<.01	<.01	<.01	0.013	0.012	0.0104	<.01	0.01
Nitrogen (Dissolved)	0.05 to 0.1		1.03	1.21	0.97	0.7		0.66	1.58	0.64	0.84
Dissolved Metals											
Aluminum	0.001 to 0.025	<.005	<.005	<.005	<.005	<.003	<.003	<.003	0.0092	<.003	<.003
Copper	0.0002 to 0.006	0.0016	0.0021	0.0015	0.0013	0.00116	0.00091	0.00083	0.00489	0.00091	0.00154
Lead	5E-005 to 0.0025	<.0005	<.0005	<.0005	<.0005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.001 to 0.006	<.005	<.005	<.005	<.005	0.0073	<.003	<.003	<.003	<.003	0.0035
Total Metals											
Aluminum	0.003 to 0.025	0.0672	0.059	0.107	0.512	0.5	0.117	0.169	0.512	0.149	0.303
Copper	0.0005 to 0.007	0.0022	0.0027	0.0023	0.0047	0.00468	0.00186	0.0019	0.0084	0.00209	0.00382
Lead	5E-005 to 0.0025	<.0005	<.0005	<.0005	<.0005	0.000151	<.00005	0.00006	0.00015	<.00005	0.000086
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.003 to 0.006	<.005	<.005	0.0056	<.005	0.0055	0.0065	<.003	0.0049	<.003	<.003
ALS LAB ID		**L995583**	**L1025075**	**L1052387**	**L1066047**	**L1076994**	**L1092368**	**L1102695**	**L1122039**	**L1133342**	**L1140194**

NOTES:
1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C5.1 FOR NOTES ON SHADING.

TABLE C5.2 - GUIDELINE EXCEEDANCES
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Site ID		PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5
Analytes	**MDL**	**2-May-12**	**9-May-12**	**16-May-12**	**24-May-12**	**10-Jul-12**	**7-Aug-12**	**5-Sep-12**	**4-Dec-12**	**8-Jan-13**	**5-Feb-13**
In Situ Parameters											
pH (unitless)	...	7.99	7.57	8.08	8.13	8.01	7.74	7.92	7.93	8.25	7.84
Turbidity NTU	...	3.8	6	3.1	1.8	1.6	2	4.4	1.3	2.1	1.8
Physical Tests											
Color TCU	5	35.3	36.5	48.5	35.7	41.7	44.6	42	24.7	20.6	19.6
pH (unitless)	0.01 to 0.1	8.23	8.34	8.38	8.37	8.26	8.25	8.44	8.32	8.21	8.16
Turbidity NTU	0.1	12.1	5.16	2.71	2.41	1.84	1.65	3.37	2.3	2.62	3.64
Nutrients											
Nitrite (as N)	0.001 to 0.02	<.01	<.01	<.01	<.01	<.01	<.01	<.01	0.025	0.018	<.01
Nitrogen (Dissolved)	0.05 to 0.1	0.83	0.82	1.11	0.73	1.08	0.89	0.94	0.902	0.836	0.89
Dissolved Metals											
Aluminum	0.001 to 0.025	<.003	<.003	<.003	0.0016	0.0018	0.0018	0.0024	0.002	0.0018	0.0017
Copper	0.0002 to 0.006	0.00186	0.00164	0.00187	0.00195	0.00141	0.00104	0.00066	0.00124	0.00089	0.00082
Lead	5E-005 to 0.0025	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005
Mercury	1E-005 to 5E-005	<.00001		<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.001 to 0.006	<.003	<.003	<.003	0.0037	0.0095	0.0031	0.0016	0.0011	0.0015	0.0063
Total Metals											
Aluminum	0.003 to 0.025	0.126	0.209	0.128	0.0754	0.0637	0.0661	0.151	0.07	0.0421	0.0398
Copper	0.0005 to 0.007	0.00364	0.00315	0.00328	0.00264	0.00216	0.00173	0.00229	0.00392	0.00187	0.00183
Lead	5E-005 to 0.0025	<.00005	0.000076	<.00005	<.00005	<.00005	<.00005	0.000058	<.00005	<.00005	<.00005
Mercury	1E-005 to 5E-005	<.00001		<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.003 to 0.006	0.0032	0.0032	0.0033	0.0039	<.003	<.003	<.003	<.003	<.003	<.003
ALS LAB ID		**L1142492**	**L1145681**	**L1148880**	**L1152500**	**L1176520**	**L1190914**	**L1205273**	**L1245799**	**L1256678**	**l1265809**

NOTES:
1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C5.1 FOR NOTES ON SHADING.

TABLE C5.2 - GUIDELINE EXCEEDANCES
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Site ID		PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5	PC02.5
Analytes	**MDL**	**6-Mar-13**	**2-Apr-13**	**7-May-13**	**5-Jun-13**	**2-Jul-13**	**7-Aug-13**	**4-Sep-13**	**9-Oct-13**	**6-Nov-13**	**4-Dec-13**
In Situ Parameters											
pH (unitless)	...	7.88	8.1	8.01	7.82	8.13	7.73	7.87	7.89	8.06	7.89
Turbidity NTU	...	3.2	3.2	1.1	1.2	0	2.3		6	6	1.9
Physical Tests											
Color TCU	5	26.5	19.8	27.3	27.9	35.8	38.7	40.9	32.6	25.9	21.7
pH (unitless)	0.01 to 0.1	8.35	8.18	8.4	8.3	8.41	8.22	8.28	8.31	8.32	8.09
Turbidity NTU	0.1	1.67	3.64	2.46	1.25	0.71	1.11	11.8	10.4	6.29	2.18
Nutrients											
Nitrite (as N)	0.001 to 0.02	<.01	0.012	<.01	<.01	<.01	<.01	0.018	<.01	0.014	<.01
Nitrogen (Dissolved)	0.05 to 0.1	0.74	0.65				0.936	2.39			
Dissolved Metals											
Aluminum	0.001 to 0.025	0.0013	0.0016	0.0016	0.0013	0.0019	0.0026	0.0026	0.0025	0.0018	0.0119
Copper	0.0002 to 0.006	0.00131	0.00131	0.0019	0.00183	0.00195	0.00111	0.00101	0.00082	0.00098	0.00149
Lead	5E-005 to 0.0025	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.001 to 0.006	0.0019	0.001	0.0019	0.0019	0.002	0.0017	<.001	<.001	<.001	<.001
Total Metals											
Aluminum	0.003 to 0.025	0.0665	0.114	0.0901	0.0409	0.0762	0.0858	0.466	0.396	0.11	0.0574
Copper	0.0005 to 0.007	0.00201	0.00259	0.00295	0.00246	0.0026	0.00201	0.00437	0.00359	0.00196	0.002
Lead	5E-005 to 0.0025	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	0.000141	0.000116	0.000052	<.00005
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.003 to 0.006	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003
ALS LAB ID		**L1276517**	**L1285503**	**L1298960**	**L1312719**	**L1326032**	**L1344180**	**L1358222**	**L1375698**	**L1388680**	**L1399806**

NOTES:
1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C5.1 FOR NOTES ON SHADING.

TABLE C5.2 - GUIDELINE EXCEEDANCES
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Site ID		PC02.5	PC02.5	PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03
Analytes	**MDL**	**13-Mar-14**	**17-Sep-14**	**2-May-07**	**18-Jul-07**	**28-Apr-08**	**7-Jul-08**	**4-Sep-08**	**4-Jun-10**	**29-Mar-11**	**14-Apr-11**	**21-Apr-11**	**28-Apr-11**
In Situ Parameters													
pH (unitless)	...	7.76	7.9	8.09	7.59	8.32	8.11	7.8	8.27	7.71	7.79	8.09	7.92
Turbidity NTU	...												
Physical Tests													
Color TCU	5			21.3	35.2	27.1	44.2	37.3	30.8	25.6	22.2	22.7	27.5
pH (unitless)	0.01 to 0.1	7.93	8.42	8.25	8.29	8.34	8.37	8.28	8.42	7.94	8.22	8.27	8.23
Turbidity NTU	0.1	12.7	4.38			1.43	0.9	3.54	0.75	1.82	1.9	5.74	3.54
Nutrients													
Nitrite (as N)	0.001 to 0.02	0.0102	0.063	<.001	<.001	0.157	<.001	0.0293	<.01	<.01	<.01	<.01	<.01
Nitrogen (Dissolved)	0.05 to 0.1												1.12
Dissolved Metals													
Aluminum	0.001 to 0.025	0.0043	0.0022	<.005	<.01	<.025	<.01	<.01	<.005	<.005	<.005	<.005	<.005
Copper	0.0002 to 0.006	0.00539	0.00129	0.0022	<.002	<.005	<.002	<.002	0.0016	<.001	<.001	0.001	0.001
Lead	5E-005 to 0.0025	<.00005	<.00005	<.0005	<.001	<.0025	<.001	<.001	<.0005	<.0005	<.0005	<.0005	<.0005
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00002	<.00002	<.00002	<.00002	<.00002	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.001 to 0.006	0.0022	0.0028	<.005	<.01	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
Total Metals													
Aluminum	0.003 to 0.025	0.465	0.274	0.014	0.012	<.025	0.012	0.072	0.0102	0.034	0.0449	0.161	0.209
Copper	0.0005 to 0.007	0.0106	0.00371	0.0025	<.002	<.005	<.002	0.0022	0.0018	0.0016	0.0013	0.0026	0.0029
Lead	5E-005 to 0.0025	0.000133	0.000087	<.0005	<.001	<.0025	<.001	<.001	<.0005	<.0005	<.0005	<.0005	<.0005
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00002	<.00002	<.00002	<.00002	<.00002	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.003 to 0.006	<.003	<.003	<.005	<.01	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
ALS LAB ID		**L1432163**	**L1519657**	**L501627**	**L532402**	**L623545**	**L652819**	**L678833**	**L894162**	**L990459**	**L995583**	**L997645**	**L999654**

NOTES:
1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C5.1 FOR NOTES ON SHADING.

TABLE C5.2 - GUIDELINE EXCEEDANCES
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Site ID		PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03
Analytes	**MDL**	**5-May-11**	**12-May-11**	**30-May-11**	**28-Jun-11**	**28-Jul-11**	**30-Aug-11**	**28-Sep-11**	**25-Oct-11**	**5-Dec-11**	**6-Mar-12**	**10-Apr-12**	**25-Apr-12**	**2-May-12**
In Situ Parameters														
pH (unitless)	...	7.79	7.77	8.07	8.17	7.77	7.84	7.97	8.45	7.57	7.66	8.14	8.18	8.32
Turbidity NTU	...			0.7		0.8	1.3	2.4		12.2	65.7		0.9	0.6
Physical Tests														
Color TCU	5	32.2	35.1	22.5	34.7	37.4	28.4	36.9	31.5	30.3	57.7	19.2	27.1	28.2
pH (unitless)	0.01 to 0.1	8.26		8.2	8.34	8.16	8.21	8.3	8.46	8.1	7.96	8.48	8.5	8.39
Turbidity NTU	0.1	1.06	1.16		1.53	0.97	0.89		1.79	4.39	15.3	1.42	0.66	0.68
Nutrients														
Nitrite (as N)	0.001 to 0.02	<.01	<.01	<.01	<.001	<.01	<.005	<.01	<.01	0.011	<.02	<.01	<.01	<.01
Nitrogen (Dissolved)	0.05 to 0.1	0.91	1.12	0.78	1	1.01	1.13	1.18	0.93		3.27	0.68	0.68	0.72
Dissolved Metals														
Aluminum	0.001 to 0.025	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.003	<.003	<.003	<.003	<.003	<.003
Copper	0.0002 to 0.006	<.001	<.002	0.0015	0.0015	<.001	<.001	<.001	0.00132	<.0005	0.00145	0.00079	0.00104	0.00101
Lead	5E-005 to 0.0025	<.0005	<.0005	<.0005	<.0005	<.0005	<.0005	<.0005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.001 to 0.006	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.0083	0.0067	<.003	<.003	<.003	0.0049
Total Metals														
Aluminum	0.003 to 0.025	0.126	0.0278	0.0232	0.0873	0.0184	0.0199	0.0279	0.0678	0.515	0.0784	0.01	0.005	0.0035
Copper	0.0005 to 0.007	0.0023	<.003	0.002	0.0025	0.0011	0.0012	0.0013	0.00194	0.00525	0.00255	0.00085	0.00121	0.00191
Lead	5E-005 to 0.0025	<.0005	<.0005	<.0005	<.0005	<.0005	<.0005	<.0005	<.00005	0.000168	<.00005	<.00005	<.00005	<.00005
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.003 to 0.006	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.0036	0.0222	0.003	<.003	<.003	0.0034
ALS LAB ID		**L1002049**	**L1005044**	**L1011001**	**L1025075**	**L1038168**	**L1052387**	**L1066047**	**L1076994**	**L1092368**	**L1122039**	**L1133342**	**L1140194**	**L1142492**

NOTES:
1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C5.1 FOR NOTES ON SHADING.

TABLE C5.2 - GUIDELINE EXCEEDANCES
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Site ID		PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03	PC03
Analytes	**MDL**	**11-May-12**	**16-May-12**	**24-May-12**	**10-Jul-12**	**7-Aug-12**	**4-Dec-12**	**8-Jan-13**	**5-Feb-13**	**6-Mar-13**	**2-Apr-13**	**7-May-13**	**5-Jun-13**	**7-Aug-13**
In Situ Parameters														
pH (unitless)	...	8.7	8.1	8.15	8.71	8.16	7.83	7.94	7.56	7.57	8.2	8.21	8.42	7.98
Turbidity NTU	...	0.9	2.4	1.3	0.9	1.2	2.2	13.7	25	48.9	1.3	2.8	1.7	1.4
Physical Tests														
Color TCU	5	29.8	28.3	26.4	35.4	33	26.5	27.7	27.9	23.1	19	20.1	23.6	31.1
pH (unitless)	0.01 to 0.1	8.54	8.38	8.36	8.57	8.36	8.23	8.01	8	8.25	8.24	8.46	8.39	8.24
Turbidity NTU	0.1	0.69	1.09	0.91	1.06	0.98	2.7	4.64	6.17	13.6	3.07	0.56	0.85	0.9
Nutrients														
Nitrite (as N)	0.001 to 0.02	<.01	<.01	<.01	<.005	<.005	<.01	0.01	<.01	<.01	<.01	<.005	<.01	0.0093
Nitrogen (Dissolved)	0.05 to 0.1	0.84	1.06	0.81	1.03	0.89	1.15	1.91	2.1	1.89	0.597			0.954
Dissolved Metals														
Aluminum	0.001 to 0.025	<.003	<.003	0.0018	0.0019	0.0013	0.0013	0.0022	0.0018	0.001	0.0016	0.0014	0.0017	0.0013
Copper	0.0002 to 0.006	0.00105	0.0014	0.00123	0.00114	0.00066	0.00063	<.0002	<.0002	0.0003	0.00086	0.0013	0.00147	0.00078
Lead	5E-005 to 0.0025	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.001 to 0.006	0.0034	<.003	0.0044	0.0022	0.0011	<.001	0.005	0.0046	<.001	0.0035	0.0013	0.0024	<.001
Total Metals														
Aluminum	0.003 to 0.025	0.0075	0.0169	0.0164	0.0147	0.0366	0.0853	0.0406	0.0358	0.03	0.0375	0.013	0.0283	0.0564
Copper	0.0005 to 0.007	0.00143	0.00227	0.00151	0.00165	0.00126	0.0038	0.00181	0.00079	0.00094	0.00146	0.00175	0.0021	0.00156
Lead	5E-005 to 0.0025	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.003 to 0.006	<.003	<.003	<.003	<.003	<.003	<.003	0.0044	0.0038	<.003	<.003	<.003	<.003	<.003
ALS LAB ID		**L1146570**	**L1148880**	**L1152500**	**L1176520**	**L1190914**	**L1245799**	**L1256678**	**l1265809**	**L1276517**	**L1285503**	**L1298960**	**L1312719**	**L1344180**

NOTES:
1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C5.1 FOR NOTES ON SHADING.

TABLE C5.2 - GUIDELINE EXCEEDANCES
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Site ID		PC03	PC03	PC03	PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08
Analytes	**MDL**	**9-Oct-13**	**6-Nov-13**	**13-Mar-14**	**17-Jul-07**	**14-Sep-07**	**7-Jul-08**	**4-Sep-08**	**1-Jun-10**	**1-Sep-10**	**22-Nov-10**	**29-Mar-11**	**14-Apr-11**	**12-May-11**
In Situ Parameters														
pH (unitless)	...	8.35	8.28	7.93	8.44	7.05	8.34	8	8.97	6.81	6.82	7.86	7.14	7.69
Turbidity NTU	...	0	0.9											
Physical Tests														
Color TCU	5	34.9	23.2		16.1	21.7	20.2	23.7	19.2	24.6	22.4	15.9	15.4	15.5
pH (unitless)	0.01 to 0.1	8.41	8.22	7.99	8.45	8.16	8.43	8.12	8.79	7.73	8.07	7.86	8.1	
Turbidity NTU	0.1	0.94	0.9	4.79			6.63	3.38	1	3.5	8.42	4.84	29.6	19.2
Nutrients														
Nitrite (as N)	0.001 to 0.02	0.033	0.024	0.013	0.0024	<.001	0.0012	0.0014	<.001	<.01	<.005	<.01	<.01	<.01
Nitrogen (Dissolved)	0.05 to 0.1													0.82
Dissolved Metals														
Aluminum	0.001 to 0.025	0.0041	0.0012	0.0036	<.005	<.005	<.005	<.01	<.005	<.005	<.005	<.005	<.005	<.005
Copper	0.0002 to 0.006	0.00306	0.00126	0.00437	<.001	<.001	<.001	<.002	0.0011	<.001	<.001	0.0012	<.001	0.0011
Lead	5E-005 to 0.0025	<.00005	<.00005	<.00005	<.0005	<.0005	<.0005	<.001	<.0005	<.0005	<.0005	<.0005	<.0005	<.0005
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00002	<.00002	<.00002	<.00002	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.001 to 0.006	0.001	<.001	0.0021	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
Total Metals														
Aluminum	0.003 to 0.025	0.0141	0.0126	0.243	0.0169	0.193	0.0354	0.262	0.0233	0.0114	0.0137	0.0087	1.28	0.191
Copper	0.0005 to 0.007	0.00341	0.00162	0.0087	<.001	0.0028	0.0015	0.0048	0.0014	<.001	0.0013	0.0018	0.0093	0.0026
Lead	5E-005 to 0.0025	<.00005	<.00005	0.000063	<.0005	<.0005	<.0005	<.001	<.0005	<.0005	<.0005	<.0005	<.0005	<.0005
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00002	<.00002	<.00002	<.00002	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.003 to 0.006	<.003	<.003	<.003	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005	<.005
ALS LAB ID		**L1375698**	**L1388680**	**L1432661**	L532007	L554763	L652819	L678833	L892818	L927896	L956921	L990459	L995583	L1005044

NOTES:
1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C5.1 FOR NOTES ON SHADING.

TABLE C5.2 - GUIDELINE EXCEEDANCES

Site ID		PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08
Analytes	**MDL**	**30-May-11**	**28-Jun-11**	**28-Jul-11**	**30-Aug-11**	**28-Sep-11**	**25-Oct-11**	**5-Dec-11**	**9-Jan-12**	**10-Apr-12**	**25-Apr-12**	**2-May-12**	**11-May-12**	**16-May-12**
In Situ Parameters														
pH (unitless)	...	8.04	8.86	7.49	8.04	8.27	7.87	7.42	7.36	7.32	7.96	7.92	7.72	8.71
Turbidity NTU	...	2.3	18.4	9.1		7.4	2.3	13.1	15.9		23.3	9.9	12.1	4.3
Physical Tests														
Color TCU	5	20.2	25.9	18.4	20.4	18.6	19.9	19	21.3	23	21.9	17.8	16.9	18.8
pH (unitless)	0.01 to 0.1	8.54	8.61	8.04	8.33	8.37	8.23	8.08	8	8.45	8.4	8.16	8.28	8.56
Turbidity NTU	0.1		12.4	7.96	2.5		10.8	21.8	9.93	4.8	10.4	11.7	11.9	4.32
Nutrients														
Nitrite (as N)	0.001 to 0.02	<.005	<.001	<.01	0.0241	0.015	0.014	0.011	<.01	0.018	<.001	<.01	<.01	<.005
Nitrogen (Dissolved)	0.05 to 0.1	0.77	1.24	1.26	1.39	0.96	0.78		0.73	0.53	0.65	0.49	0.54	0.88
Dissolved Metals														
Aluminum	0.001 to 0.025	<.005	<.005	<.005	<.005	<.005	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003
Copper	0.0002 to 0.006	0.0012	0.0013	<.001	<.001	<.001	0.00054	<.0005	0.00071	0.00109	0.00085	0.00089	0.00061	0.00102
Lead	5E-005 to 0.0025	<.0005	<.0005	<.0005	<.0005	<.0005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.001 to 0.006	<.005	<.005	0.0073	<.005	<.005	0.0098	<.003	<.003	<.003	<.003	0.004	<.003	0.0042
Total Metals														
Aluminum	0.003 to 0.025	0.055	0.122	0.145	0.0319	0.109	0.13	0.715	0.0432	0.0158	0.342	0.0615	0.558	0.0532
Copper	0.0005 to 0.007	0.0017	0.0021	0.0019	<.001	0.0013	0.00143	0.00556	0.00141	0.00151	0.00337	0.00255	0.00527	0.00193
Lead	5E-005 to 0.0025	<.0005	<.0005	<.0005	<.0005	<.0005	<.00005	0.000138	<.00005	<.00005	0.000072	<.00005	0.000103	<.00005
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.003 to 0.006	<.005	<.005	<.005	<.005	0.0085	<.003	0.0057	<.003	<.003	0.0039	0.0034	0.0042	<.003
ALS LAB ID		L1011001	L1025075	L1038168	L1052387	L1066047	L1076994	L1092368	L1102695	L1133342	L1140194	L1142492	L1146570	L1148880

NOTES:

1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C5.1 FOR NOTES ON SHADING.

TABLE C5.2 - GUIDELINE EXCEEDANCES

Site ID		PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08	PC08
Analytes	**MDL**	**24-May-12**	**10-Jul-12**	**7-Aug-12**	**4-Dec-12**	**9-Jan-13**	**6-Feb-13**	**2-Apr-13**	**7-May-13**	**5-Jun-13**	**2-Jul-13**	**7-Aug-13**	**4-Sep-13**	**9-Oct-13**
In Situ Parameters														
pH (unitless)	...	8.7	8.59	8.58	7.9	7.45	7.49	8.05	8.56	8.42	8.94	8.27	7.82	7.78
Turbidity NTU	...	1.3	1	4	8.4	47.1	8.9	9.8	2	1.7	20.6	2.9		9.9
Physical Tests														
Color TCU	5	17.8	18.8	17.7	22.5	20.4	20.7	19	16	21.9	21.1	21.4	23.2	20.5
pH (unitless)	0.01 to 0.1	8.54	8.6	8.55	8.29	7.95	7.94	8.19	8.54	8.5	8.6	8.39	8.38	8.24
Turbidity NTU	0.1	1.4	1.36	3.28	10.1	27.3	10.5	11.6	1.35	1.62	22.6	1.36	7.48	11.5
Nutrients														
Nitrite (as N)	0.001 to 0.02	<.001	0.001	<.001	0.014	0.011	<.01	<.01	<.005	<.005	<.001	0.0116	0.0135	<.01
Nitrogen (Dissolved)	0.05 to 0.1	0.77	0.93	0.92	0.881	1.17	0.825	0.535				1.12	1.75	
Dissolved Metals														
Aluminum	0.001 to 0.025	0.0022	0.0016	0.0019	0.0011	0.0019	0.0018	0.0017	0.0012	0.0027	0.0013	0.0024	0.0023	0.0019
Copper	0.0002 to 0.006	0.00093	0.00096	0.00067	0.00074	0.00032	0.00056	0.00122	0.00085	0.00132	0.00115	0.00083	0.0005	0.00044
Lead	5E-005 to 0.0025	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.001 to 0.006	0.0014	0.0032	0.0013	<.001	<.001	0.0018	0.0013	0.0017	0.0014	0.0014	0.0018	<.001	<.001
Total Metals														
Aluminum	0.003 to 0.025	0.0191	0.0232	0.0677	0.126	0.43	0.0834	0.161	0.0694	0.0334	0.0347	0.0755	0.293	0.345
Copper	0.0005 to 0.007	0.00112	0.00134	0.00133	0.00443	0.00363	0.00181	0.00301	0.00193	0.00165	0.00179	0.00154	0.00288	0.0034
Lead	5E-005 to 0.0025	<.00005	<.00005	<.00005	<.00005	0.000095	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	0.000058	0.000078
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.003 to 0.006	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003
ALS LAB ID		L1152500	L1176520	L1190914	L1245799	L1256679	L1265999	L1285503	L1298960	L1312719	L1326032	L1344180	L1358222	L1375698

NOTES:

1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C5.1 FOR NOTES ON SHADING.

TABLE C5.2 - GUIDELINE EXCEEDANCES

Site ID		PC08	PC08	PC08	PC08	PC08	PC08	PC10	PC10	PC10	PC10	PC10	PC10	ANDR15
Analytes	**MDL**	**7-Nov-13**	**8-Jan-14**	**4-Feb-14**	**13-Mar-14**	**3-Apr-14**	**10-Apr-14**	**24-Apr-14**	**7-May-14**	**23-May-14**	**4-Jun-14**	**18-Jun-14**	**16-Jul-14**	**9-Apr-14**
In Situ Parameters														
pH (unitless)	...	7.91	7.41	8.01	7.38	7.8	8.1	8.07	8.17	8.27	8.06	8.13	8.18	8.29
Turbidity NTU	...	28.9	9.1											
Physical Tests														
Color TCU	5		19.4						30.7					
pH (unitless)	0.01 to 0.1	8.25	7.87	8.03	7.86	8.26	8.24	8.35	8.29	8.26	8.37	8.37	8.36	8.24
Turbidity NTU	0.1	10.4	8.9	13	10.5	19.1	12.7	7.42	6.83	7.26	8.64	5.85	3.62	15.8
Nutrients														
Nitrite (as N)	0.001 to 0.02	0.013	0.016	<.01	0.0016	<.01	<.005	<.005	<.001	<.001	0.0011	0.0013	0.0028	<.01
Nitrogen (Dissolved)	0.05 to 0.1													
Dissolved Metals														
Aluminum	0.001 to 0.025	<.001	<.001	0.0013	0.0019	0.0018	0.002	0.0015	0.0029	0.0036	0.0095	0.0018	0.0029	0.002
Copper	0.0002 to 0.006	0.00067	0.00047	0.00042	0.00164	0.00103	0.00118	0.0022	0.00294	0.00358	0.00324	0.00241	0.00216	0.00105
Lead	5E-005 to 0.0025	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.001 to 0.006	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	0.0011	0.0012	<.001	<.001	0.0012
Total Metals														
Aluminum	0.003 to 0.025	0.232	0.123	0.26	0.571	0.565	0.235	0.379	0.256	0.352	0.699	0.399	0.252	1.85
Copper	0.0005 to 0.007	0.00349	0.0017	0.00285	0.00704	0.00548	0.00327	0.00489	0.00434	0.00572	0.00765	0.0049	0.00404	0.00881
Lead	5E-005 to 0.0025	0.000065	<.00005	0.000054	0.000104	0.000117	0.000054	0.000087	<.00005	0.000097	0.000155	0.000081	0.000073	0.00101
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.003 to 0.006	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	0.0041	<.003	<.003	0.0082
ALS LAB ID		L1389979	L1410216	L1418933	L1432661	L1439655	L1442672	**L1447300**	**L1452368**	**L1459728**	**L1465478**	**L1473827**	**L1488886**	**L1441961**

NOTES:

1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C5.1 FOR NOTES ON SHADING.

TABLE C5.2 - GUIDELINE EXCEEDANCES

Site ID		ANDR15	ANDR15	ANDR15	ANDR15	ANDER-10	ANDER-10	ANDER-10	HUMPH02	HUMPH02	HUMPH02	HUMPH02	HUMPH02	HUMPH-08
Analytes	**MDL**	**24-Apr-14**	**7-May-14**	**17-Jun-14**	**15-Jul-14**	**2-Apr-14**	**3-Jun-14**	**17-Jun-14**	**21-Mar-14**	**26-Mar-14**	**3-Apr-14**	**7-May-14**	**17-Sep-14**	**22-May-14**
In Situ Parameters														
pH (unitless)	...	8.24	8.44	8.49	8.5	8.11	8.31	8.41	8.14	8.24	8.28	8.37	8.36	8.23
Turbidity NTU	...													
Physical Tests														
Color TCU	5		33.7									17.7		
pH (unitless)	0.01 to 0.1	8.37	8.26	8.46	8.39	8.3	8.49	8.46	8.44	8.39	8.39	8.43	8.56	8.48
Turbidity NTU	0.1	7.04	2.63	4.76	3.48	2.94	6.33	4.99	5.55	4.9	3.24	3.39	1.88	12.9
Nutrients														
Nitrite (as N)	0.001 to 0.02	<.001	<.001	<.005	<.01	<.005	0.0012	<.005	<.01	<.01	<.01	<.01	<.01	<.01
Nitrogen (Dissolved)	0.05 to 0.1													
Dissolved Metals														
Aluminum	0.001 to 0.025	0.0067	0.0032	0.0033	0.0024	0.0011	0.0019	0.0019	<.001	0.0014	<.001	0.0013	0.0021	0.0014
Copper	0.0002 to 0.006	0.00149	0.00137	0.00127	0.00127	0.00115	0.00145	0.00123	0.00632	0.00608	0.00629	0.00724	0.00512	0.00534
Lead	5E-005 to 0.0025	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.001 to 0.006	<.001	<.001	0.0034	<.001	<.001	<.001	0.0068	<.001	<.001	<.001	<.001	<.001	<.001
Total Metals														
Aluminum	0.003 to 0.025	0.733	0.178	0.463	0.282	0.332	0.361	0.331	0.345	0.36	0.205	0.192	0.211	1.18
Copper	0.0005 to 0.007	0.00499	0.00225	0.00332	0.00265	0.00327	0.00367	0.00283	0.0134	0.0143	0.0111	0.0143	0.00956	0.0171
Lead	5E-005 to 0.0025	0.00036	0.000111	0.000318	0.000144	0.000084	0.000094	0.000077	0.000132	0.000131	0.000074	0.000092	0.000065	0.000294
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.003 to 0.006	0.0032	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	0.0031	0.0033
ALS LAB ID		**L1447300**	**L1452368**	**L1472862**	**L1488139**	**L1439467**	**L1465108**	**L1472862**	**L1435186**	**L1437439**	**L1439655**	**L1452368**	**L1519657**	**L1459064**

NOTES:
1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C5.1 FOR NOTES ON SHADING.

TABLE C5.2 - GUIDELINE EXCEEDANCES
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Site ID		HUMPH-08	HUMPH-08	HUMPH-08	HUMPH-08	HUMPH-08	HUMPH-08	HUMPH-08	HUMPH-08	HUMPH-10	HUMPH-10	HUMPH-10	HUMPH-10	AC02
Analytes	**MDL**	**5-Jun-14**	**17-Jun-14**	**3-Jul-14**	**15-Jul-14**	**30-Jul-14**	**11-Aug-14**	**3-Sep-14**	**18-Sep-14**	**9-Apr-14**	**15-Jul-14**	**29-Jul-14**	**11-Aug-14**	**1-May-07**
In Situ Parameters														
pH (unitless)	...	8.35	8.47	8.41	8.53	8.59	8.46	8.57	8.28	7.76	9.11	7.99	7.77	8.24
Turbidity NTU	...													
Physical Tests														
Color TCU	5													35.7
pH (unitless)	0.01 to 0.1	8.4	8.54	8.55	8.44	8.43	8.56	8.59	8.63	8.1	8.78	8.2	8.3	8.38
Turbidity NTU	0.1	10	9.05	13	15.1	14.7	6.47	9.27	17.4	1.45	2	10.9	10.1	
Nutrients														
Nitrite (as N)	0.001 to 0.02	<.01	<.01	<.01	0.014	0.012	<.01	<.01	<.01	<.01	<.01	<.01	0.017	0.0012
Nitrogen (Dissolved)	0.05 to 0.1													
Dissolved Metals														
Aluminum	0.001 to 0.025	<.001	0.002	0.0045	0.0101	0.0023	0.0026	0.0015	0.0017	<.001	0.0051	0.0032	0.0026	<.005
Copper	0.0002 to 0.006	0.00523	0.00515	0.00292	0.00314	0.00494	0.00589	0.0055	0.00463	0.00296	0.00118	0.00309	0.00417	0.0041
Lead	5E-005 to 0.0025	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.0005
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	0.000012	<.00001	0.000013	0.000015	<.00002
Zinc	0.001 to 0.006	<.001	0.0018	<.001	0.0028	<.001	0.0014	<.001	<.001	0.0017	<.001	0.0022	<.001	<.005
Total Metals														
Aluminum	0.003 to 0.025	0.604	0.518	0.276	3.42	1.37	0.302	0.455	1.05	0.47	0.233	0.376	0.711	0.0625
Copper	0.0005 to 0.007	0.0123	0.0124	0.00935	0.0295	0.0192	0.00933	0.0113	0.0154	0.00916	0.00273	0.00885	0.0133	0.0044
Lead	5E-005 to 0.0025	0.000118	0.000116	0.00015	0.000626	0.000272	0.000067	0.000101	0.000197	0.000121	0.000059	0.000139	0.000215	<.0005
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	0.000027	<.00001	0.000029	0.000038	<.00002
Zinc	0.003 to 0.006	<.003	<.003	0.0031	0.0087	0.0041	0.0034	<.003	0.0043	0.0055	<.003	0.005	0.0062	<.005
ALS LAB ID		**L1466627**	**L1472862**	**L1481215**	**L1488139**	**L1495443**	**L1500711**	**L1513418**	**L1520952**	**L1441961**	**L1488139**	**L1494491**	**L1500711**	**L501128**

NOTES:
1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C5.1 FOR NOTES ON SHADING.

TABLE C5.2 - GUIDELINE EXCEEDANCES
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Site ID		AC02	AC02	AC02	AC02	AC02	AC02	AC02	AC02	AC02	AC02	AC02	AC02	AC02
Analytes	**MDL**	**18-Jul-07**	**17-Sep-07**	**29-Apr-08**	**7-Jul-08**	**4-Sep-08**	**31-May-11**	**10-May-12**	**16-May-12**	**24-May-12**	**12-Jul-12**	**8-Aug-12**	**5-Mar-13**	**2-Apr-13**
In Situ Parameters														
pH (unitless)	...	8.02	8.1	8.65	7.91	7.82	7.35	8.3	8.21	8.17	8.22	7.94	8.19	8.37
Turbidity NTU	...						0.3	1.3	1.3	1.7	1.9	4.2	2.7	6.9
Physical Tests														
Color TCU	5	34.7	29.4	16.6	34.7	31.1	58.6	39.1	36.4	33.7	32.6	34.6	24.1	17.6
pH (unitless)	0.01 to 0.1	8.32	8.39	8.31	8.41	8.3	8.29	8.43	8.43	8.4	8.27	8.45	8.39	8.29
Turbidity NTU	0.1			1.49	1.91	28.7	0.82	1.2	1.43	1.67	3.32	4.28	3.35	7.71
Nutrients														
Nitrite (as N)	0.001 to 0.02	0.0012	0.0045	<.001	<.001	0.0042	0.0069	<.001	<.001	0.0012	0.001	0.0438	<.01	<.01
Nitrogen (Dissolved)	0.05 to 0.1						0.79	0.51	0.57	0.52	0.24	0.76	0.871	0.619
Dissolved Metals														
Aluminum	0.001 to 0.025	<.01	<.005	<.01	<.005	<.01	<.005	<.003	<.003	0.0017	0.002	0.0029	0.0013	0.0012
Copper	0.0002 to 0.006	<.002	<.001	0.0026	0.0023	<.002	0.0042	0.00413	0.0039	0.00366	0.00204	0.00097	0.00315	0.0019
Lead	5E-005 to 0.0025	<.001	<.0005	<.001	<.0005	<.001	<.0005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005
Mercury	1E-005 to 5E-005	<.00002	<.00002	<.00002	<.00002	<.00002	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.001 to 0.006	<.01	<.005	<.005	<.005	<.005	<.005	<.003	<.003	0.0059	0.0021	0.0028	<.001	<.001
Total Metals														
Aluminum	0.003 to 0.025	0.107	0.318	0.012	0.024	0.196	0.0285	0.044	0.0536	0.0478	0.159	0.151	0.0683	0.268
Copper	0.0005 to 0.007	<.002	0.0032	0.003	0.0026	<.002	0.0047	0.00459	0.00495	0.00413	0.00328	0.00236	0.00416	0.00369
Lead	5E-005 to 0.0025	<.001	<.0005	<.001	<.0005	<.001	<.0005	<.00005	<.00005	<.00005	0.000057	<.00005	<.00005	0.000059
Mercury	1E-005 to 5E-005	<.00002	<.00002	0.000041	<.00002	<.00002	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.003 to 0.006	<.01	<.005	<.005	<.005	<.005	<.005	<.003	<.003	<.003	0.0035	<.003	<.003	<.003
ALS LAB ID		**L532402**	**L555226**	**L624228**	**L652819**	**L678833**	**L1011500**	**L1146570**	**L1148880**	**L1152500**	**L1178283**	**L1191600**	**L1275746**	**L1285503**

NOTES:
1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C5.1 FOR NOTES ON SHADING.

TABLE C5.2 - GUIDELINE EXCEEDANCES

Site ID		AC02	AC02	AC02	AC02	AC02	AC02	AC02	CATCHMEI	CATCHMEI	CATCHMEI	KC03	AJWE-S	AJWE-S
Analytes	**MDL**	**6-May-13**	**4-Jun-13**	**2-Jul-13**	**7-Aug-13**	**3-Sep-13**	**8-Oct-13**	**6-Nov-13**	**10-Oct-13**	**2-Jul-14**	**2-Sep-14**	**7-May-14**	**9-May-12**	**11-Jul-12**
In Situ Parameters														
pH (unitless)	...	8.02	8.29	8.34	8.09	8.18	8.33	8.27		9.69	8.89	8.12	8.49	8.3
Turbidity NTU	...	9.6	3.5	6.3	12.7		2.8	9.5					0.2	
Physical Tests														
Color TCU	5	63.8	46.8	51.3	28.9	31.8	24	21.9	16.7			32.6	<5	<5
pH (unitless)	0.01 to 0.1	8.43	8.43	8.49	8.35	8.46	8.51	8.38	9.01	9.34	9.05	8.31	8.31	8.33
Turbidity NTU	0.1	10.4	2.84	2.93	1.27	9.14	8.08	9.49	2.12	47.1	6.97	0.42	0.22	0.25
Nutrients														
Nitrite (as N)	0.001 to 0.02	0.0012	<.005	<.001	<.01	<.005	0.027	0.012	<.02	<.02	<.02	<.01	0.101	0.162
Nitrogen (Dissolved)	0.05 to 0.1				0.609	0.897							25	29.7
Dissolved Metals														
Aluminum	0.001 to 0.025	0.0047	0.0021	0.0034	0.0015	0.0026	0.0025	<.001	0.003	0.0024	<.002	0.0012	<.003	<.002
Copper	0.0002 to 0.006	0.00572	0.00368	0.00295	0.00168	0.00115	0.0011	0.00147	<.0004	0.001	<.0004	0.00574	0.0197	0.0177
Lead	5E-005 to 0.0025	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.0001	<.0001	<.0001	<.00005	<.00005	<.0001
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001		<.00001
Zinc	0.001 to 0.006	0.0016	<.001	0.0028	0.0011	<.001	0.0016	0.001	<.002	<.002	<.002	<.001	<.003	0.0048
Total Metals														
Aluminum	0.003 to 0.025	0.536	0.172	0.142	0.121	0.429	0.255	0.275	0.0315	1.21	0.349	0.0034	0.007	<.006
Copper	0.0005 to 0.007	0.009	0.00491	0.00382	0.00263	0.00507	0.00253	0.00293	<.001	0.0053	0.0015	0.00568	0.0206	0.0178
Lead	5E-005 to 0.0025	0.000121	0.00005	<.00005	<.00005	0.000114	0.000066	0.000077	<.0001	0.00039	<.0001	<.00005	<.00005	<.0001
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001		<.00001
Zinc	0.003 to 0.006	0.0032	<.003	<.003	<.003	0.0034	<.003	<.003	<.006	<.006	<.006	<.003	<.003	<.006
ALS LAB ID		**L1298960**	**L1311741**	**L1326032**	**L1344180**	**L1357647**	**L1376311**	**L1388680**	**L1376790**	**L1481215**	**L1511703**	**L1452368**	**L1145681**	**L1177597**

NOTES:
1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C5.1 FOR NOTES ON SHADING.

TABLE C5.2 - GUIDELINE EXCEEDANCES
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Site ID		AJWE-S	AJWE-S	AJWE-D	AJWE-D	AJWE-D	NSP	NSP	NSP	NSP	NSP	NSP	NSP	NSP
Analytes	**MDL**	**6-Nov-12**	**24-Sep-14**	**9-May-12**	**11-Jul-12**	**6-Nov-12**	**31-Aug-10**	**28-Sep-11**	**25-Apr-12**	**2-May-12**	**10-Jul-12**	**7-Aug-12**	**12-Oct-12**	**6-Nov-12**
In Situ Parameters														
pH (unitless)	...	8.37	1	8.51	8.38	8.37	8.97	9.21	8.84	9.03		9.22	9.36	9.43
Turbidity NTU	...	0.2	1	0.1		0.2		2.4	23.5	3.5		1.6	6.8	8.4
Physical Tests														
Color TCU	5	<5		<5	<5	<5	47.7	36.8	50.1	47.4	35.8	34.6	35.4	35.6
pH (unitless)	0.01 to 0.1	8.3	8.35	8.29	8.3	8.32	8.93	9.11	9.01	8.94	9.11	9.28	9.22	9.2
Turbidity NTU	0.1	0.17	0.13	0.18	0.36	1.29	8.81		3.71	1.28	1.07	1.35	1.84	21.7
Nutrients														
Nitrite (as N)	0.001 to 0.02	0.028	0.127	0.029	0.025	0.046	<.05	<.05	<.02	0.034	<.05	<.05	<.05	0.052
Nitrogen (Dissolved)	0.05 to 0.1	22.6		28.5	31.4	23.9		4.82	4.55	4.84	5.07	6.04	5.25	4.25
Dissolved Metals														
Aluminum	0.001 to 0.025	0.0012	<.001	<.006	<.002	0.0021	<.05	<.05	<.015	<.015	<.005	<.005	<.005	<.005
Copper	0.0002 to 0.006	0.0178	0.0162	0.0249	0.03	0.0175	<.01	<.01	<.0025	<.0025	0.001	<.001	<.001	<.001
Lead	5E-005 to 0.0025	<.00005	<.00005	<.0001	<.0001	<.00005	<.005	<.005	<.00025	<.00025	<.00025	<.00025	<.00025	<.00025
Mercury	1E-005 to 5E-005	<.00001	<.00001		<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.001 to 0.006	<.001	<.001	<.006	0.0025	<.001	<.005	<.005	<.015	<.015	<.005	<.005	<.005	<.005
Total Metals														
Aluminum	0.003 to 0.025	0.0033	<.006	0.0097	0.0063	0.0699	0.067	<.05	0.078	0.066	0.016	0.022	0.068	0.115
Copper	0.0005 to 0.007	0.0186	0.0169	0.0262	0.0327	0.023	<.01	<.01	<.0025	<.0025	<.0025	<.0025	0.0036	<.0025
Lead	5E-005 to 0.0025	<.00005	<.00005	<.0001	<.0001	0.000057	<.005	<.005	<.00025	<.00025	<.00025	<.00025	<.00025	<.00025
Mercury	1E-005 to 5E-005	<.00001	<.00001		<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.003 to 0.006	<.003	<.003	<.006	<.006	<.003	<.005	0.0062	<.015	<.015	<.015	<.015	<.015	<.015
ALS LAB ID		**l1234688**	**L1523985**	**L1145681**	**L1177597**	**l1234688**	**L927439**	**L1066047**	**L1140194**	**L1142492**	**L1176520**	**L1190914**	**L1223406**	**l1234688**

NOTES:
1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C5.1 FOR NOTES ON SHADING.

TABLE C5.2 - GUIDELINE EXCEEDANCES

Site ID		NSP	NSP	NSP	NSP	NSP	NSP	WR-SEEP	WR-SEEP	WR-SEEP	WR-SEEP	WR-SEEP
Analytes	**MDL**	**5-Jun-13**	**3-Jul-13**	**7-Aug-13**	**5-Sep-13**	**9-Oct-13**	**8-Jan-14**	**28-Mar-11**	**10-Apr-12**	**25-Apr-12**	**24-May-12**	**11-Jul-12**
In Situ Parameters												
pH (unitless)	...	9.16	9.3	9.3	9.15	9.23	9.05	7.26	8.38	7.6	8.24	
Turbidity NTU	...	2.9	0	0.3		9.8	3.7			1.9	2.8	
Physical Tests												
Color TCU	5	35.2	31.2	29.6	29.1	33.9	35.4	566	29.3	32.4	30.1	36.5
pH (unitless)	0.01 to 0.1	9.16	9.28	9.29	9.28	9.09	8.85	7.52	8.42	8.22	8.37	8.96
Turbidity NTU	0.1	3.53	0.78	0.67	0.99	6.1	2.78		3.15	1.87	3.48	16
Nutrients												
Nitrite (as N)	0.001 to 0.02	<.05	<.05	<.05	0.036	<.05	<.05		0.062	0.071	<.02	<.02
Nitrogen (Dissolved)	0.05 to 0.1			4.78					5.13	2.72	1.8	
Dissolved Metals												
Aluminum	0.001 to 0.025	0.0069	<.005	<.005	<.005	<.005	<.005	<.01	<.003	0.0031	0.0035	
Copper	0.0002 to 0.006	0.0013	<.001	0.001	<.001	<.001	<.001	0.0086	0.0135	0.0189	0.0127	
Lead	5E-005 to 0.0025	<.00025	<.00025	<.00025	<.00025	<.00025	<.00025	<.001	<.00005	<.00005	<.00005	
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	
Zinc	0.001 to 0.006	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.0144	<.003	0.0035	
Total Metals												
Aluminum	0.003 to 0.025	0.08	<.015	0.133	<.015	0.218	<.015	<.01	0.121	0.0355	0.0402	0.268
Copper	0.0005 to 0.007	<.0025	<.0025	<.0025	<.0025	<.0025	<.0025	0.0123	0.0164	0.0209	0.0145	0.0312
Lead	5E-005 to 0.0025	<.00025	<.00025	<.00025	<.00025	<.00025	<.00025	<.001	<.00005	<.00005	<.00005	<.0001
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	0.000015	<.00001	<.00001	<.00001	<.00001
Zinc	0.003 to 0.006	<.015	<.015	<.015	<.015	<.015	<.015	<.005	0.0128	0.0043	0.0033	<.006
ALS LAB ID		**L1312719**	**L1327102**	**L1344180**	**L1358626**	**L1375698**	**L1410216**	**L990458**	**L1133342**	**L1140194**	**L1152500**	**L1177597**

NOTES:

1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C5.1 FOR NOTES ON SHADING.

TABLE C5.2 - GUIDELINE EXCEEDANCES
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Site ID		WR-SEEP	WR-SEEP	WR-SEEP	CC02	CC02	CC02	CC02	CC02	CC02	CC02
Analytes	**MDL**	**7-Aug-12**	**7-May-13**	**3-Jul-13**	**1-May-07**	**5-May-11**	**12-May-11**	**30-May-11**	**28-Jun-11**	**26-Apr-12**	**4-May-12**
In Situ Parameters											
pH (unitless)	...	7.73	8.16	8.36	8.03	8.13	7.91	5.8	7.97	7.85	8.4
Turbidity NTU	...	3.3	19.1	3.3				57.4		167	9.6
Physical Tests											
Color TCU	5	27.2	12.7	17.2	16.4	21.1	54.3	48.7	16	55.9	41.2
pH (unitless)	0.01 to 0.1	8.15	8.25	8.39	8.33	8.31		8.26	8.36	7.97	8.19
Turbidity NTU	0.1	3.59	17.7	1.56		26.3	192		0.84	184	7.81
Nutrients											
Nitrite (as N)	0.001 to 0.02	0.034	<.02	<.02	<.001	<.001	<.001	<.005	<.001	0.0045	<.001
Nitrogen (Dissolved)	0.05 to 0.1	1.28				0.4	0.56	0.48	0.44	0.61	0.38
Dissolved Metals											
Aluminum	0.001 to 0.025	0.0016	0.0043	0.0024	0.006	<.005	0.0199	0.0118	<.005	0.0165	0.0079
Copper	0.0002 to 0.006	0.0137	0.0141	0.0175	0.0026	0.0023	0.0045	0.0043	0.0028	0.0042	0.00403
Lead	5E-005 to 0.0025	<.00005	<.00005	<.0001	<.0005	<.0005	<.0005	<.0005	<.0005	<.00005	<.00005
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00002	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.001 to 0.006	0.0017	0.0016	<.002	<.005	<.005	<.005	<.005	<.005	<.003	<.003
Total Metals											
Aluminum	0.003 to 0.025	0.0479	0.471	0.0167	0.107	1.32	11.5	3.3	0.058	8.32	0.425
Copper	0.0005 to 0.007	0.0161	0.0202	0.0182	0.0035	0.0098	0.0658	0.0209	0.0034	0.0528	0.0067
Lead	5E-005 to 0.0025	<.00005	0.000107	<.0001	<.0005	<.0005	0.00183	0.00056	<.0005	0.00142	0.000089
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00002	<.00001	0.000033	<.00001	<.00001	0.000035	<.00001
Zinc	0.003 to 0.006	0.0037	<.003	<.006	<.005	<.005	0.0335	0.0097	<.005	0.0238	<.003
ALS LAB ID		**L1190914**	**L1298960**	**L1327102**	**L501128**	**L1002049**	**L1005044**	**L1011001**	**L1025075**	**L1140194**	**L1143149**

NOTES:
1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C5.1 FOR NOTES ON SHADING.

TABLE C5.2 - GUIDELINE EXCEEDANCES
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Site ID		CC02	CC02	CC02	CC02	CC02	CC02	CC02	CC08	CC08	CC08
Analytes	**MDL**	**10-May-12**	**16-May-12**	**24-May-12**	**12-Jul-12**	**6-May-13**	**4-Jun-13**	**2-Jul-13**	**1-May-07**	**18-Jul-07**	**14-Sep-07**
In Situ Parameters											
pH (unitless)	...	8.25	8.25	8.31	8.14	7.95	8.22	8.19	8.34	7.82	8.6
Turbidity NTU	...	3.4	2.4	1.8	0.2	134	17.5	3			
Physical Tests											
Color TCU	5	33.4	28.4	19.7	15	41.3	34.1	25.4	20.7	18.4	15.1
pH (unitless)	0.01 to 0.1	8.33	8.31	8.18	8.38	8.25	8.38	8.37	8.31	8.29	8.32
Turbidity NTU	0.1	2.4	1.76	1.12	1.37	123	14.2	1.56			
Nutrients											
Nitrite (as N)	0.001 to 0.02	<.001	0.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001
Nitrogen (Dissolved)	0.05 to 0.1	0.32	0.32	0.25	0.18						
Dissolved Metals											
Aluminum	0.001 to 0.025	0.007	0.0044	0.0029	0.0019	0.0156	0.0066	0.0035	<.005	<.005	<.005
Copper	0.0002 to 0.006	0.00376	0.0035	0.00301	0.00274	0.00391	0.00357	0.00297	0.0025	0.0026	0.0024
Lead	5E-005 to 0.0025	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.0005	<.0005	<.0005
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00002	<.00002	<.00002
Zinc	0.001 to 0.006	<.003	<.003	0.0049	0.0029	<.001	0.0015	0.0017	<.005	<.005	<.005
Total Metals											
Aluminum	0.003 to 0.025	0.219	0.107	0.0575	0.0987	7.23	0.581	0.283	0.0391	0.0549	0.0339
Copper	0.0005 to 0.007	0.00462	0.00469	0.00344	0.0035	0.0483	0.00679	0.00491	0.0028	0.003	0.0027
Lead	5E-005 to 0.0025	<.00005	<.00005	<.00005	<.00005	0.00132	0.000118	0.000057	<.0005	<.0005	<.0005
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	0.000029	<.00001	<.00001	<.00002	<.00002	<.00002
Zinc	0.003 to 0.006	<.003	<.003	<.003	<.003	0.0218	<.003	<.003	<.005	<.005	<.005
ALS LAB ID		**L1146570**	**L1148880**	**L1152500**	**L1178283**	**L1298960**	**L1311741**	**L1326032**	**L501128**	**L532402**	**L554763**

NOTES:
1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C5.1 FOR NOTES ON SHADING.

TABLE C5.2 - GUIDELINE EXCEEDANCES
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Site ID		CC08	CC08	CC08	CC08	CC08	CC08	CC08	CC08	CC08	CC08
Analytes	**MDL**	**7-Jul-08**	**02/Sep/2010**	**5-May-11**	**12-May-11**	**30-May-11**	**28-Jun-11**	**28-Jul-11**	**1-Sep-11**	**27-Sep-11**	**26-Apr-12**
In Situ Parameters											
pH (unitless)	...	8.16	7.91	8.26	7.85	7.3	7.97	8.04	7.93	7.98	7.88
Turbidity NTU	...					9.6		0.2	2.6		49.8
Physical Tests											
Color TCU	5	15.1	15.7	30.7	57.3	55.8	25.9	19.9	22.9	17.7	58.6
pH (unitless)	0.01 to 0.1	8.36	8.22	8.22		8.09	8.3	8.25	8.23	8.2	8.15
Turbidity NTU	0.1	0.22	0.37	1.82	54		0.32	0.41	0.37	0.33	34
Nutrients											
Nitrite (as N)	0.001 to 0.02	<.001	<.001	<.001	<.001	<.005	<.001	<.001	<.001	<.001	0.0032
Nitrogen (Dissolved)	0.05 to 0.1			0.33	0.43	0.41	0.35	0.31	0.32	0.17	0.57
Dissolved Metals											
Aluminum	0.001 to 0.025	<.005	<.005	0.0052	0.0317	0.0218	<.005	<.005	<.005	<.005	0.0219
Copper	0.0002 to 0.006	0.0029	0.0029	0.0027	0.004	0.0043	0.0031	0.0028	0.003	0.0031	0.00372
Lead	5E-005 to 0.0025	<.0005	<.0005	<.0005	<.0005	<.0005	<.0005	<.0005	<.0005	<.0005	<.00005
Mercury	1E-005 to 5E-005	<.00002	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.001 to 0.006	<.005	<.005	<.005	0.0076	<.005	<.005	<.005	<.005	<.005	<.003
Total Metals											
Aluminum	0.003 to 0.025	0.0106	0.0083	0.127	4.96	0.492	0.0184	0.0161	0.018	<.01	2.27
Copper	0.0005 to 0.007	0.003	0.0032	0.0033	0.0285	0.0064	0.0034	0.0027	0.0032	0.0033	0.0165
Lead	5E-005 to 0.0025	<.0005	<.0005	<.0005	0.00068	<.0005	<.0005	<.0005	<.0005	<.0005	0.00037
Mercury	1E-005 to 5E-005	<.00002	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	0.000012
Zinc	0.003 to 0.006	<.005	<.005	<.005	0.0145	<.005	<.005	<.005	<.005	<.005	0.0087
ALS LAB ID		**L652819**	**L927930**	**L1002049**	**L1005044**	**L1011001**	**L1025075**	**L1038168**	**L1053400**	**L1065234**	**L1140194**

NOTES:
1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C5.1 FOR NOTES ON SHADING.

TABLE C5.2 - GUIDELINE EXCEEDANCES

Site ID		CC08	CC08	CC08	CC08	CC08	CC08	CC08	CC08	CC08	CC08
Analytes	**MDL**	**4-May-12**	**10-May-12**	**16-May-12**	**24-May-12**	**12-Jul-12**	**8-Aug-12**	**5-Sep-12**	**6-May-13**	**4-Jun-13**	**2-Jul-13**
In Situ Parameters											
pH (unitless)	...	8.08	8.18	8.11	8.02	8.18	8.1	8.12	8.1	8.21	8.1
Turbidity NTU	...	2.9	1.6	1.2	0.6	-2	0.6	0.3	33.2	2.7	0
Physical Tests											
Color TCU	5	49.3	42.8	42	33.6	25.2	21.6	20.4	46.1	40	34
pH (unitless)	0.01 to 0.1	8.1	8.26	8.17	7.58	8.35	8.33	8.38	8.14	8.29	8.32
Turbidity NTU	0.1	1.66	1.05	0.68	0.39	0.41	0.49	0.42	22.2	1.57	0.85
Nutrients											
Nitrite (as N)	0.001 to 0.02	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001
Nitrogen (Dissolved)	0.05 to 0.1	0.3	0.29	0.29	0.2	0.13	0.34	0.29			
Dissolved Metals											
Aluminum	0.001 to 0.025	0.0129	0.0118	0.0074	0.0059	0.0033	0.0023	0.0023	0.0191	0.0076	0.0049
Copper	0.0002 to 0.006	0.00413	0.0037	0.00376	0.0035	0.00329	0.00295	0.00254	0.00373	0.00354	0.00323
Lead	5E-005 to 0.0025	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.001 to 0.006	<.003	<.003	<.003	0.0014		<.001	0.0016	0.0023	0.0014	0.0012
Total Metals											
Aluminum	0.003 to 0.025	0.1	0.0638	0.0633	0.0221	0.0482	0.0185	0.0124	1.76	0.103	0.0742
Copper	0.0005 to 0.007	0.00466	0.0155	0.00458	0.00354	0.00357	0.00343	0.00362	0.0144	0.00439	0.00383
Lead	5E-005 to 0.0025	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	0.0003	<.00005	<.00005
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.003 to 0.006	<.003	0.0044	<.003	<.003	<.003	<.003	<.003	0.0075	<.003	<.003
ALS LAB ID		**L1143149**	**L1146570**	**L1148880**	**L1152500**	**L1178283**	**L1191600**	**L1205273**	**L1298960**	**L1311741**	**L1326032**

NOTES:

1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C5.1 FOR NOTES ON SHADING.

TABLE C5.2 - GUIDELINE EXCEEDANCES
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Site ID		CC08	CC08	CC08	JC03	JC03	JC03	JC03	JC03	JC03	JC03
Analytes	**MDL**	**6-Aug-13**	**3-Sep-13**	**8-May-14**	**28-Apr-08**	**7-Jul-08**	**3-Jun-10**	**29-Mar-11**	**14-Apr-11**	**21-Apr-11**	**28-Apr-11**
In Situ Parameters											
pH (unitless)	...	8.08	7.82	8.62		7.8	8.17	8.11	7.92	7.95	8.08
Turbidity NTU	...	0.7									
Physical Tests											
Color TCU	5	26.7	16.1		20	27.4	69	40.2	18.5	16.2	14.8
pH (unitless)	0.01 to 0.1	8.27	8.3	8	8.2	8.4	8.24	8.16	8.26	8.24	8.29
Turbidity NTU	0.1	0.43	0.3	2.92	66.7	8.04	10.3	7.61	10.1	4.06	19.8
Nutrients											
Nitrite (as N)	0.001 to 0.02	<.001	<.001	<.001	0.0042	0.0036	<.01	<.01	<.01	<.01	<.01
Nitrogen (Dissolved)	0.05 to 0.1	0.279	0.241								0.51
Dissolved Metals											
Aluminum	0.001 to 0.025	0.0035	0.002	0.0247	0.0064	<.005	<.005	<.005	<.01	<.01	<.01
Copper	0.0002 to 0.006	0.0032	0.00281	0.00426	0.002	0.0017	0.0045	0.0016	<.002	<.002	<.002
Lead	5E-005 to 0.0025	<.00005	<.00005	<.00005	<.0005	<.0005	<.0005	<.0005	<.001	<.001	<.001
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00002	<.00002	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.001 to 0.006	0.001	<.001	<.001	<.005	<.005	<.005	<.005	<.005	<.005	<.005
Total Metals											
Aluminum	0.003 to 0.025	0.0578	0.0089	0.273	1.7	0.157	0.599	0.455	0.228	0.123	1.1
Copper	0.0005 to 0.007	0.00376	0.00303	0.00559	0.0151	0.0032	0.0084	0.0046	0.0033	0.0025	0.0071
Lead	5E-005 to 0.0025	<.00005	<.00005	0.000053	<.0005	<.0005	<.0005	<.0005	<.001	<.001	<.001
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00002	<.00002	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.003 to 0.006	<.003	<.003	<.003	0.0076	<.005	<.005	<.005	<.005	<.005	<.005
ALS LAB ID		**L1344180**	**L1357647**	**L1453031**	**L623545**	**L653575**	**L894163**	**L990459**	**L995583**	**L997645**	**L999654**

NOTES:
1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C5.1 FOR NOTES ON SHADING.

TABLE C5.2 - GUIDELINE EXCEEDANCES
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Site ID		JC03	JC03	JC03	JC03	JC03	JC03	JC03	JC03	JC03	JC03
Analytes	**MDL**	**5-May-11**	**12-May-11**	**1-Jun-11**	**28-Jun-11**	**28-Jul-11**	**1-Sep-11**	**27-Sep-11**	**10-Apr-12**	**25-Apr-12**	**2-May-12**
In Situ Parameters											
pH (unitless)	...	8.21	7.88	8.27	8.17	8.13	8	7.89	7.5	8.16	8.5
Turbidity NTU	...				6.7	5.1	2.6	0.1		66	10
Physical Tests											
Color TCU	5	18.2	37.5	48.9	28.7	26.4	16.1	24.1	38.7	20.3	38.3
pH (unitless)	0.01 to 0.1	8.37		8.28	8.35	8.3	8.24	8.22	8.4	8.4	8.19
Turbidity NTU	0.1	40.1	45.8	11.6	7.95	4.99	2.72	1.53	13	47.3	6.98
Nutrients											
Nitrite (as N)	0.001 to 0.02	<.01	<.001	<.005	<.001	<.001	<.01	<.01	<.01	<.01	<.001
Nitrogen (Dissolved)	0.05 to 0.1	0.51	0.57	0.74	0.48	0.52	0.59	0.41	1.01	0.43	0.37
Dissolved Metals											
Aluminum	0.001 to 0.025	<.01	<.005	<.005	<.005	<.005	<.005	<.01	<.003	<.003	0.0057
Copper	0.0002 to 0.006	<.002	0.0024	0.003	0.0018	0.0015	0.0011	<.002	0.00213	0.0018	0.00299
Lead	5E-005 to 0.0025	<.001	<.0005	<.0005	<.0005	<.0005	<.0005	<.001	<.00005	<.00005	<.00005
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.001 to 0.006	<.005	<.005	<.005	<.005	<.005	<.005	<.005	0.0082	<.003	0.0088
Total Metals											
Aluminum	0.003 to 0.025	1.17	2.22	0.328	0.369	0.175	0.418	<.03	0.665	2.21	0.262
Copper	0.0005 to 0.007	0.0079	0.014	0.005	0.0041	0.0026	0.0037	<.002	0.00635	0.0141	0.00538
Lead	5E-005 to 0.0025	<.001	<.0005	<.0005	<.0005	<.0005	<.0005	<.001	0.000145	0.000469	0.000069
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.003 to 0.006	0.0057	0.0077	<.005	<.005	<.005	<.005	<.005	0.005	0.0084	0.0048
ALS LAB ID		**L1002049**	**L1005044**	**L1012627**	**L1025075**	**L1038168**	**L1053400**	**L1065234**	**L1133342**	**L1140194**	**L1142492**

NOTES:
1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C5.1 FOR NOTES ON SHADING.

TABLE C5.2 - GUIDELINE EXCEEDANCES

Site ID		JC03	JC03	JC03	JC03	JC03	JC03	JC03	JC03	JC03	JC03
Analytes	**MDL**	**10-May-12**	**16-May-12**	**24-May-12**	**10-Jul-12**	**6-Sep-12**	**7-Nov-12**	**9-Jan-13**	**6-Feb-13**	**5-Mar-13**	**4-Apr-13**
In Situ Parameters											
pH (unitless)	...	8.1	8.21	8.01	8.06	7.92	7.83	7.91	7.59	7.85	8.38
Turbidity NTU	...	10.2	58.9	21.8	8.2	3.8	2.8	0.6	0.7	6.1	36
Physical Tests											
Color TCU	5	30	41.6	52.5	26.4	15.7	27.4	27.7	32.8	34.7	13.5
pH (unitless)	0.01 to 0.1	8.41	8.33	8.29	8.37	8.35	8.19	8.06	7.97	8.28	8.4
Turbidity NTU	0.1	4.13	37.1	5.53	6.11	7.98	1	1.21	1.32	8.36	27.2
Nutrients											
Nitrite (as N)	0.001 to 0.02	<.001	0.0012	0.0085	<.001	<.01	<.02	<.01	<.01	<.01	<.01
Nitrogen (Dissolved)	0.05 to 0.1	0.29	0.48	2.1	0.47	0.49	0.62	0.674	0.652	0.857	0.364
Dissolved Metals											
Aluminum	0.001 to 0.025	0.004	0.0044	0.0028	0.008	0.0016	0.002	0.0014	0.0024	0.0018	0.0013
Copper	0.0002 to 0.006	0.00261	0.00333	0.0047	0.00205	0.00155	0.00116	0.00126	0.00111	0.00143	0.00125
Lead	5E-005 to 0.0025	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.001 to 0.006	0.0036	0.0031	0.004	0.0312	0.0023	0.0014	0.0013	0.0085	0.0018	<.001
Total Metals											
Aluminum	0.003 to 0.025	0.187	1.33	0.2	0.311	0.357	0.0607	0.0131	0.0113	0.51	1.08
Copper	0.0005 to 0.007	0.00364	0.0116	0.00593	0.00407	0.00378	0.00183	0.0018	0.00156	0.00502	0.00857
Lead	5E-005 to 0.0025	<.00005	0.000332	0.000056	0.00007	0.000088	<.00005	<.00005	<.00005	0.00012	0.000228
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.003 to 0.006	<.003	0.0067	0.0032	0.0032	<.003	<.003	<.003	<.003	0.0034	0.0048
ALS LAB ID		**L1146570**	**L1148880**	**L1152500**	**L1176520**	**L1206738**	**L1235306**	**L1256679**	**L1265999**	**L1275746**	**L1286585**

NOTES:

1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C5.1 FOR NOTES ON SHADING.

TABLE C5.2 - GUIDELINE EXCEEDANCES
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Site ID		JC03	JC03	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S
Analytes	**MDL**	**7-May-13**	**3-Jul-13**	**05/Jun/2010**	**30-Aug-10**	**28-Mar-11**	**14-Apr-11**	**1-Jun-11**	**29-Jun-11**	**28-Jul-11**	**31-Aug-11**
In Situ Parameters											
pH (unitless)	...	8.09	8.14	8.57	8.91	8.95	8.28	8.75	8.8	8.85	8.84
Turbidity NTU	...	18	9.4							12.3	17
Physical Tests											
Color TCU	5	40.5	44	19.5	26.1	17	17.3	17.1	17.4	19.4	22.8
pH (unitless)	0.01 to 0.1	8.39	8.48	9.18	8.86	8.82	8.94	8.87	8.76	8.87	9.01
Turbidity NTU	0.1	21.4	6.28	41.5	1.92	3.98	8.78	0.73	0.99	10.5	16.4
Nutrients											
Nitrite (as N)	0.001 to 0.02	0.0011	0.0012	<.02	<.05	<.02	<.05	<.05	<.05	<.05	<.05
Nitrogen (Dissolved)	0.05 to 0.1							2.83	3.4	3.44	4.32
Dissolved Metals											
Aluminum	0.001 to 0.025	0.0059	0.003	<.05	<.1	<.025	<.1	<.1	<.1	<.1	<.1
Copper	0.0002 to 0.006	0.00287	0.00248	<.02	<.02	0.0066	<.02	<.02	<.02	<.02	<.02
Lead	5E-005 to 0.0025	<.00005	<.00005	<.005	<.01	<.0025	<.01	<.01	<.01	<.01	<.01
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.001 to 0.006	0.0018	0.0013	<.01	<.01	<.005	<.01	0.01	<.015	<.015	<.01
Total Metals											
Aluminum	0.003 to 0.025	1.02	0.514	<.05	<.1	0.138	0.17	<.1	<.1	<.1	0.42
Copper	0.0005 to 0.007	0.00917	0.00546	<.02	<.02	0.011	<.02	<.02	<.02	<.02	<.02
Lead	5E-005 to 0.0025	0.000214	0.000128	<.005	<.01	<.0025	<.01	<.01	<.01	<.01	<.01
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.003 to 0.006	0.0054	<.003	<.01	<.01	<.005	<.01	<.01	<.015	<.015	<.01
ALS LAB ID		**L1298960**	**L1327102**	**L894378**	**L927439**	**L990458**	**L995583**	**L1012627**	**L1025917**	**L1038168**	**L1052924**

NOTES:
1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C5.1 FOR NOTES ON SHADING.

TABLE C5.2 - GUIDELINE EXCEEDANCES
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Site ID		INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S
Analytes	**MDL**	**27-Sep-11**	**26-Oct-11**	**10-Jan-12**	**14-Feb-12**	**6-Mar-12**	**25-Apr-12**	**2-May-12**	**10-Jul-12**	**7-Aug-12**	**12-Oct-12**
In Situ Parameters											
pH (unitless)	...	9.25	9.14	8.89	8.81	9.25	8.68	8.94	8.84	8.63	8.68
Turbidity NTU	...	18.2	10.2	0.5		6.6	3	4.5	1.4	14.2	8.7
Physical Tests											
Color TCU	5	23.7	21.6	20.6	21.5	28.6	20.1	20.7	19.9	21.6	25
pH (unitless)	0.01 to 0.1	8.84	8.74	8.66	8.67	9.13	8.78	8.78	8.73	8.72	8.59
Turbidity NTU	0.1	2.37	6.63	4.32	2.45	8.74	2.56	3.84	0.94	0.98	14.2
Nutrients											
Nitrite (as N)	0.001 to 0.02	<.1	<.1	0.086	0.052	0.051	<.05	<.05	<.05	<.05	<.05
Nitrogen (Dissolved)	0.05 to 0.1	3.19	3.68	3.75	3.51	2.67	3.11	2.85	0.407	5.06	4.7
Dissolved Metals											
Aluminum	0.001 to 0.025	<.1	<.03	<.03	<.03	<.03	<.03	<.03	<.01	<.01	<.01
Copper	0.0002 to 0.006	<.02	<.005	<.005	<.005	0.0124	<.005	<.005	0.0029	<.002	<.002
Lead	5E-005 to 0.0025	<.01	<.0005	<.0005	<.0005	<.0005	<.0005	<.0005	<.0005	<.0005	<.0005
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.001 to 0.006	<.015	<.03	0.129	0.043	<.03	<.03	<.03	<.01	<.01	<.01
Total Metals											
Aluminum	0.003 to 0.025	<.1	0.911	<.03	<.03	1.33	0.044	0.805	<.03	<.03	0.353
Copper	0.0005 to 0.007	<.02	0.0097	<.005	<.005	0.0183	<.005	<.005	<.005	<.005	<.005
Lead	5E-005 to 0.0025	<.01	<.0005	<.0005	<.0005	<.0005	<.0005	<.0005	<.0005	<.0005	<.0005
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.003 to 0.006	<.015	<.03	<.03	0.063	<.03	<.03	<.03	<.03	<.03	<.03
ALS LAB ID		**L1065234**	**L1077732**	**L1103104**	**L1114498**	**L1122039**	**L1140194**	**L1142492**	**L1176520**	**L1190914**	**L1223406**

NOTES:
1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C5.1 FOR NOTES ON SHADING.

TABLE C5.2 - GUIDELINE EXCEEDANCES

Site ID		INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S	INKS-S
Analytes	**MDL**	**7-Nov-12**	**9-Jan-13**	**7-Feb-13**	**3-Apr-13**	**7-May-13**	**5-Jun-13**	**3-Jul-13**	**7-Aug-13**	**5-Sep-13**	**9-Oct-13**
In Situ Parameters											
pH (unitless)	...	8.72	9.15	8.78	9.15	9.03	8.83	8.87	8.84	8.83	9.06
Turbidity NTU	...	25.7	2.9	1.3	23.1	5.8	4.6	182	17.3		3.8
Physical Tests											
Color TCU	5	22.4	21.7	22.1	15.8	19.3	19.3	19.9	24.3	20.8	23
pH (unitless)	0.01 to 0.1	8.53	8.51	8.5	8.78	8.89	8.83	8.87	8.88	8.96	8.91
Turbidity NTU	0.1	18.6	3.37	2.88	14.2	3.54	1.92	0.92	24.9	6.51	8.41
Nutrients											
Nitrite (as N)	0.001 to 0.02	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<.02	<.05
Nitrogen (Dissolved)	0.05 to 0.1	4.35	5.49	5.07	2.38				3.63		
Dissolved Metals											
Aluminum	0.001 to 0.025	<.01	<.02	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01
Copper	0.0002 to 0.006	<.002	<.004	0.0022	0.0056	0.003	0.0025	0.003	0.0032	<.002	<.002
Lead	5E-005 to 0.0025	<.0005	<.001	<.0005	<.0005	<.0005	<.0005	<.0005	<.0005	<.0005	<.0005
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.001 to 0.006	<.01	<.02	0.01	0.013	<.01	<.01	<.01	<.01	<.01	<.01
Total Metals											
Aluminum	0.003 to 0.025	0.704	<.06	<.03	0.174	0.074	0.065	<.03	0.036	<.03	0.059
Copper	0.0005 to 0.007	0.0074	<.01	<.005	<.005	0.0052	<.005	<.005	<.005	<.005	<.005
Lead	5E-005 to 0.0025	<.0005	<.001	<.0005	<.0005	<.0005	<.0005	<.0005	<.0005	<.0005	<.0005
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.003 to 0.006	<.03	<.06	<.03	0.031	<.03	<.03	<.03	<.03	<.03	<.03
ALS LAB ID		**L1235306**	**L1256679**	**L1266846**	**L1286585**	**L1298960**	**L1312719**	**L1327102**	**L1344180**	**L1358626**	**L1375698**

NOTES:

1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C5.1 FOR NOTES ON SHADING.

TABLE C5.2 - GUIDELINE EXCEEDANCES

Site ID		PP01	PP01	PP01	PP01	PP01	JACL-S	JACL-S	JACL-S	JACL-S	JACL-S
Analytes	**MDL**	**18-Jul-07**	**17-Sep-07**	**29-Apr-08**	**7-Jul-08**	**6-Sep-08**	**10-Jul-08**	**7-Sep-08**	**2-Jun-10**	**1-Sep-10**	**1-Jun-11**
In Situ Parameters											
pH (unitless)	...		8.43	7.82	8.58	8.63	8.29	8.39	8.66	8.66	8.15
Turbidity NTU	...										
Physical Tests											
Color TCU	5	9.9	16.1	8.4	10.4	11.2	19.4	16.3	22.8	20.4	20.4
pH (unitless)	0.01 to 0.1	8.36	8.39	8.23	8.65	8.53	8.44	8.35	8.69	8.47	8.5
Turbidity NTU	0.1			3.81	1.41	3.09	8.57	1.09	0.75	1.02	1.83
Nutrients											
Nitrite (as N)	0.001 to 0.02	1.33	<.5	0.4	<.1	1.17	<.001	0.0136	<.001		<.001
Nitrogen (Dissolved)	0.05 to 0.1										0.88
Dissolved Metals											
Aluminum	0.001 to 0.025	<.25	<.5	<.5	<.5	<.5	<.005	<.005	<.005	<.005	<.005
Copper	0.0002 to 0.006	<.05	<.1	<.1	<.1	<.1	0.0013	0.0016	0.0013	0.0011	0.0012
Lead	5E-005 to 0.0025	<.025	<.05	<.05	<.05	<.05	<.0005	<.0005	<.0005	<.0005	<.0005
Mercury	1E-005 to 5E-005	<.00002	<.00002	<.00002	<.00002	<.00002	<.00002	<.00002	<.00001	<.00001	<.00001
Zinc	0.001 to 0.006	<.25	<.5	<.05	<.05	<.1	<.005	<.005	<.005	<.005	
Total Metals											
Aluminum	0.003 to 0.025	<.25	<.5	<.5	0.7	<.5	0.0105	0.0065	<.005	0.007	0.0074
Copper	0.0005 to 0.007	<.05	<.1	<.1	<.1	<.1	0.0014	0.001	0.0015	0.0012	0.0014
Lead	5E-005 to 0.0025	<.025	<.05	<.05	<.05	<.05	<.0005	<.0005	<.0005	<.0005	<.0005
Mercury	1E-005 to 5E-005	<.00002	<.00002	<.00002	<.00002	<.00002	<.00002	<.00002	<.00001	<.00001	<.00001
Zinc	0.003 to 0.006	<.25	<.5	<.05	<.05	<.1	0.032	<.005	<.005	<.005	<.005
ALS LAB ID		**L532402**	**L555226**	**L624228**	**L652819**	**L679672**	**L654416**	**L679955**	**L893847**	**L927896**	**L1012627**

NOTES:

1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C5.1 FOR NOTES ON SHADING.

TABLE C5.2 - GUIDELINE EXCEEDANCES

Site ID		JACL-S	JACL-S	JACL-S	JACL-S	JACL-S	JACL-S	JACL-S	JACL-S	JACL-S	JACL-S
Analytes	**MDL**	**29-Jun-11**	**28-Jul-11**	**31-Aug-11**	**28-Sep-11**	**26-Oct-11**	**13-Feb-12**	**7-Mar-12**	**26-Apr-12**	**3-May-12**	**11-Jul-12**
In Situ Parameters											
pH (unitless)	...	8.82	8.6	8.23	8.27	8.31	7.91	7.89	8.13	8.45	9.21
Turbidity NTU	...	20.4	8	1.5			0.2	2	0.8	0.6	17.9
Physical Tests											
Color TCU	5	24.5	21.1	19.3	17.2	17	15.3	15.9	15.8	17.1	16.8
pH (unitless)	0.01 to 0.1	8.53	8.68	8.42	8.35	8.35	8.17	8.19	8.5	8.12	8.61
Turbidity NTU	0.1	15.9	7.32	1.33		6.66	1.04	10.5	0.87	0.71	0.84
Nutrients											
Nitrite (as N)	0.001 to 0.02	<.001	0.001	0.0175	0.0243	0.0235	<.005	0.0028	0.0026	0.0027	<.001
Nitrogen (Dissolved)	0.05 to 0.1	1.07	1.12	1.4	1.03	0.82	1.48	0.99	0.89	0.78	0.58
Dissolved Metals											
Aluminum	0.001 to 0.025	<.005	<.005	<.005	<.005	<.003	<.003	<.003	<.003	0.0034	0.0012
Copper	0.0002 to 0.006	0.0013	<.001	<.001	<.001	0.00067	0.00055	0.0009	<.0005	0.00071	0.00072
Lead	5E-005 to 0.0025	<.0005	<.0005	<.0005	<.0005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.001 to 0.006	<.005	<.005	<.005	0.0103	<.003	0.0497	0.015	0.0039	0.007	0.0046
Total Metals											
Aluminum	0.003 to 0.025	0.007	0.0101	0.0111	0.0081	0.191	0.0126	0.0816	0.0069	0.0086	0.0059
Copper	0.0005 to 0.007	0.0015	0.001	<.001	0.0011	0.00181	0.00086	0.00154	0.00062	0.00115	0.00118
Lead	5E-005 to 0.0025	<.0005	<.0005	<.0005	<.0005	0.000053	<.00005	<.00005	<.00005	<.00005	<.00005
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.003 to 0.006	<.005	0.01	<.005	<.005	0.0037	0.059	0.0261	<.003	<.003	<.003
ALS LAB ID		**L1025917**	**L1038168**	**L1052924**	**L1066047**	**L1077732**	**L1114029**	**L1122039**	**L1140194**	**L1143149**	**L1177597**

NOTES:

1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C5.1 FOR NOTES ON SHADING.

TABLE C5.2 - GUIDELINE EXCEEDANCES

Site ID		JACL-S	JACL-S	JACL-S	JACL-S	JACL-D	JACL-D	JACL-D	JACL-D	JACL-D	JACL-D
Analytes	**MDL**	**8-Aug-12**	**8-May-13**	**4-Sep-13**	**9-Jan-14**	**20-Sep-07**	**29-Apr-08**	**1-Jun-11**	**29-Jun-11**	**28-Jul-11**	**31-Aug-11**
In Situ Parameters											
pH (unitless)	...	8.62	7.77	8.14	7.91	8	8.1	6.52	7.36	7.55	
Turbidity NTU	...	1.5	0		0.1				300	1.6	1.5
Physical Tests											
Color TCU	5	16.9	16.1	18.5	15.8	15.3	21.3	15.6	14.7	17.1	16.4
pH (unitless)	0.01 to 0.1	8.58	8.38	8.41	8.18	7.9	8.12	8.11	8.09	8	8.04
Turbidity NTU	0.1	1.45	0.59	1.86	0.31		2.43	2.07	1.67	13	1.61
Nutrients											
Nitrite (as N)	0.001 to 0.02	<.001	0.0036	0.0133	<.005	<.001	0.0045	<.005	<.005	<.01	<.01
Nitrogen (Dissolved)	0.05 to 0.1	0.88		2.1				1.59	1.61	2.28	2.25
Dissolved Metals											
Aluminum	0.001 to 0.025	0.0011	0.0015	<.001	<.001	0.009	<.005	<.005	<.005	<.005	<.005
Copper	0.0002 to 0.006	0.00069	0.001	0.00082	0.00048	<.001	<.001	<.001	<.001	<.001	<.001
Lead	5E-005 to 0.0025	<.00005	<.00005	<.00005	<.00005	<.0005	<.0005	<.0005	<.0005	<.0005	<.0005
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00002	<.00002	<.00001	<.00001	<.00001	<.00001
Zinc	0.001 to 0.006	0.0013	<.001	0.0012	0.0015	<.005	<.005	<.005	<.005	<.005	<.005
Total Metals											
Aluminum	0.003 to 0.025	0.0062	0.0082	0.0064	0.0034	0.0092	<.005	<.005	<.005	<.005	<.005
Copper	0.0005 to 0.007	0.0014	0.00126	0.00105	0.00074	<.001	<.001	<.001	<.001	<.001	<.001
Lead	5E-005 to 0.0025	<.00005	<.00005	<.00005	<.00005	<.0005	<.0005	<.0005	<.0005	<.0005	<.0005
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00002	<.00002	<.00001	<.00001	<.00001	<.00001
Zinc	0.003 to 0.006	<.003	<.003	0.0035	<.003	<.005	<.005	<.005	<.005	<.005	<.005
ALS LAB ID		**L1191600**	**L1299444**	**L1358222**	**L1410216**	**L557583**	**L624228**	**L1012627**	**L1025917**	**L1038168**	**L1052924**

NOTES:
1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C5.1 FOR NOTES ON SHADING.

TABLE C5.2 - GUIDELINE EXCEEDANCES
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Site ID		JACL-D	JACL-D	JACL-D	JACL-D	JACL-D	JACL-D	JACL-D	JACL-D	JACL-D	JACL-D
Analytes	**MDL**	**28-Sep-11**	**3-Nov-11**	**10-Jan-12**	**13-Feb-12**	**7-Mar-12**	**26-Apr-12**	**3-May-12**	**11-Jul-12**	**8-Aug-12**	**6-Sep-12**
In Situ Parameters											
pH (unitless)	...	7.45	7.74	7.77	7.64	7.62	7.48	7.74	7.48	7.5	7.46
Turbidity NTU	...			0.6	0.1	0.6	2.6	1.2	0.8	1	0.6
Physical Tests											
Color TCU	5	16	16.6	16.2	16.1	16.7	17.6	16.4	16.4	16.2	16
pH (unitless)	0.01 to 0.1	8.04	8.1	8.21	8.17	8.11	8.23	8.13	8.14	8.22	8.11
Turbidity NTU	0.1		23.4	1.4	5.24	1.04	1.82	1.21	2.05	2.26	0.92
Nutrients											
Nitrite (as N)	0.001 to 0.02	<.005	<.01	0.018	<.005	<.01	0.0042	0.0295	<.005	<.005	<.005
Nitrogen (Dissolved)	0.05 to 0.1	2.45	2.83	1.24	1.49	1.52	1.23	1.14	1.41	1.51	1.95
Dissolved Metals											
Aluminum	0.001 to 0.025	<.005	<.003	<.003	<.003	<.003	<.003	<.003	<.001	<.001	<.001
Copper	0.0002 to 0.006	<.001	<.0005	<.0005	<.0005	<.0005	<.0005	<.0005	<.0002	<.0002	<.0002
Lead	5E-005 to 0.0025	<.0005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005	<.00005
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.001 to 0.006	<.005	<.003	<.003	<.003	<.003	<.003	0.0034	0.0011	<.001	0.0012
Total Metals											
Aluminum	0.003 to 0.025	<.005	0.0033	0.0261	0.0841	0.0138	0.0049	0.0072	0.0035	0.0125	<.003
Copper	0.0005 to 0.007	<.001	0.00087	0.00053	0.00113	<.0005	<.0005	0.00071	0.00061	0.00079	0.00051
Lead	5E-005 to 0.0025	<.0005	<.00005	<.00005	0.00006	<.00005	<.00005	<.00005	<.00005	0.000083	<.00005
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.003 to 0.006	<.005	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003	<.003
ALS LAB ID		**L1066047**	**L1081228**	**L1103104**	**L1114029**	**L1122039**	**L1140194**	**L1143149**	**L1177597**	**L1191600**	**L1206738**

NOTES:
1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C5.1 FOR NOTES ON SHADING.

TABLE C5.2 - GUIDELINE EXCEEDANCES

Site ID		JACL-D	JACL-D	JACL-D	JACL-D	GOOSE LAKE	GOOSE LAKE	PC-EF-04	PC-EF-04	PC-EF-04	WALL
Analytes	**MDL**	**9-Jan-13**	**7-Feb-13**	**4-Sep-13**	**9-Jan-14**	**9-Apr-14**	**3-Sep-14**	**5-Jun-10**	**2-Sep-10**	**30-Aug-11**	**14-Apr-11**
In Situ Parameters											
pH (unitless)	...	8.23	7.8	7.44	7.68	9.49	9.35		8.1	8.42	8.92
Turbidity NTU	...	2	0.4		1.4						
Physical Tests											
Color TCU	5	15.4	15	15.2	16.3			32.6	15.4	34.9	36
pH (unitless)	0.01 to 0.1	8.21	8.33	8.08	8.15	9.42	9.34	8.54	8.3	8.57	9.24
Turbidity NTU	0.1	2.06	1.04	7.14	1.64	50.2	161	2.71	0.43	18.7	15.5
Nutrients											
Nitrite (as N)	0.001 to 0.02	0.0086	0.0232	<.01	<.005	<.02	0.065	<.01	<.01	<.01	<.1
Nitrogen (Dissolved)	0.05 to 0.1	1.43	1.44	3.5						1.35	
Dissolved Metals											
Aluminum	0.001 to 0.025	<.001	0.0012	<.001	<.001	<.005	<.005	<.01	<.01	<.005	<.5
Copper	0.0002 to 0.006	0.0012	0.00159	0.00023	0.00046	<.001	<.001	0.0032	0.0023	0.0037	<.15
Lead	5E-005 to 0.0025	<.00005	<.00005	<.00005	<.00005	<.00025	<.00025	<.001	<.001	<.0005	<.05
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.001 to 0.006	0.0043	0.0029	0.0012	0.0016	<.005	0.0055	<.005	<.005	0.0051	<.1
Total Metals											
Aluminum	0.003 to 0.025	0.0175	0.008	0.004	0.0149	0.465	0.031	0.191	0.014	0.903	<.5
Copper	0.0005 to 0.007	0.00101	0.00282	0.00054	0.00069	0.003	<.0025	0.0043	0.0024	0.0074	<.15
Lead	5E-005 to 0.0025	0.000179	0.000588	0.000081	<.00005	<.00025	<.00025	<.001	<.001	<.0005	<.05
Mercury	1E-005 to 5E-005	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001	<.00001
Zinc	0.003 to 0.006	<.003	<.003	<.003	<.003	<.015	<.015	<.005	<.005	0.0061	<.1
ALS LAB ID		**L1256679**	**L1266846**	**L1358222**	**L1410216**	**L1441961**	**L1513418**	**L894378**	**L927930**	**L1052387**	**L995583**

NOTES:

1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C5.1 FOR NOTES ON SHADING.

TABLE C5.2 - GUIDELINE EXCEEDANCES

Site ID		WALL	WALL
Analytes	**MDL**	**3-Apr-13**	**5-Jun-13**
In Situ Parameters			
pH (unitless)	...	9.34	8.94
Turbidity NTU	...	14.2	31.6
Physical Tests			
Color TCU	5	42.1	52.8
pH (unitless)	0.01 to 0.1	8.91	8.79
Turbidity NTU	0.1	8.37	72.7
Nutrients			
Nitrite (as N)	0.001 to 0.02	<.1	<.1
Nitrogen (Dissolved)	0.05 to 0.1	16.9	
Dissolved Metals			
Aluminum	0.001 to 0.025	<.05	<.1
Copper	0.0002 to 0.006	0.017	<.02
Lead	5E-005 to 0.0025	<.0025	<.005
Mercury	1E-005 to 5E-005	<.00001	<.00001
Zinc	0.001 to 0.006	0.069	<.1
Total Metals			
Aluminum	0.003 to 0.025	<.15	<.3
Copper	0.0005 to 0.007	<.025	<.05
Lead	5E-005 to 0.0025	<.0025	<.005
Mercury	1E-005 to 5E-005	<.00001	<.00001
Zinc	0.003 to 0.006	<.15	<.3
ALS LAB ID		**L1286585**	**L1312719**

NOTES:
1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
2. SEE TABLE C5.1 FOR NOTES ON SHADING.

APPENDIX C6

SW SUMMARY STATS

(Pages C6-1 to C6-70)

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.1 - AC02
(PAGE 1 OF 2)

Parameter	Total Count	Complete Dataset - AC02									
		Min	5th	25th	Percentiles 50th	75th	95th	Max	Average	Standard Deviation	Coefficient of Variation
In Situ Parameters											
Conductivity µS/cm	23	320	376	445	571	676	805	821	575	149	2.6E-01
Oxygen Dissolved %	21	42	58	71	83	87	108	109	79	16	2.1E-01
Oxygen Dissolved	24	3.3	5.7	6.5	9.1	10.4	11.5	12.4	8.8	2.3	2.6E-01
pH (unitless)	25	7.4	7.8	8.1	8.2	8.3	8.5	8.7	8.2	0.2	3.0E-02
Redox Potential mV	22	-94	-72	75	113	156	244	275	103	95	9.2E-01
Salinity ppt	17	0.24	0.24	0.32	0.35	0.48	0.53	0.58	0.38	0.10	2.7E-01
Specific Conductivity µS/cm	25	434	487	581	727	992	1105	1165	781	225	2.9E-01
Temperature °C	25	0.0	0.1	9.5	11.8	16.4	21.1	27.2	12.0	7.0	5.8E-01
Total Dissolved Solids	18	316	325	432	465	609	703	757	500	132	2.6E-01
Turbidity NTU	17	0.3	1.1	1.9	2.8	6.3	10.2	12.7	4.3	3.5	8.2E-01
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0E+00
Alkalinity (Total as CaCO3)	26	217	222	311	365	390	442	474	352	68	1.9E-01
Bicarbonate Alkalinity	19	217	267	305	357	395	449	474	352	66	1.9E-01
Carbonate Alkalinity	19	0.5	0.5	1.0	7.5	14.2	23.6	27.3	8.4	8.6	1.0E+00
Color TCU	24	13.8	14.6	23.5	32.2	35.9	57.5	63.8	32.1	13.2	4.1E-01
Hardness as CaCO3 (Dissolved)	26	215	247	312	365	468	566	594	387	107	2.8E-01
Hydroxide Alkalinity	19	0.5	0.5	0.5	0.5	0.8	1.0	1.0	0.6	0.2	3.6E-01
pH (unitless)	26	8.2	8.3	8.3	8.4	8.4	8.5	8.5	8.4	0.1	1.0E-02
Specific Conductivity µS/cm	26	450	526	660	755	932	1153	1210	811	213	2.6E-01
Total Dissolved Solids	26	309	348	450	467	608	772	844	533	146	2.7E-01
Total Suspended Solids	26	1.5	1.5	3.2	5.3	9.6	40.1	92.3	11.8	19.2	1.6E+00
Turbidity NTU	23	0.8	1.2	1.6	3.3	6.6	10.3	28.7	5.1	5.9	1.2E+00
Dissolved Anions											
Bromide	26	0.03	0.03	0.03	0.13	0.25	0.25	0.25	0.13	0.11	8.3E-01
Chloride	26	3	5	9	11	15	50	57	17	14	8.6E-01
Fluoride	25	0.10	0.10	0.20	0.23	0.24	0.31	0.35	0.22	0.06	3.0E-01
Sulphate	25	33	47	61	77	124	227	299	102	65	6.4E-01
Nutrients											
Ammonia (Total)	26	0.008	0.012	0.021	0.041	0.074	0.176	0.264	0.060	0.060	9.9E-01
Nitrate (as N)	26	0.003	0.00	0.01	0.03	0.06	0.13	0.22	0.04	0.053	1.2E+00
Nitrite (as N)	26	0.0005	0.00	0.00	0.00	0.01	0.03	0.04	0.01	0.0101	1.5E+00
Nitrogen (Dissolved)	12	0.24	0.39	0.56	0.64	0.81	0.94	0.99	0.67	0.21	3.1E-01
Nitrogen (Total)	16	0.50	0.59	0.67	0.80	0.94	1.03	1.04	0.81	0.16	2.0E-01
Nitrogen Kjeldahl (Total)	26	0.50	0.55	0.67	0.83	0.94	1.27	1.30	0.83	0.21	2.5E-01
Orthophosphate (Dissolved)	12	0.064	0.064	0.087	0.131	0.162	0.318	0.450	0.150	0.105	7.0E-01
Phosphorus - Dissolved	17	0.095	0.117	0.133	0.155	0.194	0.242	0.247	0.166	0.044	2.7E-01
Phosphorus - Total	25	0.098	0.110	0.164	0.179	0.223	0.300	0.630	0.210	0.102	4.8E-01
Cyanide											
Cyanide (Free)	23	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	3.5E-16
Cyanide (Total)	25	0.0025	0.0025	0.0025	0.0025	0.0025	0.0104	0.0188	0.0043	0.0040	9.4E-01
Cyanide (WAD)	24	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	3.5E-16
Dissolved Metals											
Aluminum	26	0.0005	0.0010	0.0014	0.0021	0.0026	0.0050	0.0050	0.0023	0.0013	5.6E-01
Antimony	26	0.00005	0.00005	0.00011	0.00012	0.00022	0.00050	0.00050	0.00017	0.00013	7.8E-01
Arsenic	26	0.0023	0.0025	0.0028	0.0031	0.0034	0.0043	0.0043	0.0031	0.0005	1.6E-01
Barium	26	0.026	0.030	0.041	0.045	0.058	0.073	0.076	0.049	0.013	2.7E-01
Beryllium	26	0.000050	0.000050	0.000050	0.000050	0.000388	0.001000	0.001000	0.000229	0.000328	1.4E+00
Bismuth	20	0.00025	0.00025	0.00025	0.00025	0.00025	0.00524	0.10000	0.00524	0.02230	4.3E+00
Boron	26	0.034	0.041	0.049	0.050	0.058	0.069	0.073	0.054	0.009	1.8E-01
Cadmium	26	0.0000050	0.0000050	0.0000050	0.0000050	0.0000076	0.0000170	0.0000170	0.0000069	0.0000039	5.7E-01
Calcium	26	45	47	55	62	83	103	105	68	19	2.7E-01
Chromium	26	0.00005	0.00005	0.00005	0.00011	0.00042	0.00100	0.00100	0.00025	0.00032	1.3E+00
Cobalt	26	0.00005	0.00010	0.00012	0.00014	0.00016	0.00030	0.00030	0.00015	0.00006	4.0E-01
Copper	26	0.0005	0.0010	0.0012	0.0018	0.0035	0.0042	0.0057	0.0023	0.0014	6.0E-01
Iron	26	0.012	0.015	0.015	0.021	0.037	0.068	0.076	0.030	0.020	6.7E-01
Lead	26	0.000025	0.000025	0.000025	0.000025	0.000194	0.000500	0.000500	0.000114	0.000164	1.4E+00
Lithium	26	0.00250	0.00292	0.00510	0.00879	0.00990	0.01095	0.01200	0.00781	0.00277	3.6E-01
Magnesium	26	25	29	38	55	64	75	80	53	16	3.0E-01
Manganese	26	0.011	0.018	0.043	0.080	0.130	0.363	0.439	0.121	0.117	9.7E-01
Mercury	26	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000100	0.0000100	0.0000062	0.0000021	3.5E-01
Molybdenum	26	0.001	0.001	0.002	0.003	0.003	0.003	0.003	0.002	0.001	2.6E-01
Nickel	26	0.0005	0.0010	0.0011	0.0013	0.0015	0.0016	0.0018	0.0013	0.0003	2.1E-01
Phosphorus	20	0.10	0.10	0.13	0.15	0.16	0.24	0.24	0.15	0.04	2.7E-01
Potassium	26	8	8	9	11	12	13	15	11	2	1.6E-01
Selenium	26	0.00005	0.00007	0.00015	0.00016	0.00047	0.00100	0.00100	0.00031	0.00029	9.5E-01
Silicon	20	8.3	8.9	10.2	11.3	11.7	12.2	12.3	10.8	1.2	1.1E-01
Silver	26	0.0000050	0.0000050	0.0000050	0.0000050	0.0000088	0.0000200	0.0000200	0.0000075	0.0000049	6.6E-01
Sodium	26	20	24	33	44	55	59	65	43	13	2.9E-01
Strontium	20	0.31	0.35	0.43	0.50	0.72	0.78	0.91	0.56	0.17	3.1E-01
Sulphur	14	11	14	20	33	43	84	93	39	25	6.5E-01
Thallium	26	0.0000050	0.0000050	0.0000050	0.0000050	0.0000763	0.0002000	0.0002000	0.0000421	0.0000676	1.6E+00
Tin	26	0.000050	0.000050	0.000050	0.000050	0.000200	0.000500	0.000500	0.000133	0.000154	1.2E+00
Titanium	26	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0000	1.8E-16
Uranium	26	0.0005	0.0006	0.0008	0.0009	0.0014	0.0023	0.0025	0.0011	0.0005	4.8E-01
Vanadium	26	0.0025	0.0028	0.0035	0.0045	0.0055	0.0150	0.0150	0.0055	0.0036	6.6E-01
Zinc	26	0.0005	0.0005	0.0010	0.0016	0.0025	0.0045	0.0059	0.0019	0.0013	7.2E-01
Total Metals											
Aluminum	26	0.0120	0.0251	0.0541	0.1455	0.1900	0.4013	0.5360	0.1545	0.1290	8.3E-01
Antimony	26	0.00005	0.00010	0.00013	0.00015	0.00023	0.00050	0.00050	0.00019	0.00012	6.3E-01
Arsenic	26	0.0023	0.0025	0.0028	0.0030	0.0034	0.0039	0.0041	0.0031	0.0004	1.4E-01
Barium	26	0.028	0.037	0.043	0.049	0.061	0.074	0.076	0.053	0.013	2.5E-01
Beryllium	26	0.000050	0.000050	0.000050	0.000050	0.000388	0.001000	0.001000	0.000229	0.000328	1.4E+00
Bismuth	20	0.00025	0.00025	0.00025	0.00025	0.00025	0.00524	0.10000	0.00524	0.02230	4.3E+00
Boron	26	0.039	0.043	0.050	0.054	0.065	0.075	0.076	0.057	0.011	1.9E-01
Cadmium	26	0.000005	0.000005	0.000005	0.000005	0.000009	0.000017	0.000017	0.000007	0.000004	5.7E-01
Calcium	26	44	47	55	62	83	104	105	69	19	2.8E-01
Chromium	26	0.00018	0.00020	0.00030	0.00045	0.00050	0.00100	0.00102	0.00048	0.00027	5.5E-01
Cobalt	26	0.00013	0.00013	0.00016	0.00024	0.00030	0.00043	0.00050	0.00024	0.00010	3.9E-01
Copper	26	0.0010	0.0013	0.0025	0.0032	0.0043	0.0050	0.0090	0.0035	0.0016	4.6E-01
Iron	26	0.03	0.07	0.11	0.22	0.31	0.63	0.77	0.25	0.19	7.4E-01
Lead	26	0.000025	0.000025	0.000025	0.000054	0.000218	0.000500	0.000500	0.000129	0.000158	1.2E+00
Lithium	26	0.0025	0.0030	0.0052	0.0090	0.0099	0.0119	0.0120	0.0080	0.0029	3.6E-01
Magnesium	26	25	28	39	53	63	75	76	52	16	3.0E-01
Manganese	26	0.02	0.02	0.07	0.13	0.27	0.67	1.03	0.22	0.24	1.1E+00
Mercury	26	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000100	0.0000410	0.0000073	0.0000071	9.7E-01
Molybdenum	26	0.001	0.001	0.002	0.003	0.003	0.003	0.004	0.003	0.001	2.6E-01
Nickel	26	0.0010	0.0010	0.0013	0.0015	0.0018	0.0021	0.0022	0.0015	0.0003	2.2E-01
Phosphorus	20	0.13	0.13	0.15	0.15	0.18	0.28	0.34	0.18	0.06	3.1E-01
Potassium	26	8	8	9	12	12	14	15	11	2	1.7E-01
Selenium	26	0.00005	0.00006	0.00015	0.00017	0.00047	0.00100	0.00100	0.00031	0.00029	9.4E-01
Silicon	20	8.7	9.2	10.6	11.6	12.5	12.9	13.3	11.3	1.3	1.1E-01
Silver	26	0.0000050	0.0000050	0.0000050	0.0000050	0.0000100	0.0000200	0.0000200	0.0000078	0.0000051	6.5E-01
Sodium	26	19	24	33	45	54	58	64	43	13	2.9E-01
Strontium	20	0.32	0.36	0.46	0.51	0.73	0.78	0.87	0.57	0.16	2.9E-01
Sulphur	14	11	14	21	36	44	89	94	40	26	6.5E-01
Thallium	26	0.0000050	0.0000050	0.0000050	0.0000050	0.0000763	0.0002000	0.0002000	0.0000421	0.0000676	1.6E+00
Tin	26	0.000050	0.000050	0.000050	0.000050	0.000200	0.000500	0.000500	0.000133	0.000154	1.2E+00
Titanium	26	0.0050	0.0050	0.0050	0.0050	0.0050	0.0118	0.0160	0.0064	0.0030	4.7E-01
Uranium	26	0.0005	0.0006	0.0008	0.0010	0.0015	0.0021	0.0027	0.0012	0.0005	4.6E-01
Vanadium	26	0.0029	0.0034	0.0045	0.0051	0.0058	0.0150	0.0150	0.0061	0.0034	5.6E-01
Zinc	26	0.0015	0.0015	0.0015	0.0015	0.0025	0.0035	0.0050	0.0021	0.0009	4.3E-01
Organics											
Carbon Organic (Dissolved)	25	8.8	9.3	11.9	14.7	17.2	18.9	19.3	14.5	3.1	2.1E-01
Carbon Organic (Total)	21	9.0	9.2	12.9	15.1	16.5	19.5	19.6	14.8	3.0	2.0E-01
Nitrogen Organic (Dissolved)	7	0.19	0.28	0.49	0.55	0.57	0.71	0.76	0.52	0.17	3.3E-01
Nitrogen Organic (Total)	10	0.49	0.51	0.57	0.63	0.76	0.82	0.84	0.66	0.12	1.8E-01

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.1 - AC02
(PAGE 2 OF 2)

Seasonal Statistics - AC02

Parameter	Count				Average				Min				Median				Max			
	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall
In Situ Parameters																				
Conductivity µS/cm	4	8	6	5	546	534	602	633	517	390	374	320	534.5	445	634	697	598	821	756	793
Oxygen Dissolved %	4	6	6	5	78	89	75	74	70.5	80.4	42	58	77.85	88.7	68	77	85.5	95.6	109	85
Oxygen Dissolved	4	7	7	6	11	10	7	8	10.3	8.64	3	6	10.95	9.12	6	9	12.4	11	11	11
pH (unitless)	4	8	7	6	8	8	8	8	8.09	7.35	8	8	8.195	8.225	8	8	8.48	8.65	8	8
Redox Potential mV	4	7	6	5	134	104	79	105	110	-69.3	-94	-72	127.5	107	75	129	171	246	275	213
Salinity ppt	4	6	4	3	0.50	0.34	0.35	0.35	0.48	0.24	0.33	0.27	0.5	0.3	0.34	0.38	0.52	0.58	0.37	0.39
Specific Conductivity µS/cm	4	8	7	6	1026	721	717	775	986	486	434	489	1025	621	726	823	1067	1165	1018	1023
Temperature °C	4	8	7	6	1	12	19	11	0.01	9.5	16	3	0.125	10.6	18	12	2.19	15.4	27	19
Total Dissolved Solids	4	6	4	4	667	444	462	457	642	316	439	362	666.5	404	459	478	693	757	490	510
Turbidity NTU	4	6	5	2	3	4	6	6	2.1	0.3	2	3	2.6	1.5	4	6	3.6	9.6	13	10
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	0	1	0	1	-	0.5	-	0.5	-	0.5	-	0.5	-	0.5	-	0.5	-	0.5	-	0.5
Alkalinity (Total as CaCO3)	4	9	7	6	436	302	332	392	394	217	291	359	438.5	302	328	388	474	390	373	430
Bicarbonate Alkalinity	4	7	5	3	430	319	316	387	367	217	283	349	438.5	309	320	405	474	385	357	407
Carbonate Alkalinity	4	7	5	3	7.58	6	9	15	1	0.5	1	10	1	2.6	8	11	27.3	17.4	18	23
Color TCU	4	8	7	5	17	38	38	28	13.8	16.6	29	22	14.75	36.05	35	29	24.1	63.8	51	32
Hardness as CaCO3 (Dissolved)	4	9	7	6	494	374	333	400	466	215	299	337	477.5	317	336	391	553	594	387	494
Hydroxide Alkalinity	4	7	5	3	0.88	0.57	0.60	0.50	0.5	0.5	0.50	0.50	1	0.5	0.50	0.50	1	1	1.00	0.50
pH (unitless)	4	9	7	6	8	8	8	8	8.17	8.29	8	8	8.265	8.38	8	8	8.39	8.43	8	9
Specific Conductivity µS/cm	4	9	7	6	991	771	705	876	916	450	629	738	958.5	667	704	876	1130	1210	877	1060
Total Dissolved Solids	4	9	7	6	649	519	470	550	570	309	415	457	635	449	458	528	754	844	594	704
Total Suspended Solids	4	9	7	6	8	3	9	30	3.7	1.5	4	3	5.3	1.5	6	16	19.3	8.7	34	92
Turbidity NTU	4	8	6	5	4	4	3	11	3.02	0.82	1	1	3.505	1.58	3	9	5.55	10.4	4	29
Dissolved Anions																				
Bromide	4	9	7	6	0.25	0.09	0.09	0.15	0.25	0.025	0.03	0.03	0.25	0.025	0.03	0.19	0.25	0.25	0.25	0.25
Chloride	4	9	7	6	24	16	11	20	9.8	2.5	6	8	23.9	9.94	12	12	40.3	56.8	14	53
Fluoride	4	9	6	6	0.20	0.19	0.25	0.22	0.1	0.1	0.23	0.17	0.18	0.219	0.24	0.21	0.35	0.237	0.27	0.32
Sulphate	4	8	7	6	147	108	66	109	121	33.1	47	62	125.5	63.6	61	118	215	299	117	144
Nutrients																				
Ammonia (Total)	4	9	7	6	0.177	0.024	0.037	0.065	0.119	0.0115	0.008	0.045	0.162	0.0213	0.039	0.065	0.264	0.0412	0.084	0.086
Nitrate (as N)	4	9	7	6	0.12	0.01	0.024	0.061	0.025	0.0025	0.003	0.025	0.1185	0.0096	0.013	0.050	0.219	0.025	0.067	0.116
Nitrite (as N)	4	9	7	6	0.007	0.0024	0.0078	0.0122	0.005	0.0005	0.0005	0.0025	0.005	0.0012	0.0012	0.0083	0.013	0.0069	0.0438	0.0270
Nitrogen (Dissolved)	3	5	3	1	0.84	0.60	0.54	0.90	0.662	0.51	0.24	0.90	0.871	0.57	0.61	0.90	0.99	0.79	0.76	0.90
Nitrogen (Total)	3	6	4	3	0.89	0.68	0.81	0.98	0.716	0.498	0.67	0.94	0.922	0.6705	0.79	0.95	1.03	0.842	0.99	1.04
Nitrogen Kjeldahl (Total)	4	9	7	6	0.77	0.69	0.87	1.05	0.671	0.498	0.67	0.92	0.7605	0.656	0.84	0.96	0.883	0.96	1.30	1.30
Orthophosphate (Dissolved)	1	4	2	5	0.13	0.112	0.330	0.111	0.132	0.0639	0.210	0.064	0.132	0.11445	0.330	0.099	0.132	0.157	0.450	0.175
Phosphorus - Dissolved	4	6	5	2	0.154	0.154	0.20	0.13	0.141	0.0946	0.13	0.12	0.1535	0.151	0.21	0.13	0.168	0.231	0.25	0.13
Phosphorus - Total	3	9	7	6	0.19	0.16	0.28	0.21	0.165	0.0983	0.15	0.16	0.185	0.164	0.22	0.19	0.221	0.292	0.63	0.30
Cyanide																				
Cyanide (Free)	4	8	6	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Cyanide (Total)	4	9	7	5	0.0025	0.0041	0.00577143	0.0041	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0099	0.0188	0.0105
Cyanide (WAD)	4	9	6	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Dissolved Metals																				
Aluminum	4	9	7	6	0.0012	0.0025	0.0028	0.0024	0.001	0.0012	0.0015	0.0005	0.00125	0.002	0.0025	0.0025	0.0013	0.005	0.0050	0.0050
Antimony	4	9	7	6	0.000068	0.00019	0.00019	0.00019	0.00005	0.00011	0.00010	0.00005	0.00005	0.00012	0.00013	0.00012	0.00012	0.0005	0.00050	0.00050
Arsenic	4	9	7	6	0.0026	0.0030	0.0037	0.0032	0.00231	0.0025	0.0028	0.0029	0.00266	0.00284	0.0035	0.0032	0.00278	0.00354	0.0043	0.0035
Barium	4	9	7	6	0.064	0.052	0.040	0.045	0.0583	0.0365	0.026	0.036	0.06105	0.0463	0.042	0.044	0.0738	0.0761	0.053	0.057
Beryllium	4	9	7	6	0.00005	0.00026	0.00025	0.00028	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.001	0.00100	0.00100
Bismuth	4	7	5	4	0.00025	0.015	0.000	0.000	0.00025	0.00025	0.000	0.000	0.00025	0.00025	0.000	0.000	0.00025	0.1	0.000	0.000
Boron	4	9	7	6	0.053	0.048	0.055	0.061	0.041	0.034	0.046	0.050	0.0565	0.05	0.050	0.065	0.058	0.055	0.073	0.069
Cadmium	4	9	7	6	0.00001	0.000007	0.000007	0.000008	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000017	0.000017	0.000017
Calcium	4	9	7	6	88	71	59	62	81.5	44.8	53	46	85.4	62.3	58	57	98.1	105	64	87
Chromium	4	9	7	6	0.00005	0.0003	0.00030	0.00028	0.00005	0.00005	0.00005	0.00005	0.00005	0.00013	0.00016	0.00005	0.00005	0.001	0.00100	0.00100
Cobalt	4	9	7	6	0.00011	0.00015	0.00017	0.00016	0.00005	0.00011	0.00011	0.00010	0.000115	0.00014	0.00016	0.00015	0.00017	0.0003	0.00030	0.00030
Copper	4	9	7	6	0.0017	0.0035	0.0021	0.0011	0.00107	0.00173	0.0010	0.0005	0.00124	0.0039	0.0020	0.0011	0.00315	0.00572	0.0037	0.0015
Iron	4	9	7	6	0.032	0.028	0.041	0.019	0.018	0.012	0.015	0.015	0.0315	0.015	0.034	0.017	0.046	0.076	0.069	0.024
Lead	4	9	7	6	0.00003	0.00013	0.00013	0.00014	0.000025	0.000025	0.00003	0.00003	0.000025	0.000025	0.00003	0.00003	0.000025	0.0005	0.00050	0.00050
Lithium	4	9	7	6	0.0096	0.0052	0.0081	0.0101	0.00876	0.0025	0.0044	0.0095	0.009895	0.005	0.0088	0.0099	0.01	0.0084	0.0120	0.0110
Magnesium	4	9	7	6	66.7	47.6	44.9	59.8	62.8	25.1	36.5	53.7	64.6	39.2	44.8	60.0	74.7	80.3	59.5	67.3
Manganese	4	9	7	6	0.296	0.048	0.150	0.079	0.117	0.0107	0.044	0.028	0.3145	0.0355	0.116	0.080	0.439	0.131	0.339	0.128
Mercury	4	9	7	6	0.0000050	0.0000061	0.0000064	0.0000067	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.00001	0.0000100	0.0000100
Molybdenum	4	9	7	6	0.0028	0.0026	0.0021	0.0026	0.00242	0.0019	0.0010	0.0010	0.002715	0.00279	0.0022	0.0029	0.00339	0.00323	0.0029	0.0035
Nickel	4	9	7	6	0.0012	0.0013	0.0014	0.0012	0.00102	0.001	0.0010	0.0005	0.001215	0.00132	0.0014	0.0013	0.0015	0.00151	0.0018	0.0016
Phosphorus	4	7	5	4	0.16	0.15	0.18	0.12	0.141	0.099	0.14	0.10	0.158	0.15	0.15	0.12	0.174	0.238	0.24	0.14
Potassium	4	9	7	6	12	10	11	12	10.7	8.03	9	11	11.65	9.39	11	12	14.7	12.5	13	13
Selenium	4	9	7	6	0.00015	0.00033	0.00034	0.00034	0.00005	0.00015	0.00015	0.00011	0.000085	0.00016	0.00018	0.00015	0.00038	0.001	0.00100	0.00100
Silicon	4	7	5	4	11.25	10.69	11.01	10.52	10.4	8.93	8.25	9.34	11.2	11.1	11.70	10.41	12.2	11.8	12.30	11.90
Silver	4	9	7	6	0.000005	0.000008	0.000008	0.000008	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.00002	0.000020	0.000020
Sodium	4	9	7	6	51	37	40	51	45.8	19.9	31	44	48.9	31.1	39	48	59.2	57.8	59	65
Strontium	4	7	5	4	0.73	0.53	0.45	0.57	0.707	0.305	0.40	0.43	0.733	0.459	0.44	0.57	0.756	0.908	0.49	0.71
Sulphur	4	3	3	4	47	61	19	28	38.7	11.2	15	20	40.3	79.9	20	25	69.3	92.5	20	43
Thallium	4	9	7	6	0.000005	0.000048	0.000046	0.000053	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.0002	0.000200	0.000200
Tin	4	9	7	6	0.00005	0.00014	0.00014	0.00016	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.0005	0.00050	0.00050
Titanium	4	9	7	6	0.0050	0.005	0.0050	0.0050	0.005	0.005	0.0050	0.0050	0.005	0.005	0.0050	0.0050	0.005	0.005	0.0050	0.0050
Uranium	4	9	7	6	0.0017	0.0012	0.0008	0.0011	0.00132	0.000462	0.0006	0.0008	0.00154	0.000899	0.0007	0.0010	0.00253	0.00239	0.0010	0.0015
Vanadium	4	9	7	6	0.0034	0.0065	0.0056	0.0054	0.0025	0.0044	0.0033	0.0029	0.0028	0.0055	0.0043	0.0036	0.0055	0.015	0.0150	0.0150
Zinc	4	9	7	6	0.0009	0.0022	0.0024	0.0014	0.0005	0.0005	0.0005	0.0005	0.00085	0.0016	0.0025	0.0013	0.0012	0.0059	0.0050	0.0025
Total Metals																				
Aluminum	4	9	7	6	0.08	0.13	0.13	0.27	0.0435	0.012	0.02	0.15	0.06185	0.0536	0.14	0.27	0.149	0.536	0.17	0.43
Antimony	4	9	7	6	0.0000975	0.00020	0.00022	0.00023	0.00005	0.00012	0.00013	0.00014	0.000105	0.00014	0.00016	0.00016	0.00013	0.0005	0.00050	0.00050
Arsenic	4	9	7	6	0.0027	0.0029	0.0035	0.0031	0.0024	0.00225	0.0029	0.0029	0.00273	0.00291	0.0035	0.0031	0.00279	0.00342	0.0041	0.0034
Barium	4	9	7	6	0.065	0.052	0.043	0.056	0.0604	0.04	0.028	0.040	0.0634	0.0457	0.044	0.057	0.074	0.0761	0.053	0.073
Beryllium	4	9	7	6	0.00005	0.00026	0.00025	0.00028	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.001	0.00100	0.00100
Bismuth	4	7	5	4	0.00025	0.0145	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.1	0.00025	0.00025
Boron	4	9	7	6	0.057	0.051	0.057	0.066	0.044	0.039	0.050	0.050	0.06	0.05	0.051	0.073	0.065	0.058	0.073	0.076
Cadmium	4	9	7	6	0.00001	0.000007	0.000007	0.000008	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000014	0.000017	0.000017	0.000017
Calcium	4	9	7	6	89	71	60	62	82.7	44.3	53	47	88.15	62.8	60	58	98.8	105	66	84
Chromium	4	9	7	6	0.00023	0.0005	0.0005	0.0006	0.00018	0.0002	0.0003	0.0003	0.000225	0.00045	0.0005	0.0005	0.0003	0.00102	0.0010	0.0010
Cobalt	4	9	7	6	0.00018	0.00022	0.00024	0.00033	0.00015	0.00013	0.00015	0.00021	0.000175	0.00015	0.00026	0.00031	0.0002	0.0005	0.00030	0.00044
Copper	4	9	7	6	0.0028	0.0046	0.0029	0.0028	0.00204	0.003	0.0010	0.0010	0.002405	0.0044	0.0026	0.0027	0.00416	0.009	0.0049	0.0051
Iron	4	9	7	6	0.14	0.21	0.23	0.41	0.105	0.034	0.07	0.21	0.126	0.089	0.25	0.36	0.22	0.768	0.32	0.66
Lead	4	9	7	6	0.00003	0.00014	0.00013	0.00017	0.000025	0.000025	0.00003	0.00003	0.000025	0.00006	0.00005	0.00010	0.00003	0.0005	0.00050	0.00050
Lithium	4	9	7	6	0.0098	0.0053	0.0080	0.0107	0.00902	0.0025	0.0048	0.0094	0.00989	0.005	0.0089	0.0110	0.0103	0.00823	0.0120	0.0120
Magnesium	4	9	7	6	65	46	44	59	62.3	24.7	36	50	63.45	38.8	45	60	72.5	75.6	56	65
Manganese	4	9	7	6	0.31	0.06	0.27	0.33	0.125	0.017	0.07	0.08	0.33	0.0514	0.24	0.19	0.469	0.151	0.74	1.03
Mercury	4	9	7	6	0.0000050	0.0000096	0.0000064	0.0000067	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000041	0.0000100	0.0000100
Molybdenum	4	9	7	6	0.003	0.003	0.002	0.003	0.00261	0.002	0.001	0.001	0.00293	0.0028	0.002	0.003	0.00369	0.00327	0.003	0.004
Nickel	4	9	7	6	0.0014	0.0014	0.0016	0.0015	0.0012	0.0010	0.0010	0.0010	0.0014	0.0015	0.0016	0.0017	0.0017	0.0022	0.0021	0.0019
Phosphorus	4	7	5	4	0.17	0.17	0.19	0.19	0.152	0.135	0.15	0.13	0.173	0.15	0.15	0.15	0.195	0.281	0.25	0.34
Potassium	4	9	7	6	12.5	9.9	10.6	12.5	11.2	7.7	8.9	11.5	12.1	9.2	11.1	12.2	14.4	12.5	12.0	15.0
Selenium	4	9	7	6	0.00014	0.00033	0.00034	0.00034	0.00005	0.00015	0.00015	0.00012	0.00008	0.0002	0.00019	0.00015	0.0004	0.0010	0.00100	0.00100
Silicon	4	7	5	4	11.8	10.9	11.6	11.4	10.6	9.2	8.7	10.2	11.8	11.0	12.4	11.0	12.9	12.8	12.6	13.3
Silver	4	9	7	6	0.0000050	0.0000078	0.0000091	0.0000083	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.00002	0.0000200	0.0000200
Sodium	4	9	7	6	51	36	39	53	46.5	18.8	32	45	50.2	32.5	38	52	57.1	58.2	52	64
Strontium	4	7	5	4	0.7	0.5	0.47	0.59	0.72	0.32	0.44	0.46	0.741	0.5	0.46	0.60	0.8	0.9	0.50	0.71
Sulphur	4	3	3	4	49	64	19	30	41.2	11.3	15	21	42.15	85.8	21	27	71.8	93.9	22	44
Thallium	4	9	7	6	0.00001	0.00005	0.00005	0.00005	0.000005	0.000005	0.00001	0.00001	0.000005	0.000005	0.00001	0.00001	0.000005	0.0002	0.00020	0.00020
Tin	4	9	7	6	0.00005	0.00014	0.00014	0.00016	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.0005	0.00050	0.00050
Titanium	4	9	7	6	0.005	0.006	0.006	0.008	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.008	0.005	0.016	0.011	0.012
Uranium	4	9	7	6	0.0018	0.0012	0.0008	0.0012	0.0014	0.0005	0.0007	0.0008	0.0016	0.0009	0.0008	0.0011	0.0027	0.0022	0.0010	0.0015
Vanadium	4	9	7	6	0.0039	0.0069	0.0061	0.0064	0.0029	0.0048	0.0038	0.0039	0.0034	0.0058	0.0047	0.0049	0.006	0.015	0.0150	0.0150
Zinc	4	9	7	6	0.0015	0.0020	0.0024	0.0022	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0020	0.0015	0.0032	0.0050	0.0034
Organics																				
Carbon Organic (Dissolved)	4	8	7	6	10.3	14.5	17	15	8.76	11.0	15	12	10.4	14.1	17	16	12	19	19	18
Carbon Organic (Total)	4	8	5	4	10.7	15	17	15	9.0	11.2	15	13	10.5	15.2	17	14	13	20	20	17
Nitrogen Organic (Dissolved)	0	5	2	0	-	0.57	0.38	-	-	0.481	0.19	-	-	0.549	0.38	-	-	0.76	0.57	-
Nitrogen Organic (Total)	3	5	2	0	0.62	0.62	0.82	-	0.537	0.49	0.80	-	0.56	0.63	0.82	-	0.765	0.7	0.84	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.
2. SEASONS ARE SPECIFIED AS FOLLOWS: WIN (WINTER; DECEMBER THROUGH MARCH), SPR (SPRING; APRIL AND MAY), SUMMER(JUNE THROUGH AUGUST), FALL (SEPTEMBER THROUGH NOVEMBER).

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.2 - AJWE-D
(PAGE 1 OF 2)

Parameter	Total Count	Complete Dataset - AJWE-D									
		Min	Percentiles 5th	25th	50th	75th	95th	Max	Average	Standard Deviation	Coefficient of Variation
In Situ Parameters											
Conductivity µS/cm	11	1300	1508	1829	1906	1995	2044	2050	1860	212	1.1E-01
Oxygen Dissolved %	6	66	69	78	83	89	93	94	82	10	1.2E-01
Oxygen Dissolved	9	7.9	8.3	9.3	10.3	10.9	11.4	11.5	10.1	1.2	1.2E-01
pH (unitless)	11	8.0	8.0	8.1	8.2	8.4	8.5	8.5	8.2	0.2	2.1E-02
Redox Potential mV	7	-107	-98	3	115	184	244	247	90	138	1.5E+00
Salinity ppt	5	0.01	0.29	1.43	1.45	1.48	1.51	1.52	1.18	0.65	5.6E-01
Specific Conductivity µS/cm	11	1800	2235	2734	2771	2802	2928	2929	2701	309	1.1E-01
Temperature °C	11	4.7	5.1	7.8	9.3	10.1	11.1	11.2	8.7	2.1	2.4E-01
Total Dissolved Solids	5	12	367	1788	1806	1837	1890	1903	1469	816	5.6E-01
Turbidity NTU	4	-2.4	-2.1	-0.7	0.0	0.1	0.2	0.2	-0.6	1.2	-2.3E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	2	0.5	0.6	1.2	1.8	2.5	3.0	3.1	1.8	1.8	1.0E+00
Alkalinity (Total as CaCO3)	11	146	148	157	163	167	173	177	162	9	5.6E-02
Bicarbonate Alkalinity	6	146	147	153	163	165	174	177	161	11	7.0E-02
Carbonate Alkalinity	6	0.5	0.5	0.6	1.0	1.0	1.0	1.0	0.8	0.3	3.1E-01
Color TCU	8	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0.0	0.0E+00
Hardness as CaCO3 (Dissolved)	11	1160	1175	1235	1290	1335	1370	1380	1282	70	5.5E-02
Hydroxide Alkalinity	6	0.5	0.5	0.6	1.0	1.0	1.0	1.0	0.8	0.3	3.1E-01
pH (unitless)	11	8.2	8.2	8.2	8.3	8.3	8.3	8.3	8.3	0.1	7.0E-03
Specific Conductivity µS/cm	11	2620	2670	2735	2750	2790	2825	2850	2755	59	2.1E-02
Total Dissolved Solids	11	2240	2245	2265	2270	2475	2625	2650	2380	152	6.4E-02
Total Suspended Solids	11	1.5	1.5	1.5	1.5	2.8	5.2	5.2	2.4	1.6	6.6E-01
Turbidity NTU	8	0.1	0.2	0.2	0.2	0.4	1.0	1.3	0.4	0.4	9.9E-01
Dissolved Anions											
Bromide	11	0.03	0.08	0.38	0.50	0.88	1.88	2.50	0.72	0.71	9.9E-01
Chloride	11	13	18	25	27	31	33	34	27	6	2.1E-01
Fluoride	10	0.14	0.16	0.20	0.20	0.33	0.88	1.20	0.34	0.32	9.4E-01
Sulphate	11	1350	1355	1395	1480	1585	1600	1600	1484	104	7.0E-02
Nutrients											
Ammonia (Total)	11	0.003	0.003	0.003	0.007	0.010	0.034	0.041	0.011	0.012	1.1E+00
Nitrate (as N)	11	18.500	18.65	20.70	22.00	23.25	24.20	24.40	21.75	1.993	9.2E-02
Nitrite (as N)	11	0.0079	0.01	0.02	0.03	0.07	0.15	0.16	0.05	0.0514	9.6E-01
Nitrogen (Dissolved)	3	23.90	24.36	26.20	28.50	29.95	31.11	31.40	27.93	3.78	1.4E-01
Nitrogen (Total)	3	20.80	20.84	21.00	21.20	21.70	22.10	22.20	21.40	0.72	3.4E-02
Nitrogen Kjeldahl (Total)	11	0.03	0.03	0.08	0.18	0.22	0.25	0.26	0.15	0.09	5.9E-01
Orthophosphate (Dissolved)	8	0.001	0.001	0.001	0.002	0.002	0.003	0.003	0.002	0.001	5.3E-01
Phosphorus - Dissolved	5	0.001	0.001	0.001	0.001	0.001	0.003	0.003	0.001	0.001	7.3E-01
Phosphorus - Total	10	0.001	0.001	0.001	0.003	0.003	0.008	0.010	0.003	0.003	8.8E-01
Cyanide											
Cyanide (Free)	7	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Cyanide (Total)	10	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	1.8E-16
Cyanide (WAD)	7	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Dissolved Metals											
Aluminum	11	0.0005	0.0008	0.0017	0.0125	0.0125	0.0125	0.0125	0.0075	0.0057	7.6E-01
Antimony	11	0.01890	0.01915	0.02030	0.02100	0.02235	0.02420	0.02470	0.02136	0.00177	8.3E-02
Arsenic	11	0.0512	0.0523	0.0592	0.0691	0.0741	0.0811	0.0829	0.0670	0.0106	1.6E-01
Barium	11	0.010	0.010	0.010	0.010	0.018	0.019	0.020	0.014	0.004	3.2E-01
Beryllium	11	0.000050	0.000050	0.000075	0.002500	0.002500	0.002500	0.002500	0.001395	0.001269	9.1E-01
Bismuth	5	0.00025	0.00025	0.00025	0.00025	0.00050	0.00050	0.00050	0.00035	0.00014	3.9E-01
Boron	11	0.050	0.050	0.050	0.097	0.100	0.110	0.114	0.082	0.026	3.2E-01
Cadmium	10	0.0000500	0.0001175	0.0002950	0.0004895	0.0009725	0.0013245	0.0015000	0.0006159	0.0004679	7.6E-01
Calcium	11	154	156	159	169	173	176	177	166	8	5.0E-02
Chromium	11	0.00005	0.00005	0.00008	0.00250	0.00250	0.00250	0.00250	0.00140	0.00127	9.1E-01
Cobalt	11	0.00075	0.00075	0.00097	0.00134	0.00166	0.00181	0.00191	0.00132	0.00042	3.2E-01
Copper	11	0.0150	0.0163	0.0193	0.0292	0.0332	0.0390	0.0414	0.0272	0.0088	3.2E-01
Iron	11	0.005	0.005	0.008	0.015	0.015	0.015	0.015	0.012	0.005	3.9E-01
Lead	11	0.000025	0.000025	0.000038	0.001250	0.001250	0.001250	0.001250	0.000698	0.000635	9.1E-01
Lithium	11	0.03970	0.03985	0.04160	0.04390	0.04595	0.05250	0.05300	0.04461	0.00447	1.0E-01
Magnesium	11	188	191	205	212	220	226	229	211	12	5.8E-02
Manganese	11	0.001	0.001	0.001	0.001	0.002	0.002	0.002	0.001	0.001	4.3E-01
Mercury	10	0.0000050	0.0000050	0.0000050	0.0000100	0.0000100	0.0000100	0.0000100	0.0000080	0.0000026	3.2E-01
Molybdenum	11	1.950	1.970	2.175	2.200	2.295	2.510	2.670	2.230	0.191	8.6E-02
Nickel	11	0.0025	0.0025	0.0025	0.0025	0.0036	0.0040	0.0042	0.0031	0.0007	2.2E-01
Phosphorus	5	0.03	0.03	0.03	0.03	0.15	0.15	0.15	0.08	0.07	9.1E-01
Potassium	11	18	18	19	20	21	22	22	20	1	6.5E-02
Selenium	11	0.01550	0.01555	0.01630	0.01750	0.01865	0.02000	0.02050	0.01761	0.00164	9.3E-02
Silicon	5	8.6	8.6	8.7	8.7	8.8	9.0	9.0	8.7	0.2	1.8E-02
Silver	11	0.0000050	0.0000050	0.0000075	0.0000500	0.0000500	0.0000500	0.0000500	0.0000305	0.0000225	7.4E-01
Sodium	11	188	197	206	208	211	227	235	210	11	5.3E-02
Strontium	5	2.77	2.77	2.77	2.87	2.89	3.25	3.34	2.93	0.24	8.1E-02
Sulphur	3	0	48	237	474	485	494	496	323	280	8.7E-01
Thallium	11	0.0000050	0.0000050	0.0000100	0.0005000	0.0005000	0.0005000	0.0005000	0.0002769	0.0002563	9.3E-01
Tin	11	0.000050	0.000050	0.000075	0.001250	0.001250	0.001250	0.001250	0.000714	0.000616	8.6E-01
Titanium	11	0.0050	0.0050	0.0050	0.0050	0.0050	0.0080	0.0110	0.0055	0.0018	3.3E-01
Uranium	11	0.0094	0.0094	0.0096	0.0099	0.0104	0.0108	0.0109	0.0100	0.0005	5.2E-02
Vanadium	11	0.0069	0.0070	0.0077	0.0080	0.0118	0.0150	0.0150	0.0097	0.0034	3.5E-01
Zinc	11	0.0005	0.0010	0.0021	0.0025	0.0078	0.0125	0.0125	0.0049	0.0049	1.0E+00
Total Metals											
Aluminum	11	0.0015	0.0039	0.0087	0.0125	0.0125	0.0412	0.0699	0.0155	0.0184	1.2E+00
Antimony	11	0.01910	0.01950	0.02015	0.02100	0.02200	0.02375	0.02410	0.02126	0.00153	7.2E-02
Arsenic	11	0.0518	0.0522	0.0606	0.0693	0.0736	0.0785	0.0811	0.0666	0.0097	1.4E-01
Barium	11	0.010	0.010	0.010	0.010	0.018	0.020	0.021	0.014	0.005	3.3E-01
Beryllium	11	0.000050	0.000050	0.000075	0.002500	0.002500	0.002500	0.002500	0.001395	0.001269	9.1E-01
Bismuth	5	0.00025	0.00025	0.00025	0.00025	0.00050	0.00050	0.00050	0.00035	0.00014	3.9E-01
Boron	11	0.050	0.050	0.050	0.050	0.105	0.128	0.130	0.078	0.034	4.3E-01
Cadmium	10	0.000050	0.000118	0.000332	0.000497	0.000637	0.001320	0.001500	0.000586	0.000429	7.3E-01
Calcium	11	155	155	157	169	174	179	182	166	10	5.8E-02
Chromium	11	0.00010	0.00010	0.00013	0.00250	0.00250	0.00250	0.00250	0.00145	0.00121	8.4E-01
Cobalt	11	0.00075	0.00075	0.00102	0.00137	0.00164	0.00184	0.00198	0.00134	0.00042	3.2E-01
Copper	11	0.0150	0.0176	0.0226	0.0311	0.0338	0.0390	0.0407	0.0286	0.0079	2.8E-01
Iron	11	0.01	0.01	0.01	0.02	0.02	0.05	0.09	0.02	0.02	1.2E+00
Lead	11	0.000025	0.000025	0.000050	0.001250	0.001250	0.001975	0.002700	0.000832	0.000865	1.0E+00
Lithium	11	0.0398	0.0399	0.0410	0.0419	0.0488	0.0499	0.0508	0.0442	0.0043	9.7E-02
Magnesium	11	188	190	198	215	220	232	239	211	16	7.5E-02
Manganese	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.4E-01
Mercury	10	0.0000050	0.0000050	0.0000050	0.0000100	0.0000100	0.0000100	0.0000100	0.0000080	0.0000026	3.2E-01
Molybdenum	11	1.890	1.950	2.125	2.200	2.460	2.605	2.730	2.269	0.245	1.1E-01
Nickel	11	0.0025	0.0025	0.0025	0.0025	0.0038	0.0039	0.0039	0.0031	0.0007	2.2E-01
Phosphorus	5	0.03	0.03	0.03	0.03	0.15	0.15	0.15	0.08	0.07	9.1E-01
Potassium	11	18	18	19	20	21	22	22	20	1	7.2E-02
Selenium	11	0.01530	0.01565	0.01635	0.01760	0.01870	0.01955	0.02000	0.01755	0.00148	8.4E-02
Silicon	5	8.7	8.8	8.9	8.9	9.2	9.3	9.3	9.0	0.2	2.6E-02
Silver	11	0.0000050	0.0000050	0.0000075	0.0000500	0.0000500	0.0000500	0.0000500	0.0000305	0.0000225	7.4E-01
Sodium	11	189	195	204	213	216	232	244	211	14	6.6E-02
Strontium	5	2.89	2.91	3.00	3.00	3.03	3.29	3.36	3.06	0.18	5.8E-02
Sulphur	3	492	493	495	497	498	499	499	496	4	7.3E-03
Thallium	11	0.0000050	0.0000075	0.0000100	0.0005000	0.0005000	0.0005000	0.0005000	0.0002769	0.0002563	9.3E-01
Tin	11	0.000050	0.000050	0.000075	0.001250	0.001250	0.001250	0.001250	0.000714	0.000616	8.6E-01
Titanium	11	0.0050	0.0050	0.0050	0.0050	0.0050	0.0075	0.0100	0.0055	0.0015	2.8E-01
Uranium	11	0.0092	0.0094	0.0099	0.0102	0.0104	0.0111	0.0111	0.0102	0.0006	5.6E-02
Vanadium	11	0.0066	0.0072	0.0080	0.0084	0.0119	0.0150	0.0150	0.0099	0.0033	3.3E-01
Zinc	11	0.0015	0.0015	0.0020	0.0025	0.0078	0.0125	0.0125	0.0050	0.0048	9.6E-01
Organics											
Carbon Organic (Dissolved)	11	0.9	1.0	1.2	1.5	1.6	1.7	1.7	1.4	0.3	1.9E-01
Carbon Organic (Total)	5	1.0	1.0	1.2	1.2	1.2	1.4	1.4	1.2	0.1	1.2E-01
Nitrogen Organic (Dissolved)	3	2.40	2.81	4.45	6.50	8.65	10.37	10.80	6.57	4.20	6.4E-01
Nitrogen Organic (Total)	3	0.13	0.13	0.15	0.18	0.21	0.24	0.25	0.18	0.06	3.4E-01

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.2 - AJWE-D
(PAGE 2 OF 2)

Seasonal Statistics - AJWE-D

Parameter	Count				Average				Min				Median				Max			
	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall
In Situ Parameters																				
Conductivity µS/cm	0	4	3	4	-	1681	1936	1983	-	1300	1820	1906	-	1776	1989	1988	-	1871	2000	2050
Oxygen Dissolved %	0	3	2	1	-	85	80	78	-	79.9	66	78	-	85.8	80	78	-	90.1	94	78
Oxygen Dissolved	0	4	3	2	-	11	10	9	-	10.2	8	9	-	10.5	11	9	-	11.2	12	9
pH (unitless)	0	4	3	4	-	8	8	8	-	8.01	8	8	-	8.1	8	8	-	8.51	8	8
Redox Potential mV	0	2	3	2	-	165	18	123	-	82.2	-107	115	-	164.6	-76	123	-	247	237	130
Salinity ppt	0	2	1	2	-	0.77	1.43	1.47	-	0.01	1.43	1.45	-	0.765	1.43	1.47	-	1.52	1.43	1.48
Specific Conductivity µS/cm	0	4	3	4	-	2549	2813	2769	-	1800	2748	2720	-	2733.5	2763	2775	-	2927	2929	2806
Temperature °C	0	4	3	4	-	7	9	10	-	4.73	7	9	-	7.42	8	10	-	9.81	10	11
Total Dissolved Solids	0	2	1	2	-	958	1788	1822	-	12	1788	1806	-	957.5	1788	1822	-	1903	1788	1837
Turbidity NTU	0	2	0	2	-	-1	-	0	-	-2.4	-	0	-	-1.15	-	0	-	0.1	-	0
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	0	1	0	1	-	3.1	-	0.5	-	3.1	-	0.5	-	3.1	-	0.5	-	3.1	-	0.5
Alkalinity (Total as CaCO3)	0	4	3	4	-	169	163	154	-	163	161	146	-	167	163	151	-	177	165	167
Bicarbonate Alkalinity	0	3	1	2	-	169	163	148	-	163	163	146	-	166	163	148	-	177	163	150
Carbonate Alkalinity	0	3	1	2	-	1	1	1	-	1	1	1	-	1	1	1	-	1	1	1
Color TCU	0	2	3	3	-	3	3	3	-	2.5	3	3	-	2.5	3	3	-	2.5	3	3
Hardness as CaCO3 (Dissolved)	0	4	3	4	-	1315	1270	1258	-	1240	1190	1160	-	1320	1290	1265	-	1380	1330	1340
Hydroxide Alkalinity	0	3	1	2	-	1.00	1.00	0.50	-	1	1.00	0.50	-	1	1.00	0.50	-	1	1.00	0.50
pH (unitless)	0	4	3	4	-	8	8	8	-	8.16	8	8	-	8.215	8	8	-	8.29	8	8
Specific Conductivity µS/cm	0	4	3	4	-	2763	2737	2763	-	2620	2730	2720	-	2790	2740	2770	-	2850	2740	2790
Total Dissolved Solids	0	4	3	4	-	2400	2397	2348	-	2240	2270	2260	-	2380	2270	2345	-	2600	2650	2440
Total Suspended Solids	0	4	3	4	-	2	2	2	-	1.5	2	2	-	1.5	2	2	-	5.2	4	5
Turbidity NTU	0	3	2	3	-	0	0	1	-	0.18	0	0	-	0.23	0	0	-	0.45	0	1
Dissolved Anions																				
Bromide	0	4	3	4	-	0.59	1.01	0.63	-	0.125	0.03	0.25	-	0.5	0.50	0.50	-	1.25	2.50	1.25
Chloride	0	4	3	4	-	25	27	29	-	12.5	24	25	-	28.3	25	29	-	31	31	34
Fluoride	0	4	2	4	-	0.49	0.17	0.27	-	0.2	0.14	0.18	-	0.285	0.17	0.21	-	1.2	0.20	0.50
Sulphate	0	4	3	4	-	1485	1453	1505	-	1360	1350	1400	-	1490	1410	1520	-	1600	1600	1580
Nutrients								-												
Ammonia (Total)	0	4	3	4	-	0.011	0.018	0.006	-	0.0025	0.003	0.003	-	0.00625	0.010	0.006	-	0.027	0.041	0.010
Nitrate (as N)	0	4	3	4	-	21.93	21.800	21.525	-	18.8	20.600	18.500	-	22.25	20.800	21.900	-	24.4	24.000	23.800
Nitrite (as N)	0	4	3	4	-	0.0410	0.0643	0.0583	-	0.0128	0.0079	0.0220	-	0.03	0.0250	0.0385	-	0.091	0.1600	0.1340
Nitrogen (Dissolved)	0	1	1	1	-	28.50	31.40	23.90	-	28.5	31.40	23.90	-	28.5	31.40	23.90	-	28.5	31.40	23.90
Nitrogen (Total)	0	1	1	1	-	22.20	20.80	21.20	-	22.2	20.80	21.20	-	22.2	20.80	21.20	-	22.2	20.80	21.20
Nitrogen Kjeldahl (Total)	0	4	3	4	-	0.10	0.18	0.18	-	0.025	0.13	0.03	-	0.1005	0.17	0.22	-	0.177	0.26	0.25
Orthophosphate (Dissolved)	0	3	2	3	-	0.002	0.001	0.002	-	0.0005	0.001	0.001	-	0.0021	0.001	0.002	-	0.0025	0.001	0.003
Phosphorus - Dissolved	0	2	1	2	-	0.001	0.00	0.00	-	0.001	0.00	0.00	-	0.001	0.00	0.00	-	0.001	0.00	0.00
Phosphorus - Total	0	4	3	3	-	0.00	0.00	0.00	-	0.001	0.00	0.00	-	0.00255	0.00	0.00	-	0.0102	0.00	0.00
Cyanide																				
Cyanide (Free)	0	3	2	2	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025
Cyanide (Total)	0	4	3	3	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025
Cyanide (WAD)	0	3	2	2	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025
Dissolved Metals																				
Aluminum	0	4	3	4	-	0.0073	0.0087	0.0069	-	0.0012	0.0010	0.0005	-	0.00775	0.0125	0.0073	-	0.0125	0.0125	0.0125
Antimony	0	4	3	4	-	0.02098	0.02250	0.02090	-	0.0194	0.02060	0.01890	-	0.021	0.02220	0.02050	-	0.0225	0.02470	0.02370
Arsenic	0	4	3	4	-	0.0668	0.0711	0.0642	-	0.0533	0.0612	0.0512	-	0.06735	0.0691	0.0649	-	0.0793	0.0829	0.0757
Barium	0	4	3	4	-	0.014	0.012	0.015	-	0.01	0.010	0.010	-	0.01335	0.010	0.014	-	0.0185	0.016	0.020
Beryllium	0	4	3	4	-	0.00129	0.00170	0.00128	-	0.00005	0.00010	0.00005	-	0.0013	0.00250	0.00128	-	0.0025	0.00250	0.00250
Bismuth	0	2	1	2	-	0.000	0.001	0.000	-	0.00025	0.001	0.000	-	0.000375	0.001	0.000	-	0.0005	0.001	0.000
Boron	0	4	3	4	-	0.091	0.066	0.087	-	0.05	0.050	0.050	-	0.099	0.050	0.096	-	0.114	0.097	0.105
Cadmium	0	3	3	4	-	0.000596	0.000985	0.000354	-	0.0002	0.000355	0.000050	-	0.000479	0.001100	0.000388	-	0.00111	0.001500	0.000590
Calcium	0	4	3	4	-	168	167	165	-	157	157	154	-	169.5	169	166	-	177	174	172
Chromium	0	4	3	4	-	0.0013	0.00170	0.00128	-	0.00005	0.00010	0.00005	-	0.0013	0.00250	0.00128	-	0.0025	0.00250	0.00250
Cobalt	0	4	3	4	-	0.00109	0.00145	0.00146	-	0.00075	0.00075	0.00119	-	0.000995	0.00170	0.00147	-	0.00162	0.00191	0.00170
Copper	0	4	3	4	-	0.0224	0.0337	0.0272	-	0.015	0.0296	0.0175	-	0.0226	0.0300	0.0273	-	0.0292	0.0414	0.0365
Iron	0	4	3	4	-	0.013	0.013	0.010	-	0.005	0.010	0.005	-	0.015	0.015	0.010	-	0.015	0.015	0.015
Lead	0	4	3	4	-	0.00064	0.00085	0.00064	-	0.000025	0.00005	0.00003	-	0.00065	0.00125	0.00064	-	0.00125	0.00125	0.00125
Lithium	0	4	3	4	-	0.0468	0.0454	0.0419	-	0.0439	0.0412	0.0397	-	0.0456	0.0420	0.0410	-	0.052	0.0530	0.0457
Magnesium	0	4	3	4	-	217.5	208.0	206.0	-	207.0	194.0	188.0	-	217.0	212.0	207.0	-	229.0	218.0	222.0
Manganese	0	4	3	4	-	0.001	0.001	0.001	-	0.000689	0.001	0.001	-	0.0009	0.001	0.001	-	0.0019	0.002	0.002
Mercury	0	3	3	4	-	0.0000083	0.0000083	0.0000075	-	0.000005	0.0000050	0.0000050	-	0.00001	0.0000100	0.0000075	-	0.00001	0.0000100	0.0000100
Molybdenum	0	4	3	4	-	2.3625	2.1767	2.1375	-	2.18	1.9500	1.9900	-	2.3	2.2400	2.1800	-	2.67	2.3400	2.2000
Nickel	0	4	3	4	-	0.0032	0.0030	0.0030	-	0.0025	0.0025	0.0025	-	0.00305	0.0025	0.0029	-	0.00415	0.0039	0.0036
Phosphorus	0	2	1	2	-	0.09	0.15	0.03	-	0.025	0.15	0.03	-	0.0875	0.15	0.03	-	0.15	0.15	0.03
Potassium	0	4	3	4	-	21	19	20	-	19.2	18	18	-	20.7	20	20	-	21.6	20	22
Selenium	0	4	3	4	-	0.01910	0.01623	0.01715	-	0.0175	0.01550	0.01560	-	0.0192	0.01620	0.01730	-	0.0205	0.01700	0.01840
Silicon	0	2	1	2	-	8.71	9.01	8.66	-	8.64	9.01	8.65	-	8.705	9.01	8.66	-	8.77	9.01	8.67
Silver	0	4	3	4	-	0.000029	0.000037	0.000028	-	0.000005	0.000010	0.000005	-	0.00003	0.000050	0.000028	-	0.00005	0.000050	0.000050
Sodium	0	4	3	4	-	218	208	202	-	208	206	188	-	214	207	206	-	235	212	210
Strontium	0	2	1	2	-	3.11	2.89	2.77	-	2.87	2.89	2.77	-	3.105	2.89	2.77	-	3.34	2.89	2.77
Sulphur	0	1	0	2	-	496	-	237	-	496	-	0	-	496	-	237	-	496	-	474
Thallium	0	4	3	4	-	0.000254	0.000337	0.000255	-	0.000005	0.000010	0.000005	-	0.000255	0.000500	0.000258	-	0.0005	0.000500	0.000500
Tin	0	4	3	4	-	0.00066	0.00087	0.00065	-	0.00005	0.00010	0.00005	-	0.000675	0.00125	0.00065	-	0.00125	0.00125	0.00125
Titanium	0	4	3	4	-	0.005	0.0050	0.0065	-	0.005	0.0050	0.0050	-	0.005	0.0050	0.0050	-	0.005	0.0050	0.0110
Uranium	0	4	3	4	-	0.0102	0.0105	0.0095	-	0.00988	0.0098	0.0094	-	0.01025	0.0107	0.0095	-	0.0105	0.0109	0.0098
Vanadium	0	4	3	4	-	0.0099	0.0100	0.0094	-	0.0078	0.0070	0.0069	-	0.0083	0.0081	0.0078	-	0.015	0.0150	0.0150
Zinc	0	4	3	4	-	0.0049	0.0058	0.0043	-	0.0015	0.0025	0.0005	-	0.00275	0.0025	0.0021	-	0.0125	0.0125	0.0125
Total Metals																				
Aluminum	0	4	3	4	-	0.01	0.01	0.02	-	0.0076	0.01	0.00	-	0.0111	0.01	0.01	-	0.0125	0.01	0.07
Antimony	0	4	3	4	-	0.02073	0.02247	0.02090	-	0.0191	0.02100	0.01990	-	0.02105	0.02230	0.02015	-	0.0217	0.02410	0.02340
Arsenic	0	4	3	4	-	0.0651	0.0726	0.0637	-	0.0518	0.0641	0.0525	-	0.0671	0.0726	0.0633	-	0.0745	0.0811	0.0758
Barium	0	4	3	4	-	0.014	0.012	0.015	-	0.01	0.010	0.010	-	0.0136	0.010	0.015	-	0.0184	0.017	0.021
Beryllium	0	4	3	4	-	0.00129	0.00170	0.00128	-	0.00005	0.00010	0.00005	-	0.0013	0.00250	0.00128	-	0.0025	0.00250	0.00250
Bismuth	0	2	1	2	-	0.000375	0.0005	0.00025	-	0.00025	0.0005	0.00025	-	0.000375	0.0005	0.00025	-	0.0005	0.0005	0.00025
Boron	0	4	3	4	-	0.084	0.068	0.080	-	0.05	0.050	0.050	-	0.077	0.050	0.073	-	0.13	0.105	0.126
Cadmium	0	3	3	4	-	0.000439	0.001071	0.000332	-	0.0002	0.000614	0.000050	-	0.000472	0.001100	0.000389	-	0.000645	0.001500	0.000500
Calcium	0	4	3	4	-	167	167	165	-	157	155	155	-	165	170	165	-	182	175	176
Chromium	0	4	3	4	-	0.0013	0.0017	0.0014	-	0.0001	0.0001	0.0001	-	0.001315	0.0025	0.0015	-	0.0025	0.0025	0.0025
Cobalt	0	4	3	4	-	0.00112	0.00144	0.00148	-	0.00075	0.00075	0.00134	-	0.00102	0.00160	0.00144	-	0.0017	0.00198	0.00170
Copper	0	4	3	4	-	0.0236	0.0349	0.0288	-	0.015	0.0313	0.0201	-	0.02415	0.0327	0.0290	-	0.0311	0.0407	0.0372
Iron	0	4	3	4	-	0.01	0.01	0.03	-	0.005	0.01	0.01	-	0.015	0.02	0.02	-	0.015	0.02	0.09
Lead	0	4	3	4	-	0.00101	0.00085	0.00065	-	0.000025	0.00005	0.00003	-	0.00065	0.00125	0.00065	-	0.0027	0.00125	0.00125
Lithium	0	4	3	4	-	0.0457	0.0436	0.0432	-	0.041	0.0400	0.0398	-	0.04635	0.0419	0.0410	-	0.049	0.0490	0.0508
Magnesium	0	4	3	4	-	216	211	205	-	201	195	188	-	212	215	204	-	239	222	224
Manganese	0	4	3	4	-	0.00	0.00	0.00	-	0.00075	0.00	0.00	-	0.001058	0.00	0.00	-	0.0024	0.00	0.00
Mercury	0	3	3	4	-	0.0000083	0.0000083	0.0000075	-	0.000005	0.0000050	0.0000050	-	0.00001	0.0000100	0.0000075	-	0.00001	0.0000100	0.0000100
Molybdenum	0	4	3	4	-	2.370	2.220	2.205	-	2.11	2.010	1.890	-	2.32	2.200	2.230	-	2.73	2.450	2.470
Nickel	0	4	3	4	-	0.0031	0.0030	0.0031	-	0.0025	0.0025	0.0025	-	0.0031	0.0025	0.0031	-	0.0038	0.0039	0.0039
Phosphorus	0	2	1	2	-	0.09	0.15	0.03	-	0.025	0.15	0.03	-	0.0875	0.15	0.03	-	0.15	0.15	0.03
Potassium	0	4	3	4	-	20.3	19.4	20.3	-	18.6	17.8	18.3	-	20.3	19.3	20.6	-	21.9	21.2	21.8
Selenium	0	4	3	4	-	0.01828	0.01710	0.01718	-	0.01620	0.01650	0.01530	-	0.0185	0.01720	0.01715	-	0.0200	0.01760	0.01910
Silicon	0	2	1	2	-	9.0	9.2	8.9	-	8.7	9.2	8.9	-	9.0	9.2	8.9	-	9.3	9.2	8.9
Silver	0	4	3	4	-	0.0000288	0.0000367	0.0000275	-	0.000005	0.0000100	0.0000050	-	0.00003	0.0000500	0.0000275	-	0.00005	0.0000500	0.0000500
Sodium	0	4	3	4	-	217	210	207	-	202	201	189	-	210.5	213	209	-	244	215	220
Strontium	0	2	1	2	-	3.2	3.00	2.95	-	3.03	3.00	2.89	-	3.2	3.00	2.95	-	3.4	3.00	3.00
Sulphur	0	1	0	2	-	499	-	495	-	499	-	492	-	499	-	495	-	499	-	497
Thallium	0	4	3	4	-	0.00025	0.00034	0.00026	-	0.000005	0.00001	0.00001	-	0.000255	0.00050	0.00026	-	0.0005	0.00050	0.00050
Tin	0	4	3	4	-	0.00066	0.00087	0.00065	-	0.00005	0.00010	0.00005	-	0.000675	0.00125	0.00065	-	0.00125	0.00125	0.00125
Titanium	0	4	3	4	-	0.005	0.005	0.006	-	0.005	0.005	0.005	-	0.005	0.005	0.005	-	0.005	0.005	0.010
Uranium	0	4	3	4	-	0.0103	0.0105	0.0098	-	0.0098	0.0100	0.0092	-	0.0102	0.0105	0.0099	-	0.0111	0.0110	0.0103
Vanadium	0	4	3	4	-	0.0099	0.0105	0.0095	-	0.008	0.0079	0.0066	-	0.00835	0.0085	0.0082	-	0.015	0.0150	0.0150
Zinc	0	4	3	4	-	0.0049	0.0060	0.0045	-	0.0015	0.0025	0.0015	-	0.00275	0.0030	0.0020	-	0.0125	0.0125	0.0125
Organics																				
Carbon Organic (Dissolved)	0	4	3	4	-	1.4	1	1	-	0.9	1	1	-	1.5	1	1	-	2	2	2
Carbon Organic (Total)	0	2	1	2	-	1	1	1	-	1.0	1	1	-	1.2	1	1	-	1	1	1
Nitrogen Organic (Dissolved)	0	1	1	1	-	6.50	10.80	2.40	-	6.5	10.80	2.40	-	6.5	10.80	2.40	-	6.50	10.80	2.40
Nitrogen Organic (Total)	0	1	1	1	-	0.18	0.13	0.25	-	0.18	0.13	0.25	-	0.18	0.13	0.25	-	0.2	0.13	0.25

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.
2. SEASONS ARE SPECIFIED AS FOLLOWS: WIN (WINTER; DECEMBER THROUGH MARCH), SPR (SPRING; APRIL AND MAY), SUMMER(JUNE THROUGH AUGUST), FALL (SEPTEMBER THROUGH NOVEMBER).

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.3 - AJWE-S
(PAGE 1 OF 2)

Parameter	Total Count	Complete Dataset - AJWE-D									
		Min	5th	25th	Percentiles 50th	75th	95th	Max	Average	Standard Deviation	Coefficient of Variation
In Situ Parameters											
Conductivity µS/cm	11	1300	1508	1829	1906	1995	2044	2050	1860	212	1.1E-01
Oxygen Dissolved %	6	66	69	78	83	89	93	94	82	10	1.2E-01
Oxygen Dissolved	9	7.9	8.3	9.3	10.3	10.9	11.4	11.5	10.1	1.2	1.2E-01
pH (unitless)	11	8.0	8.0	8.1	8.2	8.4	8.5	8.5	8.2	0.2	2.1E-02
Redox Potential mV	7	-107	-98	3	115	184	244	247	90	138	1.5E+00
Salinity ppt	5	0.01	0.29	1.43	1.45	1.48	1.51	1.52	1.18	0.65	5.6E-01
Specific Conductivity µS/cm	11	1800	2235	2734	2771	2802	2928	2929	2701	309	1.1E-01
Temperature °C	11	4.7	5.1	7.8	9.3	10.1	11.1	11.2	8.7	2.1	2.4E-01
Total Dissolved Solids	5	12	367	1788	1806	1837	1890	1903	1469	816	5.6E-01
Turbidity NTU	4	-2.4	-2.1	-0.7	0.0	0.1	0.2	0.2	-0.6	1.2	-2.3E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	2	0.5	0.6	1.2	1.8	2.5	3.0	3.1	1.8	1.8	1.0E+00
Alkalinity (Total as CaCO3)	11	146	148	157	163	167	173	177	162	9	5.6E-02
Bicarbonate Alkalinity	6	146	147	153	163	165	174	177	161	11	7.0E-02
Carbonate Alkalinity	6	0.5	0.5	0.6	1.0	1.0	1.0	1.0	0.8	0.3	3.1E-01
Color TCU	8	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0.0	0.0E+00
Hardness as CaCO3 (Dissolved)	11	1160	1175	1235	1290	1335	1370	1380	1282	70	5.5E-02
Hydroxide Alkalinity	6	0.5	0.5	0.6	1.0	1.0	1.0	1.0	0.8	0.3	3.1E-01
pH (unitless)	11	8.2	8.2	8.2	8.3	8.3	8.3	8.3	8.3	0.1	7.0E-03
Specific Conductivity µS/cm	11	2620	2670	2735	2750	2790	2825	2850	2755	59	2.1E-02
Total Dissolved Solids	11	2240	2245	2265	2270	2475	2625	2650	2380	152	6.4E-02
Total Suspended Solids	11	1.5	1.5	1.5	1.5	2.8	5.2	5.2	2.4	1.6	6.6E-01
Turbidity NTU	8	0.1	0.2	0.2	0.2	0.4	1.0	1.3	0.4	0.4	9.9E-01
Dissolved Anions											
Bromide	11	0.03	0.08	0.38	0.50	0.88	1.88	2.50	0.72	0.71	9.9E-01
Chloride	11	13	18	25	27	31	33	34	27	6	2.1E-01
Fluoride	10	0.14	0.16	0.20	0.20	0.33	0.88	1.20	0.34	0.32	9.4E-01
Sulphate	11	1350	1355	1395	1480	1585	1600	1600	1484	104	7.0E-02
Nutrients											
Ammonia (Total)	11	0.003	0.003	0.003	0.007	0.010	0.034	0.041	0.011	0.012	1.1E+00
Nitrate (as N)	11	18.500	18.65	20.70	22.00	23.25	24.20	24.40	21.75	1.993	9.2E-02
Nitrite (as N)	11	0.0079	0.01	0.02	0.03	0.07	0.15	0.16	0.05	0.0514	9.6E-01
Nitrogen (Dissolved)	3	23.90	24.36	26.20	28.50	29.95	31.11	31.40	27.93	3.78	1.4E-01
Nitrogen (Total)	3	20.80	20.84	21.00	21.20	21.70	22.10	22.20	21.40	0.72	3.4E-02
Nitrogen Kjeldahl (Total)	11	0.03	0.03	0.08	0.18	0.22	0.25	0.26	0.15	0.09	5.9E-01
Orthophosphate (Dissolved)	8	0.001	0.001	0.001	0.002	0.002	0.003	0.003	0.002	0.001	5.3E-01
Phosphorus - Dissolved	5	0.001	0.001	0.001	0.001	0.001	0.003	0.003	0.001	0.001	7.3E-01
Phosphorus - Total	10	0.001	0.001	0.001	0.003	0.003	0.008	0.010	0.003	0.003	8.8E-01
Cyanide											
Cyanide (Free)	7	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Cyanide (Total)	10	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	1.8E-16
Cyanide (WAD)	7	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Dissolved Metals											
Aluminum	11	0.0005	0.0008	0.0017	0.0125	0.0125	0.0125	0.0125	0.0075	0.0057	7.6E-01
Antimony	11	0.01890	0.01915	0.02030	0.02100	0.02235	0.02420	0.02470	0.02136	0.00177	8.3E-02
Arsenic	11	0.0512	0.0523	0.0592	0.0691	0.0741	0.0811	0.0829	0.0670	0.0106	1.6E-01
Barium	11	0.010	0.010	0.010	0.010	0.018	0.019	0.020	0.014	0.004	3.2E-01
Beryllium	11	0.000050	0.000050	0.000075	0.002500	0.002500	0.002500	0.002500	0.001395	0.001269	9.1E-01
Bismuth	5	0.00025	0.00025	0.00025	0.00025	0.00050	0.00050	0.00050	0.00035	0.00014	3.9E-01
Boron	11	0.050	0.050	0.050	0.097	0.100	0.110	0.114	0.082	0.026	3.2E-01
Cadmium	10	0.0000500	0.0001175	0.0002950	0.0004895	0.0009725	0.0013245	0.0015000	0.0006159	0.0004679	7.6E-01
Calcium	11	154	156	159	169	173	176	177	166	8	5.0E-02
Chromium	11	0.00005	0.00005	0.00008	0.00250	0.00250	0.00250	0.00250	0.00140	0.00127	9.1E-01
Cobalt	11	0.00075	0.00075	0.00097	0.00134	0.00166	0.00181	0.00191	0.00132	0.00042	3.2E-01
Copper	11	0.0150	0.0163	0.0193	0.0292	0.0332	0.0390	0.0414	0.0272	0.0088	3.2E-01
Iron	11	0.005	0.005	0.008	0.015	0.015	0.015	0.015	0.012	0.005	3.9E-01
Lead	11	0.000025	0.000025	0.000038	0.001250	0.001250	0.001250	0.001250	0.000698	0.000635	9.1E-01
Lithium	11	0.03970	0.03985	0.04160	0.04390	0.04595	0.05250	0.05300	0.04461	0.00447	1.0E-01
Magnesium	11	188	191	205	212	220	226	229	211	12	5.8E-02
Manganese	11	0.001	0.001	0.001	0.001	0.002	0.002	0.002	0.001	0.001	4.3E-01
Mercury	10	0.0000050	0.0000050	0.0000050	0.0000100	0.0000100	0.0000100	0.0000100	0.0000080	0.0000026	3.2E-01
Molybdenum	11	1.950	1.970	2.175	2.200	2.295	2.510	2.670	2.230	0.191	8.6E-02
Nickel	11	0.0025	0.0025	0.0025	0.0025	0.0036	0.0040	0.0042	0.0031	0.0007	2.2E-01
Phosphorus	5	0.03	0.03	0.03	0.03	0.15	0.15	0.15	0.08	0.07	9.1E-01
Potassium	11	18	18	19	20	21	22	22	20	1	6.5E-02
Selenium	11	0.01550	0.01555	0.01630	0.01750	0.01865	0.02000	0.02050	0.01761	0.00164	9.3E-02
Silicon	5	8.6	8.6	8.7	8.7	8.8	9.0	9.0	8.7	0.2	1.8E-02
Silver	11	0.0000050	0.0000050	0.0000075	0.0000500	0.0000500	0.0000500	0.0000500	0.0000305	0.0000225	7.4E-01
Sodium	11	188	197	206	208	211	227	235	210	11	5.3E-02
Strontium	5	2.77	2.77	2.77	2.87	2.89	3.25	3.34	2.93	0.24	8.1E-02
Sulphur	3	0	48	237	474	485	494	496	323	280	8.7E-01
Thallium	11	0.0000050	0.0000050	0.0000100	0.0005000	0.0005000	0.0005000	0.0005000	0.0002769	0.0002563	9.3E-01
Tin	11	0.000050	0.000050	0.000075	0.001250	0.001250	0.001250	0.001250	0.000714	0.000616	8.6E-01
Titanium	11	0.0050	0.0050	0.0050	0.0050	0.0050	0.0080	0.0110	0.0055	0.0018	3.3E-01
Uranium	11	0.0094	0.0094	0.0096	0.0099	0.0104	0.0108	0.0109	0.0100	0.0005	5.2E-02
Vanadium	11	0.0069	0.0070	0.0077	0.0080	0.0118	0.0150	0.0150	0.0097	0.0034	3.5E-01
Zinc	11	0.0005	0.0010	0.0021	0.0025	0.0078	0.0125	0.0125	0.0049	0.0049	1.0E+00
Total Metals											
Aluminum	11	0.0015	0.0039	0.0087	0.0125	0.0125	0.0412	0.0699	0.0155	0.0184	1.2E+00
Antimony	11	0.01910	0.01950	0.02015	0.02100	0.02200	0.02375	0.02410	0.02126	0.00153	7.2E-02
Arsenic	11	0.0518	0.0522	0.0606	0.0693	0.0736	0.0785	0.0811	0.0666	0.0097	1.4E-01
Barium	11	0.010	0.010	0.010	0.010	0.018	0.020	0.021	0.014	0.005	3.3E-01
Beryllium	11	0.000050	0.000050	0.000075	0.002500	0.002500	0.002500	0.002500	0.001395	0.001269	9.1E-01
Bismuth	5	0.00025	0.00025	0.00025	0.00025	0.00050	0.00050	0.00050	0.00035	0.00014	3.9E-01
Boron	11	0.050	0.050	0.050	0.050	0.105	0.128	0.130	0.078	0.034	4.3E-01
Cadmium	10	0.000050	0.000118	0.000332	0.000497	0.000637	0.001320	0.001500	0.000586	0.000429	7.3E-01
Calcium	11	155	155	157	169	174	179	182	166	10	5.8E-02
Chromium	11	0.00010	0.00010	0.00013	0.00250	0.00250	0.00250	0.00250	0.00145	0.00121	8.4E-01
Cobalt	11	0.00075	0.00075	0.00102	0.00137	0.00164	0.00184	0.00198	0.00134	0.00042	3.2E-01
Copper	11	0.0150	0.0176	0.0226	0.0311	0.0338	0.0390	0.0407	0.0286	0.0079	2.8E-01
Iron	11	0.01	0.01	0.01	0.02	0.02	0.05	0.09	0.02	0.02	1.2E+00
Lead	11	0.000025	0.000025	0.000050	0.001250	0.001250	0.001975	0.002700	0.000832	0.000865	1.0E+00
Lithium	11	0.0398	0.0399	0.0410	0.0419	0.0488	0.0499	0.0508	0.0442	0.0043	9.7E-02
Magnesium	11	188	190	198	215	220	232	239	211	16	7.5E-02
Manganese	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.4E-01
Mercury	10	0.0000050	0.0000050	0.0000050	0.0000100	0.0000100	0.0000100	0.0000100	0.0000080	0.0000026	3.2E-01
Molybdenum	11	1.890	1.950	2.125	2.200	2.460	2.605	2.730	2.269	0.245	1.1E-01
Nickel	11	0.0025	0.0025	0.0025	0.0025	0.0038	0.0039	0.0039	0.0031	0.0007	2.2E-01
Phosphorus	5	0.03	0.03	0.03	0.03	0.15	0.15	0.15	0.08	0.07	9.1E-01
Potassium	11	18	18	19	20	21	22	22	20	1	7.2E-02
Selenium	11	0.01530	0.01565	0.01635	0.01760	0.01870	0.01955	0.02000	0.01755	0.00148	8.4E-02
Silicon	5	8.7	8.8	8.9	8.9	9.2	9.3	9.3	9.0	0.2	2.6E-02
Silver	11	0.0000050	0.0000050	0.0000075	0.0000500	0.0000500	0.0000500	0.0000500	0.0000305	0.0000225	7.4E-01
Sodium	11	189	195	204	213	216	232	244	211	14	6.6E-02
Strontium	5	2.89	2.91	3.00	3.00	3.03	3.29	3.36	3.06	0.18	5.8E-02
Sulphur	3	492	493	495	497	498	499	499	496	4	7.3E-03
Thallium	11	0.0000050	0.0000075	0.0000100	0.0005000	0.0005000	0.0005000	0.0005000	0.0002769	0.0002563	9.3E-01
Tin	11	0.000050	0.000050	0.000075	0.001250	0.001250	0.001250	0.001250	0.000714	0.000616	8.6E-01
Titanium	11	0.0050	0.0050	0.0050	0.0050	0.0050	0.0075	0.0100	0.0055	0.0015	2.8E-01
Uranium	11	0.0092	0.0094	0.0099	0.0102	0.0104	0.0111	0.0111	0.0102	0.0006	5.6E-02
Vanadium	11	0.0066	0.0072	0.0080	0.0084	0.0119	0.0150	0.0150	0.0099	0.0033	3.3E-01
Zinc	11	0.0015	0.0015	0.0020	0.0025	0.0078	0.0125	0.0125	0.0050	0.0048	9.6E-01
Organics											
Carbon Organic (Dissolved)	11	0.9	1.0	1.2	1.5	1.6	1.7	1.7	1.4	0.3	1.9E-01
Carbon Organic (Total)	5	1.0	1.0	1.2	1.2	1.2	1.4	1.4	1.2	0.1	1.2E-01
Nitrogen Organic (Dissolved)	3	2.40	2.81	4.45	6.50	8.65	10.37	10.80	6.57	4.20	6.4E-01
Nitrogen Organic (Total)	3	0.13	0.13	0.15	0.18	0.21	0.24	0.25	0.18	0.06	3.4E-01

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.3 - AJWE-S
(PAGE 2 OF 2)

Seasonal Statistics - AJWE-D

Parameter	Count				Average				Min				Median				Max			
	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall
In Situ Parameters																				
Conductivity µS/cm	0	4	3	4	-	1681	1936	1983	-	1300	1820	1906	-	1776	1989	1988	-	1871	2000	2050
Oxygen Dissolved %	0	3	2	1	-	85	80	78	-	79.9	66	78	-	85.8	80	78	-	90.1	94	78
Oxygen Dissolved	0	4	3	2	-	11	10	9	-	10.2	8	9	-	10.5	11	9	-	11.2	12	9
pH (unitless)	0	4	3	4	-	8	8	8	-	8.01	8	8	-	8.1	8	8	-	8.51	8	8
Redox Potential mV	0	2	3	2	-	165	18	123	-	82.2	-107	115	-	164.6	-76	123	-	247	237	130
Salinity ppt	0	2	1	2	-	0.77	1.43	1.47	-	0.01	1.43	1.45	-	0.765	1.43	1.47	-	1.52	1.43	1.48
Specific Conductivity µS/cm	0	4	3	4	-	2549	2813	2769	-	1800	2748	2720	-	2733.5	2763	2775	-	2927	2929	2806
Temperature °C	0	4	3	4	-	7	9	10	-	4.73	7	9	-	7.42	8	10	-	9.81	10	11
Total Dissolved Solids	0	2	1	2	-	958	1788	1822	-	12	1788	1806	-	957.5	1788	1822	-	1903	1788	1837
Turbidity NTU	0	2	0	2	-	-1	-	0	-	-2.4	-	0	-	-1.15	-	0	-	0.1	-	0
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	0	1	0	1	-	3.1	-	0.5	-	3.1	-	0.5	-	3.1	-	0.5	-	3.1	-	0.5
Alkalinity (Total as CaCO3)	0	4	3	4	-	169	163	154	-	163	161	146	-	167	163	151	-	177	165	167
Bicarbonate Alkalinity	0	3	1	2	-	169	163	148	-	163	163	146	-	166	163	148	-	177	163	150
Carbonate Alkalinity	0	3	1	2	-	1	1	1	-	1	1	1	-	1	1	1	-	1	1	1
Color TCU	0	2	3	3	-	3	3	3	-	2.5	3	3	-	2.5	3	3	-	2.5	3	3
Hardness as CaCO3 (Dissolved)	0	4	3	4	-	1315	1270	1258	-	1240	1190	1160	-	1320	1290	1265	-	1380	1330	1340
Hydroxide Alkalinity	0	3	1	2	-	1.00	1.00	0.50	-	1	1.00	0.50	-	1	1.00	0.50	-	1	1.00	0.50
pH (unitless)	0	4	3	4	-	8	8	8	-	8.16	8	8	-	8.215	8	8	-	8.29	8	8
Specific Conductivity µS/cm	0	4	3	4	-	2763	2737	2763	-	2620	2730	2720	-	2790	2740	2770	-	2850	2740	2790
Total Dissolved Solids	0	4	3	4	-	2400	2397	2348	-	2240	2270	2260	-	2380	2270	2345	-	2600	2650	2440
Total Suspended Solids	0	4	3	4	-	2	2	2	-	1.5	2	2	-	1.5	2	2	-	5.2	4	5
Turbidity NTU	0	3	2	3	-	0	0	1	-	0.18	0	0	-	0.23	0	0	-	0.45	0	1
Dissolved Anions																				
Bromide	0	4	3	4	-	0.59	1.01	0.63	-	0.125	0.03	0.25	-	0.5	0.50	0.50	-	1.25	2.50	1.25
Chloride	0	4	3	4	-	25	27	29	-	12.5	24	25	-	28.3	25	29	-	31	31	34
Fluoride	0	4	2	4	-	0.49	0.17	0.27	-	0.2	0.14	0.18	-	0.285	0.17	0.21	-	1.2	0.20	0.50
Sulphate	0	4	3	4	-	1485	1453	1505	-	1360	1350	1400	-	1490	1410	1520	-	1600	1600	1580
Nutrients								-												
Ammonia (Total)	0	4	3	4	-	0.011	0.018	0.006	-	0.0025	0.003	0.003	-	0.00625	0.010	0.006	-	0.027	0.041	0.010
Nitrate (as N)	0	4	3	4	-	21.93	21.800	21.525	-	18.8	20.600	18.500	-	22.25	20.800	21.900	-	24.4	24.000	23.800
Nitrite (as N)	0	4	3	4	-	0.0410	0.0643	0.0583	-	0.0128	0.0079	0.0220	-	0.03	0.0250	0.0385	-	0.091	0.1600	0.1340
Nitrogen (Dissolved)	0	1	1	1	-	28.50	31.40	23.90	-	28.5	31.40	23.90	-	28.5	31.40	23.90	-	28.5	31.40	23.90
Nitrogen (Total)	0	1	1	1	-	22.20	20.80	21.20	-	22.2	20.80	21.20	-	22.2	20.80	21.20	-	22.2	20.80	21.20
Nitrogen Kjeldahl (Total)	0	4	3	4	-	0.10	0.18	0.18	-	0.025	0.13	0.03	-	0.1005	0.17	0.22	-	0.177	0.26	0.25
Orthophosphate (Dissolved)	0	3	2	3	-	0.002	0.001	0.002	-	0.0005	0.001	0.001	-	0.0021	0.001	0.002	-	0.0025	0.001	0.003
Phosphorus - Dissolved	0	2	1	2	-	0.001	0.00	0.00	-	0.001	0.00	0.00	-	0.001	0.00	0.00	-	0.001	0.00	0.00
Phosphorus - Total	0	4	3	3	-	0.00	0.00	0.00	-	0.001	0.00	0.00	-	0.00255	0.00	0.00	-	0.0102	0.00	0.00
Cyanide																				
Cyanide (Free)	0	3	2	2	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025
Cyanide (Total)	0	4	3	3	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025
Cyanide (WAD)	0	3	2	2	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025
Dissolved Metals																				
Aluminum	0	4	3	4	-	0.0073	0.0087	0.0069	-	0.0012	0.0010	0.0005	-	0.00775	0.0125	0.0073	-	0.0125	0.0125	0.0125
Antimony	0	4	3	4	-	0.02098	0.02250	0.02090	-	0.0194	0.02060	0.01890	-	0.021	0.02220	0.02050	-	0.0225	0.02470	0.02370
Arsenic	0	4	3	4	-	0.0668	0.0711	0.0642	-	0.0533	0.0612	0.0512	-	0.06735	0.0691	0.0649	-	0.0793	0.0829	0.0757
Barium	0	4	3	4	-	0.014	0.012	0.015	-	0.01	0.010	0.010	-	0.01335	0.010	0.014	-	0.0185	0.016	0.020
Beryllium	0	4	3	4	-	0.00129	0.00170	0.00128	-	0.00005	0.00010	0.00005	-	0.0013	0.00250	0.00128	-	0.0025	0.00250	0.00250
Bismuth	0	2	1	2	-	0.000	0.001	0.000	-	0.00025	0.001	0.000	-	0.000375	0.001	0.000	-	0.0005	0.001	0.000
Boron	0	4	3	4	-	0.091	0.066	0.087	-	0.05	0.050	0.050	-	0.099	0.050	0.096	-	0.114	0.097	0.105
Cadmium	0	3	3	4	-	0.000596	0.000985	0.000354	-	0.0002	0.000355	0.000050	-	0.000479	0.001100	0.000388	-	0.00111	0.001500	0.000590
Calcium	0	4	3	4	-	168	167	165	-	157	157	154	-	169.5	169	166	-	177	174	172
Chromium	0	4	3	4	-	0.0013	0.00170	0.00128	-	0.00005	0.00010	0.00005	-	0.0013	0.00250	0.00128	-	0.0025	0.00250	0.00250
Cobalt	0	4	3	4	-	0.00109	0.00145	0.00146	-	0.00075	0.00075	0.00119	-	0.000995	0.00170	0.00147	-	0.00162	0.00191	0.00170
Copper	0	4	3	4	-	0.0224	0.0337	0.0272	-	0.015	0.0296	0.0175	-	0.0226	0.0300	0.0273	-	0.0292	0.0414	0.0365
Iron	0	4	3	4	-	0.013	0.013	0.010	-	0.005	0.010	0.005	-	0.015	0.015	0.010	-	0.015	0.015	0.015
Lead	0	4	3	4	-	0.00064	0.00085	0.00064	-	0.000025	0.00005	0.00003	-	0.00065	0.00125	0.00064	-	0.00125	0.00125	0.00125
Lithium	0	4	3	4	-	0.0468	0.0454	0.0419	-	0.0439	0.0412	0.0397	-	0.0456	0.0420	0.0410	-	0.052	0.0530	0.0457
Magnesium	0	4	3	4	-	217.5	208.0	206.0	-	207.0	194.0	188.0	-	217.0	212.0	207.0	-	229.0	218.0	222.0
Manganese	0	4	3	4	-	0.001	0.001	0.001	-	0.000689	0.001	0.001	-	0.0009	0.001	0.001	-	0.0019	0.002	0.002
Mercury	0	3	3	4	-	0.0000083	0.0000083	0.0000075	-	0.000005	0.0000050	0.0000050	-	0.00001	0.0000100	0.0000075	-	0.00001	0.0000100	0.0000100
Molybdenum	0	4	3	4	-	2.3625	2.1767	2.1375	-	2.18	1.9500	1.9900	-	2.3	2.2400	2.1800	-	2.67	2.3400	2.2000
Nickel	0	4	3	4	-	0.0032	0.0030	0.0030	-	0.0025	0.0025	0.0025	-	0.00305	0.0025	0.0029	-	0.00415	0.0039	0.0036
Phosphorus	0	2	1	2	-	0.09	0.15	0.03	-	0.025	0.15	0.03	-	0.0875	0.15	0.03	-	0.15	0.15	0.03
Potassium	0	4	3	4	-	21	19	20	-	19.2	18	18	-	20.7	20	20	-	21.6	20	22
Selenium	0	4	3	4	-	0.01910	0.01623	0.01715	-	0.0175	0.01550	0.01560	-	0.0192	0.01620	0.01730	-	0.0205	0.01700	0.01840
Silicon	0	2	1	2	-	8.71	9.01	8.66	-	8.64	9.01	8.65	-	8.705	9.01	8.66	-	8.77	9.01	8.67
Silver	0	4	3	4	-	0.000029	0.000037	0.000028	-	0.000005	0.000010	0.000005	-	0.00003	0.000050	0.000028	-	0.00005	0.000050	0.000050
Sodium	0	4	3	4	-	218	208	202	-	208	206	188	-	214	207	206	-	235	212	210
Strontium	0	2	1	2	-	3.11	2.89	2.77	-	2.87	2.89	2.77	-	3.105	2.89	2.77	-	3.34	2.89	2.77
Sulphur	0	1	0	2	-	496	-	237	-	496	-	0	-	496	-	237	-	496	-	474
Thallium	0	4	3	4	-	0.000254	0.000337	0.000255	-	0.000005	0.000010	0.000005	-	0.000255	0.000500	0.000258	-	0.0005	0.000500	0.000500
Tin	0	4	3	4	-	0.00066	0.00087	0.00065	-	0.00005	0.00010	0.00005	-	0.000675	0.00125	0.00065	-	0.00125	0.00125	0.00125
Titanium	0	4	3	4	-	0.005	0.0050	0.0065	-	0.005	0.0050	0.0050	-	0.005	0.0050	0.0050	-	0.005	0.0050	0.0110
Uranium	0	4	3	4	-	0.0102	0.0105	0.0095	-	0.00988	0.0098	0.0094	-	0.01025	0.0107	0.0095	-	0.0105	0.0109	0.0098
Vanadium	0	4	3	4	-	0.0099	0.0100	0.0094	-	0.0078	0.0070	0.0069	-	0.0083	0.0081	0.0078	-	0.015	0.0150	0.0150
Zinc	0	4	3	4	-	0.0049	0.0058	0.0043	-	0.0015	0.0025	0.0005	-	0.00275	0.0025	0.0021	-	0.0125	0.0125	0.0125
Total Metals																				
Aluminum	0	4	3	4	-	0.01	0.01	0.02	-	0.0076	0.01	0.00	-	0.0111	0.01	0.01	-	0.0125	0.01	0.07
Antimony	0	4	3	4	-	0.02073	0.02247	0.02090	-	0.0191	0.02100	0.01990	-	0.02105	0.02230	0.02015	-	0.0217	0.02410	0.02340
Arsenic	0	4	3	4	-	0.0651	0.0726	0.0637	-	0.0518	0.0641	0.0525	-	0.0671	0.0726	0.0633	-	0.0745	0.0811	0.0758
Barium	0	4	3	4	-	0.014	0.012	0.015	-	0.01	0.010	0.010	-	0.0136	0.010	0.015	-	0.0184	0.017	0.021
Beryllium	0	4	3	4	-	0.00129	0.00170	0.00128	-	0.00005	0.00010	0.00005	-	0.0013	0.00250	0.00128	-	0.0025	0.00250	0.00250
Bismuth	0	2	1	2	-	0.000375	0.0005	0.00025	-	0.00025	0.0005	0.00025	-	0.000375	0.0005	0.00025	-	0.0005	0.0005	0.00025
Boron	0	4	3	4	-	0.084	0.068	0.080	-	0.05	0.050	0.050	-	0.077	0.050	0.073	-	0.13	0.105	0.126
Cadmium	0	3	3	4	-	0.000439	0.001071	0.000332	-	0.0002	0.000614	0.000050	-	0.000472	0.001100	0.000389	-	0.000645	0.001500	0.000500
Calcium	0	4	3	4	-	167	167	165	-	157	155	155	-	165	170	165	-	182	175	176
Chromium	0	4	3	4	-	0.0013	0.0017	0.0014	-	0.0001	0.0001	0.0001	-	0.001315	0.0025	0.0015	-	0.0025	0.0025	0.0025
Cobalt	0	4	3	4	-	0.00112	0.00144	0.00148	-	0.00075	0.00075	0.00134	-	0.00102	0.00160	0.00144	-	0.0017	0.00198	0.00170
Copper	0	4	3	4	-	0.0236	0.0349	0.0288	-	0.015	0.0313	0.0201	-	0.02415	0.0327	0.0290	-	0.0311	0.0407	0.0372
Iron	0	4	3	4	-	0.01	0.01	0.03	-	0.005	0.01	0.01	-	0.015	0.02	0.02	-	0.015	0.02	0.09
Lead	0	4	3	4	-	0.00101	0.00085	0.00065	-	0.000025	0.00005	0.00003	-	0.00065	0.00125	0.00065	-	0.0027	0.00125	0.00125
Lithium	0	4	3	4	-	0.0457	0.0436	0.0432	-	0.041	0.0400	0.0398	-	0.04635	0.0419	0.0410	-	0.049	0.0490	0.0508
Magnesium	0	4	3	4	-	216	211	205	-	201	195	188	-	212	215	204	-	239	222	224
Manganese	0	4	3	4	-	0.00	0.00	0.00	-	0.00075	0.00	0.00	-	0.001058	0.00	0.00	-	0.0024	0.00	0.00
Mercury	0	3	3	4	-	0.0000083	0.0000083	0.0000075	-	0.000005	0.0000050	0.0000050	-	0.00001	0.0000100	0.0000075	-	0.00001	0.0000100	0.0000100
Molybdenum	0	4	3	4	-	2.370	2.220	2.205	-	2.11	2.010	1.890	-	2.32	2.200	2.230	-	2.73	2.450	2.470
Nickel	0	4	3	4	-	0.0031	0.0030	0.0031	-	0.0025	0.0025	0.0025	-	0.0031	0.0025	0.0031	-	0.0038	0.0039	0.0039
Phosphorus	0	2	1	2	-	0.09	0.15	0.03	-	0.025	0.15	0.03	-	0.0875	0.15	0.03	-	0.15	0.15	0.03
Potassium	0	4	3	4	-	20.3	19.4	20.3	-	18.6	17.8	18.3	-	20.3	19.3	20.6	-	21.9	21.2	21.8
Selenium	0	4	3	4	-	0.01828	0.01710	0.01718	-	0.01620	0.01650	0.01530	-	0.0185	0.01720	0.01715	-	0.0200	0.01760	0.01910
Silicon	0	2	1	2	-	9.0	9.2	8.9	-	8.7	9.2	8.9	-	9.0	9.2	8.9	-	9.3	9.2	8.9
Silver	0	4	3	4	-	0.0000288	0.0000367	0.0000275	-	0.000005	0.0000100	0.0000050	-	0.00003	0.0000500	0.0000275	-	0.00005	0.0000500	0.0000500
Sodium	0	4	3	4	-	217	210	207	-	202	201	189	-	210.5	213	209	-	244	215	220
Strontium	0	2	1	2	-	3.2	3.00	2.95	-	3.03	3.00	2.89	-	3.2	3.00	2.95	-	3.4	3.00	3.00
Sulphur	0	1	0	2	-	499	-	495	-	499	-	492	-	499	-	495	-	499	-	497
Thallium	0	4	3	4	-	0.00025	0.00034	0.00026	-	0.000005	0.00001	0.00001	-	0.000255	0.00050	0.00026	-	0.0005	0.00050	0.00050
Tin	0	4	3	4	-	0.00066	0.00087	0.00065	-	0.00005	0.00010	0.00005	-	0.000675	0.00125	0.00065	-	0.00125	0.00125	0.00125
Titanium	0	4	3	4	-	0.005	0.005	0.006	-	0.005	0.005	0.005	-	0.005	0.005	0.005	-	0.005	0.005	0.010
Uranium	0	4	3	4	-	0.0103	0.0105	0.0098	-	0.0098	0.0100	0.0092	-	0.0102	0.0105	0.0099	-	0.0111	0.0110	0.0103
Vanadium	0	4	3	4	-	0.0099	0.0105	0.0095	-	0.008	0.0079	0.0066	-	0.00835	0.0085	0.0082	-	0.015	0.0150	0.0150
Zinc	0	4	3	4	-	0.0049	0.0060	0.0045	-	0.0015	0.0025	0.0015	-	0.00275	0.0030	0.0020	-	0.0125	0.0125	0.0125
Organics																				
Carbon Organic (Dissolved)	0	4	3	4	-	1.4	1	1	-	0.9	1	1	-	1.5	1	1	-	2	2	2
Carbon Organic (Total)	0	2	1	2	-	1	1	1	-	1.0	1	1	-	1.2	1	1	-	1	1	1
Nitrogen Organic (Dissolved)	0	1	1	1	-	6.50	10.80	2.40	-	6.5	10.80	2.40	-	6.5	10.80	2.40	-	6.50	10.80	2.40
Nitrogen Organic (Total)	0	1	1	1	-	0.18	0.13	0.25	-	0.18	0.13	0.25	-	0.18	0.13	0.25	-	0.2	0.13	0.25

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.
2. SEASONS ARE SPECIFIED AS FOLLOWS: WIN (WINTER; DECEMBER THROUGH MARCH), SPR (SPRING; APRIL AND MAY), SUMMER(JUNE THROUGH AUGUST), FALL (SEPTEMBER THROUGH NOVEMBER).

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.4 - AJWW-D
(PAGE 1 OF 2)

Parameter	Total Count	Complete Dataset - AJWW-D									
		Min	Percentiles 5th	25th	50th	75th	95th	Max	Average	Standard Deviation	Coefficient of Variation
In Situ Parameters											
Conductivity µS/cm	6	2139	2142	2156	2188	2291	2414	2445	2239	121	5.4E-02
Oxygen Dissolved %	4	12	13	16	19	32	59	66	29	25	8.6E-01
Oxygen Dissolved	6	1.5	1.6	1.9	2.1	2.2	6.1	7.4	2.9	2.2	7.7E-01
pH (unitless)	6	7.6	7.6	7.7	7.8	8.0	8.0	8.0	7.8	0.2	2.2E-02
Redox Potential mV	4	-74	-72	-67	23	117	133	137	27	112	4.1E+00
Salinity ppt	2	1.71	1.72	1.74	1.76	1.79	1.81	1.81	1.76	0.07	4.0E-02
Specific Conductivity µS/cm	6	3254	3282	3377	3417	3435	3467	3477	3395	78	2.3E-02
Temperature °C	6	4.9	5.1	5.8	6.4	9.0	10.1	10.1	7.2	2.2	3.1E-01
Total Dissolved Solids	2	2100	2107	2133	2167	2200	2226	2233	2167	94	4.3E-02
Turbidity NTU	2	-3.1	-2.9	-2.3	-1.6	-0.8	-0.2	0.0	-1.6	2.2	-1.4E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	2	5.8	5.9	6.3	6.8	7.3	7.7	7.8	6.8	1.4	2.1E-01
Alkalinity (Total as CaCO3)	7	154	155	160	162	164	169	170	162	5	3.1E-02
Bicarbonate Alkalinity	4	158	159	161	164	166	169	170	164	5	3.1E-02
Carbonate Alkalinity	4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0E+00
Color TCU	5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0.0	0.0E+00
Hardness as CaCO3 (Dissolved)	7	1590	1623	1705	1750	1800	1900	1930	1754	107	6.1E-02
Hydroxide Alkalinity	4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0E+00
pH (unitless)	7	8.0	8.0	8.0	8.1	8.1	8.2	8.2	8.1	0.1	1.2E-02
Specific Conductivity µS/cm	7	3300	3321	3375	3410	3485	3527	3530	3423	83	2.4E-02
Total Dissolved Solids	7	741	1398	2950	3010	3185	3342	3390	2773	910	3.3E-01
Total Suspended Solids	7	1.5	1.5	1.5	3.6	4.2	5.5	6.0	3.2	1.8	5.5E-01
Turbidity NTU	5	0.2	0.2	0.3	0.4	0.5	0.6	0.7	0.4	0.2	4.7E-01
Dissolved Anions											
Bromide	7	0.25	0.25	0.25	0.50	0.88	1.25	1.25	0.61	0.45	7.5E-01
Chloride	7	32	32	34	36	38	39	39	36	3	7.5E-02
Fluoride	6	0.20	0.20	0.21	0.31	0.47	1.10	1.30	0.47	0.42	9.0E-01
Sulphate	7	1650	1650	1675	1770	1825	1941	1980	1771	119	6.7E-02
Nutrients											
Ammonia (Total)	7	0.003	0.005	0.010	0.012	0.026	0.040	0.045	0.019	0.014	7.7E-01
Nitrate (as N)	7	65.400	67.20	72.15	74.10	76.65	79.63	79.90	73.86	4.860	6.6E-02
Nitrite (as N)	7	0.0360	0.04	0.06	0.14	0.14	0.18	0.19	0.11	0.0570	5.2E-01
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	7	0.03	0.03	0.03	0.15	0.25	0.35	0.39	0.16	0.14	9.0E-01
Orthophosphate (Dissolved)	6	0.001	0.001	0.001	0.001	0.002	0.002	0.002	0.001	0.001	4.4E-01
Phosphorus - Dissolved	2	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.000	0.0E+00
Phosphorus - Total	6	0.001	0.001	0.002	0.003	0.005	0.006	0.007	0.003	0.002	6.6E-01
Cyanide											
Cyanide (Free)	4	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Cyanide (Total)	6	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Cyanide (WAD)	4	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Dissolved Metals											
Aluminum	7	0.0005	0.0007	0.0068	0.0125	0.0250	0.0250	0.0250	0.0145	0.0109	7.5E-01
Antimony	7	0.01420	0.01423	0.01470	0.01570	0.01690	0.01717	0.01720	0.01576	0.00128	8.1E-02
Arsenic	7	0.0154	0.0161	0.0179	0.0183	0.0197	0.0208	0.0212	0.0186	0.0018	1.0E-01
Barium	7	0.010	0.010	0.010	0.010	0.012	0.015	0.016	0.011	0.002	2.0E-01
Beryllium	7	0.000050	0.000065	0.001300	0.002500	0.005000	0.005000	0.005000	0.002879	0.002218	7.7E-01
Bismuth	2	0.00025	0.00026	0.00031	0.00038	0.00044	0.00049	0.00050	0.00038	0.00018	4.7E-01
Boron	7	0.050	0.050	0.050	0.050	0.058	0.071	0.073	0.056	0.010	1.8E-01
Cadmium	6	0.0001000	0.0001625	0.0004275	0.0007870	0.0009785	0.0021250	0.0025000	0.0009207	0.0008447	9.2E-01
Calcium	7	212	214	220	225	236	251	255	229	15	6.6E-02
Chromium	7	0.00005	0.00007	0.00130	0.00250	0.00500	0.00500	0.00500	0.00288	0.00222	7.7E-01
Cobalt	7	0.00075	0.00075	0.00082	0.00097	0.00150	0.00150	0.00150	0.00112	0.00036	3.2E-01
Copper	7	0.0265	0.0270	0.0281	0.0310	0.0362	0.0395	0.0399	0.0323	0.0053	1.6E-01
Iron	7	0.005	0.005	0.010	0.015	0.015	0.015	0.015	0.012	0.005	4.0E-01
Lead	7	0.000025	0.000033	0.000650	0.001250	0.002500	0.002500	0.002500	0.001439	0.001109	7.7E-01
Lithium	7	0.02500	0.03100	0.04600	0.05000	0.05225	0.05435	0.05450	0.04657	0.01011	2.2E-01
Magnesium	7	258	264	280	292	295	309	314	287	17	6.1E-02
Manganese	7	0.003	0.004	0.013	0.023	0.027	0.032	0.034	0.020	0.012	5.8E-01
Mercury	7	0.0000050	0.0000050	0.0000075	0.0000100	0.0000100	0.0000100	0.0000100	0.0000086	0.0000024	2.8E-01
Molybdenum	7	3.150	3.192	3.295	3.370	3.755	4.621	4.840	3.637	0.615	1.7E-01
Nickel	7	0.0118	0.0119	0.0128	0.0140	0.0148	0.0150	0.0150	0.0137	0.0013	9.8E-02
Phosphorus	2	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.00	0.0E+00
Potassium	7	25	25	25	25	28	31	32	27	3	1.1E-01
Selenium	7	0.02800	0.02800	0.02855	0.03210	0.04175	0.05109	0.05220	0.03613	0.01009	2.8E-01
Silicon	2	7.2	7.2	7.2	7.3	7.3	7.3	7.3	7.3	0.1	1.4E-02
Silver	7	0.0000050	0.0000065	0.0000300	0.0000500	0.0001000	0.0001000	0.0001000	0.0000593	0.0000419	7.1E-01
Sodium	7	183	186	195	198	203	211	214	199	10	4.9E-02
Strontium	2	3.75	3.79	3.93	4.11	4.28	4.42	4.46	4.11	0.50	1.2E-01
Sulphur	2	597	598	602	607	611	615	616	607	13	2.2E-02
Thallium	7	0.0000100	0.0000100	0.0002550	0.0005000	0.0010000	0.0010000	0.0010000	0.0005743	0.0004456	7.8E-01
Tin	7	0.000050	0.000065	0.000675	0.001250	0.002500	0.002500	0.002500	0.001450	0.001093	7.5E-01
Titanium	7	0.0050	0.0050	0.0050	0.0050	0.0100	0.0114	0.0120	0.0074	0.0031	4.2E-01
Uranium	7	0.0103	0.0104	0.0108	0.0109	0.0111	0.0111	0.0111	0.0109	0.0003	2.8E-02
Vanadium	7	0.0046	0.0046	0.0048	0.0050	0.0100	0.0150	0.0150	0.0077	0.0050	6.4E-01
Zinc	7	0.0010	0.0011	0.0020	0.0025	0.0075	0.0213	0.0250	0.0068	0.0090	1.3E+00
Total Metals											
Aluminum	7	0.0030	0.0047	0.0107	0.0125	0.0250	0.0250	0.0250	0.0160	0.0090	5.6E-01
Antimony	7	0.01420	0.01423	0.01475	0.01560	0.01700	0.01735	0.01750	0.01583	0.00135	8.5E-02
Arsenic	7	0.0148	0.0156	0.0177	0.0186	0.0194	0.0207	0.0211	0.0184	0.0020	1.1E-01
Barium	7	0.010	0.010	0.010	0.010	0.012	0.014	0.015	0.011	0.002	1.8E-01
Beryllium	7	0.000050	0.000065	0.001300	0.002500	0.005000	0.005000	0.005000	0.002879	0.002218	7.7E-01
Bismuth	2	0.00025	0.00026	0.00031	0.00038	0.00044	0.00049	0.00050	0.00038	0.00018	4.7E-01
Boron	7	0.050	0.050	0.050	0.050	0.061	0.077	0.080	0.057	0.013	2.2E-01
Cadmium	6	0.000100	0.000175	0.000443	0.000729	0.000972	0.002125	0.002500	0.000910	0.000845	9.3E-01
Calcium	7	212	215	222	222	234	243	245	227	11	4.9E-02
Chromium	7	0.00010	0.00013	0.00135	0.00250	0.00500	0.00500	0.00500	0.00290	0.00219	7.5E-01
Cobalt	7	0.00075	0.00075	0.00084	0.00094	0.00150	0.00150	0.00150	0.00112	0.00036	3.2E-01
Copper	7	0.0274	0.0274	0.0283	0.0320	0.0386	0.0430	0.0438	0.0338	0.0067	2.0E-01
Iron	7	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.01	0.00	4.0E-01
Lead	7	0.000025	0.000033	0.000650	0.001250	0.002500	0.002500	0.002500	0.001439	0.001109	7.7E-01
Lithium	7	0.0450	0.0453	0.0480	0.0510	0.0530	0.0562	0.0570	0.0507	0.0043	8.4E-02
Magnesium	7	261	266	279	287	292	305	310	286	15	5.3E-02
Manganese	7	0.00	0.00	0.01	0.02	0.03	0.03	0.04	0.02	0.01	5.8E-01
Mercury	7	0.0000050	0.0000050	0.0000075	0.0000100	0.0000100	0.0000100	0.0000100	0.0000086	0.0000024	2.8E-01
Molybdenum	7	3.150	3.153	3.280	3.430	3.825	4.712	4.970	3.680	0.653	1.8E-01
Nickel	7	0.0113	0.0118	0.0133	0.0140	0.0149	0.0152	0.0153	0.0138	0.0014	1.0E-01
Phosphorus	2	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.00	0.0E+00
Potassium	7	24	24	25	25	28	30	30	26	3	1.0E-01
Selenium	7	0.02800	0.02812	0.02870	0.03100	0.04035	0.04931	0.05000	0.03530	0.00944	2.7E-01
Silicon	2	7.1	7.1	7.1	7.2	7.2	7.3	7.3	7.2	0.1	1.9E-02
Silver	7	0.0000050	0.0000065	0.0000300	0.0000500	0.0001000	0.0001000	0.0001000	0.0000593	0.0000419	7.1E-01
Sodium	7	183	185	193	198	199	212	217	197	10	5.2E-02
Strontium	2	3.84	3.87	4.00	4.17	4.33	4.46	4.49	4.17	0.46	1.1E-01
Sulphur	2	583	585	593	604	614	622	624	604	29	4.8E-02
Thallium	7	0.0000100	0.0000106	0.0002560	0.0005000	0.0010000	0.0010000	0.0010000	0.0005746	0.0004452	7.7E-01
Tin	7	0.000050	0.000065	0.000675	0.001250	0.002500	0.002500	0.002500	0.001450	0.001093	7.5E-01
Titanium	7	0.0050	0.0050	0.0050	0.0050	0.0075	0.0107	0.0110	0.0066	0.0027	4.1E-01
Uranium	7	0.0101	0.0102	0.0106	0.0111	0.0113	0.0117	0.0118	0.0110	0.0006	5.5E-02
Vanadium	7	0.0045	0.0046	0.0049	0.0050	0.0101	0.0150	0.0150	0.0078	0.0049	6.4E-01
Zinc	7	0.0015	0.0018	0.0025	0.0025	0.0078	0.0213	0.0250	0.0071	0.0088	1.2E+00
Organics											
Carbon Organic (Dissolved)	7	1.4	1.4	1.9	2.4	2.5	2.6	2.6	2.1	0.5	2.4E-01
Carbon Organic (Total)	2	1.4	1.4	1.5	1.5	1.5	1.6	1.6	1.5	0.1	7.1E-02
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.4 - AJWW-D
(PAGE 2 OF 2)

Seasonal Statistics - AJWW-D

Parameter	Count					Average				Min				Median				Max		
	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall
In Situ Parameters																				
Conductivity µS/cm	0	1	2	3	-	2321	2157	2266	-	2321	2139	2150	-	2321	2157	2202	-	2321	2174	2445
Oxygen Dissolved %	0	1	1	2	-	66	12	19	-	65.7	12	18	-	65.7	12	19	-	65.7	12	20
Oxygen Dissolved	0	1	2	3	-	7	2	2	-	7.37	2	2	-	7.37	2	2	-	7.37	2	2
pH (unitless)	0	1	2	3	-	8	8	8	-	8	8	8	-	8	8	8	-	8	8	8
Redox Potential mV	0	1	1	2	-	110	-74	36	-	110	-74	-65	-	110	-74	36	-	110	-74	137
Salinity ppt	0	1	0	1	-	1.71	-	1.81	-	1.71	-	1.81	-	1.71	-	1.81	-	1.71	-	1.81
Specific Conductivity µS/cm	0	1	2	3	-	3254	3422	3424	-	3254	3367	3406	-	3254	3422	3428	-	3254	3477	3437
Temperature °C	0	1	2	3	-	10	6	7	-	10.1	5	6	-	10.1	6	6	-	10.1	6	10
Total Dissolved Solids	0	1	0	1	-	2100	-	2233	-	2100	-	2233	-	2100	-	2233	-	2100	-	2233
Turbidity NTU	0	1	0	1	-	-3	-	0	-	-3.1	-	0	-	-3.1	-	0	-	-3.1	-	0
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	0	1	1	0	-	7.8	5.8	-	-	7.8	5.8	-	-	7.8	5.8	-	-	7.8	5.8	-
Alkalinity (Total as CaCO3)	0	2	2	3	-	166	159	161	-	162	154	158	-	166	159	161	-	170	163	165
Bicarbonate Alkalinity	0	2	0	2	-	166	-	162	-	162	-	158	-	166	-	162	-	170	-	165
Carbonate Alkalinity	0	2	0	2	-	1	-	1	-	1	-	1	-	1	-	1	-	1	-	1
Color TCU	0	1	2	2	-	3	3	3	-	2.5	3	3	-	2.5	3	3	-	2.5	3	3
Hardness as CaCO3 (Dissolved)	0	2	2	3	-	1840	1735	1710	-	1750	1700	1590	-	1840	1735	1710	-	1930	1770	1830
Hydroxide Alkalinity	0	2	0	2	-	1.00	-	1.00	-	1	-	1.00	-	1	-	1.00	-	1	-	1.00
pH (unitless)	0	2	2	3	-	8	8	8	-	7.95	8	8	-	8.01	8	8	-	8.07	8	8
Specific Conductivity µS/cm	0	2	2	3	-	3485	3340	3437	-	3450	3300	3370	-	3485	3340	3410	-	3520	3380	3530
Total Dissolved Solids	0	2	2	3	-	2066	2950	3127	-	741	2930	3010	-	2065.5	2950	3140	-	3390	2970	3230
Total Suspended Solids	0	2	2	3	-	5	3	2	-	4.1	2	2	-	5.05	3	2	-	6	4	4
Turbidity NTU	0	2	1	2	-	0	1	0	-	0.29	1	0	-	0.47	1	0	-	0.65	1	0
Dissolved Anions																				
Bromide	0	2	2	3	-	0.88	0.25	0.67	-	0.5	0.25	0.25	-	0.875	0.25	0.50	-	1.25	0.25	1.25
Chloride	0	2	2	3	-	36	36	36	-	33	36	32	-	35.5	36	38	-	38	36	39
Fluoride	0	2	1	3	-	0.75	0.38	0.32	-	0.2	0.38	0.21	-	0.75	0.38	0.24	-	1.3	0.38	0.50
Sulphate	0	2	2	3	-	1815	1675	1807	-	1650	1650	1770	-	1815	1675	1800	-	1980	1700	1850
Nutrients								-												
Ammonia (Total)	0	2	2	3	-	0.006	0.035	0.017	-	0.0025	0.024	0.011	-	0.00625	0.035	0.012	-	0.01	0.045	0.028
Nitrate (as N)	0	2	2	3	-	72.75	73.600	74.767	-	71.4	72.900	65.400	-	72.75	73.600	79.000	-	74.1	74.300	79.900
Nitrite (as N)	0	2	2	3	-	0.0550	0.0935	0.1580	-	0.036	0.0490	0.1380	-	0.055	0.0935	0.1490	-	0.074	0.1380	0.1870
Nitrogen (Dissolved)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	0	2	2	3	-	0.09	0.21	0.18	-	0.025	0.03	0.03	-	0.0885	0.21	0.24	-	0.152	0.39	0.27
Orthophosphate (Dissolved)	0	2	2	2	-	0.001	0.001	0.002	-	0.0011	0.001	0.002	-	0.0011	0.001	0.002	-	0.0011	0.001	0.002
Phosphorus - Dissolved	0	1	0	1	-	0.001	-	0.00	-	0.001	-	0.00	-	0.001	-	0.00	-	0.001	-	0.00
Phosphorus - Total	0	2	2	2	-	0.00	0.00	0.00	-	0.001	0.00	0.00	-	0.0022	0.00	0.00	-	0.0034	0.01	0.01
Cyanide																				
Cyanide (Free)	0	2	1	1	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025
Cyanide (Total)	0	2	2	2	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025
Cyanide (WAD)	0	2	1	1	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025
Dissolved Metals																				
Aluminum	0	2	2	3	-	0.0130	0.0188	0.0127	-	0.001	0.0125	0.0005	-	0.013	0.0188	0.0125	-	0.025	0.0250	0.0250
Antimony	0	2	2	3	-	0.01690	0.01470	0.01570	-	0.0167	0.01430	0.01420	-	0.0169	0.01470	0.01570	-	0.0171	0.01510	0.01720
Arsenic	0	2	2	3	-	0.0195	0.0190	0.0177	-	0.0178	0.0180	0.0154	-	0.0195	0.0190	0.0183	-	0.0212	0.0200	0.0193
Barium	0	2	2	3	-	0.012	0.010	0.012	-	0.01	0.010	0.010	-	0.01185	0.010	0.010	-	0.0137	0.010	0.016
Beryllium	0	2	2	3	-	0.00255	0.00375	0.00252	-	0.0001	0.00250	0.00005	-	0.00255	0.00375	0.00250	-	0.005	0.00500	0.00500
Bismuth	0	1	0	1	-	0.001	-	0.000	-	0.0005	-	0.000	-	0.0005	-	0.000	-	0.0005	-	0.000
Boron	0	2	2	3	-	0.058	0.050	0.058	-	0.05	0.050	0.050	-	0.058	0.050	0.050	-	0.066	0.050	0.073
Cadmium	0	1	2	3	-	0.000350	0.001580	0.000671	-	0.00035	0.000660	0.000100	-	0.00035	0.001580	0.000914	-	0.00035	0.002500	0.001000
Calcium	0	2	2	3	-	238	223	227	-	221	218	212	-	238	223	225	-	255	228	243
Chromium	0	2	2	3	-	0.0026	0.00375	0.00252	-	0.0001	0.00250	0.00005	-	0.00255	0.00375	0.00250	-	0.005	0.00500	0.00500
Cobalt	0	2	2	3	-	0.00120	0.00113	0.00107	-	0.00089	0.00075	0.00075	-	0.001195	0.00113	0.00097	-	0.0015	0.00150	0.00150
Copper	0	2	2	3	-	0.0362	0.0296	0.0315	-	0.034	0.0281	0.0265	-	0.0362	0.0296	0.0280	-	0.0384	0.0310	0.0399
Iron	0	2	2	3	-	0.010	0.015	0.012	-	0.005	0.015	0.005	-	0.01	0.015	0.015	-	0.015	0.015	0.015
Lead	0	2	2	3	-	0.00128	0.00188	0.00126	-	0.00005	0.00125	0.00003	-	0.001275	0.00188	0.00125	-	0.0025	0.00250	0.00250
Lithium	0	2	2	3	-	0.0523	0.0485	0.0415	-	0.0505	0.0470	0.0250	-	0.05225	0.0485	0.0450	-	0.054	0.0500	0.0545
Magnesium	0	2	2	3	-	303.0	286.0	278.0	-	292.0	280.0	258.0	-	303.0	286.0	279.0	-	314.0	292.0	297.0
Manganese	0	2	2	3	-	0.012	0.025	0.022	-	0.00317	0.023	0.005	-	0.012235	0.025	0.028	-	0.0213	0.027	0.034
Mercury	0	2	2	3	-	0.0000075	0.0000100	0.0000083	-	0.000005	0.0000100	0.0000050	-	0.0000075	0.0000100	0.0000100	-	0.00001	0.0000100	0.0000100
Molybdenum	0	2	2	3	-	4.1200	3.2250	3.5900	-	3.4	3.1500	3.2900	-	4.12	3.2250	3.3700	-	4.84	3.3000	4.1100
Nickel	0	2	2	3	-	0.0150	0.0129	0.0134	-	0.0149	0.0118	0.0120	-	0.01495	0.0129	0.0135	-	0.015	0.0140	0.0147
Phosphorus	0	1	0	1	-	0.03	-	0.03	-	0.025	-	0.03	-	0.025	-	0.03	-	0.025	-	0.03
Potassium	0	2	2	3	-	28	25	27	-	24.7	25	25	-	28.3	25	25	-	31.9	26	30
Selenium	0	2	2	3	-	0.04360	0.02855	0.03620	-	0.035	0.02800	0.02800	-	0.0436	0.02855	0.03210	-	0.0522	0.02910	0.04850
Silicon	0	1	0	1	-	7.19	-	7.33	-	7.19	-	7.33	-	7.19	-	7.33	-	7.19	-	7.33
Silver	0	2	2	3	-	0.000055	0.000075	0.000052	-	0.00001	0.000050	0.000005	-	0.000055	0.000075	0.000050	-	0.0001	0.000100	0.000100
Sodium	0	2	2	3	-	206	199	194	-	197	198	183	-	205.5	199	193	-	214	200	205
Strontium	0	1	0	1	-	4.46	-	3.75	-	4.46	-	3.75	-	4.46	-	3.75	-	4.46	-	3.75
Sulphur	0	1	0	1	-	616	-	597	-	616	-	597	-	616	-	597	-	616	-	597
Thallium	0	2	2	3	-	0.000505	0.000750	0.000503	-	0.00001	0.000500	0.000010	-	0.000505	0.000750	0.000500	-	0.001	0.001000	0.001000
Tin	0	2	2	3	-	0.00130	0.00188	0.00127	-	0.0001	0.00125	0.00005	-	0.0013	0.00188	0.00125	-	0.0025	0.00250	0.00250
Titanium	0	2	2	3	-	0.0075	0.0075	0.0073	-	0.005	0.0050	0.0050	-	0.0075	0.0075	0.0050	-	0.01	0.0100	0.0120
Uranium	0	2	2	3	-	0.0110	0.0107	0.0109	-	0.0109	0.0103	0.0106	-	0.011	0.0107	0.0109	-	0.0111	0.0111	0.0111
Vanadium	0	2	2	3	-	0.0048	0.0100	0.0082	-	0.0046	0.0050	0.0046	-	0.0048	0.0100	0.0050	-	0.005	0.0150	0.0150
Zinc	0	2	2	3	-	0.0018	0.0075	0.0096	-	0.001	0.0025	0.0014	-	0.00175	0.0075	0.0025	-	0.0025	0.0125	0.0250
Total Metals																				
Aluminum	0	2	2	3	-	0.02	0.02	0.01	-	0.0088	0.01	0.00	-	0.0169	0.02	0.01	-	0.025	0.03	0.03
Antimony	0	2	2	3	-	0.01700	0.01425	0.01610	-	0.017	0.01420	0.01520	-	0.017	0.01425	0.01560	-	0.017	0.01430	0.01750
Arsenic	0	2	2	3	-	0.0194	0.0184	0.0177	-	0.0177	0.0176	0.0148	-	0.0194	0.0184	0.0186	-	0.0211	0.0192	0.0196
Barium	0	2	2	3	-	0.012	0.010	0.012	-	0.01	0.010	0.010	-	0.0118	0.010	0.010	-	0.0136	0.010	0.015
Beryllium	0	2	2	3	-	0.00255	0.00375	0.00252	-	0.0001	0.00250	0.00005	-	0.00255	0.00375	0.00250	-	0.005	0.00500	0.00500
Bismuth	0	1	0	1	-	0.0005	-	0.00025	-	0.0005	-	0.00025	-	0.0005	-	0.00025	-	0.0005	-	0.00025
Boron	0	2	2	3	-	0.061	0.050	0.060	-	0.05	0.050	0.050	-	0.0605	0.050	0.050	-	0.071	0.050	0.080
Cadmium	0	1	2	3	-	0.000400	0.001535	0.000662	-	0.0004	0.000570	0.000100	-	0.0004	0.001535	0.000887	-	0.0004	0.002500	0.001000
Calcium	0	2	2	3	-	234	226	224	-	222	221	212	-	233.5	226	222	-	245	230	237
Chromium	0	2	2	3	-	0.0026	0.0038	0.0026	-	0.0001	0.0025	0.0002	-	0.00255	0.0038	0.0025	-	0.005	0.0050	0.0050
Cobalt	0	2	2	3	-	0.00122	0.00113	0.00106	-	0.00093	0.00075	0.00075	-	0.001215	0.00113	0.00094	-	0.0015	0.00150	0.00150
Copper	0	2	2	3	-	0.0399	0.0298	0.0325	-	0.036	0.0275	0.0274	-	0.0399	0.0298	0.0290	-	0.0438	0.0320	0.0412
Iron	0	2	2	3	-	0.01	0.02	0.01	-	0.005	0.02	0.01	-	0.01	0.02	0.02	-	0.015	0.02	0.02
Lead	0	2	2	3	-	0.00128	0.00188	0.00126	-	0.00005	0.00125	0.00003	-	0.00128	0.00188	0.00125	-	0.0025	0.00250	0.00250
Lithium	0	2	2	3	-	0.0543	0.0480	0.0501	-	0.0516	0.0450	0.0460	-	0.0543	0.0480	0.0500	-	0.057	0.0510	0.0544
Magnesium	0	2	2	3	-	301	284	276	-	292	281	261	-	301	284	277	-	310	287	291
Manganese	0	2	2	3	-	0.01	0.02	0.02	-	0.00326	0.02	0.01	-	0.01288	0.02	0.03	-	0.0225	0.03	0.04
Mercury	0	2	2	3	-	0.0000075	0.0000100	0.0000083	-	0.000005	0.0000100	0.0000050	-	0.0000075	0.0000100	0.0000100	-	0.00001	0.0000100	0.0000100
Molybdenum	0	2	2	3	-	4.255	3.155	3.647	-	3.54	3.150	3.400	-	4.255	3.155	3.430	-	4.97	3.160	4.110
Nickel	0	2	2	3	-	0.0152	0.0127	0.0137	-	0.0150	0.0113	0.0130	-	0.0152	0.0127	0.0135	-	0.0153	0.0140	0.0147
Phosphorus	0	1	0	1	-	0.03	-	0.03	-	0.025	-	0.03	-	0.025	-	0.03	-	0.025	-	0.03
Potassium	0	2	2	3	-	27.5	25.4	26.3	-	24.6	25.0	24.3	-	27.5	25.4	24.4	-	30.3	25.7	30.3
Selenium	0	2	2	3	-	0.04150	0.02820	0.03590	-	0.03300	0.02800	0.02900	-	0.0415	0.02820	0.03100	-	0.0500	0.02840	0.04770
Silicon	0	1	0	1	-	7.1	-	7.3	-	7.1	-	7.3	-	7.1	-	7.3	-	7.1	-	7.3
Silver	0	2	2	3	-	0.0000550	0.0000750	0.0000517	-	0.00001	0.0000500	0.0000050	-	0.000055	0.0000750	0.0000500	-	0.0001	0.0001000	0.0001000
Sodium	0	2	2	3	-	206	199	191	-	195	198	183	-	206	199	191	-	217	199	199
Strontium	0	1	0	1	-	4.5	-	3.84	-	4.49	-	3.84	-	4.5	-	3.84	-	4.5	-	3.84
Sulphur	0	1	0	1	-	624	-	583	-	624	-	583	-	624	-	583	-	624	-	583
Thallium	0	2	2	3	-	0.00051	0.00075	0.00050	-	0.00001	0.00050	0.00001	-	0.000505	0.00075	0.00050	-	0.001	0.00100	0.00100
Tin	0	2	2	3	-	0.00130	0.00188	0.00127	-	0.0001	0.00125	0.00005	-	0.0013	0.00188	0.00125	-	0.0025	0.00250	0.00250
Titanium	0	2	2	3	-	0.008	0.005	0.007	-	0.005	0.005	0.005	-	0.0075	0.005	0.005	-	0.01	0.005	0.011
Uranium	0	2	2	3	-	0.0113	0.0104	0.0111	-	0.0111	0.0101	0.0104	-	0.0113	0.0104	0.0111	-	0.0115	0.0107	0.0118
Vanadium	0	2	2	3	-	0.0049	0.0100	0.0082	-	0.0048	0.0050	0.0045	-	0.0049	0.0100	0.0051	-	0.005	0.0150	0.0150
Zinc	0	2	2	3	-	0.0028	0.0075	0.0097	-	0.0025	0.0025	0.0015	-	0.00275	0.0075	0.0025	-	0.003	0.0125	0.0250
Organics																				
Carbon Organic (Dissolved)	0	2	2	3	-	2.0	2	2	-	1.5	2	1	-	2.0	2	2	-	2	3	3
Carbon Organic (Total)	0	1	0	1	-	2	-	1	-	1.6	-	1	-	1.6	-	1	-	2	-	1
Nitrogen Organic (Dissolved)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.
2. SEASONS ARE SPECIFIED AS FOLLOWS: WIN (WINTER; DECEMBER THROUGH MARCH), SPR (SPRING; APRIL AND MAY), SUMMER(JUNE THROUGH AUGUST), FALL (SEPTEMBER THROUGH NOVEMBER).

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.5 - AJWW-S
(PAGE 1 OF 2)

Parameter	Total Count	Complete Dataset - AJWW-S									
		Min	Percentiles 5th	25th	50th	75th	95th	Max	Average	Standard Deviation	Coefficient of Variation
In Situ Parameters											
Conductivity µS/cm	8	2283	2284	2312	2577	2664	2740	2748	2520	195	7.7E-02
Oxygen Dissolved %	4	58	59	64	75	84	86	86	73	14	1.9E-01
Oxygen Dissolved	7	4.8	5.1	6.5	8.4	8.7	9.0	9.1	7.5	1.7	2.2E-01
pH (unitless)	7	7.3	7.5	8.0	8.1	8.2	8.3	8.3	8.0	0.4	4.4E-02
Redox Potential mV	4	-86	-82	-65	26	111	113	113	20	107	5.4E+00
Salinity ppt	2	1.71	1.72	1.74	1.77	1.80	1.82	1.83	1.77	0.08	4.8E-02
Specific Conductivity µS/cm	8	3254	3282	3348	3403	3446	3468	3470	3390	74	2.2E-02
Temperature °C	8	7.4	7.8	9.7	12.7	13.4	14.1	14.2	11.6	2.6	2.2E-01
Total Dissolved Solids	2	2110	2117	2147	2183	2220	2249	2256	2183	103	4.7E-02
Turbidity NTU	2	-3.1	-2.9	-2.3	-1.5	-0.7	-0.1	0.1	-1.5	2.3	-1.5E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	2	4.6	4.7	5.1	5.5	6.0	6.3	6.4	5.5	1.3	2.3E-01
Alkalinity (Total as CaCO3)	8	152	153	155	157	158	164	165	157	4	2.6E-02
Bicarbonate Alkalinity	4	154	154	156	157	158	160	161	157	3	1.9E-02
Carbonate Alkalinity	4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0E+00
Color TCU	5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0.0	0.0E+00
Hardness as CaCO3 (Dissolved)	8	1630	1644	1685	1730	1775	1872	1900	1741	87	5.0E-02
Hydroxide Alkalinity	4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0E+00
pH (unitless)	8	8.1	8.1	8.1	8.2	8.2	8.3	8.3	8.2	0.1	8.8E-03
Specific Conductivity µS/cm	8	3150	3199	3343	3390	3423	3482	3510	3368	108	3.2E-02
Total Dissolved Solids	8	1030	1674	2878	2890	3145	3257	3260	2773	724	2.6E-01
Total Suspended Solids	8	1.5	1.5	1.5	1.5	2.5	5.6	5.7	2.5	1.9	7.5E-01
Turbidity NTU	5	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.1	2.4E-01
Dissolved Anions											
Bromide	8	0.25	0.25	0.25	0.25	0.50	0.99	1.25	0.44	0.35	7.9E-01
Chloride	8	33	33	34	35	36	36	36	35	1	3.0E-02
Fluoride	7	0.10	0.13	0.20	0.22	0.34	0.47	0.50	0.27	0.14	5.0E-01
Sulphate	8	1640	1640	1655	1680	1745	1943	1960	1733	127	7.3E-02
Nutrients											
Ammonia (Total)	8	0.003	0.004	0.009	0.031	0.036	0.058	0.063	0.028	0.021	7.6E-01
Nitrate (as N)	8	68.200	68.45	70.85	71.85	72.65	73.78	74.30	71.50	2.031	2.8E-02
Nitrite (as N)	8	0.0770	0.08	0.11	0.13	0.14	0.14	0.14	0.12	0.0233	1.9E-01
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	8	0.03	0.03	0.03	0.03	0.09	0.18	0.18	0.07	0.07	1.0E+00
Orthophosphate (Dissolved)	7	0.001	0.001	0.001	0.001	0.002	0.002	0.002	0.001	0.000	3.9E-01
Phosphorus - Dissolved	2	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.000	0.0E+00
Phosphorus - Total	7	0.002	0.002	0.003	0.003	0.004	0.004	0.004	0.003	0.001	2.2E-01
Cyanide											
Cyanide (Free)	4	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Cyanide (Total)	7	0.0025	0.0025	0.0025	0.0025	0.0025	0.0152	0.0207	0.0051	0.0069	1.3E+00
Cyanide (WAD)	4	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Dissolved Metals											
Aluminum	8	0.0005	0.0026	0.0110	0.0250	0.0250	0.0250	0.0250	0.0181	0.0101	5.6E-01
Antimony	8	0.01570	0.01598	0.01658	0.01665	0.01753	0.01914	0.01980	0.01715	0.00125	7.3E-02
Arsenic	8	0.0164	0.0169	0.0197	0.0211	0.0232	0.0259	0.0264	0.0213	0.0034	1.6E-01
Barium	8	0.010	0.010	0.010	0.010	0.011	0.016	0.016	0.011	0.003	2.3E-01
Beryllium	8	0.000050	0.000050	0.001888	0.005000	0.005000	0.005000	0.005000	0.003450	0.002269	6.6E-01
Bismuth	2	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00000	0.0E+00
Boron	8	0.050	0.050	0.050	0.050	0.054	0.070	0.073	0.055	0.009	1.7E-01
Cadmium	7	0.0001000	0.0002320	0.0007350	0.0010000	0.0012550	0.0022030	0.0025000	0.0010829	0.0007625	7.0E-01
Calcium	8	213	215	219	224	231	246	250	227	12	5.5E-02
Chromium	8	0.00005	0.00005	0.00189	0.00500	0.00500	0.00500	0.00500	0.00345	0.00227	6.6E-01
Cobalt	8	0.00070	0.00070	0.00074	0.00150	0.00150	0.00150	0.00150	0.00121	0.00040	3.3E-01
Copper	8	0.0280	0.0287	0.0308	0.0316	0.0335	0.0346	0.0350	0.0318	0.0023	7.1E-02
Iron	8	0.005	0.005	0.013	0.015	0.015	0.015	0.015	0.013	0.005	3.7E-01
Lead	8	0.000025	0.000025	0.000944	0.002500	0.002500	0.002500	0.002500	0.001725	0.001134	6.6E-01
Lithium	8	0.02500	0.02500	0.02500	0.04825	0.05160	0.05834	0.06100	0.04211	0.01472	3.5E-01
Magnesium	8	267	269	277	286	291	306	310	286	14	4.8E-02
Manganese	8	0.002	0.003	0.006	0.007	0.008	0.010	0.011	0.007	0.003	4.2E-01
Mercury	8	0.0000050	0.0000050	0.0000088	0.0000100	0.0000100	0.0000100	0.0000100	0.0000088	0.0000023	2.6E-01
Molybdenum	8	3.210	3.217	3.268	3.445	4.105	4.417	4.560	3.676	0.515	1.4E-01
Nickel	8	0.0115	0.0117	0.0120	0.0125	0.0132	0.0159	0.0170	0.0130	0.0018	1.4E-01
Phosphorus	2	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.00	0.0E+00
Potassium	8	24	24	25	26	27	31	31	27	2	9.2E-02
Selenium	8	0.02900	0.02900	0.02923	0.03150	0.04363	0.04980	0.05050	0.03641	0.00914	2.5E-01
Silicon	2	7.1	7.1	7.1	7.1	7.1	7.2	7.2	7.1	0.0	6.0E-03
Silver	8	0.0000050	0.0000050	0.0000388	0.0001000	0.0001000	0.0001000	0.0001000	0.0000700	0.0000437	6.2E-01
Sodium	8	190	191	195	199	202	209	211	199	7	3.4E-02
Strontium	2	3.90	3.92	4.01	4.13	4.24	4.33	4.35	4.13	0.32	7.7E-02
Sulphur	2	594	595	598	601	605	607	608	601	10	1.6E-02
Thallium	8	0.0000050	0.0000075	0.0003780	0.0010000	0.0010000	0.0010000	0.0010000	0.0006896	0.0004544	6.6E-01
Tin	8	0.000050	0.000050	0.000950	0.002500	0.002500	0.002500	0.002500	0.001731	0.001124	6.5E-01
Titanium	8	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0000	0.0E+00
Uranium	8	0.0101	0.0101	0.0106	0.0108	0.0112	0.0117	0.0118	0.0109	0.0006	5.3E-02
Vanadium	8	0.0050	0.0050	0.0050	0.0052	0.0150	0.0150	0.0150	0.0088	0.0051	5.8E-01
Zinc	8	0.0005	0.0012	0.0025	0.0031	0.0156	0.0250	0.0250	0.0093	0.0104	1.1E+00
Total Metals											
Aluminum	8	0.0015	0.0026	0.0105	0.0250	0.0250	0.0250	0.0250	0.0179	0.0102	5.7E-01
Antimony	8	0.01560	0.01574	0.01600	0.01635	0.01765	0.01905	0.01940	0.01694	0.00134	7.9E-02
Arsenic	8	0.0167	0.0169	0.0193	0.0214	0.0233	0.0251	0.0258	0.0212	0.0031	1.5E-01
Barium	8	0.010	0.010	0.010	0.010	0.011	0.016	0.016	0.011	0.003	2.4E-01
Beryllium	8	0.000050	0.000050	0.001888	0.005000	0.005000	0.005000	0.005000	0.003450	0.002269	6.6E-01
Bismuth	2	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00000	0.0E+00
Boron	8	0.050	0.050	0.050	0.050	0.055	0.078	0.082	0.057	0.012	2.2E-01
Cadmium	7	0.000100	0.000268	0.000675	0.001000	0.001065	0.002089	0.002500	0.001011	0.000740	7.3E-01
Calcium	8	213	214	217	223	233	244	245	226	12	5.2E-02
Chromium	8	0.00005	0.00010	0.00192	0.00500	0.00500	0.00500	0.00500	0.00347	0.00224	6.5E-01
Cobalt	8	0.00065	0.00069	0.00080	0.00150	0.00150	0.00150	0.00150	0.00122	0.00040	3.3E-01
Copper	8	0.0280	0.0290	0.0310	0.0310	0.0338	0.0359	0.0360	0.0321	0.0027	8.5E-02
Iron	8	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.01	0.00	2.8E-01
Lead	8	0.000025	0.000025	0.000944	0.002500	0.002500	0.002500	0.002500	0.001725	0.001134	6.6E-01
Lithium	8	0.0250	0.0250	0.0250	0.0345	0.0507	0.0625	0.0660	0.0394	0.0166	4.2E-01
Magnesium	8	261	265	278	287	292	301	304	285	13	4.7E-02
Manganese	8	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.00	4.5E-01
Mercury	8	0.0000050	0.0000050	0.0000088	0.0000100	0.0000100	0.0000100	0.0000100	0.0000088	0.0000023	2.6E-01
Molybdenum	8	3.100	3.121	3.160	3.355	4.110	4.652	4.750	3.668	0.653	1.8E-01
Nickel	8	0.0110	0.0110	0.0118	0.0120	0.0137	0.0154	0.0160	0.0127	0.0018	1.4E-01
Phosphorus	2	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.00	0.0E+00
Potassium	8	24	24	26	26	27	30	30	27	2	8.1E-02
Selenium	8	0.02700	0.02735	0.02875	0.03070	0.04275	0.04943	0.05020	0.03558	0.00943	2.7E-01
Silicon	2	7.0	7.0	7.1	7.2	7.3	7.4	7.4	7.2	0.2	3.4E-02
Silver	8	0.0000050	0.0000050	0.0000388	0.0001000	0.0001000	0.0001000	0.0001000	0.0000700	0.0000437	6.2E-01
Sodium	8	196	196	196	199	202	212	215	201	7	3.3E-02
Strontium	2	4.10	4.11	4.16	4.21	4.27	4.31	4.32	4.21	0.16	3.7E-02
Sulphur	2	594	595	599	604	609	613	614	604	14	2.3E-02
Thallium	8	0.0000050	0.0000075	0.0003780	0.0010000	0.0010000	0.0010000	0.0010000	0.0006896	0.0004544	6.6E-01
Tin	8	0.000050	0.000050	0.000950	0.002500	0.002500	0.002500	0.002500	0.001731	0.001124	6.5E-01
Titanium	8	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0000	0.0E+00
Uranium	8	0.0101	0.0101	0.0104	0.0108	0.0115	0.0117	0.0117	0.0109	0.0006	5.9E-02
Vanadium	8	0.0050	0.0050	0.0050	0.0053	0.0150	0.0150	0.0150	0.0088	0.0051	5.8E-01
Zinc	8	0.0015	0.0015	0.0023	0.0025	0.0156	0.0250	0.0250	0.0091	0.0104	1.1E+00
Organics											
Carbon Organic (Dissolved)	8	1.3	1.4	1.5	2.3	2.4	2.6	2.7	2.1	0.5	2.6E-01
Carbon Organic (Total)	2	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	0.0	1.0E-02
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.5 - AJWW-S
(PAGE 2 OF 2)

Seasonal Statistics - AJWW-S

Parameter	Count				Average				Min				Median				Max			
	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall
In Situ Parameters																				
Conductivity µS/cm	0	3	2	3	-	2296	2662	2649	-	2283	2575	2579	-	2285	2662	2643	-	2321	2748	2725
Oxygen Dissolved %	0	1	1	2	-	66	58	85	-	65.7	58	83	-	65.7	58	85	-	65.7	58	86
Oxygen Dissolved	0	2	2	3	-	8	5	9	-	7.37	5	8	-	8.23	5	9	-	9.09	6	9
pH (unitless)	0	2	2	3	-	8	8	8	-	8	7	8	-	8.14	8	8	-	8.28	8	8
Redox Potential mV	0	1	1	2	-	110	-58	14	-	110	-58	-86	-	110	-58	14	-	110	-58	113
Salinity ppt	0	1	0	1	-	1.71	-	1.83	-	1.71	-	1.83	-	1.71	-	1.83	-	1.71	-	1.83
Specific Conductivity µS/cm	0	3	2	3	-	3342	3409	3425	-	3254	3352	3399	-	3334	3409	3406	-	3439	3465	3470
Temperature °C	0	3	2	3	-	9	14	13	-	7.41	13	12	-	8.5	14	13	-	10.1	14	14
Total Dissolved Solids	0	1	0	1	-	2110	-	2256	-	2110	-	2256	-	2110	-	2256	-	2110	-	2256
Turbidity NTU	0	1	0	1	-	-3	-	0	-	-3.1	-	0	-	-3.1	-	0	-	-3.1	-	0
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	0	1	1	0	-	6.4	4.6	-	-	6.4	4.6	-	-	6.4	4.6	-	-	6.4	4.6	-
Alkalinity (Total as CaCO3)	0	3	2	3	-	159	155	157	-	156	152	154	-	157	155	155	-	165	157	161
Bicarbonate Alkalinity	0	2	0	2	-	157	-	158	-	156	-	154	-	156.5	-	158	-	157	-	161
Carbonate Alkalinity	0	2	0	2	-	1	-	1	-	1	-	1	-	1	-	1	-	1	-	1
Color TCU	0	1	2	2	-	3	3	3	-	2.5	3	3	-	2.5	3	3	-	2.5	3	3
Hardness as CaCO3 (Dissolved)	0	3	2	3	-	1760	1725	1733	-	1670	1690	1630	-	1710	1725	1750	-	1900	1760	1820
Hydroxide Alkalinity	0	2	0	2	-	1.00	-	1.00	-	1	-	1.00	-	1	-	1.00	-	1	-	1.00
pH (unitless)	0	3	2	3	-	8	8	8	-	8.09	8	8	-	8.13	8	8	-	8.16	8	8
Specific Conductivity µS/cm	0	3	2	3	-	3330	3330	3430	-	3150	3290	3360	-	3410	3330	3420	-	3430	3370	3510
Total Dissolved Solids	0	3	2	3	-	2387	2890	3080	-	1030	2880	2880	-	2870	2890	3110	-	3260	2900	3250
Total Suspended Solids	0	3	2	3	-	3	4	2	-	1.5	2	2	-	1.5	4	2	-	5.7	6	2
Turbidity NTU	0	2	1	2	-	0	0	0	-	0.28	0	0	-	0.3	0	0	-	0.32	0	0
Dissolved Anions																				
Bromide	0	3	2	3	-	0.67	0.25	0.33	-	0.25	0.25	0.25	-	0.5	0.25	0.25	-	1.25	0.25	0.50
Chloride	0	3	2	3	-	36	35	34	-	35	35	33	-	35.7	35	34	-	36	36	35
Fluoride	0	3	1	3	-	0.37	0.27	0.18	-	0.2	0.27	0.10	-	0.4	0.27	0.21	-	0.5	0.27	0.22
Sulphate	0	3	2	3	-	1740	1675	1763	-	1640	1660	1640	-	1670	1675	1690	-	1910	1690	1960
Nutrients								-												
Ammonia (Total)	0	3	2	3	-	0.015	0.039	0.034	-	0.0025	0.029	0.006	-	0.01	0.039	0.033	-	0.032	0.048	0.063
Nitrate (as N)	0	3	2	3	-	71.33	72.500	71.000	-	68.2	72.200	68.900	-	71.5	72.500	71.500	-	74.3	72.800	72.600
Nitrite (as N)	0	3	2	3	-	0.1087	0.1100	0.1363	-	0.077	0.0930	0.1340	-	0.112	0.1100	0.1370	-	0.137	0.1270	0.1380
Nitrogen (Dissolved)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	0	3	2	3	-	0.04	0.10	0.07	-	0.025	0.03	0.03	-	0.025	0.10	0.03	-	0.064	0.18	0.17
Orthophosphate (Dissolved)	0	3	2	2	-	0.001	0.001	0.002	-	0.0005	0.001	0.002	-	0.001	0.001	0.002	-	0.0013	0.001	0.002
Phosphorus - Dissolved	0	1	0	1	-	0.001	-	0.00	-	0.001	-	0.00	-	0.001	-	0.00	-	0.001	-	0.00
Phosphorus - Total	0	3	2	2	-	0.00	0.00	0.00	-	0.0021	0.00	0.00	-	0.0027	0.00	0.00	-	0.0036	0.00	0.00
Cyanide																				
Cyanide (Free)	0	2	1	1	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025
Cyanide (Total)	0	3	2	2	-	0.0086	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0207	0.0025	0.0025
Cyanide (WAD)	0	2	1	1	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025
Dissolved Metals																				
Aluminum	0	3	2	3	-	0.0188	0.0188	0.0168	-	0.0065	0.0125	0.0005	-	0.025	0.0188	0.0250	-	0.025	0.0250	0.0250
Antimony	0	3	2	3	-	0.01740	0.01660	0.01727	-	0.0157	0.01660	0.01650	-	0.0167	0.01660	0.01740	-	0.0198	0.01660	0.01790
Arsenic	0	3	2	3	-	0.0230	0.0217	0.0194	-	0.0177	0.0207	0.0164	-	0.025	0.0217	0.0204	-	0.0264	0.0226	0.0214
Barium	0	3	2	3	-	0.012	0.010	0.012	-	0.01	0.010	0.010	-	0.01	0.010	0.010	-	0.0157	0.010	0.016
Beryllium	0	3	2	3	-	0.00335	0.00375	0.00335	-	0.00005	0.00250	0.00005	-	0.005	0.00375	0.00500	-	0.005	0.00500	0.00500
Bismuth	0	1	0	1	-	0.000	-	0.000	-	0.00025	-	0.000	-	0.00025	-	0.000	-	0.00025	-	0.000
Boron	0	3	2	3	-	0.055	0.050	0.058	-	0.05	0.050	0.050	-	0.05	0.050	0.050	-	0.065	0.050	0.073
Cadmium	0	2	2	3	-	0.001255	0.001520	0.000677	-	0.001	0.000540	0.000100	-	0.001255	0.001520	0.000930	-	0.00151	0.002500	0.001000
Calcium	0	3	2	3	-	229	224	227	-	218	219	213	-	219	224	228	-	250	228	239
Chromium	0	3	2	3	-	0.0034	0.00375	0.00335	-	0.00005	0.00250	0.00005	-	0.005	0.00375	0.00500	-	0.005	0.00500	0.00500
Cobalt	0	3	2	3	-	0.00123	0.00113	0.00124	-	0.0007	0.00075	0.00071	-	0.0015	0.00113	0.00150	-	0.0015	0.00150	0.00150
Copper	0	3	2	3	-	0.0328	0.0311	0.0313	-	0.03	0.0310	0.0280	-	0.0334	0.0311	0.0320	-	0.035	0.0311	0.0338
Iron	0	3	2	3	-	0.012	0.015	0.012	-	0.005	0.015	0.005	-	0.015	0.015	0.015	-	0.015	0.015	0.015
Lead	0	3	2	3	-	0.00168	0.00188	0.00168	-	0.000025	0.00125	0.00003	-	0.0025	0.00188	0.00250	-	0.0025	0.00250	0.00250
Lithium	0	3	2	3	-	0.0448	0.0365	0.0431	-	0.025	0.0250	0.0250	-	0.0485	0.0365	0.0510	-	0.061	0.0480	0.0534
Magnesium	0	3	2	3	-	289.0	283.5	284.0	-	273.0	278.0	267.0	-	284.0	283.5	287.0	-	310.0	289.0	298.0
Manganese	0	3	2	3	-	0.006	0.010	0.006	-	0.00237	0.008	0.003	-	0.0073	0.010	0.007	-	0.008	0.011	0.007
Mercury	0	3	2	3	-	0.0000083	0.0000100	0.0000083	-	0.000005	0.0000100	0.0000050	-	0.00001	0.0000100	0.0000100	-	0.00001	0.0000100	0.0000100
Molybdenum	0	3	2	3	-	4.0200	3.2450	3.6200	-	3.41	3.2100	3.2300	-	4.09	3.2450	3.4800	-	4.56	3.2800	4.1500
Nickel	0	3	2	3	-	0.0140	0.0118	0.0129	-	0.012	0.0115	0.0120	-	0.013	0.0118	0.0130	-	0.017	0.0120	0.0138
Phosphorus	0	1	0	1	-	0.03	-	0.03	-	0.025	-	0.03	-	0.025	-	0.03	-	0.025	-	0.03
Potassium	0	3	2	3	-	27	26	27	-	23.8	26	25	-	24.9	26	27	-	31.2	26	30
Selenium	0	3	2	3	-	0.04117	0.02915	0.03650	-	0.031	0.02900	0.02900	-	0.042	0.02915	0.03200	-	0.0505	0.02930	0.04850
Silicon	0	1	0	1	-	7.10	-	7.16	-	7.1	-	7.16	-	7.1	-	7.16	-	7.1	-	7.16
Silver	0	3	2	3	-	0.000068	0.000075	0.000068	-	0.000005	0.000050	0.000005	-	0.0001	0.000075	0.000100	-	0.0001	0.000100	0.000100
Sodium	0	3	2	3	-	198	199	201	-	194	198	190	-	195	199	201	-	206	200	211
Strontium	0	1	0	1	-	4.35	-	3.90	-	4.35	-	3.90	-	4.35	-	3.90	-	4.35	-	3.90
Sulphur	0	1	0	1	-	608	-	594	-	608	-	594	-	608	-	594	-	608	-	594
Thallium	0	3	2	3	-	0.000668	0.000750	0.000671	-	0.000005	0.000500	0.000012	-	0.001	0.000750	0.001000	-	0.001	0.001000	0.001000
Tin	0	3	2	3	-	0.00168	0.00188	0.00168	-	0.00005	0.00125	0.00005	-	0.0025	0.00188	0.00250	-	0.0025	0.00250	0.00250
Titanium	0	3	2	3	-	0.005	0.0050	0.0050	-	0.005	0.0050	0.0050	-	0.005	0.0050	0.0050	-	0.005	0.0050	0.0050
Uranium	0	3	2	3	-	0.0112	0.0105	0.0107	-	0.0107	0.0102	0.0101	-	0.0111	0.0105	0.0107	-	0.0118	0.0108	0.0114
Vanadium	0	3	2	3	-	0.0085	0.0100	0.0083	-	0.005	0.0050	0.0050	-	0.0054	0.0100	0.0050	-	0.015	0.0150	0.0150
Zinc	0	3	2	3	-	0.0093	0.0075	0.0104	-	0.0005	0.0025	0.0025	-	0.0025	0.0075	0.0037	-	0.025	0.0125	0.0250
Total Metals																				
Aluminum	0	3	2	3	-	0.02	0.02	0.02	-	0.0015	0.01	0.00	-	0.025	0.02	0.03	-	0.025	0.03	0.03
Antimony	0	3	2	3	-	0.01713	0.01600	0.01737	-	0.0156	0.01600	0.01630	-	0.0164	0.01600	0.01740	-	0.0194	0.01600	0.01840
Arsenic	0	3	2	3	-	0.0223	0.0225	0.0192	-	0.0174	0.0218	0.0167	-	0.0237	0.0225	0.0199	-	0.0258	0.0231	0.0209
Barium	0	3	2	3	-	0.012	0.010	0.012	-	0.01	0.010	0.010	-	0.01	0.010	0.010	-	0.0153	0.010	0.016
Beryllium	0	3	2	3	-	0.00335	0.00375	0.00335	-	0.00005	0.00250	0.00005	-	0.005	0.00375	0.00500	-	0.005	0.00500	0.00500
Bismuth	0	1	0	1	-	0.00025	-	0.00025	-	0.00025	-	0.00025	-	0.00025	-	0.00025	-	0.00025	-	0.00025
Boron	0	3	2	3	-	0.057	0.050	0.061	-	0.05	0.050	0.050	-	0.05	0.050	0.050	-	0.07	0.050	0.082
Cadmium	0	2	2	3	-	0.001065	0.001580	0.000597	-	0.001	0.000660	0.000100	-	0.001065	0.001580	0.000690	-	0.00113	0.002500	0.001000
Calcium	0	3	2	3	-	226	224	228	-	217	217	213	-	219	224	227	-	241	230	245
Chromium	0	3	2	3	-	0.0034	0.0038	0.0034	-	0.00005	0.0025	0.0002	-	0.005	0.0038	0.0050	-	0.005	0.0050	0.0050
Cobalt	0	3	2	3	-	0.00122	0.00113	0.00127	-	0.00065	0.00075	0.00082	-	0.0015	0.00113	0.00150	-	0.0015	0.00150	0.00150
Copper	0	3	2	3	-	0.0334	0.0310	0.0316	-	0.031	0.0309	0.0280	-	0.0331	0.0310	0.0310	-	0.036	0.0310	0.0358
Iron	0	3	2	3	-	0.01	0.02	0.01	-	0.005	0.02	0.01	-	0.015	0.02	0.02	-	0.015	0.02	0.02
Lead	0	3	2	3	-	0.00168	0.00188	0.00168	-	0.000025	0.00125	0.00003	-	0.00250	0.00188	0.00250	-	0.0025	0.00250	0.00250
Lithium	0	3	2	3	-	0.0466	0.0345	0.0354	-	0.025	0.0250	0.0250	-	0.0489	0.0345	0.0250	-	0.066	0.0440	0.0561
Magnesium	0	3	2	3	-	288	285	281	-	273	279	261	-	287	285	286	-	304	291	295
Manganese	0	3	2	3	-	0.01	0.01	0.01	-	0.00129	0.01	0.00	-	0.0099	0.01	0.01	-	0.0102	0.01	0.01
Mercury	0	3	2	3	-	0.0000083	0.0000100	0.0000083	-	0.000005	0.0000100	0.0000050	-	0.00001	0.0000100	0.0000100	-	0.00001	0.0000100	0.0000100
Molybdenum	0	3	2	3	-	3.990	3.130	3.703	-	3.23	3.100	3.160	-	3.99	3.130	3.480	-	4.75	3.160	4.470
Nickel	0	3	2	3	-	0.0138	0.0115	0.0125	-	0.0120	0.0110	0.0110	-	0.0135	0.0115	0.0120	-	0.0160	0.0120	0.0144
Phosphorus	0	1	0	1	-	0.03	-	0.03	-	0.025	-	0.03	-	0.025	-	0.03	-	0.025	-	0.03
Potassium	0	3	2	3	-	26.2	26.2	27.6	-	24.0	26.0	26.0	-	24.9	26.2	26.6	-	29.6	26.3	30.3
Selenium	0	3	2	3	-	0.03867	0.02920	0.03673	-	0.02700	0.02900	0.02800	-	0.0410	0.02920	0.03200	-	0.0480	0.02940	0.05020
Silicon	0	1	0	1	-	7.0	-	7.4	-	7.0	-	7.4	-	7.0	-	7.4	-	7.0	-	7.4
Silver	0	3	2	3	-	0.0000683	0.0000750	0.0000683	-	0.000005	0.0000500	0.0000050	-	0.0001	0.0000750	0.0001000	-	0.0001	0.0001000	0.0001000
Sodium	0	3	2	3	-	199	200	203	-	196	199	196	-	196	200	199	-	206	200	215
Strontium	0	1	0	1	-	4.3	-	4.10	-	4.32	-	4.10	-	4.3	-	4.10	-	4.3	-	4.10
Sulphur	0	1	0	1	-	614	-	594	-	614	-	594	-	614	-	594	-	614	-	594
Thallium	0	3	2	3	-	0.00067	0.00075	0.00067	-	0.000005	0.00050	0.00001	-	0.001	0.00075	0.00100	-	0.001	0.00100	0.00100
Tin	0	3	2	3	-	0.00168	0.00188	0.00168	-	0.00005	0.00125	0.00005	-	0.0025	0.00188	0.00250	-	0.0025	0.00250	0.00250
Titanium	0	3	2	3	-	0.005	0.005	0.005	-	0.005	0.005	0.005	-	0.005	0.005	0.005	-	0.005	0.005	0.005
Uranium	0	3	2	3	-	0.0110	0.0103	0.0111	-	0.0106	0.0101	0.0101	-	0.0109	0.0103	0.0114	-	0.0116	0.0105	0.0117
Vanadium	0	3	2	3	-	0.0085	0.0100	0.0084	-	0.005	0.0050	0.0050	-	0.0054	0.0100	0.0052	-	0.015	0.0150	0.0150
Zinc	0	3	2	3	-	0.0097	0.0075	0.0097	-	0.0015	0.0025	0.0015	-	0.0025	0.0075	0.0025	-	0.025	0.0125	0.0250
Organics																				
Carbon Organic (Dissolved)	0	3	2	3	-	2.2	2	2	-	1.4	2	1	-	2.4	2	2	-	3	3	2
Carbon Organic (Total)	0	1	0	1	-	1	-	1	-	1.4	-	1	-	1.4	-	1	-	1	-	1
Nitrogen Organic (Dissolved)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.
2. SEASONS ARE SPECIFIED AS FOLLOWS: WIN (WINTER; DECEMBER THROUGH MARCH), SPR (SPRING; APRIL AND MAY), SUMMER(JUNE THROUGH AUGUST), FALL (SEPTEMBER THROUGH NOVEMBER).

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.6 - ANDER-10
(PAGE 1 OF 2)

Complete Dataset - ANDER-10

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	15	367	374	397	499	554	610	627	486	92	1.9E-01
Oxygen Dissolved %	15	9	57	80	85	85	100	107	80	21	2.6E-01
Oxygen Dissolved	15	7.8	7.8	8.5	10.1	11.5	12.4	12.5	10.0	1.8	1.8E-01
pH (unitless)	16	7.8	7.9	8.1	8.3	8.4	9.7	12.8	8.5	1.2	1.4E-01
Redox Potential mV	15	0	17	70	127	165	196	206	115	65	5.6E-01
Salinity ppt	15	0.26	0.28	0.32	0.34	0.38	23.24	76.50	5.42	19.66	3.6E+00
Specific Conductivity µS/cm	15	533	582	653	691	786	826	832	709	91	1.3E-01
Temperature °C	16	0.1	0.1	0.6	9.5	14.7	16.4	18.3	8.5	6.8	8.0E-01
Total Dissolved Solids	15	349	382	425	449	511	538	541	462	58	1.3E-01
Turbidity NTU	0	-	-	-	-	-	-	-	-	-	-
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	0	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	16	249	253	278	316	340	402	404	316	51	1.6E-01
Bicarbonate Alkalinity	16	237	250	265	301	340	389	399	309	51	1.6E-01
Carbonate Alkalinity	16	0.5	0.5	1.0	6.3	12.0	17.9	19.2	7.2	6.8	9.5E-01
Color TCU	0	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	16	278	280	306	345	365	405	418	339	43	1.3E-01
Hydroxide Alkalinity	16	0.5	0.5	0.5	0.5	1.0	1.0	1.0	0.7	0.2	3.6E-01
pH (unitless)	16	8.2	8.3	8.3	8.3	8.4	8.5	8.5	8.3	0.1	9.8E-03
Specific Conductivity µS/cm	16	585	593	663	721	784	862	867	728	91	1.2E-01
Total Dissolved Solids	16	367	378	410	442	481	536	556	450	56	1.2E-01
Total Suspended Solids	16	1.5	1.5	3.9	7.6	13.6	47.4	124.0	15.5	29.5	1.9E+00
Turbidity NTU	16	1.0	1.0	1.3	2.2	3.3	8.7	15.9	3.3	3.7	1.1E+00
Dissolved Anions											
Bromide	16	0.03	0.03	0.03	0.13	0.25	0.25	0.25	0.14	0.11	8.0E-01
Chloride	16	41	44	50	55	59	61	61	54	6	1.2E-01
Fluoride	16	0.10	0.10	0.18	0.21	0.23	0.33	0.37	0.21	0.07	3.2E-01
Sulphate	16	12	12	13	20	22	25	26	19	5	2.6E-01
Nutrients											
Ammonia (Total)	16	0.007	0.007	0.011	0.018	0.026	0.045	0.062	0.022	0.014	6.6E-01
Nitrate (as N)	16	0.005	0.01	0.02	0.03	0.06	0.11	0.14	0.04	0.040	9.1E-01
Nitrite (as N)	16	0.0005	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.0019	6.1E-01
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	1	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	-	-
Nitrogen Kjeldahl (Total)	16	0.50	0.53	0.62	0.68	0.82	1.17	1.89	0.77	0.32	4.2E-01
Orthophosphate (Dissolved)	16	0.019	0.022	0.035	0.057	0.078	0.086	0.093	0.055	0.024	4.3E-01
Phosphorus - Dissolved	15	0.028	0.032	0.048	0.070	0.081	0.093	0.096	0.065	0.021	3.3E-01
Phosphorus - Total	16	0.038	0.043	0.062	0.079	0.100	0.224	0.486	0.105	0.105	1.0E+00
Cyanide											
Cyanide (Free)	16	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Cyanide (Total)	16	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Cyanide (WAD)	16	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Dissolved Metals											
Aluminum	16	0.0011	0.0011	0.0015	0.0019	0.0022	0.0065	0.0176	0.0028	0.0040	1.4E+00
Antimony	16	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00000	2.8E-16
Arsenic	16	0.0009	0.0010	0.0011	0.0012	0.0017	0.0020	0.0021	0.0014	0.0004	2.7E-01
Barium	16	0.057	0.059	0.069	0.074	0.079	0.083	0.085	0.073	0.008	1.1E-01
Beryllium	16	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	2.8E-16
Bismuth	16	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00000	4.5E-16
Boron	16	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.000	0.0E+00
Cadmium	16	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Calcium	16	64	65	73	78	82	90	93	78	8	1.1E-01
Chromium	16	0.00005	0.00010	0.00012	0.00013	0.00014	0.00017	0.00018	0.00013	0.00003	2.2E-01
Cobalt	16	0.00005	0.00005	0.00005	0.00012	0.00016	0.00022	0.00026	0.00012	0.00006	5.2E-01
Copper	16	0.0011	0.0011	0.0012	0.0014	0.0015	0.0019	0.0020	0.0014	0.0003	1.9E-01
Iron	16	0.024	0.026	0.036	0.041	0.053	0.086	0.094	0.046	0.019	4.1E-01
Lead	16	0.000025	0.000025	0.000025	0.000025	0.000025	0.000065	0.000186	0.000035	0.000040	1.1E+00
Lithium	16	0.00707	0.00714	0.00782	0.00819	0.00931	0.01030	0.01060	0.00851	0.00110	1.3E-01
Magnesium	16	26	28	30	36	39	44	46	35	6	1.6E-01
Manganese	16	0.012	0.015	0.032	0.063	0.208	0.457	0.962	0.160	0.235	1.5E+00
Mercury	16	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Molybdenum	16	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.002	0.000	1.8E-01
Nickel	16	0.0009	0.0010	0.0011	0.0014	0.0021	0.0024	0.0025	0.0016	0.0006	3.5E-01
Phosphorus	16	0.03	0.03	0.04	0.07	0.09	0.11	0.12	0.07	0.03	4.8E-01
Potassium	16	7	8	8	9	10	10	11	9	1	1.1E-01
Selenium	16	0.00017	0.00019	0.00023	0.00025	0.00026	0.00029	0.00033	0.00024	0.00004	1.5E-01
Silicon	16	6.6	7.1	9.0	9.6	11.7	12.5	13.5	10.1	1.9	1.9E-01
Silver	16	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Sodium	16	26	28	31	33	39	41	41	34	5	1.3E-01
Strontium	16	0.28	0.29	0.32	0.37	0.41	0.46	0.47	0.37	0.06	1.7E-01
Sulphur	16	4	4	5	7	8	9	9	7	2	2.3E-01
Thallium	16	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Tin	16	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	2.8E-16
Titanium	16	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0000	0.0E+00
Uranium	16	0.0010	0.0011	0.0013	0.0020	0.0026	0.0027	0.0027	0.0020	0.0006	3.3E-01
Vanadium	16	0.0013	0.0015	0.0023	0.0025	0.0028	0.0035	0.0036	0.0025	0.0006	2.5E-01
Zinc	16	0.0005	0.0005	0.0005	0.0008	0.0014	0.0034	0.0068	0.0013	0.0016	1.2E+00
Total Metals											
Aluminum	16	0.0015	0.0133	0.0520	0.0860	0.1528	0.3393	0.3610	0.1254	0.1154	9.2E-01
Antimony	16	0.00005	0.00005	0.00005	0.00005	0.00005	0.00011	0.00012	0.00006	0.00002	4.0E-01
Arsenic	16	0.0010	0.0010	0.0011	0.0013	0.0018	0.0020	0.0020	0.0014	0.0004	2.6E-01
Barium	16	0.058	0.059	0.070	0.076	0.079	0.084	0.089	0.074	0.009	1.2E-01
Beryllium	16	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	2.8E-16
Bismuth	16	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00000	4.5E-16
Boron	16	0.005	0.005	0.005	0.005	0.007	0.014	0.017	0.007	0.004	5.5E-01
Cadmium	16	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000000	0.0E+00
Calcium	16	60	64	70	75	80	90	91	76	9	1.1E-01
Chromium	16	0.00017	0.00023	0.00030	0.00037	0.00052	0.00108	0.00112	0.00048	0.00030	6.2E-01
Cobalt	16	0.00011	0.00013	0.00016	0.00023	0.00030	0.00043	0.00047	0.00025	0.00011	4.4E-01
Copper	16	0.0012	0.0014	0.0019	0.0021	0.0026	0.0034	0.0037	0.0023	0.0006	2.8E-01
Iron	16	0.05	0.09	0.12	0.19	0.29	0.54	0.62	0.24	0.17	6.9E-01
Lead	16	0.000025	0.000025	0.000025	0.000025	0.000038	0.000103	0.000131	0.000043	0.000034	7.9E-01
Lithium	16	0.0070	0.0070	0.0075	0.0082	0.0087	0.0100	0.0105	0.0083	0.0011	1.3E-01
Magnesium	16	26	28	29	34	38	44	46	34	6	1.7E-01
Manganese	16	0.02	0.03	0.07	0.12	0.22	0.49	1.00	0.19	0.24	1.2E+00
Mercury	16	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Molybdenum	16	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.002	0.000	1.6E-01
Nickel	16	0.0013	0.0013	0.0016	0.0023	0.0026	0.0029	0.0030	0.0022	0.0006	2.7E-01
Phosphorus	16	0.03	0.03	0.07	0.09	0.10	0.12	0.13	0.08	0.03	3.6E-01
Potassium	16	7	7	8	9	10	10	10	9	1	1.2E-01
Selenium	16	0.00019	0.00021	0.00023	0.00025	0.00025	0.00029	0.00030	0.00025	0.00003	1.0E-01
Silicon	16	7.5	7.5	9.1	9.7	11.4	12.8	13.3	10.2	1.8	1.7E-01
Silver	16	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Sodium	16	25	28	30	32	37	40	42	34	5	1.4E-01
Strontium	16	0.28	0.29	0.33	0.36	0.41	0.47	0.48	0.37	0.06	1.7E-01
Sulphur	16	5	5	5	7	8	9	10	7	2	2.4E-01
Thallium	16	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Tin	16	0.000050	0.000050	0.000050	0.000050	0.000050	0.000240	0.000810	0.000097	0.000190	1.9E+00
Titanium	16	0.0050	0.0050	0.0050	0.0050	0.0050	0.0130	0.0130	0.0065	0.0032	5.0E-01
Uranium	16	0.0010	0.0011	0.0014	0.0021	0.0026	0.0028	0.0028	0.0020	0.0006	3.1E-01
Vanadium	16	0.0015	0.0018	0.0025	0.0028	0.0034	0.0041	0.0045	0.0029	0.0008	2.8E-01
Zinc	16	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0000	1.5E-16
Organics											
Carbon Organic (Dissolved)	16	9.8	10.7	12.4	13.3	14.9	16.2	16.3	13.5	1.9	1.4E-01
Carbon Organic (Total)	16	10.1	11.1	12.7	13.6	15.9	19.0	26.8	14.6	3.8	2.6E-01
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.6 - ANDER-10
(PAGE 2 OF 2)

Seasonal Statistics - ANDER-10

Parameter	Count				Average				Min				Median				Max			
	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall
In Situ Parameters																				
Conductivity µS/cm	3	5	6	1	408	416	571	554	392	367	499	554	402	390	578	554	430	524	627	554
Oxygen Dissolved %	3	5	6	1	80	91	84	9	77.8	82.4	79	9	77.9	84.7	85	9	85.6	107	88	9
Oxygen Dissolved	3	5	6	1	12	12	8	8	11.3	10.1	8	8	11.3	11.7	9	8	12.4	12.5	9	8
pH (unitless)	3	5	6	2	8	8	8	11	7.84	8.01	8	8	7.9	8.25	8	11	8.12	8.36	9	13
Redox Potential mV	3	5	6	1	82	143	129	0	24.8	60.6	80	0	37.9	153	129	0	182	206	192	0
Salinity ppt	3	5	6	1	0.38	0.32	0.35	76.50	0.36	0.26	0.30	76.50	0.37	0.31	0.34	76.50	0.4	0.39	0.41	76.50
Specific Conductivity µS/cm	3	5	6	1	779	651	702	832	748	533	603	832	767	641	688	832	821	805	824	832
Temperature °C	3	5	6	2	0	5	15	9	0.05	0.22	12	8	0.05	3.43	15	9	0.1	13.9	18	11
Total Dissolved Solids	3	5	6	1	506	424	457	541	486	349	396	541	499	417	448	541	533	523	536	541
Turbidity NTU	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	3	5	6	2	336	265	320	403	321	249	282	401	337	258	317	403	349	298	385	404
Bicarbonate Alkalinity	3	5	6	2	336	261	309	392	321	237	262	384	337	258	301	392	349	289	385	399
Carbonate Alkalinity	3	5	6	2	0.83	4	11	11	0.5	0.5	1	5	1	1	12	11	1	11.2	19	16
Color TCU	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	3	5	6	2	361	301	337	409	343	278	306	400	355	281	337	409	385	346	379	418
Hydroxide Alkalinity	3	5	6	2	0.83	0.70	0.58	0.50	0.5	0.5	0.50	0.50	1	0.5	0.50	0.50	1	1	1.00	0.50
pH (unitless)	3	5	6	2	8	8	8	8	8.26	8.22	8	8	8.26	8.3	8	8	8.38	8.37	8	8
Specific Conductivity µS/cm	3	5	6	2	771	636	738	864	728	585	665	860	775	630	740	864	809	714	840	867
Total Dissolved Solids	3	5	6	2	455	402	457	543	435	367	410	529	443	388	456	543	488	461	527	556
Total Suspended Solids	3	5	6	2	5	8	31	2	4	1.5	4	2	4.3	8.8	14	2	6.3	14.6	124	3
Turbidity NTU	3	5	6	2	2	2	6	1	1.25	0.98	1	1	1.43	2.21	4	1	2.31	3.1	16	1
Dissolved Anions																				
Bromide	3	5	6	2	0.18	0.05	0.15	0.25	0.025	0.025	0.03	0.25	0.25	0.025	0.19	0.25	0.25	0.125	0.25	0.25
Chloride	3	5	6	2	52	50	57	59	45.1	40.9	48	59	52.3	50.4	59	59	57.4	60.5	61	60
Fluoride	3	5	6	2	0.20	0.19	0.26	0.15	0.1	0.162	0.22	0.10	0.19	0.183	0.24	0.15	0.31	0.218	0.37	0.20
Sulphate	3	5	6	2	22	20	13	25	20	16.7	12	23	21.6	21	12	25	23.9	22.8	18	26
Nutrients								-												
Ammonia (Total)	3	5	6	2	0.045	0.015	0.020	0.009	0.0353	0.0075	0.012	0.007	0.0389	0.0154	0.018	0.009	0.0619	0.0234	0.031	0.010
Nitrate (as N)	3	5	6	2	0.12	0.03	0.027	0.025	0.102	0.0054	0.013	0.025	0.102	0.0134	0.025	0.025	0.142	0.064	0.054	0.025
Nitrite (as N)	3	5	6	2	0.004	0.0011	0.0035	0.0050	0.0028	0.0005	0.0012	0.0050	0.005	0.0005	0.0038	0.0050	0.005	0.0025	0.0050	0.0050
Nitrogen (Dissolved)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	1	0	0	-	0.72	-	-	-	0.715	-	-	-	0.715	-	-	-	0.715	-	-
Nitrogen Kjeldahl (Total)	3	5	6	2	0.64	0.63	1.02	0.60	0.605	0.504	0.69	0.54	0.635	0.619	0.90	0.60	0.668	0.74	1.89	0.66
Orthophosphate (Dissolved)	3	5	6	2	0.06	0.030	0.068	0.077	0.0396	0.0194	0.034	0.071	0.0578	0.0342	0.072	0.077	0.0777	0.0376	0.093	0.084
Phosphorus - Dissolved	3	5	5	2	0.071	0.046	0.08	0.08	0.0512	0.0278	0.05	0.07	0.0761	0.0467	0.07	0.08	0.0858	0.0696	0.10	0.09
Phosphorus - Total	3	5	6	2	0.08	0.06	0.17	0.07	0.0604	0.0384	0.08	0.06	0.089	0.0451	0.11	0.07	0.0967	0.0761	0.49	0.08
Cyanide																				
Cyanide (Free)	3	5	6	2	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Cyanide (Total)	3	5	6	2	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Cyanide (WAD)	3	5	6	2	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Dissolved Metals																				
Aluminum	3	5	6	2	0.0017	0.0018	0.0045	0.0020	0.0012	0.0011	0.0013	0.0011	0.0016	0.0017	0.0019	0.0020	0.0022	0.0023	0.0176	0.0028
Antimony	3	5	6	2	0.000050	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
Arsenic	3	5	6	2	0.0011	0.0011	0.0017	0.0015	0.00097	0.00093	0.0012	0.0012	0.00108	0.00109	0.0017	0.0015	0.00121	0.00148	0.0021	0.0017
Barium	3	5	6	2	0.074	0.064	0.077	0.081	0.0691	0.0573	0.070	0.077	0.0728	0.0615	0.078	0.081	0.079	0.0707	0.083	0.085
Beryllium	3	5	6	2	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
Bismuth	3	5	6	2	0.00025	0.000	0.000	0.000	0.00025	0.00025	0.000	0.000	0.00025	0.00025	0.000	0.000	0.00025	0.00025	0.000	0.000
Boron	3	5	6	2	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Cadmium	3	5	6	2	0.00001	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005
Calcium	3	5	6	2	82	70	78	91	77.4	63.8	73	89	79.9	68.1	77	91	87.2	78.9	85	93
Chromium	3	5	6	2	0.00014	0.0001	0.00014	0.00013	0.00013	0.00005	0.00012	0.00012	0.00014	0.00012	0.00013	0.00013	0.00016	0.00014	0.00018	0.00014
Cobalt	3	5	6	2	0.00007	0.00007	0.00017	0.00018	0.00005	0.00005	0.00012	0.00015	0.00005	0.00005	0.00017	0.00018	0.0001	0.00012	0.00026	0.00021
Copper	3	5	6	2	0.0015	0.0013	0.0015	0.0013	0.00115	0.00115	0.0011	0.0011	0.0014	0.00141	0.0015	0.0013	0.00183	0.00149	0.0020	0.0015
Iron	3	5	6	2	0.048	0.031	0.054	0.060	0.043	0.024	0.034	0.036	0.049	0.031	0.050	0.060	0.052	0.037	0.094	0.083
Lead	3	5	6	2	0.00003	0.00003	0.00003	0.00011	0.000025	0.000025	0.00003	0.00003	0.000025	0.000025	0.00003	0.00011	0.000025	0.000025	0.00003	0.00019
Lithium	3	5	6	2	0.0084	0.0075	0.0088	0.0104	0.00795	0.00707	0.0080	0.0102	0.00802	0.00739	0.0086	0.0104	0.00919	0.00834	0.0098	0.0106
Magnesium	3	5	6	2	38.2	30.6	34.8	44.2	36.3	26.3	29.9	42.9	37.7	29.6	34.9	44.2	40.6	36.1	40.6	45.5
Manganese	3	5	6	2	0.042	0.030	0.286	0.286	0.0233	0.0115	0.056	0.283	0.0338	0.0271	0.178	0.286	0.0695	0.052	0.962	0.289
Mercury	3	5	6	2	0.0000050	0.0000050	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050
Molybdenum	3	5	6	2	0.0019	0.0026	0.0021	0.0020	0.00185	0.00187	0.0018	0.0019	0.00186	0.00269	0.0020	0.0020	0.00189	0.00294	0.0023	0.0021
Nickel	3	5	6	2	0.0013	0.0011	0.0020	0.0022	0.00108	0.00094	0.0012	0.0021	0.00125	0.00108	0.0021	0.0022	0.00155	0.00125	0.0025	0.0023
Phosphorus	3	5	6	2	0.07	0.04	0.09	0.09	0.025	0.025	0.05	0.07	0.081	0.025	0.09	0.09	0.092	0.051	0.12	0.11
Potassium	3	5	6	2	9	8	10	10	8.55	7.2	8	10	8.98	7.67	10	10	9.2	8.57	11	10
Selenium	3	5	6	2	0.00027	0.00026	0.00023	0.00021	0.00022	0.00023	0.00020	0.00017	0.00026	0.00026	0.00023	0.00021	0.00033	0.00028	0.00026	0.00025
Silicon	3	5	6	2	11.63	9.66	9.08	12.10	11.5	8.8	6.63	12.10	11.6	9.41	8.92	12.10	11.8	11	13.50	12.10
Silver	3	5	6	2	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005
Sodium	3	5	6	2	33	30	36	41	31.2	26	31	41	32.2	30.8	37	41	36.4	33	41	41
Strontium	3	5	6	2	0.38	0.31	0.39	0.46	0.369	0.281	0.32	0.46	0.376	0.296	0.39	0.46	0.405	0.347	0.47	0.46
Sulphur	3	5	6	2	8	7	5	9	7	6.53	4	9	7.58	7.36	5	9	8.29	8.11	7	9
Thallium	3	5	6	2	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005
Tin	3	5	6	2	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
Titanium	3	5	6	2	0.0050	0.005	0.0050	0.0050	0.005	0.005	0.0050	0.0050	0.005	0.005	0.0050	0.0050	0.005	0.005	0.0050	0.0050
Uranium	3	5	6	2	0.0025	0.0025	0.0014	0.0014	0.00228	0.00216	0.0010	0.0013	0.00258	0.00269	0.0013	0.0014	0.00273	0.00273	0.0019	0.0016
Vanadium	3	5	6	2	0.0024	0.0028	0.0026	0.0016	0.0023	0.0024	0.0015	0.0013	0.0024	0.0027	0.0027	0.0016	0.0025	0.0034	0.0036	0.0018
Zinc	3	5	6	2	0.0014	0.0010	0.0017	0.0009	0.0005	0.0005	0.0005	0.0005	0.0013	0.0011	0.0005	0.0009	0.0023	0.0017	0.0068	0.0012
Total Metals																				
Aluminum	3	5	6	2	0.07	0.16	0.16	0.03	0.0508	0.0539	0.00	0.02	0.0727	0.152	0.11	0.03	0.0854	0.332	0.36	0.05
Antimony	3	5	6	2	0.00005	0.00006	0.00006	0.00008	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00008	0.00005	0.00012	0.00011	0.00010
Arsenic	3	5	6	2	0.0011	0.0012	0.0018	0.0015	0.00097	0.00102	0.0014	0.0012	0.00107	0.00109	0.0018	0.0015	0.00122	0.00147	0.0020	0.0018
Barium	3	5	6	2	0.072	0.065	0.079	0.084	0.0692	0.0579	0.075	0.078	0.0699	0.062	0.079	0.084	0.0783	0.0743	0.083	0.089
Beryllium	3	5	6	2	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
Bismuth	3	5	6	2	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025
Boron	3	5	6	2	0.005	0.005	0.007	0.015	0.005	0.005	0.005	0.012	0.005	0.005	0.005	0.015	0.005	0.005	0.013	0.017
Cadmium	3	5	6	2	0.00001	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005
Calcium	3	5	6	2	79	68	75	90	75.3	60.1	69	90	78.3	66.1	76	90	84.8	75.5	81	91
Chromium	3	5	6	2	0.00033	0.0005	0.0006	0.0003	0.00028	0.00027	0.0002	0.0003	0.00034	0.00038	0.0005	0.0003	0.0004	0.00112	0.0011	0.0004
Cobalt	3	5	6	2	0.00015	0.00023	0.00032	0.00023	0.00013	0.00011	0.00018	0.00018	0.00016	0.00025	0.00032	0.00023	0.0002	0.0004	0.00047	0.00027
Copper	3	5	6	2	0.0019	0.0025	0.0025	0.0016	0.00151	0.00196	0.0018	0.0012	0.00196	0.00242	0.0023	0.0016	0.00231	0.00327	0.0037	0.0020
Iron	3	5	6	2	0.16	0.27	0.30	0.16	0.129	0.103	0.05	0.11	0.161	0.275	0.25	0.16	0.184	0.512	0.62	0.20
Lead	3	5	6	2	0.00003	0.00006	0.00005	0.00003	0.000025	0.000025	0.00003	0.00003	0.000025	0.00003	0.00003	0.00003	0.00003	0.0001	0.00009	0.00003
Lithium	3	5	6	2	0.0080	0.0074	0.0085	0.0101	0.00718	0.00695	0.0079	0.0098	0.00753	0.00741	0.0084	0.0101	0.00923	0.00816	0.0096	0.0105
Magnesium	3	5	6	2	36	30	34	45	34.2	26.1	29	44	34.4	28.3	35	45	40	33.8	39	46
Manganese	3	5	6	2	0.06	0.06	0.33	0.31	0.035	0.0215	0.14	0.30	0.0526	0.0815	0.21	0.31	0.0814	0.0975	1.00	0.32
Mercury	3	5	6	2	0.0000050	0.0000050	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050
Molybdenum	3	5	6	2	0.002	0.003	0.002	0.002	0.00194	0.00189	0.002	0.002	0.00197	0.0028	0.002	0.002	0.00201	0.003	0.002	0.002
Nickel	3	5	6	2	0.0016	0.0018	0.0026	0.0026	0.0013	0.0013	0.0023	0.0023	0.0015	0.0017	0.0025	0.0026	0.0019	0.0027	0.0030	0.0029
Phosphorus	3	5	6	2	0.07	0.06	0.11	0.10	0.025	0.025	0.08	0.09	0.084	0.067	0.11	0.10	0.09	0.087	0.13	0.11
Potassium	3	5	6	2	8.7	7.6	9.3	9.9	8.3	6.8	8.1	9.9	8.6	7.6	9.4	9.9	9.1	8.3	10.3	10.0
Selenium	3	5	6	2	0.00026	0.00026	0.00024	0.00022	0.00023	0.00025	0.00022	0.00019	0.00026	0.0003	0.00024	0.00022	0.0003	0.0003	0.00027	0.00024
Silicon	3	5	6	2	11.4	9.7	9.3	12.3	11.2	8.8	7.5	12.0	11.3	9.5	9.1	12.3	11.8	11.3	13.3	12.6
Silver	3	5	6	2	0.0000050	0.0000050	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050
Sodium	3	5	6	2	33	29	36	40	29.4	25	31	38	32.2	29.9	36	40	36.5	32.5	39	42
Strontium	3	5	6	2	0.4	0.3	0.39	0.48	0.36	0.28	0.33	0.47	0.393	0.3	0.39	0.48	0.4	0.3	0.46	0.48
Sulphur	3	5	6	2	8	7	5	9	7.16	6.39	5	9	7.63	7.29	5	9	8.35	8.14	7	10
Thallium	3	5	6	2	0.00001	0.00001	0.00001	0.00001	0.000005	0.000005	0.00001	0.00001	0.000005	0.000005	0.00001	0.00001	0.000005	0.000005	0.00001	0.00001
Tin	3	5	6	2	0.00030	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00081	0.00005	0.00005	0.00005
Titanium	3	5	6	2	0.005	0.007	0.008	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.013	0.005
Uranium	3	5	6	2	0.0026	0.0026	0.0014	0.0016	0.0023	0.0023	0.0010	0.0014	0.0026	0.0027	0.0014	0.0016	0.0027	0.0028	0.0019	0.0017
Vanadium	3	5	6	2	0.0027	0.0034	0.0031	0.0018	0.0026	0.0029	0.0019	0.0015	0.0027	0.0033	0.0029	0.0018	0.0027	0.004	0.0045	0.0021
Zinc	3	5	6	2	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015
Organics																				
Carbon Organic (Dissolved)	3	5	6	2	12.1	12.3	15	14	11.2	9.8	13	12	12.3	12.8	15	14	13	14	16	15
Carbon Organic (Total)	3	5	6	2	12.2	13	17	14	11.6	10.1	13	13	12.1	13.0	16	14	13	15	27	15
Nitrogen Organic (Dissolved)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.
2. SEASONS ARE SPECIFIED AS FOLLOWS: WIN (WINTER; DECEMBER THROUGH MARCH), SPR (SPRING; APRIL AND MAY), SUMMER(JUNE THROUGH AUGUST), FALL (SEPTEMBER THROUGH NOVEMBER).

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.7 - ANDR15
(PAGE 1 OF 2)

Parameter	Total Count	Complete Dataset - ANDR15 Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	16	295	342	438	485	539	582	598	480	82	1.7E-01
Oxygen Dissolved %	16	44	62	81	84	88	96	101	82	13	1.6E-01
Oxygen Dissolved	16	6.3	8.0	8.9	10.3	11.2	12.6	13.0	10.2	1.7	1.7E-01
pH (unitless)	17	8.0	8.1	8.2	8.4	8.5	8.6	8.7	8.3	0.2	2.1E-02
Redox Potential mV	16	-76	-71	32	56	96	180	203	63	77	1.2E+00
Salinity ppt	16	0.24	0.26	0.32	0.36	0.40	0.48	0.52	0.37	0.07	2.0E-01
Specific Conductivity µS/cm	16	510	572	652	745	832	994	1070	757	148	2.0E-01
Temperature °C	17	-0.3	0.0	0.8	8.8	12.7	14.1	17.7	6.9	6.0	8.6E-01
Total Dissolved Solids	16	332	371	424	484	542	646	695	492	96	2.0E-01
Turbidity NTU	0	-	-	-	-	-	-	-	-	-	-
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	0	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	17	175	201	231	255	266	282	295	248	29	1.2E-01
Bicarbonate Alkalinity	17	169	199	227	247	258	272	282	241	28	1.2E-01
Carbonate Alkalinity	17	1.0	1.0	1.0	8.0	11.3	14.9	15.1	7.4	5.2	7.0E-01
Color TCU	1	33.7	33.7	33.7	33.7	33.7	33.7	33.7	33.7	-	-
Hardness as CaCO3 (Dissolved)	17	215	233	274	317	340	374	385	311	48	1.5E-01
Hydroxide Alkalinity	17	0.5	0.5	0.5	0.5	1.0	1.0	1.0	0.6	0.2	3.6E-01
pH (unitless)	17	8.1	8.2	8.3	8.4	8.4	8.5	8.5	8.3	0.1	1.4E-02
Specific Conductivity µS/cm	17	507	551	686	785	846	978	987	764	136	1.8E-01
Total Dissolved Solids	17	331	361	418	489	528	612	637	477	87	1.8E-01
Total Suspended Solids	17	1.5	1.5	3.7	6.1	15.9	51.0	108.0	15.6	26.0	1.7E+00
Turbidity NTU	17	0.4	0.4	0.6	1.4	2.8	8.8	15.8	2.7	3.8	1.4E+00
Dissolved Anions											
Bromide	17	0.03	0.03	0.03	0.25	0.25	0.25	0.25	0.18	0.11	6.0E-01
Chloride	17	48	53	77	91	114	149	155	96	32	3.3E-01
Fluoride	17	0.10	0.10	0.16	0.21	0.22	0.40	0.42	0.21	0.09	4.3E-01
Sulphate	17	17	17	18	22	32	37	37	25	8	3.1E-01
Nutrients											
Ammonia (Total)	17	0.005	0.006	0.008	0.009	0.012	0.016	0.021	0.010	0.004	3.8E-01
Nitrate (as N)	17	0.010	0.01	0.02	0.03	0.10	0.14	0.14	0.06	0.047	8.5E-01
Nitrite (as N)	17	0.0005	0.00	0.00	0.01	0.01	0.01	0.01	0.00	0.0021	6.0E-01
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	17	0.33	0.35	0.46	0.56	0.59	1.03	1.26	0.60	0.23	3.9E-01
Orthophosphate (Dissolved)	17	0.013	0.015	0.017	0.019	0.026	0.031	0.031	0.021	0.006	2.7E-01
Phosphorus - Dissolved	16	0.019	0.020	0.025	0.027	0.030	0.171	0.222	0.047	0.057	1.2E+00
Phosphorus - Total	17	0.019	0.019	0.026	0.037	0.059	0.089	0.140	0.046	0.030	6.5E-01
Cyanide											
Cyanide (Free)	17	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Cyanide (Total)	17	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Cyanide (WAD)	17	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Dissolved Metals											
Aluminum	17	0.0005	0.0011	0.0016	0.0019	0.0025	0.0048	0.0067	0.0024	0.0014	6.0E-01
Antimony	17	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00000	2.8E-16
Arsenic	17	0.0004	0.0004	0.0005	0.0006	0.0006	0.0007	0.0007	0.0005	0.0001	1.6E-01
Barium	17	0.045	0.047	0.064	0.074	0.076	0.084	0.086	0.070	0.011	1.6E-01
Beryllium	17	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	2.8E-16
Bismuth	17	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00000	4.5E-16
Boron	17	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.000	0.0E+00
Cadmium	17	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000094	0.0000270	0.0000063	0.0000053	8.5E-01
Calcium	17	59	65	77	86	93	100	105	85	12	1.4E-01
Chromium	17	0.00005	0.00005	0.00005	0.00010	0.00012	0.00016	0.00019	0.00009	0.00004	4.7E-01
Cobalt	17	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00000	2.8E-16
Copper	17	0.0010	0.0010	0.0011	0.0013	0.0013	0.0015	0.0015	0.0012	0.0001	1.2E-01
Iron	17	0.015	0.016	0.020	0.027	0.038	0.045	0.051	0.029	0.010	3.6E-01
Lead	17	0.000025	0.000025	0.000025	0.000025	0.000025	0.000032	0.000061	0.000027	0.000009	3.2E-01
Lithium	17	0.00442	0.00451	0.00682	0.00770	0.00817	0.00875	0.00881	0.00733	0.00133	1.8E-01
Magnesium	17	16	17	21	25	27	30	30	24	4	1.9E-01
Manganese	17	0.003	0.003	0.006	0.012	0.018	0.027	0.049	0.013	0.011	8.0E-01
Mercury	17	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Molybdenum	17	0.002	0.002	0.003	0.003	0.003	0.003	0.004	0.003	0.000	1.6E-01
Nickel	17	0.0003	0.0003	0.0006	0.0007	0.0007	0.0009	0.0011	0.0006	0.0002	3.1E-01
Phosphorus	17	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.00	1.4E-16
Potassium	17	7	7	9	9	10	11	11	9	1	1.3E-01
Selenium	17	0.00016	0.00016	0.00018	0.00021	0.00028	0.00038	0.00038	0.00024	0.00007	3.2E-01
Silicon	17	7.6	7.9	8.5	8.8	9.3	10.2	10.3	8.9	0.8	8.8E-02
Silver	17	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Sodium	17	25	28	38	43	51	59	59	43	10	2.4E-01
Strontium	17	0.23	0.24	0.32	0.37	0.40	0.41	0.42	0.35	0.06	1.6E-01
Sulphur	17	6	6	7	8	11	13	13	9	2	2.8E-01
Thallium	17	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Tin	17	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	2.8E-16
Titanium	17	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0000	0.0E+00
Uranium	17	0.0023	0.0024	0.0025	0.0034	0.0044	0.0055	0.0056	0.0036	0.0011	3.0E-01
Vanadium	17	0.0014	0.0015	0.0017	0.0019	0.0020	0.0023	0.0025	0.0019	0.0003	1.6E-01
Zinc	16	0.0005	0.0005	0.0005	0.0005	0.0012	0.0023	0.0034	0.0009	0.0008	8.7E-01
Total Metals											
Aluminum	17	0.0074	0.0160	0.0605	0.1150	0.1780	0.9564	1.8500	0.2593	0.4496	1.7E+00
Antimony	17	0.00005	0.00005	0.00005	0.00005	0.00005	0.00006	0.00011	0.00005	0.00001	2.7E-01
Arsenic	17	0.0005	0.0005	0.0005	0.0006	0.0007	0.0008	0.0008	0.0006	0.0001	2.0E-01
Barium	17	0.045	0.054	0.070	0.075	0.079	0.089	0.099	0.073	0.013	1.7E-01
Beryllium	17	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	2.8E-16
Bismuth	17	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00000	4.5E-16
Boron	17	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.000	0.0E+00
Cadmium	17	0.000005	0.000005	0.000005	0.000005	0.000012	0.000029	0.000055	0.000011	0.000013	1.1E+00
Calcium	17	59	63	74	86	91	97	102	83	12	1.4E-01
Chromium	17	0.00015	0.00020	0.00027	0.00039	0.00054	0.00202	0.00401	0.00068	0.00093	1.4E+00
Cobalt	17	0.00005	0.00005	0.00010	0.00015	0.00018	0.00074	0.00146	0.00025	0.00034	1.4E+00
Copper	17	0.0012	0.0012	0.0015	0.0019	0.0023	0.0058	0.0088	0.0025	0.0019	7.7E-01
Iron	17	0.04	0.04	0.11	0.21	0.34	1.53	3.07	0.45	0.74	1.6E+00
Lead	17	0.000025	0.000025	0.000025	0.000070	0.000111	0.000490	0.001010	0.000148	0.000243	1.6E+00
Lithium	17	0.0049	0.0050	0.0067	0.0078	0.0084	0.0090	0.0090	0.0074	0.0013	1.7E-01
Magnesium	17	16	16	20	24	26	29	29	23	4	1.8E-01
Manganese	17	0.01	0.01	0.02	0.03	0.05	0.12	0.25	0.05	0.06	1.2E+00
Mercury	17	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Molybdenum	17	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.003	0.001	1.8E-01
Nickel	17	0.0003	0.0005	0.0007	0.0009	0.0011	0.0024	0.0038	0.0011	0.0008	7.5E-01
Phosphorus	17	0.03	0.03	0.03	0.03	0.06	0.12	0.21	0.05	0.05	8.7E-01
Potassium	17	7	7	8	9	10	10	11	9	1	1.4E-01
Selenium	17	0.00016	0.00017	0.00019	0.00026	0.00030	0.00039	0.00043	0.00026	0.00008	3.0E-01
Silicon	17	7.9	8.0	8.4	8.9	10.0	10.9	11.9	9.3	1.1	1.2E-01
Silver	17	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000188	0.0000380	0.0000079	0.0000082	1.0E+00
Sodium	17	24	25	38	42	51	58	58	43	11	2.5E-01
Strontium	17	0.22	0.25	0.31	0.38	0.40	0.42	0.43	0.36	0.06	1.7E-01
Sulphur	17	6	6	7	8	11	13	13	9	3	2.8E-01
Thallium	17	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000078	0.0000190	0.0000058	0.0000034	5.8E-01
Tin	17	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	2.8E-16
Titanium	17	0.0050	0.0050	0.0050	0.0050	0.0050	0.0510	0.1030	0.0144	0.0246	1.7E+00
Uranium	17	0.0024	0.0024	0.0026	0.0035	0.0046	0.0058	0.0058	0.0037	0.0012	3.1E-01
Vanadium	17	0.0017	0.0018	0.0020	0.0025	0.0028	0.0055	0.0085	0.0029	0.0016	5.5E-01
Zinc	17	0.0015	0.0015	0.0015	0.0015	0.0015	0.0042	0.0082	0.0020	0.0017	8.3E-01
Organics											
Carbon Organic (Dissolved)	17	8.4	8.9	10.0	11.3	12.8	13.9	14.4	11.3	1.8	1.6E-01
Carbon Organic (Total)	17	8.5	8.8	10.5	12.1	13.3	15.1	16.9	12.1	2.1	1.8E-01
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.7 - ANDR15
(PAGE 2 OF 2)

Seasonal Statistics - ANDR15

Parameter	Count				Average				Min				Median				Max			
	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall
In Situ Parameters																				
Conductivity µS/cm	4	5	6	1	455	428	529	549	408	295	485	549	447.5	443	519	549	517	576	598	549
Oxygen Dissolved %	4	5	6	1	73	85	85	93	43.5	67.7	82	93	80.05	81.1	85	93	87.1	101	90	93
Oxygen Dissolved	4	5	6	1	10	11	9	11	6.33	9.64	9	11	11.55	10.9	9	11	12.5	13	10	11
pH (unitless)	4	5	6	2	8	8	8	8	8.02	8.2	8	8	8.08	8.29	8	8	8.65	8.45	9	8
Redox Potential mV	4	5	6	1	57	51	70	107	-76	-69.5	23	107	65.8	35.6	56	107	172	203	154	107
Salinity ppt	4	5	6	1	0.42	0.35	0.34	0.39	0.36	0.24	0.32	0.39	0.415	0.3	0.34	0.39	0.47	0.52	0.38	0.39
Specific Conductivity µS/cm	4	5	6	1	861	736	700	794	756	510	650	794	859.5	614	691	794	968	1070	778	794
Temperature °C	4	5	6	2	0	4	13	9	-0.25	0.14	10	9	0.31	2.89	13	9	0.92	10.4	18	10
Total Dissolved Solids	4	5	6	1	559	478	455	516	490	332	423	516	559	399	449	516	629	695	506	516
Turbidity NTU	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	4	5	6	2	264	217	252	281	255	175	230	266	262	216	254	281	275	251	279	295
Bicarbonate Alkalinity	4	5	6	2	260	213	242	268	255	169	215	254	260	209	243	268	266	243	269	282
Carbonate Alkalinity	4	5	6	2	4.10	5	10	13	1	1	4	11	1	6	9	13	13.4	8	15	14
Color TCU	0	1	0	0	-	34	-	-	-	33.7	-	-	-	33.7	-	-	-	33.7	-	-
Hardness as CaCO3 (Dissolved)	4	5	6	2	357	284	294	335	338	215	272	330	360	260	296	335	371	385	317	340
Hydroxide Alkalinity	4	5	6	2	0.88	0.70	0.50	0.50	0.5	0.5	0.50	0.50	1	0.5	0.50	0.50	1	1	0.50	0.50
pH (unitless)	4	5	6	2	8	8	8	8	8.06	8.24	8	8	8.23	8.31	8	8	8.32	8.37	8	8
Specific Conductivity µS/cm	4	5	6	2	873	697	725	836	785	507	663	821	859	592	716	836	987	976	793	850
Total Dissolved Solids	4	5	6	2	530	459	437	541	489	331	368	519	511.5	384	434	541	606	637	490	563
Total Suspended Solids	4	5	6	2	3	34	13	4	1.5	3.1	4	2	2.8	16.7	8	4	4.3	108	34	6
Turbidity NTU	4	5	6	2	1	5	3	1	0.42	0.54	0	0	0.705	2.63	3	1	1.15	15.8	5	1
Dissolved Anions																				
Bromide	4	5	6	2	0.25	0.12	0.15	0.25	0.25	0.025	0.03	0.25	0.25	0.025	0.19	0.25	0.25	0.25	0.25	0.25
Chloride	4	5	6	2	121	90	81	105	90.8	48.2	72	97	122.5	58.9	81	105	148	155	93	113
Fluoride	4	5	6	2	0.17	0.17	0.26	0.21	0.1	0.1	0.22	0.21	0.1	0.192	0.23	0.21	0.39	0.21	0.42	0.22
Sulphate	4	5	6	2	34	25	19	25	29.8	17.9	17	24	35.35	21.6	18	25	37.4	36.3	22	25
Nutrients								-												
Ammonia (Total)	4	5	6	2	0.010	0.009	0.012	0.007	0.0076	0.0051	0.006	0.007	0.0105	0.0084	0.011	0.007	0.012	0.0153	0.021	0.008
Nitrate (as N)	4	5	6	2	0.12	0.04	0.033	0.025	0.107	0.0103	0.011	0.025	0.125	0.025	0.023	0.025	0.142	0.103	0.064	0.025
Nitrite (as N)	4	5	6	2	0.005	0.0023	0.0031	0.0050	0.005	0.0005	0.0005	0.0050	0.005	0.0005	0.0038	0.0050	0.005	0.005	0.0050	0.0050
Nitrogen (Dissolved)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	4	5	6	2	0.43	0.71	0.64	0.51	0.329	0.492	0.45	0.46	0.4035	0.579	0.57	0.51	0.565	1.26	0.98	0.57
Orthophosphate (Dissolved)	4	5	6	2	0.02	0.016	0.025	0.027	0.0171	0.013	0.017	0.025	0.01915	0.0156	0.027	0.027	0.0232	0.018	0.031	0.029
Phosphorus - Dissolved	4	5	5	2	0.023	0.090	0.03	0.03	0.019	0.0206	0.03	0.03	0.02285	0.0262	0.03	0.03	0.0268	0.222	0.04	0.03
Phosphorus - Total	4	5	6	2	0.03	0.03	0.07	0.05	0.025	0.019	0.04	0.03	0.02735	0.0305	0.06	0.05	0.0378	0.0398	0.14	0.07
Cyanide																				
Cyanide (Free)	4	5	6	2	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Cyanide (Total)	4	5	6	2	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Cyanide (WAD)	4	5	6	2	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Dissolved Metals																				
Aluminum	4	5	6	2	0.0014	0.0031	0.0027	0.0016	0.0005	0.0012	0.0018	0.0016	0.0016	0.0025	0.0024	0.0016	0.0019	0.0067	0.0043	0.0016
Antimony	4	5	6	2	0.000050	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
Arsenic	4	5	6	2	0.0005	0.0005	0.0006	0.0006	0.00045	0.00042	0.0006	0.0006	0.000475	0.00045	0.0006	0.0006	0.00054	0.00056	0.0007	0.0007
Barium	4	5	6	2	0.079	0.059	0.070	0.078	0.0711	0.045	0.063	0.076	0.0791	0.0576	0.071	0.078	0.0857	0.0759	0.079	0.080
Beryllium	4	5	6	2	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
Bismuth	4	5	6	2	0.00025	0.000	0.000	0.000	0.00025	0.00025	0.000	0.000	0.00025	0.00025	0.000	0.000	0.00025	0.00025	0.000	0.000
Boron	4	5	6	2	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Cadmium	4	5	6	2	0.00001	0.000005	0.000009	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000027	0.000005
Calcium	4	5	6	2	96	79	81	91	92.9	59.4	76	91	96.05	72.8	81	91	98.6	105	86	92
Chromium	4	5	6	2	0.00009	0.0001	0.00011	0.00010	0.00005	0.00005	0.00005	0.00005	0.00005	0.0001	0.00011	0.00010	0.00019	0.00012	0.00015	0.00015
Cobalt	4	5	6	2	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
Copper	4	5	6	2	0.0011	0.0013	0.0013	0.0012	0.00102	0.00103	0.0013	0.0012	0.001045	0.00131	0.0013	0.0012	0.00113	0.00149	0.0015	0.0013
Iron	4	5	6	2	0.022	0.031	0.033	0.026	0.016	0.015	0.018	0.025	0.021	0.032	0.034	0.026	0.029	0.041	0.051	0.027
Lead	4	5	6	2	0.00003	0.00003	0.00003	0.00003	0.000025	0.000025	0.00003	0.00003	0.000025	0.000025	0.00003	0.00003	0.000061	0.000025	0.00003	0.00003
Lithium	4	5	6	2	0.0079	0.0058	0.0077	0.0087	0.00706	0.00442	0.0068	0.0087	0.00796	0.00612	0.0079	0.0087	0.00881	0.00739	0.0084	0.0087
Magnesium	4	5	6	2	28.6	21.3	22.4	25.9	25.6	16.2	19.4	25.1	29.2	18.9	22.7	25.9	30.4	29.9	25.0	26.7
Manganese	4	5	6	2	0.011	0.007	0.021	0.013	0.00633	0.00323	0.007	0.012	0.01092	0.00597	0.019	0.013	0.014	0.0186	0.049	0.013
Mercury	4	5	6	2	0.0000050	0.0000050	0.0000050	0.0000050	0.0000005	0.0000005	0.0000050	0.0000050	0.0000005	0.0000005	0.0000050	0.0000050	0.0000005	0.0000005	0.0000050	0.0000050
Molybdenum	4	5	6	2	0.0031	0.0026	0.0031	0.0033	0.00283	0.00205	0.0024	0.0033	0.00318	0.00255	0.0032	0.0033	0.00335	0.00313	0.0036	0.0033
Nickel	4	5	6	2	0.0004	0.0007	0.0007	0.0006	0.00025	0.00052	0.0006	0.0006	0.000375	0.0007	0.0007	0.0006	0.00055	0.0008	0.0011	0.0007
Phosphorus	4	5	6	2	0.03	0.03	0.03	0.03	0.025	0.025	0.03	0.03	0.025	0.025	0.03	0.03	0.025	0.025	0.03	0.03
Potassium	4	5	6	2	10	8	9	11	8.4	6.6	9	10	9.755	7.87	9	11	10.7	9.81	10	11
Selenium	4	5	6	2	0.00034	0.00024	0.00018	0.00018	0.00028	0.00018	0.00016	0.00017	0.000345	0.00023	0.00018	0.00018	0.00038	0.00031	0.00021	0.00018
Silicon	4	5	6	2	8.76	8.59	9.14	9.60	8	8.37	7.55	9.10	8.845	8.53	9.35	9.60	9.34	8.81	10.30	10.10
Silver	4	5	6	2	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005
Sodium	4	5	6	2	48	40	41	49	36.1	25.2	38	47	49.1	30	40	49	58.4	58.9	45	51
Strontium	4	5	6	2	0.40	0.31	0.35	0.38	0.377	0.229	0.32	0.36	0.403	0.292	0.35	0.38	0.422	0.412	0.38	0.40
Sulphur	4	5	6	2	12	9	7	9	10	6.31	6	8	12.2	8	7	9	12.5	12.5	8	9
Thallium	4	5	6	2	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005
Tin	4	5	6	2	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
Titanium	4	5	6	2	0.0050	0.005	0.0050	0.0050	0.005	0.005	0.0050	0.0050	0.005	0.005	0.0050	0.0050	0.005	0.005	0.0050	0.0050
Uranium	4	5	6	2	0.0048	0.0034	0.0030	0.0036	0.00396	0.00233	0.0024	0.0032	0.00477	0.00246	0.0031	0.0036	0.00558	0.00548	0.0035	0.0039
Vanadium	4	5	6	2	0.0017	0.0019	0.0021	0.0018	0.0014	0.0015	0.0019	0.0017	0.00165	0.0019	0.0020	0.0018	0.002	0.0023	0.0025	0.0019
Zinc	4	5	5	2	0.0005	0.0008	0.0015	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0012	0.0005	0.0005	0.0013	0.0034	0.0005
Total Metals																				
Aluminum	4	5	6	2	0.05	0.58	0.19	0.07	0.0074	0.0182	0.06	0.03	0.05475	0.178	0.12	0.07	0.0896	1.85	0.46	0.12
Antimony	4	5	6	2	0.00005	0.00005	0.00006	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00011	0.00005
Arsenic	4	5	6	2	0.0005	0.0006	0.0007	0.0006	0.00047	0.00046	0.0006	0.0006	0.00048	0.00058	0.0007	0.0006	0.0005	0.00084	0.0008	0.0007
Barium	4	5	6	2	0.076	0.067	0.075	0.079	0.0698	0.0451	0.063	0.075	0.0757	0.0567	0.075	0.079	0.0828	0.0989	0.086	0.084
Beryllium	4	5	6	2	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
Bismuth	4	5	6	2	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025
Boron	4	5	6	2	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Cadmium	4	5	6	2	0.00001	0.000020	0.000010	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000011	0.000009	0.000005	0.000005	0.000055	0.000023	0.000005
Calcium	4	5	6	2	92	76	80	90	89.8	58.7	72	86	90.95	68.7	80	90	96.1	102	86	93
Chromium	4	5	6	2	0.00029	0.0013	0.0005	0.0004	0.00021	0.00015	0.0003	0.0002	0.000265	0.00045	0.0004	0.0004	0.0004	0.00401	0.0010	0.0005
Cobalt	4	5	6	2	0.00009	0.00048	0.00021	0.00010	0.00005	0.00005	0.00010	0.00005	0.000085	0.00018	0.00016	0.00010	0.0001	0.0015	0.00047	0.00014
Copper	4	5	6	2	0.0014	0.0039	0.0022	0.0017	0.00122	0.00136	0.0017	0.0014	0.00134	0.00225	0.0019	0.0017	0.00153	0.00881	0.0033	0.0020
Iron	4	5	6	2	0.10	0.98	0.36	0.15	0.035	0.045	0.11	0.08	0.1025	0.341	0.25	0.15	0.16	3.07	0.89	0.21
Lead	4	5	6	2	0.00004	0.00032	0.00011	0.00004	0.000025	0.000025	0.00003	0.00003	0.000025	0.00011	0.00008	0.00004	0.00007	0.0010	0.00032	0.00006
Lithium	4	5	6	2	0.0076	0.0063	0.0078	0.0089	0.00694	0.00491	0.0066	0.0088	0.007685	0.00576	0.0080	0.0089	0.00808	0.00799	0.0090	0.0090
Magnesium	4	5	6	2	27	21	22	26	24.9	15.9	19	24	27.5	17.9	23	26	28.7	29.2	25	27
Manganese	4	5	6	2	0.02	0.07	0.05	0.03	0.00874	0.00781	0.03	0.02	0.01515	0.0263	0.04	0.03	0.0239	0.253	0.09	0.04
Mercury	4	5	6	2	0.0000050	0.0000050	0.0000050	0.0000050	0.0000005	0.0000005	0.0000050	0.0000050	0.0000005	0.0000005	0.0000050	0.0000050	0.0000005	0.0000005	0.0000050	0.0000050
Molybdenum	4	5	6	2	0.003	0.003	0.003	0.004	0.00306	0.00207	0.002	0.003	0.003315	0.00245	0.003	0.004	0.0035	0.00339	0.004	0.004
Nickel	4	5	6	2	0.0006	0.0017	0.0010	0.0009	0.0003	0.0006	0.0008	0.0007	0.0006	0.0010	0.0009	0.0009	0.0008	0.0038	0.0015	0.0011
Phosphorus	4	5	6	2	0.03	0.08	0.05	0.04	0.025	0.025	0.03	0.03	0.025	0.025	0.06	0.04	0.059	0.212	0.09	0.06
Potassium	4	5	6	2	9.2	7.9	9.4	10.4	8.0	6.6	8.5	10.1	9.3	7.6	9.4	10.4	10.1	9.6	10.4	10.6
Selenium	4	5	6	2	0.00033	0.00029	0.00022	0.00017	0.00030	0.00019	0.00018	0.00016	0.00033	0.0003	0.00021	0.00017	0.0004	0.0004	0.00029	0.00017
Silicon	4	5	6	2	8.5	9.4	9.5	9.6	7.9	8.4	8.1	8.9	8.6	8.6	9.7	9.6	9.0	11.9	10.7	10.4
Silver	4	5	6	2	0.0000050	0.0000130	0.0000065	0.0000050	0.0000005	0.0000005	0.0000050	0.0000050	0.0000005	0.0000005	0.0000050	0.0000050	0.0000005	0.0000038	0.0000140	0.0000050
Sodium	4	5	6	2	47	39	42	49	33.5	24.4	38	48	48.1	29.5	41	49	57.8	58.4	49	51
Strontium	4	5	6	2	0.4	0.3	0.35	0.40	0.38	0.22	0.31	0.38	0.4055	0.3	0.34	0.40	0.4	0.4	0.40	0.43
Sulphur	4	5	6	2	12	9	7	9	9.79	6.07	6	9	12.35	7.81	6	9	12.7	12.8	8	9
Thallium	4	5	6	2	0.00001	0.00001	0.00001	0.00001	0.000005	0.000005	0.00001	0.00001	0.000005	0.000005	0.00001	0.00001	0.000005	0.000019	0.00001	0.00001
Tin	4	5	6	2	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
Titanium	4	5	6	2	0.005	0.031	0.010	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.103	0.025	0.005
Uranium	4	5	6	2	0.0049	0.0036	0.0031	0.0038	0.0042	0.0024	0.0025	0.0033	0.0049	0.0025	0.0031	0.0038	0.0058	0.0058	0.0038	0.0042
Vanadium	4	5	6	2	0.0019	0.0041	0.0029	0.0023	0.0017	0.0018	0.0023	0.0019	0.0019	0.0028	0.0028	0.0023	0.0022	0.0085	0.0036	0.0026
Zinc	4	5	6	2	0.0015	0.0032	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0082	0.0015	0.0015
Organics																				
Carbon Organic (Dissolved)	4	5	6	2	10.1	12.6	11	11	8.42	11.1	9	9	9.9	13.0	11	11	12	14	14	12
Carbon Organic (Total)	4	5	6	2	10.2	13	13	12	8.5	11.5	10	12	9.7	13.3	12	12	13	15	17	12
Nitrogen Organic (Dissolved)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.
2. SEASONS ARE SPECIFIED AS FOLLOWS: WIN (WINTER; DECEMBER THROUGH MARCH), SPR (SPRING; APRIL AND MAY), SUMMER(JUNE THROUGH AUGUST), FALL (SEPTEMBER THROUGH NOVEMBER).

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.8 - CC02
(PAGE 1 OF 2)

Parameter	Complete Dataset - CC02									
	Total Count	Percentiles						Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters										
Conductivity µS/cm	47	127	185	334	408	455	553	633	388	114	2.9E-01
Oxygen Dissolved %	44	77	81	91	94	97	104	107	94	6	6.6E-02
Oxygen Dissolved	47	9.1	9.3	10.4	11.4	12.5	14.2	15.0	11.5	1.4	1.3E-01
pH (unitless)	50	5.8	7.9	8.1	8.2	8.3	8.4	8.7	8.1	0.4	4.7E-02
Redox Potential mV	47	-233	-70	84	112	154	230	511	114	106	9.3E-01
Salinity ppt	38	0.10	0.13	0.20	0.30	0.35	0.39	0.49	0.28	0.09	3.4E-01
Specific Conductivity µS/cm	50	219	282	444	615	729	846	1025	593	187	3.1E-01
Temperature °C	50	-0.1	0.2	4.1	7.2	10.9	14.4	16.9	7.3	4.5	6.1E-01
Total Dissolved Solids	42	142	176	283	409	479	552	660	389	126	3.2E-01
Turbidity NTU	30	0.0	0.0	0.6	1.0	2.9	99.5	167.0	14.0	38.9	2.8E+00
Physical Tests										
Acidity to pH 8.3 (as CaCO3)	3	0.5	0.5	0.5	0.5	1.8	2.8	3.0	1.3	1.4	1.1E+00
Alkalinity (Total as CaCO3)	50	98	125	202	265	291	324	343	245	67	2.7E-01
Bicarbonate Alkalinity	30	98	118	186	268	286	303	309	238	66	2.8E-01
Carbonate Alkalinity	30	0.5	0.5	0.5	1.0	7.8	19.4	26.8	5.3	6.8	1.3E+00
Color TCU	48	5.4	5.9	7.3	9.5	16.1	46.1	55.9	15.4	13.3	8.7E-01
Hardness as CaCO3 (Dissolved)	50	115	143	234	288	349	410	432	286	85	3.0E-01
Hydroxide Alkalinity	30	0.5	0.5	0.5	0.5	0.5	1.0	1.0	0.6	0.2	3.5E-01
pH (unitless)	49	7.9	8.2	8.3	8.3	8.4	8.5	8.5	8.3	0.1	1.3E-02
Specific Conductivity µS/cm	50	215	273	483	607	721	810	835	579	173	3.0E-01
Total Dissolved Solids	50	151	191	329	389	469	542	560	382	113	2.9E-01
Total Suspended Solids	50	1.5	1.5	1.5	1.5	6.0	278.1	611.0	38.9	124.2	3.2E+00
Turbidity NTU	46	0.5	0.6	0.8	1.1	1.5	98.8	192.0	12.8	42.0	3.3E+00
Dissolved Anions										
Bromide	50	0.03	0.03	0.03	0.03	0.13	0.25	0.38	0.08	0.09	1.1E+00
Chloride	50	1	1	2	3	4	8	9	4	2	5.0E-01
Fluoride	49	0.05	0.06	0.10	0.11	0.13	0.16	0.27	0.11	0.04	3.5E-01
Sulphate	50	18	21	62	82	118	152	157	85	40	4.7E-01
Nutrients										
Ammonia (Total)	50	0.003	0.004	0.009	0.013	0.023	0.037	0.083	0.018	0.014	8.0E-01
Nitrate (as N)	50	0.013	0.03	0.06	0.14	0.32	0.50	0.64	0.20	0.165	8.2E-01
Nitrite (as N)	50	0.0005	0.00	0.00	0.00	0.01	0.01	0.02	0.00	0.0033	1.0E+00
Nitrogen (Dissolved)	30	0.18	0.25	0.36	0.43	0.58	0.80	0.96	0.48	0.18	3.9E-01
Nitrogen (Total)	38	0.32	0.34	0.38	0.50	0.63	1.03	2.17	0.58	0.34	5.8E-01
Nitrogen Kjeldahl (Total)	50	0.17	0.20	0.24	0.28	0.33	0.54	1.75	0.35	0.29	8.1E-01
Orthophosphate (Dissolved)	19	0.009	0.010	0.017	0.022	0.027	0.038	0.041	0.022	0.009	3.8E-01
Phosphorus - Dissolved	41	0.011	0.015	0.022	0.030	0.037	0.057	0.083	0.032	0.014	4.4E-01
Phosphorus - Total	49	0.020	0.020	0.029	0.034	0.049	0.545	0.870	0.094	0.192	2.0E+00
Cyanide										
Cyanide (Free)	45	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	5.3E-16
Cyanide (Total)	47	0.0025	0.0025	0.0025	0.0025	0.0025	0.0107	0.0217	0.0036	0.0035	9.7E-01
Cyanide (WAD)	46	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	5.3E-16
Dissolved Metals										
Aluminum	50	0.0005	0.0005	0.0015	0.0025	0.0048	0.0139	0.0199	0.0036	0.0042	1.1E+00
Antimony	50	0.00005	0.00005	0.00005	0.00005	0.00025	0.00050	0.00050	0.00015	0.00014	9.2E-01
Arsenic	50	0.0005	0.0005	0.0005	0.0006	0.0007	0.0008	0.0010	0.0006	0.0001	2.0E-01
Barium	50	0.031	0.037	0.061	0.081	0.094	0.109	0.114	0.078	0.023	2.9E-01
Beryllium	50	0.000050	0.000050	0.000050	0.000050	0.000500	0.001000	0.001000	0.000261	0.000300	1.2E+00
Bismuth	42	0.00025	0.00025	0.00025	0.00025	0.07506	0.10000	0.10000	0.02638	0.04439	1.7E+00
Boron	50	0.005	0.013	0.036	0.042	0.050	0.050	0.050	0.039	0.013	3.3E-01
Cadmium	50	0.0000050	0.0000050	0.0000050	0.0000050	0.0000155	0.0000338	0.0000430	0.0000114	0.0000106	9.3E-01
Calcium	50	32	38	59	72	86	102	107	71	20	2.8E-01
Chromium	50	0.00005	0.00005	0.00005	0.00014	0.00050	0.00100	0.00100	0.00028	0.00029	1.0E+00
Cobalt	50	0.00005	0.00005	0.00005	0.00005	0.00015	0.00030	0.00030	0.00010	0.00007	7.5E-01
Copper	50	0.0010	0.0010	0.0012	0.0016	0.0025	0.0041	0.0045	0.0020	0.0010	5.2E-01
Iron	50	0.011	0.014	0.015	0.015	0.018	0.047	0.116	0.021	0.018	8.5E-01
Lead	50	0.000025	0.000025	0.000025	0.000025	0.000250	0.000500	0.000500	0.000131	0.000150	1.2E+00
Lithium	50	0.00025	0.00109	0.00214	0.00250	0.00268	0.00500	0.00500	0.00250	0.00098	3.9E-01
Magnesium	50	8	12	21	27	33	38	40	26	9	3.3E-01
Manganese	50	0.003	0.004	0.013	0.021	0.028	0.035	0.054	0.020	0.011	5.6E-01
Mercury	50	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000100	0.0000100	0.0000056	0.0000016	2.9E-01
Molybdenum	50	0.008	0.008	0.009	0.009	0.010	0.010	0.012	0.009	0.001	9.2E-02
Nickel	50	0.0003	0.0003	0.0003	0.0003	0.0005	0.0010	0.0010	0.0004	0.0002	5.3E-01
Phosphorus	42	0.03	0.03	0.03	0.15	0.15	0.15	0.15	0.10	0.06	5.9E-01
Potassium	50	2	2	3	4	4	5	7	4	1	2.8E-01
Selenium	50	0.00022	0.00023	0.00034	0.00050	0.00050	0.00100	0.00180	0.00051	0.00030	5.9E-01
Silicon	42	5.4	6.2	6.5	7.5	8.0	8.3	8.6	7.3	0.8	1.1E-01
Silver	50	0.0000050	0.0000050	0.0000050	0.0000050	0.0000100	0.0000200	0.0000200	0.0000077	0.0000043	5.6E-01
Sodium	50	5	8	20	29	32	39	42	26	10	4.0E-01
Strontium	42	0.11	0.15	0.24	0.32	0.38	0.44	0.46	0.31	0.09	3.0E-01
Sulphur	15	6	7	20	28	37	44	48	27	13	4.8E-01
Thallium	50	0.0000050	0.0000050	0.0000050	0.0000050	0.0001000	0.0002000	0.0002000	0.0000491	0.0000623	1.3E+00
Tin	50	0.000050	0.000050	0.000050	0.000050	0.000250	0.000500	0.000500	0.000146	0.000139	9.5E-01
Titanium	50	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0120	0.0051	0.0010	1.9E-01
Uranium	50	0.0002	0.0002	0.0005	0.0006	0.0008	0.0010	0.0011	0.0006	0.0002	3.9E-01
Vanadium	50	0.0010	0.0012	0.0016	0.0018	0.0020	0.0093	0.0150	0.0026	0.0032	1.2E+00
Zinc	50	0.0005	0.0005	0.0012	0.0020	0.0025	0.0038	0.0256	0.0023	0.0035	1.5E+00
Total Metals										
Aluminum	50	0.0050	0.0096	0.0204	0.0310	0.0878	5.4615	11.5000	0.6934	2.2272	3.2E+00
Antimony	50	0.00005	0.00005	0.00005	0.00012	0.00025	0.00050	0.00050	0.00017	0.00013	7.7E-01
Arsenic	50	0.0003	0.0005	0.0005	0.0006	0.0007	0.0025	0.0041	0.0008	0.0007	8.7E-01
Barium	50	0.047	0.053	0.074	0.084	0.098	0.124	0.183	0.087	0.025	2.8E-01
Beryllium	50	0.000050	0.000050	0.000050	0.000050	0.000500	0.001000	0.001000	0.000266	0.000298	1.1E+00
Bismuth	42	0.00025	0.00025	0.00025	0.00025	0.07506	0.10000	0.10000	0.02638	0.04439	1.7E+00
Boron	50	0.011	0.017	0.040	0.046	0.050	0.050	0.050	0.042	0.011	2.7E-01
Cadmium	50	0.000005	0.000005	0.000005	0.000009	0.000017	0.000058	0.000116	0.000015	0.000021	1.3E+00
Calcium	50	39	42	59	72	88	101	105	72	19	2.7E-01
Chromium	50	0.00011	0.00015	0.00019	0.00046	0.00058	0.01008	0.02110	0.00158	0.00401	2.5E+00
Cobalt	50	0.00005	0.00005	0.00005	0.00015	0.00020	0.00533	0.01060	0.00072	0.00208	2.9E+00
Copper	50	0.0010	0.0010	0.0016	0.0020	0.0034	0.0360	0.0658	0.0061	0.0131	2.1E+00
Iron	50	0.04	0.04	0.06	0.08	0.13	7.99	17.00	1.04	3.29	3.2E+00
Lead	50	0.000025	0.000025	0.000025	0.000038	0.000250	0.000978	0.001830	0.000226	0.000370	1.6E+00
Lithium	50	0.0012	0.0015	0.0024	0.0025	0.0029	0.0050	0.0073	0.0028	0.0012	4.1E-01
Magnesium	50	14	14	21	27	33	38	42	27	8	2.9E-01
Manganese	50	0.01	0.01	0.02	0.03	0.04	0.27	0.63	0.06	0.11	1.9E+00
Mercury	50	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000204	0.0000350	0.0000072	0.0000066	9.2E-01
Molybdenum	50	0.008	0.008	0.009	0.010	0.011	0.011	0.012	0.010	0.001	9.5E-02
Nickel	50	0.0003	0.0003	0.0003	0.0005	0.0009	0.0089	0.0170	0.0015	0.0034	2.3E+00
Phosphorus	42	0.03	0.03	0.03	0.15	0.15	0.80	1.19	0.17	0.23	1.4E+00
Potassium	50	1	2	3	4	5	6	7	4	1	2.8E-01
Selenium	50	0.00022	0.00023	0.00031	0.00050	0.00052	0.00100	0.00120	0.00050	0.00025	5.0E-01
Silicon	42	6.2	6.2	7.2	8.0	8.4	20.8	30.7	9.0	4.8	5.3E-01
Silver	50	0.0000050	0.0000050	0.0000050	0.0000050	0.0000100	0.0000471	0.0000760	0.0000122	0.0000151	1.2E+00
Sodium	50	5	8	20	30	32	38	45	26	10	4.0E-01
Strontium	42	0.15	0.17	0.24	0.33	0.39	0.44	0.46	0.31	0.09	2.8E-01
Sulphur	15	6	8	21	29	39	46	47	28	13	4.8E-01
Thallium	50	0.0000050	0.0000050	0.0000050	0.0000050	0.0001000	0.0002000	0.0002000	0.0000501	0.0000618	1.2E+00
Tin	50	0.000050	0.000050	0.000050	0.000050	0.000250	0.000500	0.000500	0.000146	0.000139	9.5E-01
Titanium	50	0.0050	0.0050	0.0050	0.0050	0.0108	0.2050	0.5180	0.0333	0.0952	2.9E+00
Uranium	50	0.0003	0.0003	0.0005	0.0006	0.0008	0.0011	0.0012	0.0007	0.0002	3.5E-01
Vanadium	50	0.0010	0.0017	0.0020	0.0022	0.0026	0.0248	0.0504	0.0056	0.0096	1.7E+00
Zinc	50	0.0015	0.0015	0.0015	0.0015	0.0025	0.0164	0.0335	0.0037	0.0061	1.6E+00
Organics										
Carbon Organic (Dissolved)	49	4.2	4.6	5.2	5.8	8.0	15.1	17.4	7.3	3.3	4.6E-01
Carbon Organic (Total)	42	4.3	4.5	5.2	6.1	9.5	17.5	33.3	8.4	5.8	6.9E-01
Nitrogen Organic (Dissolved)	25	0.03	0.05	0.21	0.27	0.32	0.48	0.56	0.27	0.12	4.6E-01
Nitrogen Organic (Total)	30	0.10	0.15	0.21	0.26	0.30	0.50	1.73	0.31	0.28	9.0E-01

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.8 - CC02
(PAGE 2 OF 2)

Seasonal Statistics - CC02

Parameter	Count				Average				Min				Median				Max			
	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall
In Situ Parameters																				
Conductivity µS/cm	10	17	8	12	417	340	392	427	365	127	264	293	418	256	408	417	522	578	460	633
Oxygen Dissolved %	10	13	8	13	93	92	96	94	85.7	78.6	91	77	91.85	94.7	96	94	107	102	104	104
Oxygen Dissolved	10	14	9	14	13	12	10	11	11	9.08	9	9	12.8	11.45	10	11	14.3	15	12	12
pH (unitless)	10	17	9	14	8	8	8	8	8.06	5.8	8	8	8.24	8.15	8	8	8.65	8.5	8	8
Redox Potential mV	10	16	8	13	113	138	103	93	66	-56.7	-103	-233	109.5	129.5	107	97	176	511	222	268
Salinity ppt	9	14	6	9	0.35	0.24	0.24	0.30	0.33	0.1	0.16	0.21	0.35	0.19	0.26	0.30	0.37	0.49	0.29	0.36
Specific Conductivity µS/cm	10	17	9	14	738	539	516	604	697	219	339	434	721.5	413	531	615	840	1025	615	773
Temperature °C	10	17	9	14	2	6	13	9	0.04	-0.02	10	0	1.835	5.78	12	10	5.14	10.8	17	13
Total Dissolved Solids	10	15	6	11	480	345	319	405	453	142	220	282	469	269	342	405	547	660	380	503
Turbidity NTU	9	9	6	6	1	42	4	1	0	0.6	0	0	0.6	3.4	2	1	8.2	167	18	1
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	0	0	1	2	-	-	3	0.5	-	-	3	0.5	-	-	3	0.5	-	-	3	0.5
Alkalinity (Total as CaCO3)	10	17	9	14	293	214	214	271	256	97.9	152	234	290	170	214	270	325	343	260	309
Bicarbonate Alkalinity	8	10	5	7	282	199	191	277	256	97.9	152	251	283.5	166	199	283	298	305	238	309
Carbonate Alkalinity	8	10	5	7	4.66	8	5	3	0.5	0.5	1	1	1	1	6	4	17	26.8	11	8
Color TCU	10	16	9	13	7	25	16	9	5.4	6.9	9	7	6.55	20.4	13	9	9.2	55.9	34	11
Hardness as CaCO3 (Dissolved)	10	17	9	14	353	262	239	295	312	115	162	246	348	209	244	293	391	432	281	365
Hydroxide Alkalinity	8	10	5	7	0.69	0.65	0.50	0.57	0.5	0.5	0.50	0.50	0.5	0.5	0.50	0.50	1	1	0.50	1.00
pH (unitless)	10	16	9	14	8	8	8	8	8.18	7.91	8	8	8.32	8.31	8	8	8.41	8.54	8	8
Specific Conductivity µS/cm	10	17	9	14	711	515	495	617	623	215	328	538	718.5	396	505	612	802	835	602	749
Total Dissolved Solids	10	17	9	14	469	346	327	399	426	151	222	333	460.5	261	336	389	536	560	390	476
Total Suspended Solids	10	17	9	14	2	107	8	2	1.5	1.5	2	2	1.5	6.8	3	2	4	611	42	6
Turbidity NTU	10	15	8	13	1	36	3	1	0.47	0.61	1	1	0.9	1.69	1	1	2.02	192	14	1
Dissolved Anions																				
Bromide	10	17	9	14	0.15	0.10	0.03	0.06	0.025	0.025	0.03	0.03	0.125	0.025	0.03	0.03	0.345	0.38	0.03	0.25
Chloride	10	17	9	14	5	4	3	3	2.5	1.24	2	2	4.2	2.5	3	3	8.1	9	4	5
Fluoride	10	17	8	14	0.11	0.10	0.12	0.13	0.1	0.05	0.11	0.10	0.105	0.093	0.12	0.13	0.17	0.27	0.13	0.27
Sulphate	10	17	9	14	119	81	60	82	85.9	18.3	25	61	123	52.8	65	82	141	157	85	111
Nutrients								-												
Ammonia (Total)	10	17	9	14	0.034	0.014	0.012	0.014	0.0151	0.0025	0.006	0.003	0.02755	0.0144	0.010	0.010	0.0831	0.031	0.031	0.032
Nitrate (as N)	10	17	9	14	0.40	0.19	0.080	0.154	0.277	0.0125	0.039	0.032	0.3935	0.0624	0.082	0.127	0.635	0.552	0.140	0.311
Nitrite (as N)	10	17	9	14	0.006	0.0030	0.0009	0.0030	0.0032	0.0005	0.0005	0.0005	0.0051	0.0025	0.0005	0.0017	0.0101	0.016	0.0026	0.0120
Nitrogen (Dissolved)	7	11	5	7	0.66	0.49	0.35	0.37	0.45	0.25	0.18	0.26	0.616	0.48	0.37	0.36	0.96	0.758	0.44	0.56
Nitrogen (Total)	9	14	6	9	0.66	0.71	0.39	0.44	0.49	0.331	0.34	0.32	0.655	0.5505	0.38	0.39	0.972	2.17	0.45	0.62
Nitrogen Kjeldahl (Total)	10	17	9	14	0.28	0.49	0.32	0.26	0.208	0.171	0.24	0.18	0.27	0.309	0.31	0.24	0.337	1.75	0.43	0.53
Orthophosphate (Dissolved)	2	4	4	9	0.03	0.020	0.021	0.022	0.0286	0.0088	0.017	0.015	0.0347	0.01805	0.021	0.020	0.0408	0.0336	0.024	0.038
Phosphorus - Dissolved	9	15	7	10	0.042	0.028	0.03	0.03	0.0269	0.0111	0.02	0.02	0.0372	0.0242	0.03	0.03	0.0829	0.0567	0.06	0.04
Phosphorus - Total	9	17	9	14	0.05	0.20	0.04	0.03	0.0301	0.0198	0.02	0.02	0.0402	0.0415	0.03	0.03	0.0921	0.87	0.12	0.05
Cyanide																				
Cyanide (Free)	10	15	8	12	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Cyanide (Total)	10	16	9	12	0.0025	0.0054	0.00278889	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0217	0.0051	0.0025
Cyanide (WAD)	10	16	8	12	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Dissolved Metals																				
Aluminum	10	17	9	14	0.0013	0.0067	0.0032	0.0019	0.0005	0.0005	0.0015	0.0005	0.00135	0.005	0.0025	0.0017	0.0025	0.0199	0.0066	0.0050
Antimony	10	17	9	14	0.000070	0.00020	0.00014	0.00015	0.00005	0.00005	0.00005	0.00005	0.00005	0.00012	0.00010	0.00005	0.00025	0.0005	0.00025	0.00050
Arsenic	10	17	9	14	0.0005	0.0006	0.0008	0.0006	0.00047	0.0005	0.0007	0.0005	0.000485	0.00056	0.0008	0.0007	0.00063	0.00078	0.0010	0.0008
Barium	10	17	9	14	0.095	0.070	0.067	0.082	0.0863	0.0309	0.045	0.070	0.0935	0.055	0.070	0.081	0.107	0.114	0.085	0.104
Beryllium	10	17	9	14	0.00010	0.00035	0.00025	0.00028	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.0005	0.001	0.00050	0.00100
Bismuth	10	15	7	10	0.010225	0.040	0.029	0.020	0.00025	0.00025	0.000	0.000	0.00025	0.00025	0.000	0.000	0.1	0.1	0.100	0.100
Boron	10	17	9	14	0.039	0.035	0.037	0.045	0.034	0.005	0.014	0.037	0.039	0.044	0.039	0.044	0.05	0.05	0.050	0.050
Cadmium	10	17	9	14	0.00001	0.000014	0.000014	0.000010	0.000005	0.000005	0.000005	0.000005	0.000005	0.0000085	0.000009	0.000005	0.000025	0.000043	0.000042	0.000031
Calcium	10	17	9	14	87	67	60	73	75.9	31.6	43	60	85.9	53.6	61	73	98	107	71	91
Chromium	10	17	9	14	0.00010	0.0004	0.00027	0.00028	0.00005	0.00005	0.00005	0.00005	0.00005	0.0002	0.00015	0.00008	0.0005	0.001	0.00050	0.00100
Cobalt	10	17	9	14	0.00006	0.00012	0.00009	0.00010	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00015	0.0003	0.00015	0.00030
Copper	10	17	9	14	0.0012	0.0026	0.0025	0.0015	0.00098	0.001	0.0019	0.0010	0.00115	0.0026	0.0022	0.0014	0.0016	0.0045	0.0036	0.0019
Iron	10	17	9	14	0.016	0.031	0.016	0.017	0.013	0.011	0.014	0.015	0.015	0.015	0.015	0.015	0.022	0.116	0.020	0.022
Lead	10	17	9	14	0.00005	0.00018	0.00013	0.00014	0.000025	0.000025	0.00003	0.00003	0.000025	0.000025	0.00003	0.00003	0.00025	0.0005	0.00025	0.00050
Lithium	10	17	9	14	0.0027	0.0024	0.0021	0.0027	0.0022	0.00025	0.0010	0.0016	0.002765	0.0025	0.0025	0.0025	0.00321	0.005	0.0026	0.0050
Magnesium	10	17	9	14	32.8	23.3	21.7	27.2	29.3	8.4	13.3	23.3	32.5	17.1	22.5	26.6	36.0	40.0	25.3	33.8
Manganese	10	17	9	14	0.027	0.018	0.015	0.021	0.0194	0.00305	0.004	0.014	0.0277	0.00655	0.013	0.021	0.0353	0.0542	0.028	0.039
Mercury	10	17	9	14	0.0000050	0.0000056	0.0000061	0.0000057	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.00001	0.0000100	0.0000100
Molybdenum	10	17	9	14	0.0091	0.0089	0.0098	0.0096	0.0083	0.0078	0.0088	0.0081	0.00927	0.00866	0.0099	0.0097	0.0098	0.0122	0.0106	0.0104
Nickel	10	17	9	14	0.0003	0.0005	0.0004	0.0004	0.00025	0.00025	0.0003	0.0003	0.00025	0.0005	0.0005	0.0003	0.0005	0.001	0.0005	0.0010
Phosphorus	10	15	7	10	0.09	0.13	0.10	0.09	0.025	0.025	0.03	0.03	0.103	0.15	0.15	0.09	0.15	0.15	0.15	0.15
Potassium	10	17	9	14	5	3	3	4	4.07	2	2	3	4.47	2.6	3	4	6.53	5.7	4	4
Selenium	10	17	9	14	0.00047	0.00071	0.00038	0.00040	0.00028	0.00024	0.00023	0.00022	0.000485	0.0005	0.00037	0.00032	0.00064	0.0018	0.00050	0.00100
Silicon	10	15	7	10	7.44	6.44	7.79	8.16	6.65	5.44	7.20	7.86	7.395	6.46	7.84	8.13	8.19	7.48	8.12	8.62
Silver	10	17	9	14	0.000006	0.000009	0.000007	0.000008	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.00001	0.00002	0.000010	0.000020
Sodium	10	17	9	14	33	21	21	30	28.7	4.5	9	23	32.5	11.5	23	31	37.4	41.8	28	37
Strontium	10	15	7	10	0.38	0.27	0.26	0.32	0.33	0.108	0.18	0.29	0.3815	0.223	0.27	0.32	0.408	0.464	0.31	0.33
Sulphur	5	3	3	4	36	32	12	24	28	6.07	8	21	36.4	42.4	10	23	42.2	47.6	18	29
Thallium	10	17	9	14	0.000015	0.000067	0.000047	0.000053	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.0001	0.0002	0.000100	0.000200
Tin	10	17	9	14	0.00007	0.00019	0.00014	0.00015	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00025	0.0005	0.00025	0.00050
Titanium	10	17	9	14	0.0050	0.005	0.0050	0.0055	0.005	0.005	0.0050	0.0050	0.005	0.005	0.0050	0.0050	0.005	0.005	0.0050	0.0120
Uranium	10	17	9	14	0.0008	0.0006	0.0005	0.0006	0.000714	0.000167	0.0003	0.0005	0.000794	0.00046	0.0005	0.0006	0.000989	0.0011	0.0006	0.0008
Vanadium	10	17	9	14	0.0018	0.0025	0.0034	0.0027	0.0015	0.001	0.0017	0.0010	0.0017	0.0017	0.0020	0.0018	0.0023	0.015	0.0150	0.0150
Zinc	10	17	9	14	0.0039	0.0021	0.0021	0.0017	0.0005	0.0005	0.0011	0.0005	0.0015	0.0025	0.0025	0.0022	0.0256	0.0049	0.0029	0.0043
Total Metals																				
Aluminum	10	17	9	14	0.03	1.92	0.15	0.03	0.0062	0.005	0.02	0.01	0.0211	0.107	0.08	0.03	0.0648	11.5	0.58	0.04
Antimony	10	17	9	14	0.000087	0.00022	0.00017	0.00016	0.00005	0.00005	0.00005	0.00005	0.00005	0.00021	0.00014	0.00011	0.00025	0.0005	0.00025	0.00050
Arsenic	10	17	9	14	0.0005	0.0011	0.0008	0.0006	0.00025	0.00025	0.0007	0.0005	0.000495	0.00059	0.0008	0.0007	0.00059	0.00409	0.0010	0.0007
Barium	10	17	9	14	0.096	0.095	0.070	0.082	0.0859	0.0469	0.056	0.073	0.09505	0.104	0.071	0.080	0.111	0.183	0.089	0.099
Beryllium	10	17	9	14	0.00010	0.00036	0.00025	0.00028	0.00005	0.00005	0.00005	0.00005	0.00005	0.00018	0.00005	0.00005	0.0005	0.001	0.00050	0.00100
Bismuth	10	15	7	10	0.010225	0.04015	0.02875	0.0202	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.1	0.1	0.1	0.1
Boron	10	17	9	14	0.043	0.037	0.040	0.047	0.038	0.011	0.017	0.039	0.0435	0.048	0.047	0.048	0.05	0.05	0.050	0.050
Cadmium	10	17	9	14	0.00001	0.000027	0.000010	0.000008	0.000005	0.000005	0.000005	0.000005	0.000005	0.000017	0.000009	0.000005	0.000036	0.000116	0.000031	0.000027
Calcium	10	17	9	14	88	67	61	73	78	39.2	43	59	87.85	52.6	62	72	98.7	105	73	90
Chromium	10	17	9	14	0.00046	0.0038	0.0005	0.0004	0.00011	0.00015	0.0003	0.0001	0.000195	0.001	0.0005	0.0003	0.0025	0.0211	0.0012	0.0010
Cobalt	10	17	9	14	0.00007	0.00188	0.00021	0.00010	0.00005	0.00005	0.00010	0.00005	0.00005	0.0003	0.00015	0.00005	0.0002	0.0106	0.00058	0.00030
Copper	10	17	9	14	0.0017	0.0135	0.0037	0.0018	0.00136	0.001	0.0023	0.0010	0.00154	0.0035	0.0032	0.0017	0.00334	0.0658	0.0068	0.0023
Iron	10	17	9	14	0.07	2.84	0.23	0.07	0.035	0.046	0.06	0.04	0.0665	0.131	0.12	0.07	0.132	17	0.84	0.10
Lead	10	17	9	14	0.00005	0.00045	0.00014	0.00014	0.000025	0.000025	0.00003	0.00003	0.000025	0.00025	0.00012	0.00004	0.00025	0.0018	0.00025	0.00050
Lithium	10	17	9	14	0.0028	0.0032	0.0022	0.0027	0.00241	0.00121	0.0017	0.0016	0.00284	0.0025	0.0025	0.0025	0.00315	0.0073	0.0028	0.0050
Magnesium	10	17	9	14	33	25	22	27	27.8	14	14	23	32.8	17.7	23	27	36.6	41.6	26	33
Manganese	10	17	9	14	0.03	0.12	0.03	0.03	0.0247	0.00985	0.02	0.02	0.0322	0.0394	0.02	0.03	0.047	0.631	0.05	0.05
Mercury	10	17	9	14	0.0000050	0.0000104	0.0000061	0.0000057	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000035	0.0000100	0.0000100
Molybdenum	10	17	9	14	0.010	0.009	0.011	0.010	0.00889	0.00835	0.010	0.008	0.00959	0.0091	0.011	0.010	0.0107	0.0121	0.011	0.011
Nickel	10	17	9	14	0.0005	0.0034	0.0007	0.0004	0.0003	0.0003	0.0005	0.0003	0.0003	0.0010	0.0005	0.0004	0.0023	0.0170	0.0016	0.0010
Phosphorus	10	15	7	10	0.09	0.31	0.11	0.09	0.025	0.025	0.03	0.03	0.107	0.15	0.15	0.10	0.15	1.19	0.15	0.15
Potassium	10	17	9	14	4.9	3.6	3.3	4.0	3.9	1.0	2.4	3.2	4.7	3.5	3.4	4.1	6.8	6.4	3.9	5.3
Selenium	10	17	9	14	0.00046	0.00068	0.00038	0.00039	0.00027	0.00035	0.00025	0.00022	0.00051	0.0005	0.00037	0.00028	0.0006	0.0012	0.00050	0.00100
Silicon	10	15	7	10	7.5	11.0	8.3	8.2	6.7	6.2	7.8	7.8	7.5	6.7	8.3	8.2	8.2	30.7	8.6	8.6
Silver	10	17	9	14	0.0000055	0.0000178	0.0000079	0.0000131	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.00001	0.0000100	0.0000050	0.00001	0.000076	0.0000110	0.0000570
Sodium	10	17	9	14	33	21	22	30	29.5	4.79	9	22	32.1	12	23	31	37.5	45.3	28	37
Strontium	10	15	7	10	0.4	0.3	0.27	0.32	0.33	0.15	0.18	0.28	0.39	0.2	0.29	0.32	0.4	0.5	0.33	0.35
Sulphur	5	3	3	4	37	32	13	25	29.1	6.16	8	22	37.4	44	10	24	44.8	47.2	20	31
Thallium	10	17	9	14	0.00001	0.00007	0.00005	0.00005	0.000005	0.000005	0.00001	0.00001	0.000005	0.000034	0.00001	0.00001	0.0001	0.0002	0.00010	0.00020
Tin	10	17	9	14	0.00007	0.00019	0.00014	0.00015	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00025	0.0005	0.00025	0.00050
Titanium	10	17	9	14	0.0057	0.085	0.009	0.006	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.012	0.518	0.024	0.015
Uranium	10	17	9	14	0.0009	0.0007	0.0005	0.0006	0.0007	0.0003	0.0003	0.0005	0.0008	0.0005	0.0006	0.0006	0.0010	0.0012	0.0007	0.0008
Vanadium	10	17	9	14	0.0020	0.0106	0.0041	0.0029	0.0017	0.001	0.0020	0.0010	0.00195	0.0024	0.0026	0.0021	0.0024	0.0504	0.0150	0.0150
Zinc	10	17	9	14	0.0027	0.0067	0.0019	0.0019	0.0015	0.0015	0.0015	0.0015	0.0015	0.0025	0.0015	0.0015	0.0084	0.0335	0.0025	0.0025
Organics																				
Carbon Organic (Dissolved)	10	16	9	14	4.9	9.5	8	6	4.45	4.2	6	5	4.8	9.8	8	6	6	17	12	7
Carbon Organic (Total)	9	16	7	10	4.9	12	9	6	4.4	4.3	7	5	4.9	10.0	8	6	5	33	13	7
Nitrogen Organic (Dissolved)	4	11	4	6	0.22	0.32	0.25	0.21	0.05	0.196	0.07	0.03	0.255	0.294	0.30	0.24	0.31	0.56	0.34	0.29
Nitrogen Organic (Total)	8	12	4	6	0.22	0.44	0.28	0.20	0.15	0.16	0.23	0.10	0.20	0.30	0.28	0.23	0.322	1.7	0.34	0.26

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.
2. SEASONS ARE SPECIFIED AS FOLLOWS: WIN (WINTER; DECEMBER THROUGH MARCH), SPR (SPRING; APRIL AND MAY), SUMMER(JUNE THROUGH AUGUST), FALL (SEPTEMBER THROUGH NOVEMBER).

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.9 - CC08
(PAGE 1 OF 2)

Parameter	Total Count	Complete Dataset - CC08									
		Min	Percentiles 5th	25th	50th	75th	95th	Max	Average	Standard Deviation	Coefficient of Variation
In Situ Parameters											
Conductivity µS/cm	41	97	107	149	179	203	241	305	178	46	2.6E-01
Oxygen Dissolved %	38	8	74	85	89	92	96	98	86	14	1.7E-01
Oxygen Dissolved	41	7.5	8.6	10.1	10.9	12.1	13.2	116.0	13.5	16.5	1.2E+00
pH (unitless)	44	-0.9	7.5	8.0	8.1	8.2	8.6	8.9	7.9	1.4	1.7E-01
Redox Potential mV	41	-106	-73	91	120	164	238	436	121	97	8.0E-01
Salinity ppt	32	0.08	0.08	0.10	0.13	0.14	0.17	0.19	0.12	0.03	2.4E-01
Specific Conductivity µS/cm	43	158	173	210	265	304	348	388	264	61	2.3E-01
Temperature °C	44	-0.1	0.3	2.6	7.9	11.0	14.2	15.7	7.1	4.6	6.4E-01
Total Dissolved Solids	35	111	114	142	181	211	236	1365	208	205	9.8E-01
Turbidity NTU	22	-2.0	-0.1	0.1	0.7	2.7	32.2	49.8	5.4	12.4	2.3E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	3	0.5	0.5	0.5	0.5	1.7	2.7	2.9	1.3	1.4	1.1E+00
Alkalinity (Total as CaCO3)	44	79	81	118	138	156	171	1770	170	248	1.5E+00
Bicarbonate Alkalinity	26	79	80	105	134	155	173	948	159	164	1.0E+00
Carbonate Alkalinity	26	0.5	0.5	0.5	1.0	1.0	6.2	825.0	32.9	161.6	4.9E+00
Color TCU	38	5.1	5.3	8.4	19.2	32.9	56.0	58.6	22.7	16.2	7.1E-01
Hardness as CaCO3 (Dissolved)	44	84	96	126	147	164	186	948	161	125	7.8E-01
Hydroxide Alkalinity	26	0.5	0.5	0.5	1.0	1.0	1.0	1.0	0.8	0.3	3.3E-01
pH (unitless)	43	7.6	8.1	8.2	8.3	8.3	8.4	9.4	8.3	0.2	2.7E-02
Specific Conductivity µS/cm	44	161	174	232	265	305	329	4880	363	699	1.9E+00
Total Dissolved Solids	44	119	139	156	181	195	209	3940	259	568	2.2E+00
Total Suspended Solids	44	1.5	1.5	1.5	1.5	3.4	67.9	179.0	11.2	33.3	3.0E+00
Turbidity NTU	40	0.2	0.2	0.3	0.4	0.9	22.8	54.0	3.3	10.3	3.1E+00
Dissolved Anions											
Bromide	44	0.03	0.03	0.03	0.03	0.03	0.03	1.40	0.06	0.21	3.5E+00
Chloride	44	0	0	1	1	1	1	107	3	16	5.1E+00
Fluoride	43	0.05	0.06	0.07	0.08	0.09	0.09	0.10	0.08	0.01	1.7E-01
Sulphate	44	1	4	7	10	13	16	25	10	5	4.5E-01
Nutrients											
Ammonia (Total)	44	0.003	0.003	0.003	0.004	0.007	0.031	0.101	0.009	0.016	1.8E+00
Nitrate (as N)	44	0.003	0.00	0.01	0.02	0.05	0.17	0.30	0.04	0.062	1.4E+00
Nitrite (as N)	44	0.0005	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.0015	1.8E+00
Nitrogen (Dissolved)	22	0.13	0.14	0.21	0.30	0.35	0.43	0.57	0.30	0.11	3.7E-01
Nitrogen (Total)	30	0.11	0.13	0.22	0.31	0.37	0.81	0.95	0.35	0.21	6.1E-01
Nitrogen Kjeldahl (Total)	44	0.11	0.12	0.18	0.25	0.34	0.82	7.54	0.46	1.11	2.4E+00
Orthophosphate (Dissolved)	20	0.004	0.005	0.008	0.010	0.012	0.015	0.034	0.011	0.006	5.6E-01
Phosphorus - Dissolved	36	0.005	0.008	0.011	0.013	0.016	0.037	0.066	0.016	0.011	6.9E-01
Phosphorus - Total	43	0.007	0.008	0.012	0.016	0.021	0.204	0.241	0.033	0.055	1.7E+00
Cyanide											
Cyanide (Free)	39	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	5.3E-16
Cyanide (Total)	41	0.0025	0.0025	0.0025	0.0025	0.0054	0.0104	0.0205	0.0041	0.0036	8.6E-01
Cyanide (WAD)	40	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	5.3E-16
Dissolved Metals											
Aluminum	44	0.0005	0.0005	0.0025	0.0025	0.0050	0.0219	0.0317	0.0056	0.0072	1.3E+00
Antimony	44	0.00005	0.00005	0.00005	0.00005	0.00025	0.00025	0.00201	0.00018	0.00030	1.7E+00
Arsenic	44	0.0003	0.0003	0.0003	0.0003	0.0004	0.0005	0.0195	0.0008	0.0029	3.8E+00
Barium	44	0.017	0.029	0.039	0.046	0.051	0.055	0.060	0.044	0.010	2.2E-01
Beryllium	44	0.000050	0.000050	0.000050	0.000050	0.000500	0.000500	0.000500	0.000249	0.000223	9.0E-01
Bismuth	36	0.00025	0.00025	0.00025	0.00025	0.10000	0.10000	0.10000	0.03076	0.04658	1.5E+00
Boron	44	0.005	0.005	0.005	0.005	0.050	0.050	0.248	0.030	0.040	1.3E+00
Cadmium	44	0.0000050	0.0000050	0.0000050	0.0000050	0.0000240	0.0000360	0.0000420	0.0000131	0.0000116	8.9E-01
Calcium	44	7	27	35	43	48	54	56	42	10	2.4E-01
Chromium	44	0.00005	0.00005	0.00005	0.00019	0.00050	0.00050	0.00050	0.00028	0.00020	7.3E-01
Cobalt	44	0.00005	0.00005	0.00005	0.00005	0.00015	0.00015	0.00025	0.00010	0.00005	5.6E-01
Copper	44	0.0005	0.0015	0.0017	0.0028	0.0033	0.0041	0.0043	0.0027	0.0009	3.5E-01
Iron	44	0.005	0.005	0.005	0.015	0.016	0.067	0.125	0.022	0.026	1.2E+00
Lead	44	0.000025	0.000025	0.000025	0.000025	0.000250	0.000250	0.000250	0.000124	0.000112	9.0E-01
Lithium	44	0.00025	0.00025	0.00053	0.00098	0.00250	0.00250	0.06680	0.00290	0.00991	3.4E+00
Magnesium	44	5	6	7	9	10	12	226	14	33	2.4E+00
Manganese	44	0.000	0.000	0.000	0.001	0.001	0.002	0.006	0.001	0.001	1.3E+00
Mercury	44	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000100	0.0000100	0.0000057	0.0000017	3.1E-01
Molybdenum	44	0.004	0.007	0.008	0.009	0.010	0.011	0.012	0.009	0.001	1.6E-01
Nickel	44	0.0003	0.0003	0.0003	0.0003	0.0005	0.0005	0.0013	0.0004	0.0002	4.8E-01
Phosphorus	36	0.03	0.03	0.03	0.10	0.15	0.15	0.15	0.09	0.06	7.1E-01
Potassium	44	1	1	1	1	2	2	170	5	25	4.9E+00
Selenium	44	0.00005	0.00005	0.00011	0.00018	0.00050	0.00050	0.00050	0.00028	0.00020	7.2E-01
Silicon	36	0.2	5.5	5.8	6.4	7.4	7.8	7.9	6.4	1.3	2.1E-01
Silver	44	0.0000050	0.0000050	0.0000050	0.0000050	0.0000100	0.0000100	0.0000250	0.0000076	0.0000037	4.8E-01
Sodium	44	2	3	3	4	4	5	932	25	140	5.6E+00
Strontium	36	0.08	0.08	0.10	0.13	0.15	0.16	0.52	0.13	0.07	5.4E-01
Sulphur	17	2	2	3	3	4	85	395	26	95	3.6E+00
Thallium	44	0.0000050	0.0000050	0.0000050	0.0000050	0.0001000	0.0001000	0.0001000	0.0000465	0.0000473	1.0E+00
Tin	44	0.000050	0.000050	0.000050	0.000050	0.000250	0.000250	0.000250	0.000141	0.000101	7.1E-01
Titanium	44	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0250	0.0055	0.0030	5.5E-01
Uranium	44	0.0000	0.0001	0.0001	0.0001	0.0003	0.0005	0.0042	0.0003	0.0006	2.2E+00
Vanadium	44	0.0005	0.0005	0.0005	0.0011	0.0012	0.0131	0.0150	0.0018	0.0036	2.0E+00
Zinc	43	0.0005	0.0005	0.0011	0.0023	0.0025	0.0025	0.0076	0.0019	0.0012	6.5E-01
Total Metals											
Aluminum	44	0.0015	0.0015	0.0072	0.0180	0.0634	1.5698	4.9600	0.2467	0.8431	3.4E+00
Antimony	44	0.00005	0.00005	0.00005	0.00011	0.00025	0.00025	0.00191	0.00019	0.00028	1.5E+00
Arsenic	44	0.0003	0.0003	0.0003	0.0004	0.0004	0.0009	0.0191	0.0008	0.0028	3.4E+00
Barium	44	0.018	0.030	0.042	0.048	0.052	0.060	0.096	0.047	0.012	2.5E-01
Beryllium	44	0.000050	0.000050	0.000050	0.000050	0.000500	0.000500	0.000500	0.000249	0.000223	9.0E-01
Bismuth	36	0.00025	0.00025	0.00025	0.00025	0.10000	0.10000	0.10000	0.03076	0.04658	1.5E+00
Boron	44	0.005	0.005	0.005	0.005	0.050	0.050	0.242	0.030	0.040	1.3E+00
Cadmium	44	0.000005	0.000005	0.000005	0.000007	0.000020	0.000034	0.000064	0.000013	0.000013	9.8E-01
Calcium	44	8	29	36	43	49	53	54	42	10	2.3E-01
Chromium	44	0.00005	0.00013	0.00020	0.00050	0.00050	0.00314	0.00850	0.00072	0.00143	2.0E+00
Cobalt	44	0.00005	0.00005	0.00005	0.00015	0.00015	0.00164	0.00419	0.00030	0.00073	2.5E+00
Copper	44	0.0013	0.0017	0.0021	0.0030	0.0037	0.0153	0.0285	0.0044	0.0050	1.1E+00
Iron	44	0.01	0.01	0.02	0.03	0.11	2.61	6.71	0.37	1.19	3.2E+00
Lead	44	0.000025	0.000025	0.000025	0.000089	0.000250	0.000293	0.000680	0.000149	0.000142	9.6E-01
Lithium	44	0.0003	0.0003	0.0007	0.0016	0.0025	0.0025	0.0695	0.0031	0.0103	3.4E+00
Magnesium	44	5	6	8	9	11	12	228	14	33	2.4E+00
Manganese	44	0.00	0.00	0.00	0.00	0.00	0.10	0.25	0.01	0.04	3.3E+00
Mercury	44	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000100	0.0004940	0.0000168	0.0000736	4.4E+00
Molybdenum	44	0.004	0.008	0.009	0.010	0.011	0.012	0.013	0.010	0.001	1.5E-01
Nickel	44	0.0003	0.0003	0.0003	0.0005	0.0005	0.0035	0.0137	0.0010	0.0022	2.2E+00
Phosphorus	36	0.03	0.03	0.03	0.15	0.15	0.18	0.66	0.11	0.12	1.1E+00
Potassium	44	1	1	1	1	2	2	176	5	26	4.9E+00
Selenium	44	0.00005	0.00005	0.00012	0.00017	0.00050	0.00050	0.00200	0.00031	0.00033	1.0E+00
Silicon	36	0.2	5.7	5.9	7.1	7.7	9.5	15.4	7.0	2.1	3.0E-01
Silver	44	0.0000050	0.0000050	0.0000050	0.0000100	0.0000100	0.0000224	0.0000280	0.0000092	0.0000054	5.9E-01
Sodium	44	2	3	3	4	4	5	983	26	148	5.7E+00
Strontium	36	0.08	0.08	0.11	0.13	0.15	0.16	0.53	0.14	0.07	5.3E-01
Sulphur	17	2	2	3	3	4	92	430	29	103	3.6E+00
Thallium	44	0.0000050	0.0000050	0.0000050	0.0000075	0.0001000	0.0001000	0.0001000	0.0000467	0.0000471	1.0E+00
Tin	44	0.000050	0.000050	0.000050	0.000050	0.000250	0.000250	0.000250	0.000142	0.000100	7.0E-01
Titanium	44	0.0050	0.0050	0.0050	0.0050	0.0050	0.0723	0.2420	0.0159	0.0401	2.5E+00
Uranium	44	0.0001	0.0001	0.0001	0.0001	0.0003	0.0006	0.0044	0.0003	0.0006	2.1E+00
Vanadium	44	0.0005	0.0005	0.0011	0.0014	0.0016	0.0150	0.0213	0.0031	0.0048	1.5E+00
Zinc	44	0.0015	0.0015	0.0015	0.0025	0.0025	0.0075	0.0145	0.0028	0.0025	8.8E-01
Organics											
Carbon Organic (Dissolved)	43	3.8	4.2	5.7	8.8	12.3	17.3	122.0	11.8	17.6	1.5E+00
Carbon Organic (Total)	36	3.7	4.2	6.2	9.9	13.1	20.0	128.0	13.3	20.2	1.5E+00
Nitrogen Organic (Dissolved)	17	0.07	0.11	0.24	0.29	0.31	0.42	0.51	0.28	0.10	3.7E-01
Nitrogen Organic (Total)	21	0.12	0.13	0.17	0.30	0.34	0.85	0.86	0.33	0.21	6.4E-01

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.9 - CC08
(PAGE 2 OF 2)

Seasonal Statistics - CC08

Parameter	Count				Average				Min				Median				Max			
	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall
In Situ Parameters																				
Conductivity µS/cm	4	17	12	8	208	143	203	199	177	97	149	166	187.5	129	208	184	279	205	241	305
Oxygen Dissolved %	4	15	10	9	88	84	87	87	85.4	7.97	69	75	87	90.1	91	87	93.2	95.8	97	98
Oxygen Dissolved	4	16	11	10	12	18	9	11	12	9.12	7	9	12.2	11.85	10	11	12.8	116	11	13
pH (unitless)	4	17	12	11	8	8	8	8	8.16	-0.9	8	7	8.35	8.1	8	8	8.85	8.62	8	9
Redox Potential mV	4	16	12	9	128	137	104	113	84.1	-72.6	-106	-93	105.7	132.5	128	102	216	436	238	251
Salinity ppt	3	14	9	6	0.15	0.11	0.12	0.14	0.13	0.08	0.10	0.12	0.15	0.09	0.12	0.14	0.16	0.19	0.14	0.16
Specific Conductivity µS/cm	4	17	12	10	289	251	266	272	158	170	209	207	325.5	210	267	273	348	388	301	327
Temperature °C	4	17	12	11	2	4	12	8	1.01	-0.13	10	0	1.83	3.44	12	10	2.26	9.69	16	12
Total Dissolved Solids	4	15	9	7	208	242	168	190	181	111	136	158	211.5	126	169	195	226	1365	195	213
Turbidity NTU	3	9	6	4	1	12	0	1	0.1	0	-2	0	0.1	2.9	0	0	1.3	49.8	3	3
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	0	0	1	2	-	-	2.9	0.5	-	-	2.9	0.5	-	-	2.9	0.5	-	-	2.9	0.5
Alkalinity (Total as CaCO3)	4	17	12	11	159	119	271	144	156	79.2	109	124	156.5	103	139	138	167	171	1770	173
Bicarbonate Alkalinity	3	10	8	5	154	109	231	148	150	79.2	109	125	156	92.4	130	142	156	171	948	173
Carbonate Alkalinity	3	10	8	5	3.10	1	104	1	1	0.5	1	1	1	1	1	1	7.3	1	825	1
Color TCU	4	15	9	10	5	31	25	14	5.1	5.7	15	7	5.2	33.6	25	15	5.7	58.6	40	23
Hardness as CaCO3 (Dissolved)	4	17	12	11	168	132	211	148	163	83.9	112	118	164.5	106	148	143	181	187	948	179
Hydroxide Alkalinity	3	10	8	5	0.83	0.85	0.69	0.70	0.5	0.5	0.50	0.50	1	1	0.50	0.50	1	1	1.00	1.00
pH (unitless)	4	16	12	11	8	8	8	8	8.2	7.58	8	8	8.215	8.16	8	8	8.37	8.31	9	8
Specific Conductivity µS/cm	4	17	12	11	303	238	645	271	281	161	214	232	301	196	263	266	329	333	4880	322
Total Dissolved Solids	4	17	12	11	187	166	490	178	181	119	154	149	184.5	152	183	179	196	209	3940	209
Total Suspended Solids	4	17	12	11	2	26	2	2	1.5	1.5	2	2	1.5	3.3	2	2	1.5	179	8	5
Turbidity NTU	4	15	11	10	0	8	1	0	0.17	0.18	0	0	0.22	1.05	0	0	0.4	54	2	1
Dissolved Anions																				
Bromide	4	17	12	11	0.03	0.03	0.14	0.03	0.025	0.025	0.03	0.03	0.025	0.025	0.03	0.03	0.0365	0.125	1.40	0.03
Chloride	4	17	12	11	1	1	9	1	0.96	0.54	0	1	1.005	0.95	1	1	1.06	1.25	107	1
Fluoride	4	17	11	11	0.08	0.07	0.09	0.08	0.067	0.05	0.05	0.07	0.08	0.07	0.09	0.08	0.088	0.094	0.10	0.10
Sulphate	4	17	12	11	13	13	8	7	10.7	8.1	1	3	12.55	13.2	9	7	14.6	25.3	13	16
Nutrients								-												
Ammonia (Total)	4	17	12	11	0.003	0.006	0.015	0.009	0.0025	0.0025	0.003	0.003	0.0025	0.0058	0.004	0.005	0.0025	0.0159	0.101	0.036
Nitrate (as N)	4	17	12	11	0.06	0.07	0.030	0.015	0.0075	0.0025	0.006	0.003	0.01895	0.0352	0.026	0.006	0.176	0.302	0.063	0.046
Nitrite (as N)	4	17	12	11	0.001	0.0008	0.0013	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0032	0.0100	0.0005
Nitrogen (Dissolved)	3	10	5	4	0.15	0.36	0.28	0.26	0.14	0.2	0.13	0.17	0.155	0.35	0.31	0.27	0.16	0.57	0.35	0.32
Nitrogen (Total)	4	13	6	7	0.19	0.47	0.32	0.22	0.122	0.19	0.28	0.11	0.161	0.42	0.31	0.23	0.3	0.95	0.38	0.35
Nitrogen Kjeldahl (Total)	4	17	12	11	0.14	0.38	0.90	0.21	0.124	0.115	0.22	0.11	0.139	0.328	0.30	0.22	0.158	0.871	7.54	0.35
Orthophosphate (Dissolved)	1	5	7	7	0.01	0.006	0.011	0.014	0.0081	0.0039	0.009	0.009	0.0081	0.0065	0.011	0.010	0.0081	0.0084	0.014	0.034
Phosphorus - Dissolved	3	15	10	8	0.011	0.015	0.02	0.02	0.0088	0.0051	0.01	0.01	0.0101	0.0142	0.02	0.01	0.0131	0.0369	0.07	0.04
Phosphorus - Total	3	17	12	11	0.01	0.06	0.02	0.02	0.0097	0.0072	0.01	0.01	0.0098	0.0209	0.02	0.01	0.0104	0.241	0.07	0.04
Cyanide																				
Cyanide (Free)	4	15	11	9	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Cyanide (Total)	4	16	12	9	0.0025	0.0053	0.003575	0.00361111	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0078	0.0061
Cyanide (WAD)	4	16	11	9	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Dissolved Metals																				
Aluminum	4	17	12	11	0.0013	0.0103	0.0034	0.0021	0.0005	0.0005	0.0023	0.0005	0.00115	0.0059	0.0027	0.0025	0.0025	0.0317	0.0076	0.0025
Antimony	4	17	12	11	0.000100	0.00014	0.00028	0.00016	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00025	0.00025	0.00025	0.00201	0.00025
Arsenic	4	17	12	11	0.0003	0.0003	0.0019	0.0003	0.00025	0.00025	0.0003	0.0003	0.000355	0.0003	0.0004	0.0003	0.00037	0.00038	0.0195	0.0005
Barium	4	17	12	11	0.048	0.039	0.044	0.050	0.0449	0.0267	0.017	0.040	0.0467	0.033	0.045	0.051	0.052	0.055	0.055	0.060
Beryllium	4	17	12	11	0.00016	0.00026	0.00022	0.00030	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00050	0.0005	0.0005	0.00050	0.00050
Bismuth	4	15	10	7	0.0251875	0.040	0.020	0.029	0.00025	0.00025	0.000	0.000	0.00025	0.00025	0.000	0.000	0.1	0.1	0.100	0.100
Boron	4	17	12	11	0.016	0.026	0.040	0.030	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.050	0.05	0.05	0.248	0.050
Cadmium	4	17	12	11	0.00001	0.000015	0.000013	0.000011	0.000005	0.000005	0.000005	0.000005	0.000005	0.0000085	0.000005	0.000009	0.000037	0.000036	0.000042	0.000027
Calcium	4	17	12	11	50	40	40	44	48.2	25.3	7	35	48.8	32.1	44	43	53.5	55.5	48	54
Chromium	4	17	12	11	0.00016	0.0003	0.00024	0.00030	0.00005	0.00005	0.00005	0.00005	0.00005	0.00026	0.00015	0.00050	0.0005	0.0005	0.00050	0.00050
Cobalt	4	17	12	11	0.00008	0.00010	0.00010	0.00010	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00015	0.00015	0.00015	0.00025	0.00015
Copper	4	17	12	11	0.0015	0.0029	0.0029	0.0025	0.00143	0.00148	0.0005	0.0017	0.0015	0.0035	0.0030	0.0025	0.0016	0.0043	0.0035	0.0031
Iron	4	17	12	11	0.008	0.040	0.012	0.010	0.005	0.005	0.005	0.005	0.005	0.023	0.014	0.015	0.015	0.125	0.027	0.015
Lead	4	17	12	11	0.00008	0.00013	0.00011	0.00015	0.000025	0.000025	0.00003	0.00003	0.000025	0.000025	0.00003	0.00025	0.00025	0.00025	0.00025	0.00025
Lithium	4	17	12	11	0.0011	0.0014	0.0067	0.0017	0.00025	0.00025	0.0003	0.0003	0.000795	0.00064	0.0009	0.0025	0.0025	0.0025	0.0668	0.0025
Magnesium	4	17	12	11	10.6	8.1	26.9	9.0	10.2	5.1	6.8	7.3	10.4	6.4	9.1	8.8	11.4	11.8	226.0	11.0
Manganese	4	17	12	11	0.000	0.001	0.001	0.001	0.000025	0.000132	0.000	0.000	0.00009	0.000329	0.001	0.001	0.00015	0.00571	0.002	0.002
Mercury	4	17	12	11	0.0000050	0.0000056	0.0000058	0.0000059	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.00001	0.0000100	0.0000100
Molybdenum	4	17	12	11	0.0091	0.0095	0.0094	0.0079	0.00825	0.0072	0.0043	0.0057	0.009225	0.0096	0.0096	0.0079	0.0095	0.0122	0.0111	0.0090
Nickel	4	17	12	11	0.0003	0.0004	0.0004	0.0004	0.00025	0.00025	0.0003	0.0003	0.00025	0.0005	0.0003	0.0005	0.0005	0.00062	0.0013	0.0005
Phosphorus	4	15	10	7	0.06	0.12	0.08	0.06	0.025	0.025	0.03	0.03	0.025	0.15	0.04	0.03	0.15	0.15	0.15	0.15
Potassium	4	17	12	11	1	1	15	1	1	1	1	1	1.5	1.16	2	1	1.61	1.91	170	2
Selenium	4	17	12	11	0.00016	0.00031	0.00026	0.00030	0.00005	0.00005	0.00010	0.00005	0.00005	0.00022	0.00013	0.00050	0.0005	0.0005	0.00050	0.00050
Silicon	4	15	10	7	5.91	5.96	6.74	7.35	5.83	5.18	0.19	6.70	5.87	5.86	7.48	7.43	6.08	7.04	7.86	7.71
Silver	4	17	12	11	0.000006	0.000007	0.000008	0.000008	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000010	0.00001	0.00001	0.000025	0.000010
Sodium	4	17	12	11	4	4	81	4	4.06	2.44	3	3	4.165	3	4	4	5.1	5.3	932	5
Strontium	4	15	10	7	0.15	0.11	0.16	0.13	0.147	0.0757	0.10	0.12	0.149	0.0887	0.13	0.13	0.159	0.158	0.52	0.15
Sulphur	3	4	6	4	4	5	68	3	3.73	3.1	2	2	4.06	4.53	3	3	4.46	7.21	395	3
Thallium	4	17	12	11	0.000029	0.000050	0.000038	0.000057	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000100	0.0001	0.0001	0.000100	0.000100
Tin	4	17	12	11	0.00010	0.00014	0.00013	0.00016	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00025	0.00025	0.00025	0.00025	0.00025
Titanium	4	17	12	11	0.0050	0.005	0.0067	0.0050	0.005	0.005	0.0050	0.0050	0.005	0.005	0.0050	0.0050	0.005	0.005	0.0250	0.0050
Uranium	4	17	12	11	0.0004	0.0002	0.0005	0.0001	0.000308	0.000049	0.0001	0.0001	0.0003585	0.0001	0.0001	0.0001	0.00049	0.00052	0.0042	0.0003
Vanadium	4	17	12	11	0.0005	0.0014	0.0025	0.0023	0.0005	0.0005	0.0011	0.0005	0.0005	0.0005	0.0013	0.0011	0.0005	0.015	0.0150	0.0150
Zinc	4	17	11	11	0.0014	0.0022	0.0018	0.0017	0.0005	0.0005	0.0005	0.0005	0.00135	0.0023	0.0025	0.0025	0.0025	0.0076	0.0026	0.0025
Total Metals																				
Aluminum	4	17	12	11	0.00	0.60	0.04	0.01	0.0015	0.0015	0.01	0.00	0.0015	0.0638	0.02	0.01	0.0025	4.96	0.10	0.03
Antimony	4	17	12	11	0.0001	0.00015	0.00028	0.00016	0.00005	0.00005	0.00005	0.00005	0.00005	0.00011	0.00012	0.00025	0.00025	0.00025	0.00191	0.00025
Arsenic	4	17	12	11	0.0004	0.0005	0.0019	0.0003	0.00025	0.00025	0.0003	0.0003	0.00037	0.00033	0.0004	0.0003	0.00045	0.00161	0.0191	0.0006
Barium	4	17	12	11	0.048	0.047	0.044	0.050	0.047	0.0298	0.018	0.041	0.04785	0.0471	0.046	0.049	0.051	0.096	0.056	0.061
Beryllium	4	17	12	11	0.00016	0.00026	0.00022	0.00030	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00050	0.0005	0.0005	0.00050	0.00050
Bismuth	4	15	10	7	0.0251875	0.04015	0.0203	0.02875	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.1	0.1	0.1	0.1
Boron	4	17	12	11	0.016	0.026	0.040	0.030	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.050	0.05	0.05	0.242	0.050
Cadmium	4	17	12	11	0.00001	0.000016	0.000011	0.000013	0.000005	0.000005	0.000005	0.000005	0.000005	0.0000085	0.000005	0.000009	0.0000085	0.000064	0.000039	0.000031
Calcium	4	17	12	11	51	39	40	44	48.9	27.8	8	35	50.4	36.3	43	43	52.3	54.4	48	52
Chromium	4	17	12	11	0.00021	0.0013	0.0003	0.0004	0.00005	0.00011	0.0001	0.0001	0.00015	0.0005	0.0003	0.0005	0.0005	0.0085	0.0005	0.0005
Cobalt	4	17	12	11	0.00008	0.00060	0.00011	0.00010	0.00005	0.00005	0.00005	0.00005	0.00005	0.00015	0.00012	0.00015	0.0002	0.0042	0.00025	0.00015
Copper	4	17	12	11	0.0018	0.0069	0.0032	0.0028	0.0016	0.0017	0.0013	0.0019	0.001825	0.00354	0.0034	0.0030	0.00207	0.0285	0.0044	0.0036
Iron	4	17	12	11	0.01	0.89	0.06	0.02	0.005	0.005	0.02	0.01	0.005	0.121	0.03	0.02	0.015	6.71	0.17	0.06
Lead	4	17	12	11	0.00008	0.00019	0.00011	0.00015	0.000025	0.000025	0.00003	0.00003	0.000025	0.00025	0.00003	0.00025	0.00025	0.0007	0.00025	0.00025
Lithium	4	17	12	11	0.0011	0.0016	0.0070	0.0018	0.00025	0.00025	0.0003	0.0003	0.00092	0.00162	0.0009	0.0025	0.0025	0.0025	0.0695	0.0025
Magnesium	4	17	12	11	11	8	27	9	10.5	5.17	7	7	10.7	7.35	9	9	11.2	11.8	228	11
Manganese	4	17	12	11	0.00	0.03	0.00	0.00	0.000025	0.00015	0.00	0.00	0.00013	0.00237	0.00	0.00	0.000169	0.248	0.01	0.00
Mercury	4	17	12	11	0.0000050	0.0000345	0.0000058	0.0000059	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000494	0.0000100	0.0000100
Molybdenum	4	17	12	11	0.010	0.010	0.010	0.009	0.0087	0.00759	0.004	0.006	0.00978	0.0102	0.010	0.009	0.0103	0.0125	0.012	0.010
Nickel	4	17	12	11	0.0003	0.0019	0.0005	0.0004	0.0003	0.0003	0.0003	0.0003	0.0003	0.0005	0.0005	0.0005	0.0005	0.0137	0.0013	0.0005
Phosphorus	4	15	10	7	0.06	0.17	0.08	0.06	0.025	0.025	0.03	0.03	0.025	0.15	0.05	0.03	0.15	0.66	0.15	0.15
Potassium	4	17	12	11	1.4	1.4	15.9	1.4	1.0	1.0	1.0	1.0	1.6	1.3	1.5	1.0	1.6	2.5	176.0	2.2
Selenium	4	17	12	11	0.00016	0.00040	0.00026	0.00030	0.00005	0.00005	0.00011	0.00005	0.00005	0.0003	0.00014	0.00050	0.0005	0.0020	0.00050	0.00050
Silicon	4	15	10	7	5.9	7.2	6.8	7.4	5.7	5.6	0.2	6.8	5.9	5.9	7.6	7.4	6.1	15.4	7.9	7.9
Silver	4	17	12	11	0.0000063	0.0000111	0.0000088	0.0000077	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.00001	0.0000075	0.0000100	0.00001	0.000028	0.0000250	0.0000100
Sodium	4	17	12	11	4	4	85	4	4.12	2.45	3	3	4.355	3.1	4	4	5	5.6	983	4
Strontium	4	15	10	7	0.2	0.1	0.17	0.14	0.15	0.08	0.11	0.12	0.1565	0.1	0.13	0.13	0.2	0.2	0.53	0.17
Sulphur	3	4	6	4	4	5	74	3	3.9	3.1	2	2	4.18	4.585	3	3	4.71	7.09	430	4
Thallium	4	17	12	11	0.00003	0.00005	0.00004	0.00006	0.000005	0.000005	0.00001	0.00001	0.000005	0.00001	0.00001	0.00010	0.0001	0.0001	0.00010	0.00010
Tin	4	17	12	11	0.00010	0.00015	0.00013	0.00016	0.00005	0.00005	0.00005	0.00005	0.00005	0.00011	0.00005	0.00025	0.00025	0.00025	0.00025	0.00025
Titanium	4	17	12	11	0.005	0.032	0.007	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.242	0.025	0.005
Uranium	4	17	12	11	0.0004	0.0003	0.0005	0.0001	0.0003	0.0001	0.0001	0.0001	0.0004	0.0002	0.0001	0.0001	0.0005	0.0006	0.0044	0.0003
Vanadium	4	17	12	11	0.0011	0.0042	0.0027	0.0025	0.001	0.0005	0.0012	0.0010	0.001	0.0012	0.0016	0.0013	0.0012	0.0213	0.0150	0.0150
Zinc	4	17	12	11	0.0028	0.0036	0.0023	0.0020	0.0015	0.0015	0.0015	0.0015	0.002	0.0025	0.0015	0.0025	0.0055	0.0145	0.0075	0.0025
Organics																				
Carbon Organic (Dissolved)	4	16	12	11	4.2	10.9	19	8	3.8	4.5	8	5	4.2	12.3	10	8	5	18	122	11
Carbon Organic (Total)	3	16	10	7	4.0	12	23	8	3.7	4.3	9	6	4.1	12.4	11	8	4	22	128	11
Nitrogen Organic (Dissolved)	0	10	4	3	-	0.30	0.25	0.25	-	0.122	0.07	0.17	-	0.2845	0.30	0.27	-	0.51	0.34	0.30
Nitrogen Organic (Total)	3	11	4	3	0.15	0.41	0.29	0.24	0.132	0.12	0.26	0.19	0.15	0.33	0.29	0.22	0.158	0.9	0.34	0.31

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.
2. SEASONS ARE SPECIFIED AS FOLLOWS: WIN (WINTER; DECEMBER THROUGH MARCH), SPR (SPRING; APRIL AND MAY), SUMMER(JUNE THROUGH AUGUST), FALL (SEPTEMBER THROUGH NOVEMBER).

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.10 - EDITH-01D
(PAGE 1 OF 2)

Parameter	Total Count	Complete Dataset - EDITH-01D									
		Min	Percentiles 5th	25th	50th	75th	95th	Max	Average	Standard Deviation	Coefficient of Variation
In Situ Parameters											
Conductivity µS/cm	11	527	571	628	677	743	1012	1148	723	167	2.3E-01
Oxygen Dissolved %	9	2	2	3	5	81	91	92	39	43	1.1E+00
Oxygen Dissolved	9	0.2	0.2	0.4	0.6	8.1	9.0	9.0	4.0	4.2	1.1E+00
pH (unitless)	11	7.3	7.3	7.8	8.1	8.8	8.8	8.8	8.1	0.6	7.0E-02
Redox Potential mV	11	-279	-220	-79	1	61	180	272	-12	144	-1.2E+01
Salinity ppt	11	0.39	0.41	0.44	0.44	0.47	0.70	0.89	0.49	0.14	2.8E-01
Specific Conductivity µS/cm	11	792	795	871	897	941	1393	1765	973	271	2.8E-01
Temperature °C	11	6.3	6.4	7.0	9.1	15.5	19.0	20.0	11.3	5.1	4.5E-01
Total Dissolved Solids	11	518	539	572	584	613	1063	1461	666	266	4.0E-01
Turbidity NTU	11	-8.7	-4.8	-0.4	1.5	2.6	3.5	3.7	0.6	3.4	6.1E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	0	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	11	390	392	401	413	423	497	552	424	45	1.1E-01
Bicarbonate Alkalinity	11	356	362	374	383	408	497	552	404	55	1.4E-01
Carbonate Alkalinity	11	1.0	4.7	9.7	18.3	30.9	43.7	49.3	20.8	14.8	7.1E-01
Color TCU	0	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	11	383	386	391	397	405	415	422	399	11	2.7E-02
Hydroxide Alkalinity	11	0.5	0.5	0.5	0.5	0.5	5.5	10.0	1.4	2.9	2.0E+00
pH (unitless)	11	8.2	8.2	8.3	8.4	8.5	8.8	8.8	8.4	0.2	2.3E-02
Specific Conductivity µS/cm	11	871	872	880	900	914	962	969	905	32	3.5E-02
Total Dissolved Solids	11	371	445	527	533	543	567	568	523	53	1.0E-01
Total Suspended Solids	11	1.5	1.5	1.5	1.5	3.0	6.4	6.9	2.7	2.0	7.7E-01
Turbidity NTU	11	0.5	0.5	1.1	1.6	3.8	24.0	43.3	5.8	12.5	2.1E+00
Dissolved Anions											
Bromide	11	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.00	0.0E+00
Chloride	11	48	48	49	50	51	52	52	50	1	2.6E-02
Fluoride	11	0.21	0.21	0.23	0.24	0.25	0.38	0.42	0.26	0.06	2.4E-01
Sulphate	11	26	27	40	41	42	43	43	39	6	1.6E-01
Nutrients											
Ammonia (Total)	11	0.016	0.017	0.083	0.238	0.362	2.145	2.420	0.538	0.815	1.5E+00
Nitrate (as N)	11	0.025	0.03	0.03	0.03	0.03	0.04	0.05	0.03	0.008	2.9E-01
Nitrite (as N)	11	0.0050	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.0000	1.8E-16
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	11	1.44	1.44	1.54	1.61	1.86	3.42	3.64	1.95	0.75	3.9E-01
Orthophosphate (Dissolved)	11	0.001	0.001	0.002	0.024	0.065	0.377	0.434	0.086	0.148	1.7E+00
Phosphorus - Dissolved	11	0.020	0.020	0.023	0.047	0.096	0.439	0.502	0.117	0.164	1.4E+00
Phosphorus - Total	11	0.038	0.044	0.053	0.073	0.120	0.422	0.504	0.135	0.149	1.1E+00
Cyanide											
Cyanide (Free)	11	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	1.8E-16
Cyanide (Total)	11	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	1.8E-16
Cyanide (WAD)	11	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	1.8E-16
Dissolved Metals											
Aluminum	11	0.0005	0.0005	0.0011	0.0014	0.0022	0.0039	0.0041	0.0018	0.0012	6.8E-01
Antimony	11	0.00005	0.00005	0.00011	0.00011	0.00012	0.00014	0.00014	0.00011	0.00003	2.8E-01
Arsenic	11	0.0014	0.0014	0.0015	0.0015	0.0016	0.0016	0.0017	0.0015	0.0001	4.9E-02
Barium	11	0.049	0.049	0.050	0.054	0.056	0.067	0.068	0.055	0.007	1.2E-01
Beryllium	11	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	2.8E-16
Bismuth	11	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00000	2.3E-16
Boron	11	0.015	0.016	0.017	0.018	0.019	0.019	0.019	0.017	0.001	7.8E-02
Cadmium	11	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Calcium	11	39	39	41	42	42	45	46	42	2	4.5E-02
Chromium	11	0.00005	0.00005	0.00005	0.00005	0.00005	0.00012	0.00012	0.00006	0.00003	4.3E-01
Cobalt	11	0.00005	0.00008	0.00010	0.00011	0.00012	0.00013	0.00014	0.00011	0.00002	2.1E-01
Copper	11	0.0001	0.0002	0.0009	0.0012	0.0016	0.0032	0.0047	0.0014	0.0012	8.7E-01
Iron	11	0.005	0.005	0.005	0.005	0.005	0.014	0.016	0.007	0.004	5.6E-01
Lead	11	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000000	2.8E-16
Lithium	11	0.01080	0.01085	0.01120	0.01170	0.01215	0.01250	0.01270	0.01166	0.00062	5.3E-02
Magnesium	11	68	68	70	72	73	75	75	72	2	3.1E-02
Manganese	11	0.002	0.002	0.004	0.038	0.147	0.214	0.254	0.079	0.089	1.1E+00
Mercury	11	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Molybdenum	11	0.000	0.001	0.002	0.002	0.002	0.002	0.002	0.002	0.001	3.6E-01
Nickel	11	0.0006	0.0006	0.0007	0.0007	0.0008	0.0009	0.0009	0.0007	0.0001	1.2E-01
Phosphorus	11	0.03	0.03	0.03	0.03	0.10	0.42	0.47	0.11	0.16	1.4E+00
Potassium	11	17	17	18	18	20	21	21	19	1	7.9E-02
Selenium	10	0.00005	0.00005	0.00006	0.00011	0.00023	0.00044	0.00052	0.00017	0.00016	9.2E-01
Silicon	11	0.1	0.1	0.3	1.1	1.6	3.7	3.8	1.3	1.3	9.6E-01
Silver	11	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Sodium	11	51	52	54	56	56	58	60	55	2	4.2E-02
Strontium	11	0.26	0.27	0.28	0.28	0.29	0.32	0.33	0.29	0.02	7.1E-02
Sulphur	11	11	12	14	15	15	18	20	15	2	1.5E-01
Thallium	11	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Tin	11	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	2.8E-16
Titanium	11	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0000	1.8E-16
Uranium	11	0.0013	0.0014	0.0014	0.0016	0.0016	0.0017	0.0017	0.0015	0.0001	7.8E-02
Vanadium	11	0.0019	0.0020	0.0020	0.0021	0.0022	0.0032	0.0032	0.0023	0.0005	2.0E-01
Zinc	11	0.0005	0.0005	0.0005	0.0005	0.0008	0.0018	0.0022	0.0008	0.0005	7.0E-01
Total Metals											
Aluminum	11	0.0056	0.0057	0.0075	0.0092	0.0117	0.0194	0.0218	0.0106	0.0049	4.6E-01
Antimony	11	0.00011	0.00011	0.00012	0.00013	0.00015	0.00016	0.00017	0.00013	0.00002	1.5E-01
Arsenic	11	0.0013	0.0013	0.0014	0.0015	0.0016	0.0017	0.0019	0.0015	0.0001	9.8E-02
Barium	11	0.049	0.049	0.050	0.054	0.057	0.063	0.064	0.054	0.005	9.3E-02
Beryllium	11	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	2.8E-16
Bismuth	11	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00000	2.3E-16
Boron	11	0.015	0.016	0.017	0.018	0.021	0.023	0.024	0.019	0.003	1.4E-01
Cadmium	11	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000000	0.0E+00
Calcium	11	38	39	39	41	41	45	47	41	2	5.6E-02
Chromium	11	0.00005	0.00008	0.00010	0.00014	0.00016	0.00025	0.00031	0.00014	0.00007	4.7E-01
Cobalt	11	0.00012	0.00012	0.00012	0.00013	0.00014	0.00016	0.00017	0.00013	0.00002	1.2E-01
Copper	11	0.0009	0.0012	0.0019	0.0024	0.0036	0.0057	0.0067	0.0030	0.0017	5.6E-01
Iron	11	0.01	0.01	0.02	0.02	0.02	0.05	0.05	0.02	0.01	5.8E-01
Lead	11	0.000025	0.000025	0.000025	0.000025	0.000040	0.000182	0.000206	0.000056	0.000064	1.1E+00
Lithium	11	0.0098	0.0101	0.0105	0.0109	0.0113	0.0122	0.0123	0.0110	0.0007	6.7E-02
Magnesium	11	65	65	68	69	71	75	76	69	3	4.6E-02
Manganese	11	0.01	0.01	0.02	0.09	0.15	0.21	0.24	0.10	0.08	8.4E-01
Mercury	11	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Molybdenum	11	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.002	0.000	2.0E-01
Nickel	11	0.0007	0.0007	0.0008	0.0008	0.0009	0.0009	0.0009	0.0008	0.0001	9.1E-02
Phosphorus	11	0.03	0.04	0.06	0.08	0.11	0.45	0.52	0.14	0.16	1.1E+00
Potassium	11	17	17	17	18	19	20	22	18	1	8.0E-02
Selenium	11	0.00005	0.00005	0.00005	0.00005	0.00011	0.00016	0.00019	0.00008	0.00005	5.5E-01
Silicon	11	0.1	0.1	0.7	1.5	1.6	3.7	3.9	1.5	1.2	8.3E-01
Silver	11	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Sodium	11	50	52	53	54	56	61	61	55	3	6.0E-02
Strontium	11	0.26	0.27	0.28	0.28	0.29	0.32	0.35	0.29	0.02	7.8E-02
Sulphur	11	11	12	14	14	15	15	15	14	1	8.2E-02
Thallium	11	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Tin	11	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	2.8E-16
Titanium	11	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0000	1.8E-16
Uranium	11	0.0014	0.0015	0.0016	0.0017	0.0018	0.0018	0.0018	0.0017	0.0001	6.5E-02
Vanadium	11	0.0022	0.0022	0.0022	0.0022	0.0023	0.0032	0.0039	0.0024	0.0005	2.1E-01
Zinc	11	0.0015	0.0015	0.0015	0.0015	0.0015	0.0036	0.0041	0.0019	0.0009	4.7E-01
Organics											
Carbon Organic (Dissolved)	11	9.8	13.9	18.8	19.4	20.1	20.7	20.8	18.6	3.1	1.6E-01
Carbon Organic (Total)	11	9.9	14.0	19.0	19.7	20.1	20.9	21.5	18.8	3.1	1.6E-01
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.10 - EDITH-01D
(PAGE 2 OF 2)

Seasonal Statistics - EDITH-01D

Parameter	Count					Average				Min				Median				Max		
	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall
In Situ Parameters																				
Conductivity µS/cm	0	3	6	2	-	639	705	904	-	527	614	660	-	677	681	904	-	712	875	1148
Oxygen Dissolved %	0	2	5	2	-	82	37	4	-	76.5	2	3	-	82.15	5	4	-	87.8	92	4
Oxygen Dissolved	0	2	5	2	-	9	3	0	-	8.13	0	0	-	8.565	1	0	-	9	9	1
pH (unitless)	0	3	6	2	-	9	8	7	-	8.14	8	7	-	8.75	8	7	-	8.81	9	7
Redox Potential mV	0	3	6	2	-	41	-42	-4	-	0.8	-161	-279	-	49.9	-51	-4	-	71.3	89	272
Salinity ppt	0	3	6	2	-	0.42	0.45	0.70	-	0.39	0.42	0.51	-	0.44	0.45	0.70	-	0.44	0.47	0.89
Specific Conductivity µS/cm	0	3	6	2	-	860	890	1393	-	798	792	1021	-	885	902	1393	-	897	956	1765
Temperature °C	0	3	6	2	-	11	13	7	-	7.23	6	6	-	12.7	13	7	-	14.3	20	7
Total Dissolved Solids	0	3	6	2	-	559	588	1063	-	518	559	664	-	575	587	1063	-	584	622	1461
Turbidity NTU	0	3	6	2	-	-1	2	-3	-	-0.9	1	-9	-	-0.4	2	-3	-	-0.3	4	3
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	0	3	6	2	-	395	417	489	-	390	401	426	-	394	416	489	-	400	442	552
Bicarbonate Alkalinity	0	3	6	2	-	365	404	465	-	356	379	377	-	368	405	465	-	370	442	552
Carbonate Alkalinity	0	3	6	2	-	30	13	30	-	20.4	1	10	-	31.9	11	30	-	38.1	30	49
Color TCU	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	0	3	6	2	-	392	399	407	-	383	388	407	-	393	397	407	-	401	422	407
Hydroxide Alkalinity	0	3	6	2	-	0.50	0.58	5.25	-	0.5	0.50	0.50	-	0.5	0.50	5.25	-	0.5	1.00	10.00
pH (unitless)	0	3	6	2	-	9	8	9	-	8.46	8	8	-	8.61	8	9	-	8.77	8	9
Specific Conductivity µS/cm	0	3	6	2	-	877	912	926	-	871	872	898	-	880	906	926	-	880	969	954
Total Dissolved Solids	0	3	6	2	-	477	535	556	-	371	518	546	-	527	530	556	-	533	568	565
Total Suspended Solids	0	3	6	2	-	3	3	2	-	1.5	2	2	-	1.5	2	2	-	6.9	6	2
Turbidity NTU	0	3	6	2	-	1	3	22	-	0.5	1	1	-	1.2	3	22	-	1.56	5	43
Dissolved Anions																				
Bromide	0	3	6	2	-	0.25	0.25	0.25	-	0.25	0.25	0.25	-	0.25	0.25	0.25	-	0.25	0.25	0.25
Chloride	0	3	6	2	-	51	49	50	-	48.4	48	50	-	51.6	49	50	-	52	51	50
Fluoride	0	3	6	2	-	0.22	0.28	0.25	-	0.21	0.23	0.25	-	0.21	0.24	0.25	-	0.25	0.42	0.25
Sulphate	0	3	6	2	-	41	39	34	-	39.7	28	26	-	40.6	41	34	-	42.7	43	42
Nutrients								-												
Ammonia (Total)	0	3	6	2	-	0.060	0.642	0.944	-	0.0163	0.152	0.019	-	0.0169	0.321	0.944	-	0.147	2.420	1.870
Nitrate (as N)	0	3	6	2	-	0.03	0.025	0.038	-	0.025	0.025	0.025	-	0.025	0.025	0.038	-	0.025	0.025	0.051
Nitrite (as N)	0	3	6	2	-	0.0050	0.0050	0.0050	-	0.005	0.0050	0.0050	-	0.005	0.0050	0.0050	-	0.005	0.0050	0.0050
Nitrogen (Dissolved)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	0	3	6	2	-	1.53	2.03	2.32	-	1.44	1.50	1.44	-	1.58	1.71	2.32	-	1.58	3.64	3.20
Orthophosphate (Dissolved)	0	3	6	2	-	0.009	0.100	0.161	-	0.0019	0.001	0.001	-	0.0023	0.045	0.161	-	0.0236	0.434	0.320
Phosphorus - Dissolved	0	3	6	2	-	0.032	0.13	0.20	-	0.0245	0.02	0.02	-	0.0254	0.07	0.20	-	0.0467	0.50	0.38
Phosphorus - Total	0	3	6	2	-	0.06	0.16	0.19	-	0.0495	0.05	0.04	-	0.0535	0.10	0.19	-	0.0732	0.50	0.34
Cyanide																				
Cyanide (Free)	0	3	6	2	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025
Cyanide (Total)	0	3	6	2	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025
Cyanide (WAD)	0	3	6	2	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025
Dissolved Metals																				
Aluminum	0	3	6	2	-	0.0007	0.0019	0.0029	-	0.0005	0.0010	0.0020	-	0.0005	0.0015	0.0029	-	0.0011	0.0041	0.0037
Antimony	0	3	6	2	-	0.00011	0.00011	0.00009	-	0.00011	0.00005	0.00005	-	0.00011	0.00012	0.00009	-	0.00012	0.00014	0.00013
Arsenic	0	3	6	2	-	0.0015	0.0015	0.0016	-	0.00145	0.0014	0.0016	-	0.0015	0.0015	0.0016	-	0.00151	0.0017	0.0016
Barium	0	3	6	2	-	0.051	0.055	0.059	-	0.0486	0.049	0.051	-	0.0496	0.055	0.059	-	0.0537	0.066	0.068
Beryllium	0	3	6	2	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005
Bismuth	0	3	6	2	-	0.000	0.000	0.000	-	0.00025	0.000	0.000	-	0.00025	0.000	0.000	-	0.00025	0.000	0.000
Boron	0	3	6	2	-	0.017	0.018	0.018	-	0.015	0.016	0.016	-	0.018	0.018	0.018	-	0.019	0.019	0.019
Cadmium	0	3	6	2	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005
Calcium	0	3	6	2	-	41	42	42	-	40.2	39	40	-	41.1	42	42	-	41.7	46	44
Chromium	0	3	6	2	-	0.0001	0.00006	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00011	0.00012	0.00005
Cobalt	0	3	6	2	-	0.00009	0.00011	0.00012	-	0.00005	0.00010	0.00011	-	0.0001	0.00011	0.00012	-	0.00011	0.00014	0.00012
Copper	0	3	6	2	-	0.0013	0.0016	0.0008	-	0.00099	0.0003	0.0001	-	0.00124	0.0012	0.0008	-	0.00172	0.0047	0.0015
Iron	0	3	6	2	-	0.005	0.007	0.009	-	0.005	0.005	0.005	-	0.005	0.005	0.009	-	0.005	0.016	0.012
Lead	0	3	6	2	-	0.00003	0.00003	0.00003	-	0.000025	0.00003	0.00003	-	0.000025	0.00003	0.00003	-	0.000025	0.00003	0.00003
Lithium	0	3	6	2	-	0.0114	0.0118	0.0116	-	0.0111	0.0108	0.0109	-	0.0115	0.0119	0.0116	-	0.0117	0.0127	0.0123
Magnesium	0	3	6	2	-	70.4	71.4	73.5	-	68.1	68.8	72.3	-	71.1	71.7	73.5	-	72.1	74.6	74.6
Manganese	0	3	6	2	-	0.004	0.099	0.130	-	0.0015	0.002	0.005	-	0.00189	0.109	0.130	-	0.00858	0.173	0.254
Mercury	0	3	6	2	-	0.0000050	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050
Molybdenum	0	3	6	2	-	0.0020	0.0016	0.0013	-	0.0018	0.0005	0.0006	-	0.00184	0.0017	0.0013	-	0.00246	0.0020	0.0019
Nickel	0	3	6	2	-	0.0009	0.0007	0.0007	-	0.00079	0.0006	0.0007	-	0.00088	0.0007	0.0007	-	0.00089	0.0008	0.0007
Phosphorus	0	3	6	2	-	0.03	0.13	0.20	-	0.025	0.03	0.03	-	0.025	0.08	0.20	-	0.025	0.47	0.38
Potassium	0	3	6	2	-	17	19	18	-	17	18	18	-	17.1	20	18	-	17.7	21	19
Selenium	0	3	6	1	-	0.00011	0.00023	0.00005	-	0.0001	0.00005	0.00005	-	0.0001	0.00019	0.00005	-	0.00012	0.00052	0.00005
Silicon	0	3	6	2	-	0.20	1.61	2.22	-	0.054	0.18	0.90	-	0.124	1.52	2.22	-	0.424	3.81	3.55
Silver	0	3	6	2	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005
Sodium	0	3	6	2	-	55	54	58	-	53.7	51	57	-	55.6	55	58	-	56.4	57	60
Strontium	0	3	6	2	-	0.27	0.29	0.30	-	0.262	0.28	0.28	-	0.269	0.29	0.30	-	0.274	0.32	0.33
Sulphur	0	3	6	2	-	14	15	13	-	13.6	13	11	-	14.6	14	13	-	14.7	20	15
Thallium	0	3	6	2	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005
Tin	0	3	6	2	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005
Titanium	0	3	6	2	-	0.005	0.0050	0.0050	-	0.005	0.0050	0.0050	-	0.005	0.0050	0.0050	-	0.005	0.0050	0.0050
Uranium	0	3	6	2	-	0.0014	0.0016	0.0016	-	0.0013	0.0014	0.0016	-	0.00141	0.0016	0.0016	-	0.00146	0.0017	0.0017
Vanadium	0	3	6	2	-	0.0022	0.0022	0.0027	-	0.0022	0.0019	0.0021	-	0.0022	0.0020	0.0027	-	0.0022	0.0032	0.0032
Zinc	0	3	6	2	-	0.0007	0.0009	0.0005	-	0.0005	0.0005	0.0005	-	0.0005	0.0005	0.0005	-	0.0011	0.0022	0.0005
Total Metals																				
Aluminum	0	3	6	2	-	0.01	0.01	0.02	-	0.0058	0.01	0.01	-	0.0072	0.01	0.02	-	0.0104	0.02	0.02
Antimony	0	3	6	2	-	0.00014	0.00013	0.00012	-	0.00011	0.00011	0.00011	-	0.00015	0.00013	0.00012	-	0.00017	0.00015	0.00013
Arsenic	0	3	6	2	-	0.0013	0.0015	0.0017	-	0.00131	0.0015	0.0016	-	0.00136	0.0015	0.0017	-	0.00137	0.0016	0.0019
Barium	0	3	6	2	-	0.049	0.056	0.059	-	0.0486	0.050	0.056	-	0.0492	0.055	0.059	-	0.0495	0.064	0.062
Beryllium	0	3	6	2	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005
Bismuth	0	3	6	2	-	0.00025	0.00025	0.00025	-	0.00025	0.00025	0.00025	-	0.00025	0.00025	0.00025	-	0.00025	0.00025	0.00025
Boron	0	3	6	2	-	0.016	0.019	0.023	-	0.015	0.017	0.021	-	0.016	0.019	0.023	-	0.016	0.021	0.024
Cadmium	0	3	6	2	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005
Calcium	0	3	6	2	-	40	42	40	-	38.2	39	39	-	40.9	41	40	-	41.5	47	41
Chromium	0	3	6	2	-	0.0001	0.0001	0.0002	-	0.0001	0.0001	0.0002	-	0.00014	0.0001	0.0002	-	0.00014	0.0002	0.0003
Cobalt	0	3	6	2	-	0.00012	0.00013	0.00016	-	0.00012	0.00012	0.00014	-	0.00012	0.00013	0.00016	-	0.0001	0.00014	0.00017
Copper	0	3	6	2	-	0.0029	0.0036	0.0013	-	0.00226	0.0015	0.0009	-	0.00234	0.0030	0.0013	-	0.00404	0.0067	0.0016
Iron	0	3	6	2	-	0.01	0.02	0.04	-	0.01	0.01	0.03	-	0.013	0.02	0.04	-	0.019	0.05	0.05
Lead	0	3	6	2	-	0.00003	0.00008	0.00003	-	0.000025	0.00003	0.00003	-	0.00003	0.00003	0.00003	-	0.0001	0.00021	0.00003
Lithium	0	3	6	2	-	0.0106	0.0112	0.0109	-	0.00979	0.0104	0.0105	-	0.0105	0.0110	0.0109	-	0.0114	0.0123	0.0112
Magnesium	0	3	6	2	-	67	70	71	-	65.1	66	69	-	67.7	69	71	-	69.3	76	73
Manganese	0	3	6	2	-	0.01	0.13	0.13	-	0.0103	0.04	0.02	-	0.0103	0.14	0.13	-	0.0157	0.19	0.24
Mercury	0	3	6	2	-	0.0000050	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050
Molybdenum	0	3	6	2	-	0.002	0.002	0.001	-	0.00186	0.002	0.001	-	0.00188	0.002	0.001	-	0.00237	0.002	0.002
Nickel	0	3	6	2	-	0.0009	0.0008	0.0008	-	0.0008	0.0007	0.0008	-	0.0009	0.0008	0.0008	-	0.0009	0.0008	0.0009
Phosphorus	0	3	6	2	-	0.07	0.15	0.20	-	0.058	0.06	0.03	-	0.076	0.09	0.20	-	0.076	0.52	0.38
Potassium	0	3	6	2	-	16.8	18.7	18.0	-	16.5	17.5	17.3	-	16.8	18.2	18.0	-	17.1	21.6	18.6
Selenium	0	3	6	2	-	0.00008	0.00008	0.00012	-	0.00005	0.00005	0.00005	-	0.0001	0.00008	0.00012	-	0.0001	0.00011	0.00019
Silicon	0	3	6	2	-	0.2	1.9	2.2	-	0.1	1.1	0.9	-	0.1	1.6	2.2	-	0.4	3.9	3.4
Silver	0	3	6	2	-	0.0000050	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050
Sodium	0	3	6	2	-	53	55	58	-	50.3	53	54	-	52.7	54	58	-	56.3	60	61
Strontium	0	3	6	2	-	0.3	0.30	0.28	-	0.26	0.28	0.28	-	0.3	0.29	0.28	-	0.3	0.35	0.29
Sulphur	0	3	6	2	-	14	14	13	-	13.7	13	11	-	14.4	14	13	-	14.5	15	15
Thallium	0	3	6	2	-	0.00001	0.00001	0.00001	-	0.000005	0.00001	0.00001	-	0.000005	0.00001	0.00001	-	0.000005	0.00001	0.00001
Tin	0	3	6	2	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005
Titanium	0	3	6	2	-	0.005	0.005	0.005	-	0.005	0.005	0.005	-	0.005	0.005	0.005	-	0.005	0.005	0.005
Uranium	0	3	6	2	-	0.0018	0.0017	0.0016	-	0.0018	0.0016	0.0014	-	0.0018	0.0017	0.0016	-	0.0018	0.0018	0.0018
Vanadium	0	3	6	2	-	0.0023	0.0022	0.0031	-	0.0022	0.0022	0.0022	-	0.0022	0.0022	0.0031	-	0.0024	0.0023	0.0039
Zinc	0	3	6	2	-	0.0015	0.0019	0.0023	-	0.0015	0.0015	0.0015	-	0.0015	0.0015	0.0023	-	0.0015	0.0041	0.0031
Organics																				
Carbon Organic (Dissolved)	0	3	6	2	-	19.2	18	20	-	18.4	10	20	-	19.1	19	20	-	20	21	21
Carbon Organic (Total)	0	3	6	2	-	19	18	20	-	18.7	10	20	-	19.4	20	20	-	20	22	20
Nitrogen Organic (Dissolved)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.
2. SEASONS ARE SPECIFIED AS FOLLOWS: WIN (WINTER; DECEMBER THROUGH MARCH), SPR (SPRING; APRIL AND MAY), SUMMER(JUNE THROUGH AUGUST), FALL (SEPTEMBER THROUGH NOVEMBER).

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.11 - EDITH-01M
(PAGE 1 OF 2)

Parameter	Total Count	Complete Dataset - EDITH-01M									
		Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	3	699	701	711	723	975	1177	1227	883	298	3.4E-01
Oxygen Dissolved %	3	5	7	12	19	22	25	25	17	10	6.2E-01
Oxygen Dissolved	3	0.6	0.7	1.3	2.0	2.2	2.3	2.3	1.6	0.9	5.6E-01
pH (unitless)	3	7.9	8.0	8.1	8.3	8.4	8.5	8.5	8.2	0.3	3.5E-02
Redox Potential mV	3	-233	-199	-62	109	120	128	130	2	204	1.0E+02
Salinity ppt	3	0.44	0.44	0.46	0.48	0.66	0.80	0.83	0.58	0.21	3.7E-01
Specific Conductivity µS/cm	3	893	902	936	978	1309	1574	1640	1170	409	3.5E-01
Temperature °C	3	10.0	10.2	10.9	11.8	13.5	14.8	15.1	12.3	2.6	2.1E-01
Total Dissolved Solids	3	581	586	608	634	850	1023	1066	760	266	3.5E-01
Turbidity NTU	3	-10.1	-9.0	-4.5	1.1	5.4	8.8	9.6	0.2	9.9	4.9E+01
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	0	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	3	407	408	413	418	433	445	448	424	21	5.0E-02
Bicarbonate Alkalinity	3	374	378	396	418	433	444	447	413	37	8.9E-02
Carbonate Alkalinity	3	0.5	0.5	0.5	0.5	16.7	29.6	32.8	11.3	18.6	1.7E+00
Color TCU	0	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	3	397	397	399	400	407	413	414	404	9	2.2E-02
Hydroxide Alkalinity	3	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0E+00
pH (unitless)	3	8.4	8.4	8.4	8.4	8.5	8.6	8.6	8.4	0.1	1.5E-02
Specific Conductivity µS/cm	3	906	907	912	917	930	940	942	922	18	2.0E-02
Total Dissolved Solids	3	534	536	542	549	556	561	562	548	14	2.6E-02
Total Suspended Solids	3	1.5	1.5	1.5	1.5	3.7	5.4	5.8	2.9	2.5	8.5E-01
Turbidity NTU	3	1.0	1.4	3.1	5.2	14.5	21.9	23.8	10.0	12.1	1.2E+00
Dissolved Anions											
Bromide	3	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.00	0.0E+00
Chloride	3	49	49	49	50	50	51	51	50	1	2.1E-02
Fluoride	3	0.23	0.23	0.24	0.25	0.25	0.25	0.25	0.24	0.01	4.3E-02
Sulphate	3	27	28	34	41	41	42	42	36	9	2.4E-01
Nutrients											
Ammonia (Total)	3	0.243	0.255	0.302	0.360	0.960	1.440	1.560	0.721	0.729	1.0E+00
Nitrate (as N)	3	0.025	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.000	1.7E-16
Nitrite (as N)	3	0.0050	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.0000	0.0E+00
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	3	1.51	1.57	1.80	2.09	2.64	3.07	3.18	2.26	0.85	3.8E-01
Orthophosphate (Dissolved)	3	0.001	0.002	0.006	0.011	0.168	0.294	0.325	0.113	0.184	1.6E+00
Phosphorus - Dissolved	3	0.022	0.023	0.026	0.030	0.203	0.342	0.377	0.143	0.203	1.4E+00
Phosphorus - Total	3	0.044	0.047	0.057	0.070	0.238	0.373	0.407	0.174	0.203	1.2E+00
Cyanide											
Cyanide (Free)	3	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Cyanide (Total)	3	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Cyanide (WAD)	3	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Dissolved Metals											
Aluminum	3	0.0015	0.0016	0.0018	0.0021	0.0027	0.0032	0.0033	0.0023	0.0009	4.0E-01
Antimony	3	0.00005	0.00006	0.00009	0.00012	0.00013	0.00013	0.00013	0.00010	0.00004	4.4E-01
Arsenic	3	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0000	2.6E-02
Barium	3	0.053	0.053	0.056	0.059	0.063	0.066	0.067	0.060	0.007	1.2E-01
Beryllium	3	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	0.0E+00
Bismuth	3	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00000	0.0E+00
Boron	3	0.017	0.017	0.018	0.018	0.018	0.018	0.018	0.018	0.001	3.3E-02
Cadmium	3	0.0000050	0.0000050	0.0000050	0.0000050	0.0000080	0.0000104	0.0000110	0.0000070	0.0000035	4.9E-01
Calcium	3	40	40	41	42	44	45	45	42	2	5.6E-02
Chromium	3	0.00005	0.00005	0.00005	0.00005	0.00008	0.00010	0.00010	0.00007	0.00003	4.3E-01
Cobalt	3	0.00010	0.00010	0.00011	0.00011	0.00012	0.00012	0.00012	0.00011	0.00001	9.1E-02
Copper	3	0.0003	0.0003	0.0006	0.0010	0.0011	0.0012	0.0012	0.0008	0.0005	6.1E-01
Iron	3	0.005	0.005	0.005	0.005	0.010	0.014	0.015	0.008	0.006	6.9E-01
Lead	3	0.000025	0.000025	0.000025	0.000025	0.000038	0.000048	0.000051	0.000034	0.000015	4.5E-01
Lithium	3	0.01080	0.01082	0.01090	0.01100	0.01165	0.01217	0.01230	0.01137	0.00081	7.2E-02
Magnesium	3	72	72	72	72	73	73	73	72	1	1.3E-02
Manganese	3	0.107	0.117	0.156	0.204	0.210	0.214	0.215	0.175	0.059	3.4E-01
Mercury	3	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Molybdenum	3	0.000	0.000	0.001	0.001	0.002	0.002	0.002	0.001	0.001	7.6E-01
Nickel	3	0.0006	0.0006	0.0006	0.0006	0.0007	0.0007	0.0007	0.0007	0.0000	6.6E-02
Phosphorus	3	0.03	0.03	0.03	0.03	0.18	0.31	0.34	0.13	0.18	1.4E+00
Potassium	3	19	19	19	19	19	19	19	19	0	2.1E-02
Selenium	3	0.00005	0.00005	0.00005	0.00005	0.00012	0.00017	0.00018	0.00009	0.00008	8.0E-01
Silicon	3	1.4	1.4	1.7	2.0	2.7	3.3	3.4	2.2	1.0	4.7E-01
Silver	3	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Sodium	3	55	55	56	56	58	59	59	57	2	3.7E-02
Strontium	3	0.29	0.29	0.29	0.29	0.30	0.30	0.31	0.30	0.01	2.8E-02
Sulphur	3	11	12	13	14	14	15	15	13	2	1.3E-01
Thallium	3	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Tin	3	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	0.0E+00
Titanium	3	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0000	0.0E+00
Uranium	3	0.0015	0.0015	0.0015	0.0015	0.0016	0.0017	0.0017	0.0016	0.0001	8.0E-02
Vanadium	3	0.0021	0.0021	0.0021	0.0021	0.0025	0.0028	0.0029	0.0024	0.0005	2.0E-01
Zinc	3	0.0005	0.0005	0.0005	0.0005	0.0019	0.0029	0.0032	0.0014	0.0016	1.1E+00
Total Metals											
Aluminum	3	0.0056	0.0064	0.0096	0.0136	0.0151	0.0162	0.0165	0.0119	0.0056	4.7E-01
Antimony	3	0.00011	0.00011	0.00012	0.00012	0.00013	0.00013	0.00013	0.00012	0.00001	8.3E-02
Arsenic	3	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0017	0.0016	0.0000	2.3E-02
Barium	3	0.055	0.055	0.056	0.058	0.061	0.064	0.064	0.059	0.005	8.3E-02
Beryllium	3	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	0.0E+00
Bismuth	3	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00000	0.0E+00
Boron	3	0.019	0.019	0.021	0.022	0.023	0.024	0.024	0.022	0.003	1.2E-01
Cadmium	3	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000000	0.0E+00
Calcium	3	39	39	40	42	42	43	43	41	2	5.0E-02
Chromium	3	0.00015	0.00015	0.00015	0.00015	0.00016	0.00016	0.00016	0.00015	0.00001	3.8E-02
Cobalt	3	0.00014	0.00014	0.00014	0.00014	0.00014	0.00014	0.00014	0.00014	0.00000	0.0E+00
Copper	3	0.0015	0.0015	0.0015	0.0016	0.0016	0.0017	0.0017	0.0016	0.0001	7.9E-02
Iron	3	0.02	0.02	0.02	0.02	0.04	0.04	0.05	0.03	0.01	4.2E-01
Lead	3	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000000	0.0E+00
Lithium	3	0.0112	0.0112	0.0113	0.0114	0.0116	0.0117	0.0117	0.0114	0.0003	2.2E-02
Magnesium	3	70	70	71	72	72	72	72	71	1	1.7E-02
Manganese	3	0.12	0.13	0.16	0.20	0.21	0.22	0.23	0.18	0.05	3.0E-01
Mercury	3	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Molybdenum	3	0.001	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.001	4.4E-01
Nickel	3	0.0007	0.0007	0.0007	0.0008	0.0008	0.0008	0.0009	0.0008	0.0001	9.2E-02
Phosphorus	3	0.03	0.03	0.05	0.08	0.20	0.30	0.33	0.14	0.16	1.1E+00
Potassium	3	18	18	18	18	19	19	19	18	1	3.8E-02
Selenium	3	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00000	0.0E+00
Silicon	3	1.4	1.4	1.7	2.0	2.6	3.1	3.2	2.2	0.9	4.3E-01
Silver	3	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Sodium	3	56	56	56	56	56	56	57	56	0	6.7E-03
Strontium	3	0.30	0.30	0.30	0.30	0.31	0.31	0.31	0.31	0.01	2.1E-02
Sulphur	3	11	12	13	14	14	14	15	13	2	1.3E-01
Thallium	3	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Tin	3	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	0.0E+00
Titanium	3	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0000	0.0E+00
Uranium	3	0.0015	0.0015	0.0015	0.0016	0.0017	0.0018	0.0018	0.0016	0.0002	1.0E-01
Vanadium	3	0.0023	0.0023	0.0024	0.0025	0.0028	0.0030	0.0031	0.0026	0.0004	1.6E-01
Zinc	3	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0000	1.8E-16
Organics											
Carbon Organic (Dissolved)	3	19.1	19.2	19.4	19.7	20.3	20.7	20.8	19.9	0.9	4.3E-02
Carbon Organic (Total)	3	19.7	19.8	20.0	20.3	20.6	20.8	20.9	20.3	0.6	3.0E-02
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.11 - EDITH-01M
(PAGE 2 OF 2)

Parameter	Seasonal Statistics - EDITH-01M																			
	Count				Average				Min				Median				Max			
	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall
In Situ Parameters																				
Conductivity µS/cm	0	0	1	2	-	-	723	963	-	-	723	699	-	-	723	963	-	-	723	1227
Oxygen Dissolved %	0	0	1	2	-	-	25	12	-	-	25	5	-	-	25	12	-	-	25	19
Oxygen Dissolved	0	0	1	2	-	-	2	1	-	-	2	1	-	-	2	1	-	-	2	2
pH (unitless)	0	0	1	2	-	-	9	8	-	-	9	8	-	-	9	8	-	-	9	8
Redox Potential mV	0	0	1	2	-	-	130	-62	-	-	130	-233	-	-	130	-62	-	-	130	109
Salinity ppt	0	0	1	2	-	-	0.44	0.66	-	-	0.44	0.48	-	-	0.44	0.66	-	-	0.44	0.83
Specific Conductivity µS/cm	0	0	1	2	-	-	893	1309	-	-	893	978	-	-	893	1309	-	-	893	1640
Temperature °C	0	0	1	2	-	-	15	11	-	-	15	10	-	-	15	11	-	-	15	12
Total Dissolved Solids	0	0	1	2	-	-	581	850	-	-	581	634	-	-	581	850	-	-	581	1066
Turbidity NTU	0	0	1	2	-	-	1	0	-	-	1	-10	-	-	1	0	-	-	1	10
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	0	0	1	2	-	-	418	428	-	-	418	407	-	-	418	428	-	-	418	448
Bicarbonate Alkalinity	0	0	1	2	-	-	418	411	-	-	418	374	-	-	418	411	-	-	418	447
Carbonate Alkalinity	0	0	1	2	-	-	1	17	-	-	1	1	-	-	1	17	-	-	1	33
Color TCU	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	0	0	1	2	-	-	400	406	-	-	400	397	-	-	400	406	-	-	400	414
Hydroxide Alkalinity	0	0	1	2	-	-	0.50	0.50	-	-	0.50	0.50	-	-	0.50	0.50	-	-	0.50	0.50
pH (unitless)	0	0	1	2	-	-	8	8	-	-	8	8	-	-	8	8	-	-	8	9
Specific Conductivity µS/cm	0	0	1	2	-	-	917	924	-	-	917	906	-	-	917	924	-	-	917	942
Total Dissolved Solids	0	0	1	2	-	-	549	548	-	-	549	534	-	-	549	548	-	-	549	562
Total Suspended Solids	0	0	1	2	-	-	6	2	-	-	6	2	-	-	6	2	-	-	6	2
Turbidity NTU	0	0	1	2	-	-	5	12	-	-	5	1	-	-	5	12	-	-	5	24
Dissolved Anions																				
Bromide	0	0	1	2	-	-	0.25	0.25	-	-	0.25	0.25	-	-	0.25	0.25	-	-	0.25	0.25
Chloride	0	0	1	2	-	-	49	50	-	-	49	50	-	-	49	50	-	-	49	51
Fluoride	0	0	1	2	-	-	0.23	0.25	-	-	0.23	0.25	-	-	0.23	0.25	-	-	0.23	0.25
Sulphate	0	0	1	2	-	-	41	34	-	-	41	27	-	-	41	34	-	-	41	42
Nutrients								-												
Ammonia (Total)	0	0	1	2	-	-	0.360	0.902	-	-	0.360	0.243	-	-	0.360	0.902	-	-	0.360	1.560
Nitrate (as N)	0	0	1	2	-	-	0.025	0.025	-	-	0.025	0.025	-	-	0.025	0.025	-	-	0.025	0.025
Nitrite (as N)	0	0	1	2	-	-	0.0050	0.0050	-	-	0.0050	0.0050	-	-	0.0050	0.0050	-	-	0.0050	0.0050
Nitrogen (Dissolved)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	0	0	1	2	-	-	2.09	2.35	-	-	2.09	1.51	-	-	2.09	2.35	-	-	2.09	3.18
Orthophosphate (Dissolved)	0	0	1	2	-	-	0.001	0.168	-	-	0.001	0.011	-	-	0.001	0.168	-	-	0.001	0.325
Phosphorus - Dissolved	0	0	1	2	-	-	0.02	0.20	-	-	0.02	0.03	-	-	0.02	0.20	-	-	0.02	0.38
Phosphorus - Total	0	0	1	2	-	-	0.07	0.23	-	-	0.07	0.04	-	-	0.07	0.23	-	-	0.07	0.41
Cyanide																				
Cyanide (Free)	0	0	1	2	-	-	0.0025	0.0025	-	-	0.0025	0.0025	-	-	0.0025	0.0025	-	-	0.0025	0.0025
Cyanide (Total)	0	0	1	2	-	-	0.0025	0.0025	-	-	0.0025	0.0025	-	-	0.0025	0.0025	-	-	0.0025	0.0025
Cyanide (WAD)	0	0	1	2	-	-	0.0025	0.0025	-	-	0.0025	0.0025	-	-	0.0025	0.0025	-	-	0.0025	0.0025
Dissolved Metals																				
Aluminum	0	0	1	2	-	-	0.0021	0.0024	-	-	0.0021	0.0015	-	-	0.0021	0.0024	-	-	0.0021	0.0033
Antimony	0	0	1	2	-	-	0.00012	0.00009	-	-	0.00012	0.00005	-	-	0.00012	0.00009	-	-	0.00012	0.00013
Arsenic	0	0	1	2	-	-	0.0016	0.0016	-	-	0.0016	0.0016	-	-	0.0016	0.0016	-	-	0.0016	0.0016
Barium	0	0	1	2	-	-	0.059	0.060	-	-	0.059	0.053	-	-	0.059	0.060	-	-	0.059	0.067
Beryllium	0	0	1	2	-	-	0.00005	0.00005	-	-	0.00005	0.00005	-	-	0.00005	0.00005	-	-	0.00005	0.00005
Bismuth	0	0	1	2	-	-	0.000	0.000	-	-	0.000	0.000	-	-	0.000	0.000	-	-	0.000	0.000
Boron	0	0	1	2	-	-	0.017	0.018	-	-	0.017	0.018	-	-	0.017	0.018	-	-	0.017	0.018
Cadmium	0	0	1	2	-	-	0.000011	0.000005	-	-	0.000011	0.000005	-	-	0.000011	0.000005	-	-	0.000011	0.000005
Calcium	0	0	1	2	-	-	42	43	-	-	42	40	-	-	42	43	-	-	42	45
Chromium	0	0	1	2	-	-	0.00005	0.00008	-	-	0.00005	0.00005	-	-	0.00005	0.00008	-	-	0.00005	0.00010
Cobalt	0	0	1	2	-	-	0.00010	0.00012	-	-	0.00010	0.00011	-	-	0.00010	0.00012	-	-	0.00010	0.00012
Copper	0	0	1	2	-	-	0.0012	0.0006	-	-	0.0012	0.0003	-	-	0.0012	0.0006	-	-	0.0012	0.0010
Iron	0	0	1	2	-	-	0.005	0.010	-	-	0.005	0.005	-	-	0.005	0.010	-	-	0.005	0.015
Lead	0	0	1	2	-	-	0.00005	0.00003	-	-	0.00005	0.00003	-	-	0.00005	0.00003	-	-	0.00005	0.00003
Lithium	0	0	1	2	-	-	0.0108	0.0117	-	-	0.0108	0.0110	-	-	0.0108	0.0117	-	-	0.0108	0.0123
Magnesium	0	0	1	2	-	-	71.6	72.7	-	-	71.6	72.0	-	-	71.6	72.7	-	-	71.6	73.4
Manganese	0	0	1	2	-	-	0.215	0.156	-	-	0.215	0.107	-	-	0.215	0.156	-	-	0.215	0.204
Mercury	0	0	1	2	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050
Molybdenum	0	0	1	2	-	-	0.0014	0.0013	-	-	0.0014	0.0003	-	-	0.0014	0.0013	-	-	0.0014	0.0024
Nickel	0	0	1	2	-	-	0.0006	0.0007	-	-	0.0006	0.0006	-	-	0.0006	0.0007	-	-	0.0006	0.0007
Phosphorus	0	0	1	2	-	-	0.03	0.18	-	-	0.03	0.03	-	-	0.03	0.18	-	-	0.03	0.34
Potassium	0	0	1	2	-	-	19	19	-	-	19	19	-	-	19	19	-	-	19	19
Selenium	0	0	1	2	-	-	0.00005	0.00012	-	-	0.00005	0.00005	-	-	0.00005	0.00012	-	-	0.00005	0.00018
Silicon	0	0	1	2	-	-	1.97	2.38	-	-	1.97	1.36	-	-	1.97	2.38	-	-	1.97	3.40
Silver	0	0	1	2	-	-	0.000005	0.000005	-	-	0.000005	0.000005	-	-	0.000005	0.000005	-	-	0.000005	0.000005
Sodium	0	0	1	2	-	-	56	57	-	-	56	55	-	-	56	57	-	-	56	59
Strontium	0	0	1	2	-	-	0.29	0.30	-	-	0.29	0.29	-	-	0.29	0.30	-	-	0.29	0.31
Sulphur	0	0	1	2	-	-	14	13	-	-	14	11	-	-	14	13	-	-	14	15
Thallium	0	0	1	2	-	-	0.000005	0.000005	-	-	0.000005	0.000005	-	-	0.000005	0.000005	-	-	0.000005	0.000005
Tin	0	0	1	2	-	-	0.00005	0.00005	-	-	0.00005	0.00005	-	-	0.00005	0.00005	-	-	0.00005	0.00005
Titanium	0	0	1	2	-	-	0.0050	0.0050	-	-	0.0050	0.0050	-	-	0.0050	0.0050	-	-	0.0050	0.0050
Uranium	0	0	1	2	-	-	0.0015	0.0016	-	-	0.0015	0.0015	-	-	0.0015	0.0016	-	-	0.0015	0.0017
Vanadium	0	0	1	2	-	-	0.0021	0.0025	-	-	0.0021	0.0021	-	-	0.0021	0.0025	-	-	0.0021	0.0029
Zinc	0	0	1	2	-	-	0.0032	0.0005	-	-	0.0032	0.0005	-	-	0.0032	0.0005	-	-	0.0032	0.0005
Total Metals																				
Aluminum	0	0	1	2	-	-	0.01	0.01	-	-	0.01	0.01	-	-	0.01	0.01	-	-	0.01	0.02
Antimony	0	0	1	2	-	-	0.00012	0.00012	-	-	0.00012	0.00011	-	-	0.00012	0.00012	-	-	0.00012	0.00013
Arsenic	0	0	1	2	-	-	0.0016	0.0016	-	-	0.0016	0.0016	-	-	0.0016	0.0016	-	-	0.0016	0.0017
Barium	0	0	1	2	-	-	0.058	0.059	-	-	0.058	0.055	-	-	0.058	0.059	-	-	0.058	0.064
Beryllium	0	0	1	2	-	-	0.00005	0.00005	-	-	0.00005	0.00005	-	-	0.00005	0.00005	-	-	0.00005	0.00005
Bismuth	0	0	1	2	-	-	0.00025	0.00025	-	-	0.00025	0.00025	-	-	0.00025	0.00025	-	-	0.00025	0.00025
Boron	0	0	1	2	-	-	0.019	0.023	-	-	0.019	0.022	-	-	0.019	0.023	-	-	0.019	0.024
Cadmium	0	0	1	2	-	-	0.000005	0.000005	-	-	0.000005	0.000005	-	-	0.000005	0.000005	-	-	0.000005	0.000005
Calcium	0	0	1	2	-	-	42	41	-	-	42	39	-	-	42	41	-	-	42	43
Chromium	0	0	1	2	-	-	0.0002	0.0002	-	-	0.0002	0.0002	-	-	0.0002	0.0002	-	-	0.0002	0.0002
Cobalt	0	0	1	2	-	-	0.00014	0.00014	-	-	0.00014	0.00014	-	-	0.00014	0.00014	-	-	0.00014	0.00014
Copper	0	0	1	2	-	-	0.0016	0.0016	-	-	0.0016	0.0015	-	-	0.0016	0.0016	-	-	0.0016	0.0017
Iron	0	0	1	2	-	-	0.02	0.03	-	-	0.02	0.02	-	-	0.02	0.03	-	-	0.02	0.05
Lead	0	0	1	2	-	-	0.00003	0.00003	-	-	0.00003	0.00003	-	-	0.00003	0.00003	-	-	0.00003	0.00003
Lithium	0	0	1	2	-	-	0.0114	0.0115	-	-	0.0114	0.0112	-	-	0.0114	0.0115	-	-	0.0114	0.0117
Magnesium	0	0	1	2	-	-	72	71	-	-	72	70	-	-	72	71	-	-	72	72
Manganese	0	0	1	2	-	-	0.23	0.16	-	-	0.23	0.12	-	-	0.23	0.16	-	-	0.23	0.20
Mercury	0	0	1	2	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050
Molybdenum	0	0	1	2	-	-	0.002	0.002	-	-	0.002	0.001	-	-	0.002	0.002	-	-	0.002	0.002
Nickel	0	0	1	2	-	-	0.0008	0.0008	-	-	0.0008	0.0007	-	-	0.0008	0.0008	-	-	0.0008	0.0009
Phosphorus	0	0	1	2	-	-	0.08	0.18	-	-	0.08	0.03	-	-	0.08	0.18	-	-	0.08	0.33
Potassium	0	0	1	2	-	-	19.2	18.0	-	-	19.2	17.9	-	-	19.2	18.0	-	-	19.2	18.1
Selenium	0	0	1	2	-	-	0.00005	0.00005	-	-	0.00005	0.00005	-	-	0.00005	0.00005	-	-	0.00005	0.00005
Silicon	0	0	1	2	-	-	2.0	2.3	-	-	2.0	1.4	-	-	2.0	2.3	-	-	2.0	3.2
Silver	0	0	1	2	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050
Sodium	0	0	1	2	-	-	57	56	-	-	57	56	-	-	57	56	-	-	57	56
Strontium	0	0	1	2	-	-	0.31	0.30	-	-	0.31	0.30	-	-	0.31	0.30	-	-	0.31	0.30
Sulphur	0	0	1	2	-	-	14	13	-	-	14	11	-	-	14	13	-	-	14	15
Thallium	0	0	1	2	-	-	0.00001	0.00001	-	-	0.00001	0.00001	-	-	0.00001	0.00001	-	-	0.00001	0.00001
Tin	0	0	1	2	-	-	0.00005	0.00005	-	-	0.00005	0.00005	-	-	0.00005	0.00005	-	-	0.00005	0.00005
Titanium	0	0	1	2	-	-	0.005	0.005	-	-	0.005	0.005	-	-	0.005	0.005	-	-	0.005	0.005
Uranium	0	0	1	2	-	-	0.0016	0.0017	-	-	0.0016	0.0015	-	-	0.0016	0.0017	-	-	0.0016	0.0018
Vanadium	0	0	1	2	-	-	0.0023	0.0028	-	-	0.0023	0.0025	-	-	0.0023	0.0028	-	-	0.0023	0.0031
Zinc	0	0	1	2	-	-	0.0015	0.0015	-	-	0.0015	0.0015	-	-	0.0015	0.0015	-	-	0.0015	0.0015
Organics																				
Carbon Organic (Dissolved)	0	0	1	2	-	-	19	20	-	-	19	20	-	-	19	20	-	-	19	21
Carbon Organic (Total)	0	0	1	2	-	-	20	20	-	-	20	20	-	-	20	20	-	-	20	21
Nitrogen Organic (Dissolved)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.
2. SEASONS ARE SPECIFIED AS FOLLOWS: WIN (WINTER; DECEMBER THROUGH MARCH), SPR (SPRING; APRIL AND MAY), SUMMER(JUNE THROUGH AUGUST), FALL (SEPTEMBER THROUGH NOVEMBER).

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.12 - EDITH-01S
(PAGE 1 OF 2)

Parameter	Total Count	Complete Dataset - EDITH-01S									
		Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	11	527	602	716	782	794	1035	1236	785	171	2.2E-01
Oxygen Dissolved %	9	13	29	77	84	88	91	92	73	26	3.5E-01
Oxygen Dissolved	9	1.2	2.6	7.4	8.1	8.8	9.0	9.0	7.2	2.6	3.7E-01
pH (unitless)	11	7.9	8.0	8.7	8.8	8.8	8.8	8.8	8.6	0.3	3.6E-02
Redox Potential mV	11	-196	-124	-24	50	77	146	168	26	99	3.8E+00
Salinity ppt	11	0.39	0.41	0.43	0.44	0.44	0.64	0.81	0.47	0.11	2.5E-01
Specific Conductivity µS/cm	11	798	829	874	885	896	1263	1597	943	219	2.3E-01
Temperature °C	11	7.2	10.0	13.6	16.6	19.3	21.1	21.8	16.0	4.3	2.7E-01
Total Dissolved Solids	11	518	539	568	575	583	820	1037	613	142	2.3E-01
Turbidity NTU	11	-9.9	-5.4	-0.4	0.8	1.6	2.8	3.7	0.0	3.5	-3.9E+02
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	0	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	11	355	370	394	402	406	419	421	398	18	4.4E-02
Bicarbonate Alkalinity	11	304	322	344	345	357	373	382	348	19	5.5E-02
Carbonate Alkalinity	11	39.3	39.6	45.7	50.3	57.4	59.5	60.7	50.5	7.5	1.5E-01
Color TCU	0	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	11	382	382	387	391	394	402	408	391	7	1.9E-02
Hydroxide Alkalinity	11	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0E+00
pH (unitless)	11	8.6	8.7	8.7	8.8	8.8	8.8	8.8	8.7	0.1	6.9E-03
Specific Conductivity µS/cm	11	842	844	859	864	887	900	901	870	20	2.3E-02
Total Dissolved Solids	11	457	469	498	527	540	546	547	517	29	5.7E-02
Total Suspended Solids	11	1.5	1.5	1.5	1.5	4.4	6.5	7.4	3.1	2.1	6.8E-01
Turbidity NTU	11	0.5	0.6	1.1	1.7	2.1	4.9	6.5	2.1	1.7	8.1E-01
Dissolved Anions											
Bromide	11	0.03	0.14	0.25	0.25	0.25	0.25	0.25	0.23	0.07	3.0E-01
Chloride	11	47	47	48	50	50	51	51	49	1	2.9E-02
Fluoride	11	0.21	0.22	0.23	0.24	0.25	0.41	0.46	0.27	0.07	2.8E-01
Sulphate	11	39	40	41	42	42	42	42	41	1	2.5E-02
Nutrients											
Ammonia (Total)	11	0.013	0.014	0.018	0.024	0.031	0.072	0.092	0.031	0.023	7.3E-01
Nitrate (as N)	11	0.006	0.02	0.03	0.03	0.03	0.03	0.03	0.02	0.006	2.4E-01
Nitrite (as N)	11	0.0005	0.00	0.01	0.01	0.01	0.01	0.01	0.00	0.0014	3.0E-01
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	11	1.26	1.29	1.38	1.42	1.54	1.65	1.66	1.45	0.13	8.9E-02
Orthophosphate (Dissolved)	11	0.001	0.001	0.001	0.001	0.002	0.006	0.008	0.002	0.002	1.3E+00
Phosphorus - Dissolved	11	0.018	0.018	0.021	0.022	0.024	0.029	0.031	0.023	0.004	1.7E-01
Phosphorus - Total	11	0.028	0.029	0.030	0.031	0.036	0.055	0.070	0.036	0.012	3.3E-01
Cyanide											
Cyanide (Free)	11	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	1.8E-16
Cyanide (Total)	11	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	1.8E-16
Cyanide (WAD)	11	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	1.8E-16
Dissolved Metals											
Aluminum	11	0.0005	0.0009	0.0020	0.0042	0.0054	0.0111	0.0116	0.0047	0.0036	7.7E-01
Antimony	11	0.00010	0.00011	0.00012	0.00013	0.00013	0.00014	0.00014	0.00012	0.00001	9.1E-02
Arsenic	11	0.0014	0.0014	0.0015	0.0016	0.0017	0.0018	0.0018	0.0016	0.0001	9.0E-02
Barium	11	0.042	0.044	0.047	0.049	0.050	0.054	0.054	0.049	0.004	7.4E-02
Beryllium	11	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	2.8E-16
Bismuth	11	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00000	2.3E-16
Boron	11	0.014	0.015	0.015	0.016	0.016	0.019	0.020	0.016	0.002	1.0E-01
Cadmium	11	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Calcium	11	38	38	39	40	41	41	42	40	1	2.9E-02
Chromium	11	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00000	2.8E-16
Cobalt	11	0.00005	0.00005	0.00011	0.00012	0.00014	0.00014	0.00014	0.00011	0.00003	2.9E-01
Copper	11	0.0007	0.0008	0.0010	0.0011	0.0011	0.0013	0.0014	0.0011	0.0002	1.7E-01
Iron	11	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.000	1.8E-16
Lead	11	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000000	2.8E-16
Lithium	11	0.01020	0.01030	0.01070	0.01130	0.01195	0.01270	0.01290	0.01142	0.00088	7.7E-02
Magnesium	11	68	69	70	71	72	73	75	71	2	2.5E-02
Manganese	11	0.001	0.001	0.002	0.002	0.004	0.007	0.009	0.003	0.002	7.7E-01
Mercury	11	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Molybdenum	11	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.000	5.5E-02
Nickel	11	0.0006	0.0006	0.0006	0.0007	0.0007	0.0007	0.0007	0.0007	0.0000	6.6E-02
Phosphorus	11	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.00	1.5E-16
Potassium	11	17	17	17	18	19	20	21	18	1	6.8E-02
Selenium	11	0.00005	0.00005	0.00005	0.00005	0.00010	0.00012	0.00013	0.00007	0.00003	4.3E-01
Silicon	11	0.0	0.0	0.2	0.3	0.4	1.0	1.0	0.4	0.3	9.2E-01
Silver	11	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Sodium	11	52	52	53	55	57	60	61	56	3	5.3E-02
Strontium	11	0.27	0.27	0.27	0.28	0.28	0.31	0.33	0.28	0.02	6.4E-02
Sulphur	11	14	14	14	15	15	15	16	14	1	3.8E-02
Thallium	11	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Tin	11	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	2.8E-16
Titanium	11	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0000	1.8E-16
Uranium	11	0.0014	0.0015	0.0016	0.0016	0.0017	0.0018	0.0018	0.0016	0.0001	6.1E-02
Vanadium	11	0.0021	0.0022	0.0023	0.0028	0.0033	0.0033	0.0033	0.0028	0.0005	1.8E-01
Zinc	11	0.0005	0.0005	0.0005	0.0005	0.0013	0.0026	0.0034	0.0011	0.0009	8.3E-01
Total Metals											
Aluminum	11	0.0037	0.0047	0.0074	0.0141	0.0160	0.0228	0.0232	0.0131	0.0065	5.0E-01
Antimony	11	0.00012	0.00013	0.00013	0.00014	0.00015	0.00017	0.00017	0.00014	0.00001	1.0E-01
Arsenic	11	0.0013	0.0013	0.0014	0.0016	0.0016	0.0017	0.0017	0.0015	0.0001	9.8E-02
Barium	11	0.041	0.042	0.046	0.047	0.049	0.051	0.052	0.047	0.003	7.1E-02
Beryllium	11	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	2.8E-16
Bismuth	11	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00000	2.3E-16
Boron	11	0.014	0.015	0.016	0.018	0.019	0.021	0.022	0.018	0.002	1.3E-01
Cadmium	11	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000000	0.0E+00
Calcium	11	37	37	38	39	39	40	41	39	1	3.0E-02
Chromium	11	0.00005	0.00005	0.00005	0.00011	0.00015	0.00017	0.00018	0.00010	0.00005	5.1E-01
Cobalt	11	0.00005	0.00008	0.00011	0.00014	0.00016	0.00017	0.00017	0.00013	0.00004	2.7E-01
Copper	11	0.0010	0.0010	0.0011	0.0013	0.0014	0.0024	0.0028	0.0014	0.0005	3.9E-01
Iron	11	0.01	0.01	0.02	0.02	0.03	0.04	0.05	0.02	0.01	4.9E-01
Lead	11	0.000025	0.000025	0.000025	0.000025	0.000025	0.000051	0.000077	0.000030	0.000016	5.3E-01
Lithium	11	0.0094	0.0097	0.0102	0.0111	0.0112	0.0116	0.0118	0.0108	0.0007	6.9E-02
Magnesium	11	65	66	68	69	72	73	73	69	3	3.8E-02
Manganese	11	0.00	0.00	0.00	0.01	0.01	0.02	0.02	0.01	0.01	7.8E-01
Mercury	11	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Molybdenum	11	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.000	3.8E-02
Nickel	11	0.0007	0.0007	0.0007	0.0007	0.0008	0.0008	0.0008	0.0007	0.0000	6.2E-02
Phosphorus	11	0.03	0.03	0.03	0.03	0.03	0.05	0.08	0.03	0.02	5.4E-01
Potassium	11	16	16	17	18	18	20	20	18	1	7.0E-02
Selenium	11	0.00005	0.00005	0.00005	0.00005	0.00011	0.00012	0.00012	0.00008	0.00003	4.0E-01
Silicon	11	0.1	0.1	0.2	0.3	0.5	1.0	1.0	0.4	0.3	8.2E-01
Silver	11	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Sodium	11	51	52	54	54	56	58	58	55	2	4.0E-02
Strontium	11	0.26	0.27	0.28	0.29	0.29	0.30	0.30	0.28	0.01	3.9E-02
Sulphur	11	14	14	14	15	15	15	16	15	1	3.7E-02
Thallium	11	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Tin	11	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	2.8E-16
Titanium	11	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0000	1.8E-16
Uranium	11	0.0017	0.0017	0.0018	0.0018	0.0019	0.0019	0.0019	0.0018	0.0001	3.2E-02
Vanadium	11	0.0023	0.0023	0.0025	0.0030	0.0035	0.0036	0.0036	0.0029	0.0005	1.8E-01
Zinc	11	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0000	1.5E-16
Organics											
Carbon Organic (Dissolved)	11	9.8	14.1	18.7	19.1	19.6	20.1	20.2	18.4	2.9	1.6E-01
Carbon Organic (Total)	11	10.0	14.4	19.6	20.0	20.2	20.4	20.4	19.0	3.0	1.6E-01
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.12 - EDITH-01S
(PAGE 2 OF 2)

Seasonal Statistics - EDITH-01S

Parameter	Count					Average				Min				Median				Max		
	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall
In Situ Parameters																				
Conductivity µS/cm	0	3	6	2	-	639	781	1015	-	527	720	794	-	677	787	1015	-	712	833	1236
Oxygen Dissolved %	0	2	5	2	-	82	65	85	-	76.5	13	84	-	82.15	81	85	-	87.8	92	85
Oxygen Dissolved	0	2	5	2	-	9	6	9	-	8.13	1	9	-	8.565	7	9	-	9	9	9
pH (unitless)	0	3	6	2	-	9	9	9	-	8.14	8	9	-	8.75	9	9	-	8.81	9	9
Redox Potential mV	0	3	6	2	-	41	-15	125	-	0.8	-196	82	-	49.9	-11	125	-	71.1	123	168
Salinity ppt	0	3	6	2	-	0.42	0.43	0.64	-	0.39	0.42	0.46	-	0.44	0.44	0.64	-	0.44	0.44	0.81
Specific Conductivity µS/cm	0	3	6	2	-	860	879	1263	-	798	859	929	-	885	879	1263	-	897	894	1597
Temperature °C	0	3	6	2	-	11	19	14	-	7.23	17	13	-	12.7	19	14	-	14.3	22	14
Total Dissolved Solids	0	3	6	2	-	559	571	820	-	518	559	603	-	575	572	820	-	584	581	1037
Turbidity NTU	0	3	6	2	-	-1	2	-4	-	-0.9	1	-10	-	-0.4	1	-4	-	-0.3	4	2
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	0	3	6	2	-	378	403	415	-	355	393	408	-	384	403	415	-	394	416	421
Bicarbonate Alkalinity	0	3	6	2	-	331	348	373	-	304	339	364	-	344	345	373	-	346	358	382
Carbonate Alkalinity	0	3	6	2	-	46	56	41	-	39.9	50	39	-	47.8	57	41	-	51.1	61	44
Color TCU	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	0	3	6	2	-	391	388	401	-	387	382	394	-	393	389	401	-	394	396	408
Hydroxide Alkalinity	0	3	6	2	-	0.50	0.50	0.50	-	0.5	0.50	0.50	-	0.5	0.50	0.50	-	0.5	0.50	0.50
pH (unitless)	0	3	6	2	-	9	9	9	-	8.68	9	9	-	8.7	9	9	-	8.84	9	9
Specific Conductivity µS/cm	0	3	6	2	-	858	867	900	-	842	846	898	-	864	861	900	-	867	891	901
Total Dissolved Solids	0	3	6	2	-	519	507	543	-	501	457	538	-	527	510	543	-	528	545	547
Total Suspended Solids	0	3	6	2	-	3	3	2	-	1.5	2	2	-	1.5	3	2	-	7.4	6	3
Turbidity NTU	0	3	6	2	-	1	3	2	-	0.52	1	1	-	0.69	2	2	-	1.69	6	2
Dissolved Anions																				
Bromide	0	3	6	2	-	0.18	0.25	0.25	-	0.025	0.25	0.25	-	0.25	0.25	0.25	-	0.25	0.25	0.25
Chloride	0	3	6	2	-	47	50	51	-	46.6	49	50	-	47.3	50	51	-	48.1	51	51
Fluoride	0	3	6	2	-	0.23	0.29	0.25	-	0.21	0.23	0.24	-	0.22	0.25	0.25	-	0.25	0.46	0.25
Sulphate	0	3	6	2	-	40	42	42	-	38.9	41	42	-	40.5	42	42	-	41.1	42	42
Nutrients								-												
Ammonia (Total)	0	3	6	2	-	0.047	0.023	0.035	-	0.0183	0.013	0.017	-	0.0293	0.024	0.035	-	0.0922	0.032	0.052
Nitrate (as N)	0	3	6	2	-	0.02	0.025	0.025	-	0.0063	0.025	0.025	-	0.025	0.025	0.025	-	0.025	0.025	0.025
Nitrite (as N)	0	3	6	2	-	0.0035	0.0050	0.0050	-	0.0005	0.0050	0.0050	-	0.005	0.0050	0.0050	-	0.005	0.0050	0.0050
Nitrogen (Dissolved)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	0	3	6	2	-	1.44	1.47	1.42	-	1.36	1.26	1.40	-	1.39	1.46	1.42	-	1.58	1.66	1.43
Orthophosphate (Dissolved)	0	3	6	2	-	0.005	0.001	0.001	-	0.0024	0.001	0.001	-	0.004	0.001	0.001	-	0.0078	0.001	0.001
Phosphorus - Dissolved	0	3	6	2	-	0.028	0.02	0.02	-	0.0251	0.02	0.02	-	0.0263	0.02	0.02	-	0.0314	0.02	0.02
Phosphorus - Total	0	3	6	2	-	0.05	0.03	0.03	-	0.0313	0.03	0.03	-	0.0371	0.03	0.03	-	0.0698	0.04	0.03
Cyanide																				
Cyanide (Free)	0	3	6	2	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025
Cyanide (Total)	0	3	6	2	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025
Cyanide (WAD)	0	3	6	2	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025
Dissolved Metals																				
Aluminum	0	3	6	2	-	0.0013	0.0054	0.0075	-	0.0005	0.0019	0.0044	-	0.0012	0.0046	0.0075	-	0.0021	0.0116	0.0105
Antimony	0	3	6	2	-	0.00011	0.00013	0.00013	-	0.0001	0.00012	0.00013	-	0.00011	0.00013	0.00013	-	0.00012	0.00014	0.00013
Arsenic	0	3	6	2	-	0.0014	0.0016	0.0017	-	0.00141	0.0015	0.0017	-	0.00141	0.0016	0.0017	-	0.00141	0.0018	0.0018
Barium	0	3	6	2	-	0.048	0.047	0.054	-	0.0455	0.042	0.054	-	0.0488	0.047	0.054	-	0.0494	0.050	0.054
Beryllium	0	3	6	2	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005
Bismuth	0	3	6	2	-	0.000	0.000	0.000	-	0.00025	0.000	0.000	-	0.00025	0.000	0.000	-	0.00025	0.000	0.000
Boron	0	3	6	2	-	0.015	0.016	0.018	-	0.014	0.015	0.016	-	0.015	0.016	0.018	-	0.015	0.018	0.020
Cadmium	0	3	6	2	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005
Calcium	0	3	6	2	-	41	39	40	-	40.4	38	40	-	40.7	39	40	-	42	41	41
Chromium	0	3	6	2	-	0.0001	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005
Cobalt	0	3	6	2	-	0.00007	0.00013	0.00013	-	0.00005	0.00011	0.00013	-	0.00005	0.00013	0.00013	-	0.00011	0.00014	0.00013
Copper	0	3	6	2	-	0.0009	0.0012	0.0011	-	0.00074	0.0010	0.0011	-	0.00079	0.0011	0.0011	-	0.00102	0.0014	0.0011
Iron	0	3	6	2	-	0.005	0.005	0.005	-	0.005	0.005	0.005	-	0.005	0.005	0.005	-	0.005	0.005	0.005
Lead	0	3	6	2	-	0.00003	0.00003	0.00003	-	0.000025	0.00003	0.00003	-	0.000025	0.00003	0.00003	-	0.000025	0.00003	0.00003
Lithium	0	3	6	2	-	0.0111	0.0116	0.0116	-	0.0106	0.0104	0.0102	-	0.0108	0.0116	0.0116	-	0.0118	0.0125	0.0129
Magnesium	0	3	6	2	-	70.1	70.5	73.0	-	69.2	68.2	71.5	-	70.3	70.8	73.0	-	70.9	72.2	74.5
Manganese	0	3	6	2	-	0.003	0.002	0.007	-	0.00106	0.001	0.005	-	0.00238	0.002	0.007	-	0.00483	0.004	0.009
Mercury	0	3	6	2	-	0.0000050	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050
Molybdenum	0	3	6	2	-	0.0019	0.0020	0.0020	-	0.00185	0.0019	0.0019	-	0.00186	0.0020	0.0020	-	0.00201	0.0021	0.0022
Nickel	0	3	6	2	-	0.0007	0.0006	0.0007	-	0.00061	0.0006	0.0007	-	0.00063	0.0006	0.0007	-	0.00074	0.0007	0.0007
Phosphorus	0	3	6	2	-	0.03	0.03	0.03	-	0.025	0.03	0.03	-	0.025	0.03	0.03	-	0.025	0.03	0.03
Potassium	0	3	6	2	-	17	18	19	-	16.8	17	19	-	16.9	18	19	-	17.6	21	19
Selenium	0	3	6	2	-	0.00009	0.00007	0.00005	-	0.00005	0.00005	0.00005	-	0.0001	0.00005	0.00005	-	0.00013	0.00010	0.00005
Silicon	0	3	6	2	-	0.07	0.30	0.96	-	0.025	0.17	0.90	-	0.025	0.30	0.96	-	0.16	0.51	1.03
Silver	0	3	6	2	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005
Sodium	0	3	6	2	-	53	55	60	-	52.2	53	60	-	53	56	60	-	53.7	57	61
Strontium	0	3	6	2	-	0.27	0.28	0.30	-	0.267	0.27	0.27	-	0.271	0.28	0.30	-	0.282	0.29	0.33
Sulphur	0	3	6	2	-	14	15	14	-	13.7	14	14	-	14.2	15	14	-	14.8	16	15
Thallium	0	3	6	2	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005
Tin	0	3	6	2	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005
Titanium	0	3	6	2	-	0.005	0.0050	0.0050	-	0.005	0.0050	0.0050	-	0.005	0.0050	0.0050	-	0.005	0.0050	0.0050
Uranium	0	3	6	2	-	0.0015	0.0017	0.0017	-	0.00143	0.0016	0.0017	-	0.00156	0.0017	0.0017	-	0.00162	0.0018	0.0018
Vanadium	0	3	6	2	-	0.0022	0.0029	0.0033	-	0.0021	0.0023	0.0033	-	0.0022	0.0030	0.0033	-	0.0023	0.0033	0.0033
Zinc	0	3	6	2	-	0.0017	0.0008	0.0009	-	0.0005	0.0005	0.0005	-	0.0012	0.0005	0.0009	-	0.0034	0.0017	0.0013
Total Metals																				
Aluminum	0	3	6	2	-	0.01	0.02	0.01	-	0.0037	0.01	0.01	-	0.006	0.02	0.01	-	0.0088	0.02	0.01
Antimony	0	3	6	2	-	0.00014	0.00015	0.00014	-	0.00013	0.00012	0.00013	-	0.00013	0.00015	0.00014	-	0.00015	0.00017	0.00014
Arsenic	0	3	6	2	-	0.0013	0.0016	0.0016	-	0.00129	0.0015	0.0016	-	0.00133	0.0016	0.0016	-	0.00136	0.0017	0.0017
Barium	0	3	6	2	-	0.046	0.046	0.051	-	0.0423	0.041	0.051	-	0.0463	0.046	0.051	-	0.0483	0.050	0.052
Beryllium	0	3	6	2	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005
Bismuth	0	3	6	2	-	0.00025	0.00025	0.00025	-	0.00025	0.00025	0.00025	-	0.00025	0.00025	0.00025	-	0.00025	0.00025	0.00025
Boron	0	3	6	2	-	0.015	0.018	0.021	-	0.014	0.017	0.020	-	0.015	0.018	0.021	-	0.015	0.019	0.022
Cadmium	0	3	6	2	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005
Calcium	0	3	6	2	-	40	39	38	-	38.5	37	37	-	39.3	39	38	-	40.7	40	38
Chromium	0	3	6	2	-	0.0001	0.0001	0.0002	-	0.00005	0.0001	0.0002	-	0.00005	0.0001	0.0002	-	0.00011	0.0002	0.0002
Cobalt	0	3	6	2	-	0.00009	0.00015	0.00015	-	0.00005	0.00011	0.00014	-	0.00011	0.00016	0.00015	-	0.0001	0.00017	0.00015
Copper	0	3	6	2	-	0.0010	0.0015	0.0017	-	0.00095	0.0011	0.0013	-	0.00099	0.0014	0.0017	-	0.00106	0.0028	0.0021
Iron	0	3	6	2	-	0.03	0.02	0.02	-	0.012	0.01	0.02	-	0.016	0.02	0.02	-	0.049	0.03	0.02
Lead	0	3	6	2	-	0.00003	0.00003	0.00003	-	0.000025	0.00003	0.00003	-	0.00003	0.00003	0.00003	-	0.0000	0.00008	0.00003
Lithium	0	3	6	2	-	0.0102	0.0111	0.0106	-	0.00936	0.0101	0.0102	-	0.00996	0.0112	0.0106	-	0.0112	0.0118	0.0110
Magnesium	0	3	6	2	-	67	70	70	-	64.7	67	68	-	68.7	70	70	-	68.8	73	72
Manganese	0	3	6	2	-	0.01	0.01	0.02	-	0.00389	0.00	0.02	-	0.00573	0.01	0.02	-	0.0107	0.01	0.02
Mercury	0	3	6	2	-	0.0000050	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050
Molybdenum	0	3	6	2	-	0.002	0.002	0.002	-	0.00191	0.002	0.002	-	0.00195	0.002	0.002	-	0.00202	0.002	0.002
Nickel	0	3	6	2	-	0.0007	0.0007	0.0008	-	0.0007	0.0007	0.0008	-	0.0007	0.0007	0.0008	-	0.0007	0.0008	0.0008
Phosphorus	0	3	6	2	-	0.04	0.03	0.03	-	0.025	0.03	0.03	-	0.025	0.03	0.03	-	0.078	0.03	0.03
Potassium	0	3	6	2	-	16.5	18.5	18.0	-	16.3	17.0	17.5	-	16.5	18.3	18.0	-	16.7	20.2	18.4
Selenium	0	3	6	2	-	0.00009	0.00006	0.00011	-	0.00005	0.00005	0.00010	-	0.0001	0.00005	0.00011	-	0.0001	0.00010	0.00011
Silicon	0	3	6	2	-	0.1	0.3	1.0	-	0.1	0.2	0.9	-	0.1	0.3	1.0	-	0.2	0.5	1.0
Silver	0	3	6	2	-	0.0000050	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050
Sodium	0	3	6	2	-	52	56	56	-	50.9	54	54	-	52.8	56	56	-	53.4	58	58
Strontium	0	3	6	2	-	0.3	0.29	0.29	-	0.26	0.28	0.29	-	0.3	0.29	0.29	-	0.3	0.30	0.29
Sulphur	0	3	6	2	-	14	15	14	-	13.6	14	14	-	14.3	15	14	-	14.5	16	15
Thallium	0	3	6	2	-	0.00001	0.00001	0.00001	-	0.000005	0.00001	0.00001	-	0.000005	0.00001	0.00001	-	0.000005	0.00001	0.00001
Tin	0	3	6	2	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005
Titanium	0	3	6	2	-	0.005	0.005	0.005	-	0.005	0.005	0.005	-	0.005	0.005	0.005	-	0.005	0.005	0.005
Uranium	0	3	6	2	-	0.0018	0.0018	0.0019	-	0.0017	0.0018	0.0018	-	0.0018	0.0018	0.0019	-	0.0018	0.0019	0.0019
Vanadium	0	3	6	2	-	0.0023	0.0031	0.0033	-	0.0023	0.0026	0.0031	-	0.0023	0.0032	0.0033	-	0.0023	0.0036	0.0035
Zinc	0	3	6	2	-	0.0015	0.0015	0.0015	-	0.0015	0.0015	0.0015	-	0.0015	0.0015	0.0015	-	0.0015	0.0015	0.0015
Organics																				
Carbon Organic (Dissolved)	0	3	6	2	-	18.8	18	20	-	18.4	10	20	-	18.6	19	20	-	20	20	20
Carbon Organic (Total)	0	3	6	2	-	20	18	20	-	18.9	10	20	-	19.3	20	20	-	20	20	20
Nitrogen Organic (Dissolved)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.
2. SEASONS ARE SPECIFIED AS FOLLOWS: WIN (WINTER; DECEMBER THROUGH MARCH), SPR (SPRING; APRIL AND MAY), SUMMER(JUNE THROUGH AUGUST), FALL (SEPTEMBER THROUGH NOVEMBER).

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.13 - GOOSE LAKE
(PAGE 1 OF 2)

Parameter	Total Count	Complete Dataset - GOOSE LAKE									
		Min	Percentiles 5th	25th	50th	75th	95th	Max	Average	Standard Deviation	Coefficient of Variation
In Situ Parameters											
Conductivity µS/cm	11	2631	2777	3665	5259	5345	6096	6755	4656	1271	2.7E-01
Oxygen Dissolved %	11	13	22	35	62	86	91	92	60	28	4.6E-01
Oxygen Dissolved	11	1.4	2.1	4.3	6.3	7.0	9.6	10.5	5.9	2.6	4.5E-01
pH (unitless)	12	9.3	9.3	9.4	9.6	9.6	9.7	9.8	9.5	0.1	1.4E-02
Redox Potential mV	11	-349	-323	-261	-64	14	55	67	-123	158	-1.3E+00
Salinity ppt	11	1.96	2.13	2.43	2.79	2.93	3.67	3.85	2.79	0.54	1.9E-01
Specific Conductivity µS/cm	11	3703	3992	4530	5172	5439	6681	7000	5168	939	1.8E-01
Temperature °C	12	8.3	9.2	15.6	20.0	23.9	26.2	27.0	19.0	6.3	3.3E-01
Total Dissolved Solids	11	2407	2595	2946	3362	3535	4342	4550	3362	610	1.8E-01
Turbidity NTU	0	-	-	-	-	-	-	-	-	-	-
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	0	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	12	1310	1343	1615	1920	2205	2434	2450	1905	391	2.1E-01
Bicarbonate Alkalinity	12	732	764	892	1032	1185	1322	1360	1040	201	1.9E-01
Carbonate Alkalinity	12	576.0	580.4	721.3	863.5	997.0	1136.0	1180.0	865.3	200.7	2.3E-01
Color TCU	0	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	12	676	718	901	1035	1160	1197	1230	1006	178	1.8E-01
Hydroxide Alkalinity	12	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0E+00
pH (unitless)	12	9.3	9.3	9.4	9.4	9.5	9.5	9.5	9.4	0.1	5.4E-03
Specific Conductivity µS/cm	12	3730	3983	4628	5430	6538	7208	7290	5564	1196	2.1E-01
Total Dissolved Solids	12	2980	3250	3865	4705	5950	6200	6260	4823	1160	2.4E-01
Total Suspended Solids	12	1.5	3.2	11.6	18.7	37.7	125.7	218.0	37.5	58.8	1.6E+00
Turbidity NTU	12	0.8	0.9	1.4	4.7	13.8	100.1	161.0	22.6	45.8	2.0E+00
Dissolved Anions											
Bromide	12	1.10	1.10	1.25	1.25	1.26	1.45	1.50	1.26	0.11	8.6E-02
Chloride	12	86	94	103	129	147	165	169	127	28	2.2E-01
Fluoride	12	0.02	0.02	0.03	0.04	0.20	0.50	0.50	0.15	0.18	1.2E+00
Sulphate	12	997	1065	1273	1550	1873	2148	2170	1585	394	2.5E-01
Nutrients											
Ammonia (Total)	12	0.063	0.073	0.116	0.142	0.154	0.256	0.341	0.147	0.071	4.8E-01
Nitrate (as N)	12	0.050	0.05	0.05	0.13	0.13	0.13	0.13	0.09	0.039	4.1E-01
Nitrite (as N)	12	0.0100	0.01	0.01	0.03	0.03	0.04	0.07	0.02	0.0154	7.0E-01
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	12	7.22	7.41	8.44	10.70	14.33	16.82	17.20	11.43	3.51	3.1E-01
Orthophosphate (Dissolved)	12	0.001	0.001	0.002	0.003	0.006	0.021	0.022	0.006	0.007	1.2E+00
Phosphorus - Dissolved	11	0.031	0.036	0.061	0.086	0.131	0.187	0.196	0.099	0.054	5.5E-01
Phosphorus - Total	12	0.042	0.047	0.071	0.097	0.297	0.389	0.400	0.170	0.135	7.9E-01
Cyanide											
Cyanide (Free)	12	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	1.8E-16
Cyanide (Total)	12	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	1.8E-16
Cyanide (WAD)	12	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	1.8E-16
Dissolved Metals											
Aluminum	12	0.0025	0.0025	0.0025	0.0025	0.0025	0.0059	0.0070	0.0031	0.0014	4.6E-01
Antimony	12	0.00153	0.00160	0.00188	0.00218	0.00273	0.00312	0.00319	0.00227	0.00055	2.4E-01
Arsenic	12	0.0181	0.0187	0.0193	0.0200	0.0240	0.0312	0.0325	0.0225	0.0049	2.2E-01
Barium	12	0.005	0.005	0.007	0.015	0.017	0.018	0.019	0.013	0.005	4.2E-01
Beryllium	12	0.000250	0.000250	0.000250	0.000250	0.000250	0.000363	0.000500	0.000271	0.000072	2.7E-01
Bismuth	12	0.00125	0.00125	0.00125	0.00125	0.00125	0.00181	0.00250	0.00135	0.00036	2.7E-01
Boron	12	0.161	0.166	0.227	0.275	0.321	0.333	0.341	0.266	0.064	2.4E-01
Cadmium	11	0.0000250	0.0000250	0.0000250	0.0000250	0.0000250	0.0000540	0.0000580	0.0000303	0.0000119	3.9E-01
Calcium	12	6	6	6	6	7	8	9	7	1	1.6E-01
Chromium	12	0.00025	0.00025	0.00025	0.00025	0.00025	0.00036	0.00050	0.00027	0.00007	2.7E-01
Cobalt	12	0.00025	0.00025	0.00025	0.00025	0.00025	0.00036	0.00050	0.00027	0.00007	2.7E-01
Copper	12	0.0005	0.0005	0.0005	0.0005	0.0005	0.0012	0.0014	0.0006	0.0003	4.6E-01
Iron	12	0.005	0.005	0.010	0.010	0.019	0.042	0.058	0.017	0.015	9.1E-01
Lead	12	0.000125	0.000125	0.000125	0.000125	0.000125	0.000181	0.000250	0.000135	0.000036	2.7E-01
Lithium	12	0.05030	0.05074	0.06110	0.07410	0.08838	0.09320	0.09380	0.07343	0.01641	2.2E-01
Magnesium	12	161	171	214	248	278	286	294	240	43	1.8E-01
Manganese	12	0.001	0.001	0.001	0.001	0.001	0.002	0.002	0.001	0.001	4.3E-01
Mercury	12	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Molybdenum	12	0.003	0.004	0.004	0.004	0.005	0.005	0.005	0.004	0.001	1.3E-01
Nickel	12	0.0013	0.0013	0.0013	0.0013	0.0013	0.0018	0.0025	0.0014	0.0004	2.7E-01
Phosphorus	12	0.03	0.03	0.03	0.05	0.05	0.12	0.14	0.05	0.04	7.0E-01
Potassium	12	138	142	159	196	240	277	287	204	51	2.5E-01
Selenium	12	0.00025	0.00025	0.00025	0.00025	0.00025	0.00036	0.00050	0.00027	0.00007	2.7E-01
Silicon	12	0.2	0.3	0.6	0.7	2.3	4.0	4.2	1.6	1.5	9.3E-01
Silver	12	0.0000250	0.0000250	0.0000250	0.0000250	0.0000250	0.0000363	0.0000500	0.0000271	0.0000072	2.7E-01
Sodium	12	719	759	858	1001	1290	1402	1440	1062	256	2.4E-01
Strontium	12	0.38	0.38	0.46	0.50	0.54	0.57	0.58	0.49	0.07	1.4E-01
Sulphur	12	319	330	371	487	584	686	689	490	133	2.7E-01
Thallium	12	0.0000250	0.0000250	0.0000250	0.0000250	0.0000250	0.0000363	0.0000500	0.0000271	0.0000072	2.7E-01
Tin	12	0.000250	0.000250	0.000250	0.000250	0.000250	0.000363	0.000500	0.000271	0.000072	2.7E-01
Titanium	12	0.0250	0.0250	0.0250	0.0250	0.0250	0.0363	0.0500	0.0271	0.0072	2.7E-01
Uranium	12	0.0034	0.0036	0.0043	0.0044	0.0050	0.0053	0.0053	0.0045	0.0006	1.3E-01
Vanadium	12	0.0025	0.0025	0.0025	0.0025	0.0031	0.0054	0.0058	0.0032	0.0013	4.0E-01
Zinc	12	0.0025	0.0025	0.0025	0.0025	0.0025	0.0052	0.0055	0.0030	0.0011	3.6E-01
Total Metals											
Aluminum	12	0.0075	0.0075	0.0075	0.0155	0.0280	0.2401	0.4650	0.0556	0.1297	2.3E+00
Antimony	12	0.00153	0.00165	0.00198	0.00223	0.00253	0.00307	0.00323	0.00228	0.00050	2.2E-01
Arsenic	12	0.0180	0.0184	0.0191	0.0199	0.0234	0.0301	0.0309	0.0220	0.0045	2.0E-01
Barium	12	0.005	0.006	0.009	0.018	0.018	0.021	0.025	0.015	0.006	4.0E-01
Beryllium	12	0.000250	0.000250	0.000250	0.000250	0.000250	0.000363	0.000500	0.000271	0.000072	2.7E-01
Bismuth	12	0.00125	0.00125	0.00125	0.00125	0.00125	0.00181	0.00250	0.00135	0.00036	2.7E-01
Boron	12	0.153	0.161	0.228	0.267	0.305	0.348	0.356	0.263	0.065	2.5E-01
Cadmium	11	0.000025	0.000025	0.000025	0.000025	0.000025	0.000038	0.000050	0.000027	0.000008	2.8E-01
Calcium	12	5	5	6	7	8	9	10	7	1	1.8E-01
Chromium	12	0.00025	0.00025	0.00025	0.00025	0.00025	0.00102	0.00165	0.00039	0.00040	1.0E+00
Cobalt	12	0.00025	0.00025	0.00025	0.00025	0.00025	0.00054	0.00059	0.00030	0.00012	3.9E-01
Copper	12	0.0013	0.0013	0.0013	0.0013	0.0013	0.0027	0.0030	0.0015	0.0006	4.0E-01
Iron	12	0.01	0.01	0.02	0.03	0.06	0.43	0.81	0.10	0.23	2.2E+00
Lead	12	0.000125	0.000125	0.000125	0.000125	0.000125	0.000181	0.000250	0.000135	0.000036	2.7E-01
Lithium	12	0.0453	0.0484	0.0621	0.0732	0.0841	0.0907	0.0950	0.0719	0.0157	2.2E-01
Magnesium	12	155	168	215	246	276	291	293	240	46	1.9E-01
Manganese	12	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.00	0.01	1.7E+00
Mercury	12	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Molybdenum	12	0.003	0.004	0.004	0.004	0.005	0.005	0.005	0.005	0.001	1.3E-01
Nickel	12	0.0013	0.0013	0.0013	0.0013	0.0013	0.0018	0.0025	0.0014	0.0004	2.7E-01
Phosphorus	12	0.05	0.05	0.06	0.11	0.29	0.35	0.37	0.17	0.12	7.4E-01
Potassium	12	129	137	159	196	236	269	278	200	49	2.4E-01
Selenium	12	0.00025	0.00025	0.00025	0.00025	0.00025	0.00036	0.00050	0.00027	0.00007	2.7E-01
Silicon	12	0.2	0.3	0.6	0.9	2.4	4.8	5.6	1.8	1.8	9.8E-01
Silver	12	0.0000250	0.0000250	0.0000250	0.0000250	0.0000250	0.0000363	0.0000500	0.0000271	0.0000072	2.7E-01
Sodium	12	691	742	883	1041	1248	1323	1350	1047	224	2.1E-01
Strontium	12	0.40	0.42	0.46	0.51	0.56	0.59	0.62	0.50	0.07	1.3E-01
Sulphur	12	313	337	401	509	599	680	690	503	127	2.5E-01
Thallium	12	0.0000250	0.0000250	0.0000250	0.0000250	0.0000250	0.0000363	0.0000500	0.0000271	0.0000072	2.7E-01
Tin	12	0.000250	0.000250	0.000250	0.000250	0.000250	0.000363	0.000500	0.000271	0.000072	2.7E-01
Titanium	12	0.0250	0.0250	0.0250	0.0250	0.0250	0.0363	0.0500	0.0271	0.0072	2.7E-01
Uranium	12	0.0034	0.0035	0.0044	0.0047	0.0050	0.0051	0.0051	0.0046	0.0006	1.2E-01
Vanadium	12	0.0025	0.0025	0.0025	0.0025	0.0050	0.0057	0.0063	0.0037	0.0015	4.1E-01
Zinc	12	0.0075	0.0075	0.0075	0.0075	0.0075	0.0109	0.0150	0.0081	0.0022	2.7E-01
Organics											
Carbon Organic (Dissolved)	12	102.0	105.9	117.0	133.5	169.3	190.8	199.0	142.4	32.8	2.3E-01
Carbon Organic (Total)	12	107.0	109.2	115.8	142.0	177.3	191.1	196.0	146.8	33.2	2.3E-01
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.13 - GOOSE LAKE
(PAGE 2 OF 2)

Seasonal Statistics - GOOSE LAKE

Parameter	Count				Average				Min				Median				Max			
	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall
In Situ Parameters																				
Conductivity µS/cm	0	4	6	1	-	3221	5500	5332	-	2631	4884	5332	-	3103.5	5334	5332	-	4046	6755	5332
Oxygen Dissolved %	0	4	6	1	-	64	62	37	-	12.6	31	37	-	75.3	69	37	-	91.8	87	37
Oxygen Dissolved	0	4	6	1	-	7	6	3	-	1.4	3	3	-	7.505	6	3	-	10.5	7	3
pH (unitless)	0	4	6	2	-	10	10	9	-	9.49	9	9	-	9.555	10	9	-	9.59	10	9
Redox Potential mV	0	4	6	1	-	-50	-152	-237	-	-241	-349	-237	-	-13.8	-172	-237	-	67.4	43	-237
Salinity ppt	0	4	6	1	-	2.28	3.02	3.49	-	1.96	2.74	3.49	-	2.29	2.88	3.49	-	2.57	3.85	3.49
Specific Conductivity µS/cm	0	4	6	1	-	4261	5573	6361	-	3703	5117	6361	-	4282.5	5323	6361	-	4776	7000	6361
Temperature °C	0	4	6	2	-	12	24	17	-	8.33	22	17	-	11.32	24	17	-	16.9	27	18
Total Dissolved Solids	0	4	6	1	-	2770	3628	4134	-	2407	3326	4134	-	2784.5	3476	4134	-	3105	4550	4134
Turbidity NTU	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	0	4	6	2	-	1465	2058	2325	-	1310	1770	2200	-	1455	2070	2325	-	1640	2420	2450
Bicarbonate Alkalinity	0	4	6	2	-	822	1090	1325	-	732	955	1290	-	826.5	1095	1325	-	902	1230	1360
Carbonate Alkalinity	0	4	6	2	-	643	968	1001	-	576	808	911	-	630.5	953	1001	-	736	1180	1090
Color TCU	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	0	4	6	2	-	799	1103	1130	-	676	955	1030	-	801	1145	1130	-	918	1170	1230
Hydroxide Alkalinity	0	4	6	2	-	0.50	0.50	0.50	-	0.5	0.50	0.50	-	0.5	0.50	0.50	-	0.5	0.50	0.50
pH (unitless)	0	4	6	2	-	9	9	9	-	9.34	9	9	-	9.41	9	9	-	9.45	10	9
Specific Conductivity µS/cm	0	4	6	2	-	4293	5973	6880	-	3730	4850	6620	-	4405	5995	6880	-	4630	7290	7140
Total Dissolved Solids	0	4	6	2	-	3543	5330	5860	-	2980	4240	5680	-	3660	5430	5860	-	3870	6260	6040
Total Suspended Solids	0	4	6	2	-	12	27	119	-	1.5	5	20	-	10.35	27	119	-	26.7	50	218
Turbidity NTU	0	4	6	2	-	14	6	90	-	0.76	1	19	-	2.495	5	90	-	50.2	12	161
Dissolved Anions																				
Bromide	0	4	6	2	-	1.24	1.28	1.25	-	1.1	1.25	1.25	-	1.175	1.25	1.25	-	1.5	1.40	1.25
Chloride	0	4	6	2	-	98	137	155	-	86	106	148	-	101.5	144	155	-	103	169	162
Fluoride	0	4	6	2	-	0.28	0.11	0.02	-	0.2	0.02	0.02	-	0.2	0.04	0.02	-	0.5	0.50	0.02
Sulphate	0	4	6	2	-	1162	1727	2005	-	997	1370	1880	-	1185	1735	2005	-	1280	2170	2130
Nutrients								-												
Ammonia (Total)	0	4	6	2	-	0.153	0.139	0.158	-	0.0633	0.091	0.149	-	0.1029	0.142	0.158	-	0.341	0.186	0.167
Nitrate (as N)	0	4	6	2	-	0.07	0.100	0.125	-	0.05	0.050	0.125	-	0.05	0.125	0.125	-	0.125	0.125	0.125
Nitrite (as N)	0	4	6	2	-	0.0138	0.0200	0.0450	-	0.01	0.0100	0.0250	-	0.01	0.0250	0.0450	-	0.025	0.0250	0.0650
Nitrogen (Dissolved)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	0	4	6	2	-	8.61	12.35	14.35	-	7.22	7.57	14.30	-	8.2	11.55	14.35	-	10.8	17.20	14.40
Orthophosphate (Dissolved)	0	4	6	2	-	0.004	0.005	0.013	-	0.0013	0.001	0.004	-	0.00225	0.003	0.013	-	0.0092	0.020	0.022
Phosphorus - Dissolved	0	4	5	2	-	0.106	0.07	0.16	-	0.0415	0.03	0.14	-	0.09415	0.08	0.16	-	0.196	0.09	0.18
Phosphorus - Total	0	4	6	2	-	0.07	0.18	0.34	-	0.0423	0.07	0.30	-	0.05635	0.12	0.34	-	0.113	0.40	0.38
Cyanide																				
Cyanide (Free)	0	4	6	2	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025
Cyanide (Total)	0	4	6	2	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025
Cyanide (WAD)	0	4	6	2	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025
Dissolved Metals																				
Aluminum	0	4	6	2	-	0.0025	0.0037	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0070	0.0025
Antimony	0	4	6	2	-	0.00177	0.00233	0.00313	-	0.00153	0.00177	0.00306	-	0.00178	0.00232	0.00313	-	0.00198	0.00280	0.00319
Arsenic	0	4	6	2	-	0.0199	0.0212	0.0314	-	0.0193	0.0181	0.0302	-	0.01995	0.0196	0.0314	-	0.0204	0.0283	0.0325
Barium	0	4	6	2	-	0.015	0.014	0.005	-	0.011	0.007	0.005	-	0.0153	0.017	0.005	-	0.0182	0.019	0.006
Beryllium	0	4	6	2	-	0.00025	0.00029	0.00025	-	0.00025	0.00025	0.00025	-	0.00025	0.00025	0.00025	-	0.00025	0.00050	0.00025
Bismuth	0	4	6	2	-	0.001	0.001	0.001	-	0.00125	0.001	0.001	-	0.00125	0.001	0.001	-	0.00125	0.003	0.001
Boron	0	4	6	2	-	0.199	0.292	0.320	-	0.161	0.228	0.314	-	0.197	0.314	0.320	-	0.242	0.341	0.326
Cadmium	0	3	6	2	-	0.000025	0.000035	0.000025	-	0.000025	0.000025	0.000025	-	0.000025	0.000025	0.000025	-	0.000025	0.000058	0.000025
Calcium	0	4	6	2	-	7	7	6	-	5.67	6	6	-	6.68	7	6	-	8.98	7	6
Chromium	0	4	6	2	-	0.0003	0.00029	0.00025	-	0.00025	0.00025	0.00025	-	0.00025	0.00025	0.00025	-	0.00025	0.00050	0.00025
Cobalt	0	4	6	2	-	0.00025	0.00029	0.00025	-	0.00025	0.00025	0.00025	-	0.00025	0.00025	0.00025	-	0.00025	0.00050	0.00025
Copper	0	4	6	2	-	0.0005	0.0006	0.0010	-	0.0005	0.0005	0.0005	-	0.0005	0.0005	0.0010	-	0.0005	0.0010	0.0014
Iron	0	4	6	2	-	0.019	0.009	0.034	-	0.005	0.005	0.010	-	0.0215	0.010	0.034	-	0.029	0.010	0.058
Lead	0	4	6	2	-	0.00013	0.00015	0.00013	-	0.000125	0.00013	0.00013	-	0.000125	0.00013	0.00013	-	0.000125	0.00025	0.00013
Lithium	0	4	6	2	-	0.0573	0.0800	0.0861	-	0.0503	0.0611	0.0829	-	0.0567	0.0857	0.0861	-	0.0653	0.0938	0.0892
Magnesium	0	4	6	2	-	190.0	263.8	270.5	-	161.0	227.0	247.0	-	190.5	274.0	270.5	-	218.0	280.0	294.0
Manganese	0	4	6	2	-	0.001	0.001	0.001	-	0.00077	0.001	0.001	-	0.00123	0.001	0.001	-	0.00247	0.002	0.001
Mercury	0	4	6	2	-	0.0000050	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050
Molybdenum	0	4	6	2	-	0.0039	0.0048	0.0045	-	0.00323	0.0043	0.0044	-	0.004005	0.0050	0.0045	-	0.00435	0.0051	0.0046
Nickel	0	4	6	2	-	0.0013	0.0015	0.0013	-	0.00125	0.0013	0.0013	-	0.00125	0.0013	0.0013	-	0.00125	0.0025	0.0013
Phosphorus	0	4	6	2	-	0.03	0.07	0.05	-	0.025	0.03	0.05	-	0.025	0.05	0.05	-	0.025	0.14	0.05
Potassium	0	4	6	2	-	150	221	260	-	138	173	250	-	151.5	225	260	-	160	287	269
Selenium	0	4	6	2	-	0.00025	0.00029	0.00025	-	0.00025	0.00025	0.00025	-	0.00025	0.00025	0.00025	-	0.00025	0.00050	0.00025
Silicon	0	4	6	2	-	1.63	0.76	4.00	-	0.336	0.18	3.82	-	1.249	0.60	4.00	-	3.67	1.82	4.17
Silver	0	4	6	2	-	0.000025	0.000029	0.000025	-	0.000025	0.000025	0.000025	-	0.000025	0.000025	0.000025	-	0.000025	0.000050	0.000025
Sodium	0	4	6	2	-	806	1146	1325	-	719	884	1280	-	822	1170	1325	-	860	1440	1370
Strontium	0	4	6	2	-	0.44	0.53	0.48	-	0.375	0.45	0.47	-	0.4185	0.53	0.48	-	0.54	0.58	0.48
Sulphur	0	4	6	2	-	349	531	647	-	319	399	610	-	352.5	536	647	-	372	689	684
Thallium	0	4	6	2	-	0.000025	0.000029	0.000025	-	0.000025	0.000025	0.000025	-	0.000025	0.000025	0.000025	-	0.000025	0.000050	0.000025
Tin	0	4	6	2	-	0.00025	0.00029	0.00025	-	0.00025	0.00025	0.00025	-	0.00025	0.00025	0.00025	-	0.00025	0.00050	0.00025
Titanium	0	4	6	2	-	0.025	0.0292	0.0250	-	0.025	0.0250	0.0250	-	0.025	0.0250	0.0250	-	0.025	0.0500	0.0250
Uranium	0	4	6	2	-	0.0039	0.0049	0.0045	-	0.00342	0.0043	0.0043	-	0.003925	0.0050	0.0045	-	0.00447	0.0053	0.0047
Vanadium	0	4	6	2	-	0.0040	0.0029	0.0025	-	0.0025	0.0025	0.0025	-	0.00375	0.0025	0.0025	-	0.0058	0.0050	0.0025
Zinc	0	4	6	2	-	0.0025	0.0029	0.0040	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0040	-	0.0025	0.0050	0.0055
Total Metals																				
Aluminum	0	4	6	2	-	0.13	0.02	0.02	-	0.0075	0.01	0.01	-	0.01725	0.02	0.02	-	0.465	0.06	0.03
Antimony	0	4	6	2	-	0.00186	0.00230	0.00308	-	0.00153	0.00181	0.00293	-	0.001895	0.00239	0.00308	-	0.00212	0.00262	0.00323
Arsenic	0	4	6	2	-	0.0201	0.0206	0.0302	-	0.0189	0.0180	0.0294	-	0.01965	0.0194	0.0302	-	0.0222	0.0271	0.0309
Barium	0	4	6	2	-	0.019	0.015	0.006	-	0.0137	0.008	0.005	-	0.01805	0.018	0.006	-	0.0247	0.019	0.007
Beryllium	0	4	6	2	-	0.00025	0.00029	0.00025	-	0.00025	0.00025	0.00025	-	0.00025	0.00025	0.00025	-	0.00025	0.00050	0.00025
Bismuth	0	4	6	2	-	0.00125	0.00145833	0.00125	-	0.00125	0.00125	0.00125	-	0.00125	0.00125	0.00125	-	0.00125	0.0025	0.00125
Boron	0	4	6	2	-	0.198	0.288	0.320	-	0.153	0.229	0.298	-	0.196	0.295	0.320	-	0.245	0.356	0.341
Cadmium	0	3	6	2	-	0.000025	0.000029	0.000025	-	0.000025	0.000025	0.000025	-	0.000025	0.000025	0.000025	-	0.000025	0.000050	0.000025
Calcium	0	4	6	2	-	8	7	5	-	5.93	6	5	-	7.92	7	5	-	9.82	8	6
Chromium	0	4	6	2	-	0.0006	0.0003	0.0003	-	0.00025	0.0003	0.0003	-	0.00025	0.0003	0.0003	-	0.00165	0.0005	0.0003
Cobalt	0	4	6	2	-	0.00034	0.00029	0.00025	-	0.00025	0.00025	0.00025	-	0.00025	0.00025	0.00025	-	0.0006	0.00050	0.00025
Copper	0	4	6	2	-	0.0017	0.0015	0.0013	-	0.00125	0.0013	0.0013	-	0.00125	0.0013	0.0013	-	0.003	0.0025	0.0013
Iron	0	4	6	2	-	0.22	0.05	0.05	-	0.016	0.01	0.03	-	0.026	0.04	0.05	-	0.814	0.11	0.07
Lead	0	4	6	2	-	0.00013	0.00015	0.00013	-	0.000125	0.00013	0.00013	-	0.00013	0.00013	0.00013	-	0.0001	0.00025	0.00013
Lithium	0	4	6	2	-	0.0558	0.0784	0.0850	-	0.0453	0.0608	0.0831	-	0.05675	0.0807	0.0850	-	0.0642	0.0950	0.0869
Magnesium	0	4	6	2	-	188	268	261	-	155	232	233	-	186.5	274	261	-	222	293	289
Manganese	0	4	6	2	-	0.01	0.00	0.00	-	0.00113	0.00	0.00	-	0.00152	0.00	0.00	-	0.0271	0.00	0.00
Mercury	0	4	6	2	-	0.0000050	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050
Molybdenum	0	4	6	2	-	0.004	0.005	0.004	-	0.0032	0.004	0.004	-	0.00434	0.005	0.004	-	0.0045	0.005	0.004
Nickel	0	4	6	2	-	0.0013	0.0015	0.0013	-	0.0013	0.0013	0.0013	-	0.0013	0.0013	0.0013	-	0.0013	0.0025	0.0013
Phosphorus	0	4	6	2	-	0.14	0.16	0.27	-	0.059	0.05	0.21	-	0.0885	0.09	0.27	-	0.308	0.37	0.33
Potassium	0	4	6	2	-	147.0	220.7	245.5	-	129.0	179.0	229.0	-	149.0	222.5	245.5	-	161.0	278.0	262.0
Selenium	0	4	6	2	-	0.00025	0.00029	0.00025	-	0.00025	0.00025	0.00025	-	0.0003	0.00025	0.00025	-	0.0003	0.00050	0.00025
Silicon	0	4	6	2	-	2.1	0.8	3.9	-	0.3	0.2	3.7	-	1.3	0.7	3.9	-	5.6	1.9	4.2
Silver	0	4	6	2	-	0.0000250	0.0000292	0.0000250	-	0.000025	0.0000250	0.0000250	-	0.000025	0.0000250	0.0000250	-	0.000025	0.0000500	0.0000250
Sodium	0	4	6	2	-	807	1140	1250	-	691	896	1200	-	814.5	1165	1250	-	908	1350	1300
Strontium	0	4	6	2	-	0.5	0.54	0.47	-	0.40	0.43	0.46	-	0.5	0.54	0.47	-	0.6	0.62	0.48
Sulphur	0	4	6	2	-	364	556	625	-	313	429	579	-	366	570	625	-	409	690	671
Thallium	0	4	6	2	-	0.00003	0.00003	0.00003	-	0.000025	0.00003	0.00003	-	0.000025	0.00003	0.00003	-	0.000025	0.00005	0.00003
Tin	0	4	6	2	-	0.00025	0.00029	0.00025	-	0.00025	0.00025	0.00025	-	0.00025	0.00025	0.00025	-	0.00025	0.00050	0.00025
Titanium	0	4	6	2	-	0.025	0.029	0.025	-	0.025	0.025	0.025	-	0.025	0.025	0.025	-	0.025	0.050	0.025
Uranium	0	4	6	2	-	0.0040	0.0048	0.0050	-	0.0034	0.0043	0.0048	-	0.0041	0.0049	0.0050	-	0.0046	0.0051	0.0051
Vanadium	0	4	6	2	-	0.0054	0.0029	0.0025	-	0.005	0.0025	0.0025	-	0.00515	0.0025	0.0025	-	0.0063	0.0050	0.0025
Zinc	0	4	6	2	-	0.0075	0.0088	0.0075	-	0.0075	0.0075	0.0075	-	0.0075	0.0075	0.0075	-	0.0075	0.0150	0.0075
Organics																				
Carbon Organic (Dissolved)	0	4	6	2	-	110.3	150	185	-	102.0	120	170	-	110.0	152	185	-	119	184	199
Carbon Organic (Total)	0	4	6	2	-	112	156	189	-	107.0	123	181	-	111.5	158	189	-	117	187	196
Nitrogen Organic (Dissolved)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.
2. SEASONS ARE SPECIFIED AS FOLLOWS: WIN (WINTER; DECEMBER THROUGH MARCH), SPR (SPRING; APRIL AND MAY), SUMMER(JUNE THROUGH AUGUST), FALL (SEPTEMBER THROUGH NOVEMBER).

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.14 - HUMPH02
(PAGE 1 OF 2)

Parameter	Total Count	Complete Dataset - HUMPH02									
		Min	Percentiles 5th	25th	50th	75th	95th	Max	Average	Standard Deviation	Coefficient of Variation
In Situ Parameters											
Conductivity µS/cm	15	600	717	814	840	872	919	920	831	79	9.5E-02
Oxygen Dissolved %	14	71	76	84	88	90	105	106	88	9	1.0E-01
Oxygen Dissolved	15	8.9	9.0	9.6	10.0	11.2	12.5	13.3	10.4	1.3	1.2E-01
pH (unitless)	16	8.1	8.2	8.3	8.4	8.4	8.6	8.7	8.4	0.1	1.6E-02
Redox Potential mV	15	-70	-22	53	68	113	171	217	77	65	8.5E-01
Salinity ppt	15	0.41	0.41	0.55	0.62	0.69	0.76	0.81	0.61	0.11	1.8E-01
Specific Conductivity µS/cm	15	825	907	1096	1231	1414	4988	12850	2006	3007	1.5E+00
Temperature °C	16	1.9	2.8	5.3	8.9	11.9	14.9	15.3	8.7	4.3	4.9E-01
Total Dissolved Solids	15	542	591	713	800	890	984	1052	803	137	1.7E-01
Turbidity NTU	0	-	-	-	-	-	-	-	-	-	-
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	0	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	16	289	404	462	474	485	498	508	463	50	1.1E-01
Bicarbonate Alkalinity	16	188	354	433	443	454	471	476	429	66	1.5E-01
Carbonate Alkalinity	16	1.0	6.6	20.9	32.9	42.6	65.2	101.0	34.5	22.6	6.5E-01
Color TCU	1	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	-	-
Hardness as CaCO3 (Dissolved)	16	483	488	594	641	724	799	850	652	101	1.5E-01
Hydroxide Alkalinity	16	0.5	0.5	0.5	0.5	0.5	0.6	1.0	0.5	0.1	2.4E-01
pH (unitless)	16	8.3	8.3	8.4	8.5	8.5	8.5	8.6	8.5	0.1	8.9E-03
Specific Conductivity µS/cm	16	1000	1023	1208	1250	1373	1473	1540	1268	144	1.1E-01
Total Dissolved Solids	16	493	621	801	855	969	1020	1050	857	146	1.7E-01
Total Suspended Solids	16	3.9	4.2	8.3	11.1	18.1	24.1	28.3	12.7	7.2	5.6E-01
Turbidity NTU	16	0.5	0.9	1.8	2.4	3.9	7.3	7.6	3.1	2.2	7.0E-01
Dissolved Anions											
Bromide	16	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.00	0.0E+00
Chloride	16	25	28	31	33	41	48	49	36	7	2.0E-01
Fluoride	16	0.23	0.25	0.26	0.27	0.28	0.37	0.40	0.28	0.04	1.5E-01
Sulphate	16	85	93	213	235	332	409	478	259	105	4.1E-01
Nutrients											
Ammonia (Total)	16	0.006	0.006	0.008	0.011	0.014	0.020	0.024	0.012	0.005	4.5E-01
Nitrate (as N)	16	0.025	0.03	0.03	0.03	0.06	0.14	0.18	0.05	0.045	9.0E-01
Nitrite (as N)	16	0.0050	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.0000	0.0E+00
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	16	0.55	0.58	0.60	0.66	0.87	0.99	1.05	0.73	0.16	2.2E-01
Orthophosphate (Dissolved)	16	0.074	0.075	0.081	0.086	0.098	0.126	0.133	0.091	0.017	1.9E-01
Phosphorus - Dissolved	15	0.078	0.085	0.089	0.092	0.117	0.150	0.160	0.105	0.025	2.4E-01
Phosphorus - Total	16	0.081	0.081	0.109	0.137	0.152	0.166	0.166	0.128	0.030	2.3E-01
Cyanide											
Cyanide (Free)	16	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Cyanide (Total)	16	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Cyanide (WAD)	16	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Dissolved Metals											
Aluminum	16	0.0005	0.0005	0.0005	0.0017	0.0018	0.0022	0.0026	0.0014	0.0007	4.9E-01
Antimony	16	0.00013	0.00014	0.00019	0.00021	0.00021	0.00024	0.00026	0.00020	0.00003	1.6E-01
Arsenic	16	0.0028	0.0029	0.0032	0.0033	0.0035	0.0037	0.0038	0.0033	0.0003	8.1E-02
Barium	16	0.053	0.054	0.056	0.061	0.066	0.068	0.069	0.061	0.006	9.1E-02
Beryllium	16	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	2.8E-16
Bismuth	16	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00000	4.5E-16
Boron	16	0.023	0.025	0.029	0.029	0.033	0.038	0.039	0.031	0.004	1.4E-01
Cadmium	16	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000138	0.0000250	0.0000066	0.0000051	7.7E-01
Calcium	16	69	70	92	100	113	124	132	100	17	1.7E-01
Chromium	16	0.00005	0.00005	0.00005	0.00013	0.00015	0.00027	0.00044	0.00013	0.00010	7.2E-01
Cobalt	16	0.00005	0.00005	0.00005	0.00005	0.00005	0.00012	0.00013	0.00006	0.00003	4.4E-01
Copper	16	0.0040	0.0048	0.0062	0.0064	0.0069	0.0073	0.0074	0.0064	0.0009	1.4E-01
Iron	16	0.005	0.005	0.005	0.005	0.011	0.016	0.028	0.008	0.006	7.5E-01
Lead	16	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000000	2.8E-16
Lithium	16	0.00643	0.00643	0.00669	0.00709	0.00761	0.00788	0.00804	0.00713	0.00054	7.6E-02
Magnesium	16	76	76	88	96	108	119	126	98	14	1.5E-01
Manganese	16	0.004	0.005	0.008	0.010	0.017	0.024	0.025	0.012	0.007	5.5E-01
Mercury	16	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Molybdenum	16	0.013	0.013	0.019	0.022	0.024	0.025	0.025	0.021	0.004	1.9E-01
Nickel	16	0.0011	0.0011	0.0012	0.0013	0.0014	0.0016	0.0017	0.0013	0.0001	1.1E-01
Phosphorus	16	0.07	0.07	0.08	0.10	0.11	0.14	0.15	0.10	0.02	2.2E-01
Potassium	16	13	13	14	15	15	17	18	15	1	9.0E-02
Selenium	16	0.00056	0.00062	0.00075	0.00211	0.00455	0.00533	0.00618	0.00260	0.00192	7.4E-01
Silicon	16	8.0	8.0	8.4	8.7	9.6	10.3	10.4	9.0	0.8	8.7E-02
Silver	16	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Sodium	16	54	57	59	63	64	66	69	62	4	5.7E-02
Strontium	16	0.59	0.61	0.83	0.89	0.96	1.06	1.19	0.89	0.14	1.6E-01
Sulphur	16	28	30	70	77	109	130	150	84	33	3.9E-01
Thallium	16	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Tin	16	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	2.8E-16
Titanium	16	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0000	0.0E+00
Uranium	16	0.0024	0.0024	0.0026	0.0036	0.0041	0.0046	0.0047	0.0035	0.0008	2.4E-01
Vanadium	16	0.0033	0.0034	0.0044	0.0051	0.0053	0.0057	0.0059	0.0048	0.0008	1.6E-01
Zinc	16	0.0005	0.0005	0.0005	0.0005	0.0005	0.0013	0.0018	0.0007	0.0004	5.6E-01
Total Metals											
Aluminum	16	0.0484	0.0526	0.0766	0.1810	0.1953	0.3488	0.3600	0.1655	0.0935	5.7E-01
Antimony	16	0.00016	0.00018	0.00019	0.00021	0.00022	0.00027	0.00028	0.00021	0.00003	1.5E-01
Arsenic	16	0.0028	0.0029	0.0031	0.0033	0.0033	0.0034	0.0034	0.0032	0.0002	5.4E-02
Barium	16	0.052	0.054	0.060	0.063	0.068	0.071	0.072	0.063	0.006	9.2E-02
Beryllium	16	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	2.8E-16
Bismuth	16	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00000	4.5E-16
Boron	16	0.024	0.027	0.030	0.032	0.036	0.042	0.043	0.033	0.005	1.6E-01
Cadmium	16	0.000005	0.000005	0.000005	0.000010	0.000012	0.000018	0.000025	0.000010	0.000005	5.7E-01
Calcium	16	68	69	90	101	108	119	129	98	16	1.7E-01
Chromium	16	0.00021	0.00023	0.00032	0.00053	0.00058	0.00088	0.00093	0.00050	0.00021	4.2E-01
Cobalt	16	0.00014	0.00015	0.00017	0.00028	0.00030	0.00048	0.00049	0.00027	0.00011	3.9E-01
Copper	16	0.0074	0.0080	0.0089	0.0099	0.0113	0.0143	0.0143	0.0105	0.0021	2.0E-01
Iron	16	0.07	0.08	0.11	0.28	0.32	0.53	0.57	0.26	0.15	5.7E-01
Lead	16	0.000025	0.000025	0.000025	0.000068	0.000089	0.000131	0.000132	0.000065	0.000038	5.8E-01
Lithium	16	0.0063	0.0063	0.0066	0.0069	0.0074	0.0080	0.0080	0.0070	0.0006	7.9E-02
Magnesium	16	73	75	88	93	103	113	122	94	13	1.4E-01
Manganese	16	0.01	0.01	0.03	0.04	0.06	0.08	0.08	0.04	0.02	5.2E-01
Mercury	16	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Molybdenum	16	0.014	0.014	0.020	0.022	0.024	0.025	0.025	0.021	0.004	1.7E-01
Nickel	16	0.0014	0.0015	0.0018	0.0019	0.0020	0.0024	0.0025	0.0019	0.0003	1.6E-01
Phosphorus	16	0.10	0.10	0.11	0.12	0.13	0.14	0.16	0.12	0.02	1.4E-01
Potassium	16	13	13	13	14	15	17	17	14	1	9.5E-02
Selenium	16	0.00057	0.00059	0.00076	0.00185	0.00399	0.00497	0.00510	0.00237	0.00173	7.3E-01
Silicon	16	8.0	8.3	8.6	9.1	9.4	11.0	11.0	9.2	0.9	9.5E-02
Silver	16	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000203	0.0000300	0.0000077	0.0000068	8.8E-01
Sodium	16	51	55	56	60	63	65	67	60	4	7.1E-02
Strontium	16	0.60	0.61	0.82	0.91	0.98	1.07	1.16	0.89	0.15	1.7E-01
Sulphur	16	29	32	72	78	109	128	147	84	32	3.8E-01
Thallium	16	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Tin	16	0.000050	0.000050	0.000050	0.000050	0.000050	0.000065	0.000110	0.000054	0.000015	2.8E-01
Titanium	16	0.0050	0.0050	0.0050	0.0050	0.0050	0.0135	0.0150	0.0061	0.0031	5.1E-01
Uranium	16	0.0025	0.0026	0.0027	0.0037	0.0041	0.0047	0.0048	0.0035	0.0008	2.3E-01
Vanadium	16	0.0040	0.0041	0.0048	0.0058	0.0062	0.0065	0.0067	0.0055	0.0009	1.6E-01
Zinc	16	0.0015	0.0015	0.0015	0.0015	0.0015	0.0019	0.0031	0.0016	0.0004	2.5E-01
Organics											
Carbon Organic (Dissolved)	16	9.3	9.6	9.9	10.6	11.6	17.1	17.2	11.4	2.4	2.1E-01
Carbon Organic (Total)	16	10.1	10.3	11.3	12.4	13.2	17.9	20.6	13.0	2.8	2.2E-01
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.14 - HUMPH02
(PAGE 2 OF 2)

Seasonal Statistics - HUMPH02

Parameter	Count				Average				Min				Median				Max			
	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall
In Situ Parameters																				
Conductivity µS/cm	3	5	6	1	853	861	786	882	814	814	600	882	840	859	800	882	904	919	920	882
Oxygen Dissolved %	3	5	5	1	82	87	93	89	79.5	70.7	88	89	82.4	87	90	89	83.9	106	104	89
Oxygen Dissolved	3	5	6	1	11	11	10	10	10.2	8.91	9	10	11	10.5	10	10	11.6	13.3	12	10
pH (unitless)	3	5	6	2	8	8	8	8	8.14	8.27	8	8	8.24	8.3	8	8	8.33	8.39	9	9
Redox Potential mV	3	5	6	1	78	58	87	109	52.3	-70.4	49	109	64.5	58.9	75	109	117	217	151	109
Salinity ppt	3	5	6	1	0.73	0.67	0.51	0.62	0.66	0.61	0.41	0.62	0.72	0.68	0.52	0.62	0.81	0.74	0.60	0.62
Specific Conductivity µS/cm	3	5	6	1	1464	3655	1032	1231	1330	1215	825	1231	1443	1384	1048	1231	1619	12850	1187	1231
Temperature °C	3	5	6	2	3	6	13	11	1.87	4.98	8	10	3.11	5.8	13	11	4.72	9.79	15	12
Total Dissolved Solids	3	5	6	1	951	871	673	800	863	789	542	800	937	880	681	800	1052	955	780	800
Turbidity NTU	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	3	5	6	2	414	478	464	501	289	465	442	494	469	475	463	501	484	495	489	508
Bicarbonate Alkalinity	3	5	6	2	378	444	433	458	188	439	409	452	469	443	432	458	476	450	460	464
Carbonate Alkalinity	3	5	6	2	36.83	34	31	43	1	21.4	17	41	8.5	32.8	31	43	101	45.2	53	44
Color TCU	0	1	0	0	-	18	-	-	-	17.7	-	-	-	17.7	-	-	-	17.7	-	-
Hardness as CaCO3 (Dissolved)	3	5	6	2	797	675	565	639	760	597	483	635	782	675	573	639	850	733	639	642
Hydroxide Alkalinity	3	5	6	2	0.67	0.50	0.50	0.50	0.5	0.5	0.50	0.50	0.5	0.5	0.50	0.50	1	0.5	0.50	0.50
pH (unitless)	3	5	6	2	8	8	9	9	8.28	8.36	8	9	8.39	8.43	9	9	8.44	8.49	9	9
Specific Conductivity µS/cm	3	5	6	2	1470	1302	1140	1265	1420	1210	1000	1260	1450	1310	1175	1265	1540	1380	1230	1270
Total Dissolved Solids	3	5	6	2	1020	910	719	896	1000	800	493	858	1010	946	765	896	1050	988	826	934
Total Suspended Solids	3	5	6	2	22	13	9	10	17.7	5.8	4	9	19.3	13	7	10	28.3	19.7	23	11
Turbidity NTU	3	5	6	2	6	2	3	2	4.9	0.47	1	2	5.55	2.14	2	2	7.22	3.39	8	3
Dissolved Anions																				
Bromide	3	5	6	2	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Chloride	3	5	6	2	28	32	42	40	25.4	29.1	32	38	28.4	32.1	44	40	30.6	34	49	41
Fluoride	3	5	6	2	0.29	0.26	0.30	0.25	0.25	0.23	0.26	0.25	0.25	0.26	0.28	0.25	0.36	0.28	0.40	0.26
Sulphate	3	5	6	2	411	292	166	228	369	230	85	217	386	313	179	228	478	342	231	238
Nutrients								-												
Ammonia (Total)	3	5	6	2	0.018	0.008	0.013	0.010	0.012	0.0062	0.007	0.010	0.018	0.0077	0.012	0.010	0.0237	0.0105	0.019	0.011
Nitrate (as N)	3	5	6	2	0.12	0.04	0.030	0.025	0.053	0.025	0.025	0.025	0.129	0.025	0.025	0.025	0.18	0.088	0.055	0.025
Nitrite (as N)	3	5	6	2	0.005	0.0050	0.0050	0.0050	0.005	0.005	0.0050	0.0050	0.005	0.005	0.0050	0.0050	0.005	0.005	0.0050	0.0050
Nitrogen (Dissolved)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	3	5	6	2	0.76	0.60	0.87	0.62	0.678	0.552	0.61	0.60	0.679	0.597	0.89	0.62	0.92	0.646	1.05	0.64
Orthophosphate (Dissolved)	3	5	6	2	0.08	0.079	0.102	0.103	0.0771	0.0744	0.083	0.102	0.0817	0.0767	0.095	0.103	0.0866	0.0864	0.133	0.103
Phosphorus - Dissolved	3	5	5	2	0.089	0.093	0.12	0.13	0.0879	0.0777	0.09	0.12	0.0893	0.0921	0.10	0.13	0.0901	0.114	0.16	0.14
Phosphorus - Total	3	5	6	2	0.15	0.10	0.13	0.16	0.144	0.0811	0.11	0.15	0.152	0.0914	0.12	0.16	0.16	0.142	0.17	0.17
Cyanide																				
Cyanide (Free)	3	5	6	2	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Cyanide (Total)	3	5	6	2	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Cyanide (WAD)	3	5	6	2	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Dissolved Metals																				
Aluminum	3	5	6	2	0.0013	0.0009	0.0017	0.0019	0.0005	0.0005	0.0005	0.0017	0.0014	0.0005	0.0018	0.0019	0.0019	0.0016	0.0026	0.0021
Antimony	3	5	6	2	0.000223	0.00021	0.00020	0.00014	0.0002	0.00019	0.00018	0.00013	0.00021	0.00021	0.00020	0.00014	0.00026	0.00023	0.00021	0.00014
Arsenic	3	5	6	2	0.0032	0.0035	0.0034	0.0031	0.0028	0.00325	0.0031	0.0029	0.00331	0.00345	0.0034	0.0031	0.00352	0.00383	0.0036	0.0032
Barium	3	5	6	2	0.064	0.056	0.063	0.065	0.0586	0.0547	0.053	0.065	0.0635	0.0554	0.066	0.065	0.069	0.0567	0.068	0.065
Beryllium	3	5	6	2	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
Bismuth	3	5	6	2	0.00025	0.000	0.000	0.000	0.00025	0.00025	0.000	0.000	0.00025	0.00025	0.000	0.000	0.00025	0.00025	0.000	0.000
Boron	3	5	6	2	0.032	0.027	0.032	0.034	0.029	0.023	0.029	0.034	0.029	0.027	0.033	0.034	0.039	0.029	0.037	0.034
Cadmium	3	5	6	2	0.00001	0.000006	0.000008	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.00001	0.000025	0.000008	0.000005
Calcium	3	5	6	2	122	105	85	101	113	92.7	69	101	121	106	89	101	132	114	100	101
Chromium	3	5	6	2	0.00023	0.0002	0.00009	0.00005	0.00012	0.00012	0.00005	0.00005	0.00013	0.00016	0.00008	0.00005	0.00044	0.00021	0.00015	0.00005
Cobalt	3	5	6	2	0.00007	0.00005	0.00007	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00011	0.00005	0.00013	0.00005
Copper	3	5	6	2	0.0055	0.0068	0.0068	0.0053	0.004	0.00629	0.0063	0.0051	0.00608	0.00681	0.0068	0.0053	0.00632	0.00741	0.0073	0.0055
Iron	3	5	6	2	0.013	0.005	0.007	0.012	0.005	0.005	0.005	0.012	0.005	0.005	0.005	0.012	0.028	0.005	0.012	0.012
Lead	3	5	6	2	0.00003	0.00003	0.00003	0.00003	0.000025	0.000025	0.00003	0.00003	0.000025	0.000025	0.00003	0.00003	0.000025	0.000025	0.00003	0.00003
Lithium	3	5	6	2	0.0071	0.0066	0.0074	0.0077	0.00699	0.00643	0.0066	0.0076	0.00715	0.00646	0.0076	0.0077	0.00717	0.00702	0.0080	0.0078
Magnesium	3	5	6	2	119.7	100.5	85.3	93.8	116.0	88.9	75.6	92.9	117.0	99.5	85.2	93.8	126.0	109.0	96.6	94.7
Manganese	3	5	6	2	0.018	0.008	0.010	0.023	0.0126	0.00531	0.004	0.022	0.0153	0.00772	0.010	0.023	0.0248	0.00971	0.020	0.024
Mercury	3	5	6	2	0.0000050	0.0000050	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050
Molybdenum	3	5	6	2	0.0231	0.0229	0.0188	0.0171	0.0199	0.0205	0.0126	0.0170	0.0245	0.0235	0.0202	0.0171	0.0248	0.0242	0.0233	0.0172
Nickel	3	5	6	2	0.0013	0.0012	0.0014	0.0014	0.00113	0.00114	0.0012	0.0013	0.00134	0.00121	0.0014	0.0014	0.00135	0.00128	0.0017	0.0015
Phosphorus	3	5	6	2	0.09	0.08	0.11	0.12	0.071	0.074	0.08	0.11	0.096	0.078	0.11	0.12	0.101	0.099	0.15	0.12
Potassium	3	5	6	2	15	14	16	15	14.2	13.2	14	15	14.5	13.7	16	15	15.2	13.8	18	15
Selenium	3	5	6	2	0.00438	0.00407	0.00110	0.00074	0.00211	0.0027	0.00056	0.00073	0.00486	0.00448	0.00076	0.00074	0.00618	0.00505	0.00210	0.00075
Silicon	3	5	6	2	8.98	8.38	9.04	10.35	8.64	8.04	7.98	10.30	8.79	8.4	9.06	10.35	9.5	8.64	9.96	10.40
Silver	3	5	6	2	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005
Sodium	3	5	6	2	66	62	59	62	63.7	57.3	54	59	65.6	62.5	59	62	68.5	63.8	63	64
Strontium	3	5	6	2	1.06	0.92	0.76	0.92	0.985	0.83	0.59	0.88	1.01	0.955	0.81	0.92	1.19	0.972	0.89	0.96
Sulphur	3	5	6	2	129	95	55	75	113	72.5	28	73	123	100	58	75	150	110	77	76
Thallium	3	5	6	2	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005
Tin	3	5	6	2	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
Titanium	3	5	6	2	0.0050	0.005	0.0050	0.0050	0.005	0.005	0.0050	0.0050	0.005	0.005	0.0050	0.0050	0.005	0.005	0.0050	0.0050
Uranium	3	5	6	2	0.0044	0.0041	0.0029	0.0025	0.0038	0.00363	0.0024	0.0024	0.00455	0.004	0.0027	0.0025	0.00471	0.0045	0.0036	0.0025
Vanadium	3	5	6	2	0.0048	0.0053	0.0049	0.0034	0.0042	0.0051	0.0039	0.0033	0.0049	0.0052	0.0051	0.0034	0.0052	0.0059	0.0056	0.0034
Zinc	3	5	6	2	0.0005	0.0006	0.0006	0.0012	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0012	0.0005	0.0011	0.0011	0.0018
Total Metals																				
Aluminum	3	5	6	2	0.30	0.18	0.07	0.20	0.19	0.156	0.05	0.18	0.345	0.186	0.07	0.20	0.36	0.205	0.13	0.21
Antimony	3	5	6	2	0.00023667	0.00023	0.00020	0.00017	0.0002	0.00021	0.00018	0.00016	0.00023	0.00022	0.00020	0.00017	0.00028	0.00026	0.00021	0.00018
Arsenic	3	5	6	2	0.0031	0.0033	0.0032	0.0030	0.00275	0.00317	0.0031	0.0030	0.00326	0.00332	0.0032	0.0030	0.00338	0.00341	0.0033	0.0031
Barium	3	5	6	2	0.068	0.060	0.062	0.070	0.0637	0.0585	0.052	0.069	0.0687	0.06	0.064	0.070	0.0717	0.0605	0.068	0.071
Beryllium	3	5	6	2	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
Bismuth	3	5	6	2	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025
Boron	3	5	6	2	0.035	0.028	0.034	0.040	0.032	0.024	0.032	0.038	0.032	0.028	0.032	0.040	0.04	0.03	0.043	0.041
Cadmium	3	5	6	2	0.00001	0.000010	0.000009	0.000005	0.000012	0.000005	0.000005	0.000005	0.000012	0.000011	0.000005	0.000005	0.000016	0.000012	0.000025	0.000005
Calcium	3	5	6	2	117	104	82	102	107	93.2	68	102	116	108	86	102	129	111	95	102
Chromium	3	5	6	2	0.00078	0.0006	0.0003	0.0005	0.00055	0.00047	0.0002	0.0005	0.00086	0.00057	0.0003	0.0005	0.0009	0.00064	0.0005	0.0006
Cobalt	3	5	6	2	0.00041	0.00031	0.00016	0.00029	0.00027	0.00027	0.00014	0.00028	0.00047	0.0003	0.00016	0.00029	0.0005	0.0004	0.00020	0.00030
Copper	3	5	6	2	0.0117	0.0119	0.0089	0.0096	0.00741	0.0111	0.0082	0.0096	0.0134	0.0112	0.0088	0.0096	0.0143	0.0143	0.0101	0.0097
Iron	3	5	6	2	0.46	0.31	0.11	0.29	0.282	0.243	0.07	0.29	0.518	0.32	0.10	0.29	0.571	0.341	0.20	0.29
Lead	3	5	6	2	0.00011	0.00008	0.00003	0.00009	0.00007	0.000065	0.00003	0.00007	0.000131	0.00007	0.00003	0.00009	0.00013	0.0001	0.00003	0.00011
Lithium	3	5	6	2	0.0069	0.0067	0.0070	0.0078	0.00651	0.00635	0.0063	0.0076	0.00696	0.00675	0.0069	0.0078	0.00734	0.00691	0.0079	0.0080
Magnesium	3	5	6	2	112	98	82	95	103	89.3	73	95	110	101	83	95	122	107	91	96
Manganese	3	5	6	2	0.07	0.04	0.02	0.06	0.065	0.0317	0.01	0.06	0.0739	0.0454	0.02	0.06	0.0848	0.0537	0.03	0.06
Mercury	3	5	6	2	0.0000050	0.0000050	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050
Molybdenum	3	5	6	2	0.023	0.024	0.019	0.019	0.0199	0.0219	0.014	0.018	0.024	0.0238	0.020	0.019	0.0251	0.0253	0.023	0.019
Nickel	3	5	6	2	0.0023	0.0019	0.0016	0.0020	0.0019	0.0018	0.0014	0.0019	0.0024	0.0019	0.0016	0.0020	0.0025	0.0020	0.0018	0.0021
Phosphorus	3	5	6	2	0.13	0.11	0.12	0.13	0.122	0.105	0.10	0.13	0.126	0.106	0.11	0.13	0.13	0.122	0.16	0.14
Potassium	3	5	6	2	13.8	13.3	15.1	15.4	13.3	12.9	12.9	15.3	14.1	13.3	15.2	15.4	14.1	13.6	17.4	15.4
Selenium	3	5	6	2	0.00394	0.00371	0.00100	0.00074	0.00196	0.00245	0.00057	0.00071	0.00477	0.0038	0.00074	0.00074	0.0051	0.0049	0.00173	0.00077
Silicon	3	5	6	2	9.3	8.7	9.0	11.0	9.0	8.4	8.0	11.0	9.1	8.6	8.9	11.0	9.7	9.1	10.1	11.0
Silver	3	5	6	2	0.0000090	0.0000100	0.0000060	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000017	0.00003	0.0000110	0.0000050
Sodium	3	5	6	2	64	61	56	62	59.8	56.3	51	60	64.9	62.9	56	62	67.2	63.1	61	65
Strontium	3	5	6	2	1.1	0.9	0.75	0.95	0.97	0.85	0.60	0.92	1.04	1.0	0.78	0.95	1.2	1.0	0.91	0.99
Sulphur	3	5	6	2	126	96	55	78	110	74.3	29	76	122	102	58	78	147	111	75	80
Thallium	3	5	6	2	0.00001	0.00001	0.00001	0.00001	0.000005	0.000005	0.00001	0.00001	0.000005	0.000005	0.00001	0.00001	0.000005	0.000005	0.00001	0.00001
Tin	3	5	6	2	0.00005	0.00006	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00011	0.00005	0.00005
Titanium	3	5	6	2	0.011	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.013	0.005	0.005	0.005	0.015	0.005	0.005	0.005
Uranium	3	5	6	2	0.0043	0.0042	0.0029	0.0026	0.0039	0.0038	0.0025	0.0026	0.0044	0.0041	0.0027	0.0026	0.0048	0.0046	0.0035	0.0027
Vanadium	3	5	6	2	0.0058	0.0062	0.0052	0.0042	0.0049	0.0058	0.0041	0.0040	0.0062	0.0062	0.0054	0.0042	0.0064	0.0067	0.0062	0.0044
Zinc	3	5	6	2	0.0015	0.0015	0.0015	0.0023	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0023	0.0015	0.0015	0.0015	0.0031
Organics																				
Carbon Organic (Dissolved)	3	5	6	2	10.3	10.1	13	11	9.93	9.6	9	11	10.2	9.9	12	11	11	11	17	12
Carbon Organic (Total)	3	5	6	2	12.4	11	15	13	11.5	10.1	11	12	12.3	10.6	15	13	13	12	21	13
Nitrogen Organic (Dissolved)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.
2. SEASONS ARE SPECIFIED AS FOLLOWS: WIN (WINTER; DECEMBER THROUGH MARCH), SPR (SPRING; APRIL AND MAY), SUMMER(JUNE THROUGH AUGUST), FALL (SEPTEMBER THROUGH NOVEMBER).

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.15 - HUMPH-08
(PAGE 1 OF 2)

Parameter	Total Count	Complete Dataset - HUMPH-08									
		Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	8	686	694	713	737	803	848	855	758	63	8.3E-02
Oxygen Dissolved %	8	73	73	75	79	84	89	91	80	6	8.0E-02
Oxygen Dissolved	8	7.2	7.2	7.6	7.9	8.3	9.5	10.0	8.1	0.9	1.1E-01
pH (unitless)	9	8.2	8.3	8.4	8.5	8.5	8.6	8.6	8.4	0.1	1.5E-02
Redox Potential mV	8	46	50	68	75	103	158	171	90	42	4.7E-01
Salinity ppt	8	0.42	0.43	0.46	0.48	0.48	0.49	0.49	0.47	0.02	5.1E-02
Specific Conductivity µS/cm	8	850	862	928	953	973	979	981	939	47	5.1E-02
Temperature °C	9	10.5	10.8	12.8	13.1	18.1	20.9	21.4	14.9	4.0	2.7E-01
Total Dissolved Solids	8	553	561	603	620	631	636	638	610	30	5.0E-02
Turbidity NTU	0	-	-	-	-	-	-	-	-	-	-
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	0	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	9	413	414	427	433	463	469	472	442	23	5.2E-02
Bicarbonate Alkalinity	9	385	385	397	410	433	451	463	416	26	6.3E-02
Carbonate Alkalinity	9	0.5	3.4	16.7	29.8	36.2	44.0	45.3	26.6	15.2	5.7E-01
Color TCU	0	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	9	407	411	429	447	451	460	461	439	18	4.2E-02
Hydroxide Alkalinity	9	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0E+00
pH (unitless)	9	8.4	8.4	8.4	8.5	8.6	8.6	8.6	8.5	0.1	9.3E-03
Specific Conductivity µS/cm	9	898	907	934	970	973	984	990	953	30	3.2E-02
Total Dissolved Solids	9	487	519	572	578	593	612	616	576	37	6.4E-02
Total Suspended Solids	9	12.8	14.6	22.1	26.5	42.8	60.0	66.8	33.7	17.5	5.2E-01
Turbidity NTU	9	6.5	7.5	9.3	12.9	14.7	16.5	17.4	12.0	3.5	2.9E-01
Dissolved Anions											
Bromide	9	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.00	0.0E+00
Chloride	9	37	38	40	44	48	50	50	44	5	1.1E-01
Fluoride	9	0.22	0.22	0.24	0.24	0.24	0.36	0.43	0.26	0.07	2.5E-01
Sulphate	9	39	40	47	68	76	87	92	64	19	3.0E-01
Nutrients											
Ammonia (Total)	9	0.012	0.014	0.018	0.024	0.033	0.057	0.065	0.029	0.017	5.8E-01
Nitrate (as N)	9	0.025	0.03	0.06	0.07	0.08	0.15	0.17	0.08	0.044	5.8E-01
Nitrite (as N)	9	0.0050	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.0036	5.3E-01
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	9	0.65	0.68	0.82	0.91	1.28	1.79	1.83	1.09	0.43	3.9E-01
Orthophosphate (Dissolved)	9	0.107	0.110	0.130	0.137	0.153	0.173	0.183	0.139	0.023	1.7E-01
Phosphorus - Dissolved	8	0.115	0.116	0.144	0.168	0.182	0.225	0.242	0.167	0.041	2.4E-01
Phosphorus - Total	9	0.155	0.163	0.187	0.222	0.294	0.318	0.332	0.234	0.062	2.6E-01
Cyanide											
Cyanide (Free)	9	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Cyanide (Total)	9	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Cyanide (WAD)	9	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Dissolved Metals											
Aluminum	9	0.0005	0.0009	0.0015	0.0020	0.0026	0.0079	0.0101	0.0030	0.0029	9.8E-01
Antimony	9	0.00014	0.00014	0.00017	0.00019	0.00020	0.00022	0.00022	0.00018	0.00003	1.6E-01
Arsenic	9	0.0025	0.0025	0.0038	0.0041	0.0049	0.0051	0.0052	0.0041	0.0010	2.5E-01
Barium	9	0.058	0.060	0.065	0.069	0.073	0.076	0.077	0.068	0.006	9.2E-02
Beryllium	9	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	1.4E-16
Bismuth	9	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00000	0.0E+00
Boron	9	0.019	0.020	0.027	0.029	0.031	0.033	0.033	0.028	0.005	1.7E-01
Cadmium	9	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Calcium	9	46	47	61	65	66	67	68	61	8	1.3E-01
Chromium	9	0.00005	0.00009	0.00015	0.00021	0.00023	0.00027	0.00027	0.00019	0.00007	3.8E-01
Cobalt	9	0.00012	0.00012	0.00013	0.00015	0.00019	0.00029	0.00029	0.00018	0.00007	3.7E-01
Copper	9	0.0029	0.0030	0.0046	0.0052	0.0053	0.0057	0.0059	0.0047	0.0010	2.2E-01
Iron	9	0.005	0.005	0.011	0.015	0.023	0.035	0.041	0.017	0.011	6.7E-01
Lead	9	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000000	1.4E-16
Lithium	9	0.00595	0.00603	0.00668	0.00698	0.00705	0.01056	0.01100	0.00751	0.00173	2.3E-01
Magnesium	9	66	67	68	70	71	72	72	70	2	2.7E-02
Manganese	9	0.018	0.020	0.028	0.031	0.037	0.051	0.056	0.033	0.011	3.3E-01
Mercury	9	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Molybdenum	9	0.004	0.004	0.012	0.013	0.015	0.016	0.016	0.011	0.004	3.9E-01
Nickel	9	0.0015	0.0015	0.0017	0.0017	0.0018	0.0022	0.0022	0.0018	0.0002	1.3E-01
Phosphorus	9	0.13	0.13	0.14	0.16	0.17	0.21	0.22	0.16	0.03	1.8E-01
Potassium	9	15	15	16	18	19	20	21	18	2	9.7E-02
Selenium	9	0.00018	0.00018	0.00064	0.00085	0.00114	0.00131	0.00132	0.00083	0.00043	5.2E-01
Silicon	9	3.2	3.4	8.2	8.3	9.0	9.1	9.2	7.5	2.3	3.1E-01
Silver	9	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Sodium	9	50	50	51	53	54	58	58	53	3	5.6E-02
Strontium	9	0.35	0.36	0.51	0.54	0.56	0.58	0.60	0.50	0.08	1.7E-01
Sulphur	9	14	14	16	23	25	29	30	21	6	2.8E-01
Thallium	9	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Tin	9	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	1.4E-16
Titanium	9	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0000	0.0E+00
Uranium	9	0.0017	0.0018	0.0026	0.0032	0.0033	0.0035	0.0035	0.0029	0.0007	2.3E-01
Vanadium	9	0.0040	0.0041	0.0074	0.0076	0.0099	0.0101	0.0103	0.0076	0.0023	3.0E-01
Zinc	9	0.0005	0.0005	0.0005	0.0005	0.0014	0.0024	0.0028	0.0010	0.0008	8.3E-01
Total Metals											
Aluminum	9	0.2760	0.2864	0.4550	0.6040	1.1800	2.6000	3.4200	1.0194	0.9825	9.6E-01
Antimony	9	0.00016	0.00017	0.00023	0.00023	0.00023	0.00024	0.00024	0.00022	0.00003	1.2E-01
Arsenic	9	0.0025	0.0029	0.0040	0.0041	0.0048	0.0051	0.0052	0.0042	0.0008	1.9E-01
Barium	9	0.066	0.067	0.070	0.078	0.079	0.093	0.099	0.077	0.010	1.3E-01
Beryllium	9	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	1.4E-16
Bismuth	9	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00000	0.0E+00
Boron	9	0.021	0.023	0.029	0.031	0.033	0.037	0.037	0.031	0.005	1.7E-01
Cadmium	9	0.000005	0.000005	0.000005	0.000013	0.000017	0.000024	0.000028	0.000013	0.000008	6.0E-01
Calcium	9	47	47	60	61	63	65	67	59	7	1.2E-01
Chromium	9	0.00084	0.00086	0.00144	0.00171	0.00317	0.00587	0.00744	0.00260	0.00206	7.9E-01
Cobalt	9	0.00032	0.00036	0.00050	0.00068	0.00105	0.00197	0.00253	0.00089	0.00067	7.5E-01
Copper	9	0.0093	0.0093	0.0113	0.0124	0.0171	0.0254	0.0295	0.0151	0.0064	4.2E-01
Iron	9	0.37	0.40	0.61	0.81	1.65	3.08	3.88	1.32	1.10	8.4E-01
Lead	9	0.000067	0.000081	0.000116	0.000150	0.000272	0.000493	0.000626	0.000216	0.000172	8.0E-01
Lithium	9	0.0058	0.0059	0.0070	0.0073	0.0074	0.0113	0.0125	0.0078	0.0020	2.6E-01
Magnesium	9	64	64	67	68	70	71	72	68	3	3.7E-02
Manganese	9	0.03	0.03	0.04	0.05	0.07	0.13	0.16	0.06	0.04	6.5E-01
Mercury	9	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Molybdenum	9	0.004	0.004	0.013	0.013	0.015	0.016	0.017	0.012	0.005	3.9E-01
Nickel	9	0.0025	0.0028	0.0033	0.0035	0.0058	0.0086	0.0102	0.0047	0.0024	5.1E-01
Phosphorus	9	0.15	0.16	0.18	0.20	0.22	0.35	0.43	0.22	0.08	3.8E-01
Potassium	9	15	15	16	18	18	19	19	17	2	9.3E-02
Selenium	9	0.00020	0.00031	0.00066	0.00082	0.00110	0.00130	0.00133	0.00084	0.00036	4.4E-01
Silicon	9	3.6	5.9	9.6	10.1	11.0	12.1	12.7	9.8	2.5	2.6E-01
Silver	9	0.0000050	0.0000050	0.0000050	0.0000130	0.0000240	0.0000746	0.0001030	0.0000239	0.0000311	1.3E+00
Sodium	9	47	47	49	50	54	54	54	51	3	5.3E-02
Strontium	9	0.36	0.38	0.50	0.52	0.54	0.60	0.62	0.51	0.08	1.6E-01
Sulphur	9	14	14	16	23	26	28	29	21	6	2.6E-01
Thallium	9	0.0000050	0.0000050	0.0000050	0.0000050	0.0000110	0.0000140	0.0000160	0.0000076	0.0000041	5.4E-01
Tin	9	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	1.4E-16
Titanium	9	0.0050	0.0082	0.0190	0.0270	0.0470	0.0992	0.1300	0.0393	0.0375	9.5E-01
Uranium	9	0.0019	0.0019	0.0028	0.0033	0.0034	0.0036	0.0037	0.0030	0.0007	2.2E-01
Vanadium	9	0.0054	0.0068	0.0092	0.0112	0.0116	0.0132	0.0133	0.0104	0.0025	2.4E-01
Zinc	9	0.0015	0.0015	0.0015	0.0033	0.0041	0.0069	0.0087	0.0035	0.0022	6.4E-01
Organics											
Carbon Organic (Dissolved)	9	9.1	9.3	10.6	11.1	13.8	20.0	20.2	12.9	4.2	3.3E-01
Carbon Organic (Total)	9	10.5	11.1	12.0	12.6	19.7	20.7	21.1	14.9	4.2	2.8E-01
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.15 - HUMPH-08
(PAGE 2 OF 2)

Parameter	Seasonal Statistics - HUMPH-08																			
	Count				Average				Min				Median				Max			
	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall
In Situ Parameters																				
Conductivity µS/cm	0	1	6	1	-	750	765	723	-	750	686	723	-	750	753	723	-	750	855	723
Oxygen Dissolved %	0	1	6	1	-	76	82	73	-	76.4	73	73	-	76.4	82	73	-	76.4	91	73
Oxygen Dissolved	0	1	6	1	-	8	8	8	-	8.05	7	8	-	8.05	8	8	-	8.05	10	8
pH (unitless)	0	1	6	2	-	8	8	8	-	8.23	8	8	-	8.23	8	8	-	8.23	9	9
Redox Potential mV	0	1	6	1	-	46	90	134	-	45.9	57	134	-	45.9	75	134	-	45.9	171	134
Salinity ppt	0	1	6	1	-	0.48	0.46	0.47	-	0.48	0.42	0.47	-	0.48	0.48	0.47	-	0.48	0.49	0.47
Specific Conductivity µS/cm	0	1	6	1	-	975	932	942	-	975	850	942	-	975	953	942	-	975	981	942
Temperature °C	0	1	6	2	-	13	16	13	-	12.9	11	13	-	12.9	16	13	-	12.9	21	14
Total Dissolved Solids	0	1	6	1	-	630	606	613	-	630	553	613	-	630	620	613	-	630	638	613
Turbidity NTU	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	0	1	6	2	-	413	439	468	-	413	415	463	-	413	432	468	-	413	465	472
Bicarbonate Alkalinity	0	1	6	2	-	405	407	447	-	405	385	430	-	405	404	447	-	405	433	463
Carbonate Alkalinity	0	1	6	2	-	8	31	21	-	7.7	17	1	-	7.7	31	21	-	7.7	45	42
Color TCU	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	0	1	6	2	-	458	431	454	-	458	407	447	-	458	431	454	-	458	451	461
Hydroxide Alkalinity	0	1	6	2	-	0.50	0.50	0.50	-	0.5	0.50	0.50	-	0.5	0.50	0.50	-	0.5	0.50	0.50
pH (unitless)	0	1	6	2	-	8	8	9	-	8.48	8	9	-	8.48	8	9	-	8.48	9	9
Specific Conductivity µS/cm	0	1	6	2	-	973	941	980	-	973	898	970	-	973	942	980	-	973	974	990
Total Dissolved Solids	0	1	6	2	-	566	568	605	-	566	487	593	-	566	578	605	-	566	605	616
Total Suspended Solids	0	1	6	2	-	50	35	21	-	49.7	13	17	-	49.7	34	21	-	49.7	67	25
Turbidity NTU	0	1	6	2	-	13	11	13	-	12.9	6	9	-	12.9	12	13	-	12.9	15	17
Dissolved Anions																				
Bromide	0	1	6	2	-	0.25	0.25	0.25	-	0.25	0.25	0.25	-	0.25	0.25	0.25	-	0.25	0.25	0.25
Chloride	0	1	6	2	-	37	46	41	-	37	39	40	-	37	46	41	-	37	50	41
Fluoride	0	1	6	2	-	0.23	0.27	0.24	-	0.23	0.22	0.24	-	0.23	0.24	0.24	-	0.23	0.43	0.24
Sulphate	0	1	6	2	-	92	56	72	-	91.7	39	68	-	91.7	50	72	-	91.7	80	76
Nutrients								-												
Ammonia (Total)	0	1	6	2	-	0.021	0.032	0.023	-	0.0207	0.012	0.018	-	0.0207	0.028	0.023	-	0.0207	0.065	0.027
Nitrate (as N)	0	1	6	2	-	0.03	0.061	0.142	-	0.025	0.025	0.118	-	0.025	0.065	0.142	-	0.025	0.078	0.165
Nitrite (as N)	0	1	6	2	-	0.0050	0.0077	0.0050	-	0.005	0.0050	0.0050	-	0.005	0.0050	0.0050	-	0.005	0.0140	0.0050
Nitrogen (Dissolved)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	0	1	6	2	-	0.91	1.22	0.80	-	0.905	0.65	0.71	-	0.905	1.15	0.80	-	0.905	1.83	0.90
Orthophosphate (Dissolved)	0	1	6	2	-	0.130	0.142	0.136	-	0.13	0.107	0.135	-	0.13	0.145	0.136	-	0.13	0.183	0.137
Phosphorus - Dissolved	0	1	5	2	-	0.153	0.17	0.17	-	0.153	0.12	0.17	-	0.153	0.17	0.17	-	0.153	0.24	0.18
Phosphorus - Total	0	1	6	2	-	0.22	0.24	0.22	-	0.222	0.16	0.20	-	0.222	0.24	0.22	-	0.222	0.33	0.25
Cyanide																				
Cyanide (Free)	0	1	6	2	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025
Cyanide (Total)	0	1	6	2	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025
Cyanide (WAD)	0	1	6	2	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025
Dissolved Metals																				
Aluminum	0	1	6	2	-	0.0014	0.0037	0.0016	-	0.0014	0.0005	0.0015	-	0.0014	0.0025	0.0016	-	0.0014	0.0101	0.0017
Antimony	0	1	6	2	-	0.00021	0.00017	0.00021	-	0.00021	0.00014	0.00020	-	0.00021	0.00018	0.00021	-	0.00021	0.00020	0.00022
Arsenic	0	1	6	2	-	0.0038	0.0038	0.0051	-	0.00384	0.0025	0.0049	-	0.00384	0.0040	0.0051	-	0.00384	0.0050	0.0052
Barium	0	1	6	2	-	0.069	0.066	0.074	-	0.0689	0.058	0.073	-	0.0689	0.065	0.074	-	0.0689	0.077	0.075
Beryllium	0	1	6	2	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005
Bismuth	0	1	6	2	-	0.000	0.000	0.000	-	0.00025	0.000	0.000	-	0.00025	0.000	0.000	-	0.00025	0.000	0.000
Boron	0	1	6	2	-	0.031	0.026	0.031	-	0.031	0.019	0.029	-	0.031	0.028	0.031	-	0.031	0.033	0.032
Cadmium	0	1	6	2	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005
Calcium	0	1	6	2	-	66	58	67	-	66.1	46	66	-	66.1	62	67	-	66.1	66	68
Chromium	0	1	6	2	-	0.0002	0.00017	0.00022	-	0.00023	0.00005	0.00021	-	0.00023	0.00016	0.00022	-	0.00023	0.00027	0.00023
Cobalt	0	1	6	2	-	0.00019	0.00019	0.00014	-	0.00019	0.00012	0.00012	-	0.00019	0.00016	0.00014	-	0.00019	0.00029	0.00015
Copper	0	1	6	2	-	0.0053	0.0045	0.0051	-	0.00534	0.0029	0.0046	-	0.00534	0.0050	0.0051	-	0.00534	0.0059	0.0055
Iron	0	1	6	2	-	0.023	0.020	0.005	-	0.023	0.011	0.005	-	0.023	0.016	0.005	-	0.023	0.041	0.005
Lead	0	1	6	2	-	0.00003	0.00003	0.00003	-	0.000025	0.00003	0.00003	-	0.000025	0.00003	0.00003	-	0.000025	0.00003	0.00003
Lithium	0	1	6	2	-	0.0067	0.0078	0.0070	-	0.00668	0.0060	0.0069	-	0.00668	0.0070	0.0070	-	0.00668	0.0110	0.0071
Magnesium	0	1	6	2	-	71.1	69.4	69.7	-	71.1	66.3	68.2	-	71.1	69.6	69.7	-	71.1	72.2	71.1
Manganese	0	1	6	2	-	0.043	0.035	0.023	-	0.0434	0.023	0.018	-	0.0434	0.033	0.023	-	0.0434	0.056	0.028
Mercury	0	1	6	2	-	0.0000050	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050
Molybdenum	0	1	6	2	-	0.0119	0.0101	0.0156	-	0.0119	0.0039	0.0155	-	0.0119	0.0125	0.0156	-	0.0119	0.0147	0.0156
Nickel	0	1	6	2	-	0.0022	0.0018	0.0015	-	0.00224	0.0017	0.0015	-	0.00224	0.0017	0.0015	-	0.00224	0.0020	0.0016
Phosphorus	0	1	6	2	-	0.14	0.17	0.15	-	0.144	0.13	0.15	-	0.144	0.17	0.15	-	0.144	0.22	0.16
Potassium	0	1	6	2	-	15	18	18	-	15.4	15	18	-	15.4	18	18	-	15.4	21	18
Selenium	0	1	6	2	-	0.00130	0.00061	0.00123	-	0.0013	0.00018	0.00114	-	0.0013	0.00073	0.00123	-	0.0013	0.00101	0.00132
Silicon	0	1	6	2	-	8.31	6.93	8.85	-	8.31	3.23	8.71	-	8.31	8.27	8.85	-	8.31	9.16	8.99
Silver	0	1	6	2	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005
Sodium	0	1	6	2	-	50	54	52	-	50	51	51	-	50	54	52	-	50	58	53
Strontium	0	1	6	2	-	0.60	0.47	0.55	-	0.595	0.35	0.54	-	0.595	0.51	0.55	-	0.595	0.56	0.56
Sulphur	0	1	6	2	-	30	19	24	-	29.7	14	23	-	29.7	17	24	-	29.7	27	25
Thallium	0	1	6	2	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005
Tin	0	1	6	2	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005
Titanium	0	1	6	2	-	0.005	0.0050	0.0050	-	0.005	0.0050	0.0050	-	0.005	0.0050	0.0050	-	0.005	0.0050	0.0050
Uranium	0	1	6	2	-	0.0032	0.0026	0.0035	-	0.00315	0.0017	0.0034	-	0.00315	0.0028	0.0035	-	0.00315	0.0033	0.0035
Vanadium	0	1	6	2	-	0.0076	0.0068	0.0101	-	0.0076	0.0040	0.0099	-	0.0076	0.0074	0.0101	-	0.0076	0.0099	0.0103
Zinc	0	1	6	2	-	0.0005	0.0013	0.0005	-	0.0005	0.0005	0.0005	-	0.0005	0.0010	0.0005	-	0.0005	0.0028	0.0005
Total Metals																				
Aluminum	0	1	6	2	-	1.18	1.08	0.75	-	1.18	0.28	0.46	-	1.18	0.56	0.75	-	1.18	3.42	1.05
Antimony	0	1	6	2	-	0.00024	0.00021	0.00023	-	0.00024	0.00016	0.00023	-	0.00024	0.00023	0.00023	-	0.00024	0.00024	0.00023
Arsenic	0	1	6	2	-	0.0040	0.0039	0.0050	-	0.00403	0.0025	0.0049	-	0.00403	0.0041	0.0050	-	0.00403	0.0048	0.0052
Barium	0	1	6	2	-	0.079	0.076	0.079	-	0.0794	0.066	0.078	-	0.0794	0.070	0.079	-	0.0794	0.099	0.079
Beryllium	0	1	6	2	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005
Bismuth	0	1	6	2	-	0.00025	0.00025	0.00025	-	0.00025	0.00025	0.00025	-	0.00025	0.00025	0.00025	-	0.00025	0.00025	0.00025
Boron	0	1	6	2	-	0.032	0.029	0.035	-	0.032	0.021	0.033	-	0.032	0.029	0.035	-	0.032	0.037	0.037
Cadmium	0	1	6	2	-	0.000018	0.000014	0.000008	-	0.000018	0.000005	0.000005	-	0.000018	0.000014	0.000008	-	0.000018	0.000028	0.000010
Calcium	0	1	6	2	-	63	57	64	-	62.7	47	61	-	62.7	60	64	-	62.7	63	67
Chromium	0	1	6	2	-	0.0032	0.0027	0.0021	-	0.00317	0.0008	0.0014	-	0.00317	0.0017	0.0021	-	0.00317	0.0074	0.0028
Cobalt	0	1	6	2	-	0.00105	0.00095	0.00066	-	0.00105	0.00032	0.00043	-	0.00105	0.00061	0.00066	-	0.0011	0.00253	0.00088
Copper	0	1	6	2	-	0.0171	0.0153	0.0134	-	0.0171	0.0093	0.0113	-	0.0171	0.0124	0.0134	-	0.0171	0.0295	0.0154
Iron	0	1	6	2	-	1.65	1.36	1.04	-	1.65	0.37	0.61	-	1.65	0.77	1.04	-	1.65	3.88	1.46
Lead	0	1	6	2	-	0.00029	0.00022	0.00015	-	0.000294	0.00007	0.00010	-	0.00029	0.00013	0.00015	-	0.0003	0.00063	0.00020
Lithium	0	1	6	2	-	0.0074	0.0080	0.0072	-	0.00744	0.0058	0.0072	-	0.00744	0.0072	0.0072	-	0.00744	0.0125	0.0073
Magnesium	0	1	6	2	-	69	68	68	-	69.2	65	64	-	69.2	68	68	-	69.2	71	72
Manganese	0	1	6	2	-	0.07	0.07	0.04	-	0.0656	0.03	0.03	-	0.0656	0.05	0.04	-	0.0656	0.16	0.05
Mercury	0	1	6	2	-	0.0000050	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050
Molybdenum	0	1	6	2	-	0.013	0.010	0.016	-	0.0127	0.004	0.015	-	0.0127	0.013	0.016	-	0.0127	0.015	0.017
Nickel	0	1	6	2	-	0.0058	0.0048	0.0040	-	0.0058	0.0025	0.0031	-	0.0058	0.0034	0.0040	-	0.0058	0.0102	0.0048
Phosphorus	0	1	6	2	-	0.21	0.23	0.19	-	0.208	0.15	0.19	-	0.208	0.20	0.19	-	0.208	0.43	0.20
Potassium	0	1	6	2	-	14.8	17.3	17.5	-	14.8	14.9	16.8	-	14.8	18.0	17.5	-	14.8	18.7	18.2
Selenium	0	1	6	2	-	0.00133	0.00064	0.00118	-	0.00133	0.00020	0.00110	-	0.0013	0.00072	0.00118	-	0.0013	0.00091	0.00126
Silicon	0	1	6	2	-	10.8	9.4	10.6	-	10.8	3.6	10.1	-	10.8	9.6	10.6	-	10.8	12.7	11.0
Silver	0	1	6	2	-	0.0001030	0.0000150	0.0000110	-	0.000103	0.0000050	0.0000050	-	0.000103	0.0000120	0.0000110	-	0.000103	0.0000320	0.0000170
Sodium	0	1	6	2	-	49	51	50	-	49.3	48	47	-	49.3	51	50	-	49.3	54	54
Strontium	0	1	6	2	-	0.6	0.47	0.55	-	0.62	0.36	0.53	-	0.6	0.50	0.55	-	0.6	0.54	0.58
Sulphur	0	1	6	2	-	29	19	24	-	29.1	14	23	-	29.1	17	24	-	29.1	27	24
Thallium	0	1	6	2	-	0.00001	0.00001	0.00001	-	0.000011	0.00001	0.00001	-	0.000011	0.00001	0.00001	-	0.000011	0.00002	0.00001
Tin	0	1	6	2	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005
Titanium	0	1	6	2	-	0.047	0.041	0.030	-	0.047	0.005	0.019	-	0.047	0.024	0.030	-	0.047	0.130	0.040
Uranium	0	1	6	2	-	0.0033	0.0028	0.0035	-	0.0033	0.0019	0.0033	-	0.0033	0.0030	0.0035	-	0.0033	0.0034	0.0037
Vanadium	0	1	6	2	-	0.0112	0.0097	0.0123	-	0.0112	0.0054	0.0115	-	0.0112	0.0094	0.0123	-	0.0112	0.0133	0.0130
Zinc	0	1	6	2	-	0.0033	0.0037	0.0029	-	0.0033	0.0015	0.0015	-	0.0033	0.0033	0.0029	-	0.0033	0.0087	0.0043
Organics																				
Carbon Organic (Dissolved)	0	1	6	2	-	11.1	14	11	-	11.1	9	11	-	11.1	13	11	-	11	20	11
Carbon Organic (Total)	0	1	6	2	-	14	16	12	-	14.4	11	12	-	14.4	16	12	-	14	21	13
Nitrogen Organic (Dissolved)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.
2. SEASONS ARE SPECIFIED AS FOLLOWS: WIN (WINTER; DECEMBER THROUGH MARCH), SPR (SPRING; APRIL AND MAY), SUMMER(JUNE THROUGH AUGUST), FALL (SEPTEMBER THROUGH NOVEMBER).

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.16 - HUMPH-10
(PAGE 1 OF 2)

Parameter	Total Count	Complete Dataset - HUMPH-10 Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	14	364	378	551	700	826	909	930	685	188	2.7E-01
Oxygen Dissolved %	13	50	52	57	68	83	91	96	71	15	2.1E-01
Oxygen Dissolved	13	3.8	4.7	6.8	7.6	8.9	9.5	9.6	7.4	1.7	2.3E-01
pH (unitless)	15	7.8	7.8	7.8	7.9	8.4	9.0	9.1	8.1	0.5	5.7E-02
Redox Potential mV	14	-24	-23	31	38	54	115	175	42	49	1.2E+00
Salinity ppt	14	0.32	0.37	0.43	0.45	0.48	0.49	0.50	0.44	0.05	1.0E-01
Specific Conductivity µS/cm	14	658	759	872	917	960	997	1007	902	90	1.0E-01
Temperature °C	15	3.1	3.4	6.9	16.5	20.6	24.0	26.9	14.0	8.0	5.7E-01
Total Dissolved Solids	14	427	493	582	596	624	649	655	588	58	9.9E-02
Turbidity NTU	0	-	-	-	-	-	-	-	-	-	-
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	0	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	15	280	351	407	419	457	478	487	424	51	1.2E-01
Bicarbonate Alkalinity	15	280	322	381	419	445	478	487	409	55	1.3E-01
Carbonate Alkalinity	15	0.5	0.5	1.0	1.0	28.3	53.5	55.4	14.6	20.4	1.4E+00
Color TCU	0	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	15	292	346	397	411	423	437	437	403	36	8.9E-02
Hydroxide Alkalinity	15	0.5	0.5	0.5	0.5	1.0	1.0	1.0	0.7	0.3	3.6E-01
pH (unitless)	15	8.1	8.2	8.2	8.3	8.5	8.8	8.8	8.4	0.2	2.5E-02
Specific Conductivity µS/cm	15	671	775	876	895	957	965	978	896	77	8.6E-02
Total Dissolved Solids	15	372	440	512	537	549	578	592	524	53	1.0E-01
Total Suspended Solids	15	1.5	1.5	6.2	8.3	23.9	73.4	84.5	21.4	26.1	1.2E+00
Turbidity NTU	15	0.8	0.8	1.0	2.1	4.5	10.3	10.9	3.4	3.3	9.6E-01
Dissolved Anions											
Bromide	15	0.03	0.10	0.25	0.25	0.25	0.25	0.25	0.23	0.06	2.8E-01
Chloride	15	31	38	48	50	51	53	53	48	6	1.2E-01
Fluoride	15	0.18	0.21	0.24	0.25	0.29	0.38	0.46	0.27	0.07	2.4E-01
Sulphate	15	15	18	28	38	40	46	53	34	10	2.9E-01
Nutrients											
Ammonia (Total)	15	0.020	0.026	0.061	0.086	0.088	0.431	0.535	0.131	0.144	1.1E+00
Nitrate (as N)	15	0.013	0.02	0.03	0.03	0.03	0.07	0.08	0.03	0.018	5.8E-01
Nitrite (as N)	15	0.0050	0.01	0.01	0.01	0.01	0.02	0.03	0.01	0.0058	7.7E-01
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	1	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	-	-
Nitrogen Kjeldahl (Total)	15	1.01	1.08	1.25	1.37	1.62	2.20	2.35	1.50	0.40	2.7E-01
Orthophosphate (Dissolved)	15	0.001	0.004	0.035	0.043	0.058	0.188	0.401	0.066	0.096	1.5E+00
Phosphorus - Dissolved	14	0.024	0.028	0.050	0.063	0.087	0.253	0.479	0.094	0.115	1.2E+00
Phosphorus - Total	15	0.053	0.053	0.061	0.110	0.153	0.346	0.574	0.141	0.132	9.3E-01
Cyanide											
Cyanide (Free)	15	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Cyanide (Total)	15	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Cyanide (WAD)	15	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Dissolved Metals											
Aluminum	15	0.0005	0.0005	0.0016	0.0026	0.0028	0.0047	0.0051	0.0023	0.0014	5.9E-01
Antimony	15	0.00005	0.00005	0.00008	0.00013	0.00015	0.00018	0.00019	0.00012	0.00005	4.0E-01
Arsenic	15	0.0013	0.0014	0.0015	0.0016	0.0025	0.0033	0.0038	0.0020	0.0007	3.7E-01
Barium	15	0.047	0.048	0.065	0.088	0.113	0.140	0.145	0.090	0.032	3.5E-01
Beryllium	15	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	2.8E-16
Bismuth	15	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00000	4.5E-16
Boron	15	0.005	0.005	0.005	0.015	0.020	0.024	0.025	0.014	0.007	5.3E-01
Cadmium	15	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Calcium	15	33	38	42	45	47	49	51	44	4	9.7E-02
Chromium	15	0.00005	0.00005	0.00005	0.00005	0.00005	0.00013	0.00016	0.00007	0.00003	5.2E-01
Cobalt	15	0.00016	0.00017	0.00045	0.00062	0.00089	0.00141	0.00146	0.00070	0.00041	5.9E-01
Copper	15	0.0012	0.0012	0.0025	0.0030	0.0033	0.0040	0.0042	0.0028	0.0009	3.4E-01
Iron	15	0.005	0.009	0.039	0.076	0.095	0.113	0.151	0.068	0.039	5.8E-01
Lead	15	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000000	2.8E-16
Lithium	15	0.00424	0.00481	0.00555	0.00760	0.00986	0.01147	0.01210	0.00788	0.00256	3.2E-01
Magnesium	15	51	60	71	72	75	78	79	71	7	9.4E-02
Manganese	15	0.015	0.015	0.161	0.262	0.495	0.674	0.694	0.315	0.227	7.2E-01
Mercury	15	0.0000050	0.0000050	0.0000050	0.0000050	0.0000120	0.0000136	0.0000150	0.0000080	0.0000039	4.9E-01
Molybdenum	15	0.002	0.002	0.004	0.004	0.005	0.008	0.008	0.004	0.002	3.8E-01
Nickel	15	0.0007	0.0007	0.0029	0.0046	0.0061	0.0071	0.0074	0.0043	0.0022	5.2E-01
Phosphorus	15	0.03	0.03	0.04	0.07	0.09	0.25	0.50	0.10	0.12	1.2E+00
Potassium	15	12	13	13	17	20	21	22	17	3	2.0E-01
Selenium	15	0.00005	0.00009	0.00012	0.00013	0.00016	0.00019	0.00021	0.00014	0.00004	2.8E-01
Silicon	15	0.6	0.6	2.7	4.2	5.7	6.6	6.8	4.0	2.1	5.4E-01
Silver	15	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Sodium	15	36	47	54	57	59	61	61	56	6	1.1E-01
Strontium	15	0.27	0.27	0.31	0.37	0.40	0.45	0.45	0.36	0.06	1.6E-01
Sulphur	15	6	7	10	13	14	16	18	12	3	2.8E-01
Thallium	15	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Tin	15	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	2.8E-16
Titanium	15	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0000	0.0E+00
Uranium	15	0.0011	0.0013	0.0015	0.0018	0.0020	0.0022	0.0022	0.0017	0.0003	1.8E-01
Vanadium	15	0.0012	0.0013	0.0019	0.0026	0.0032	0.0048	0.0055	0.0027	0.0012	4.5E-01
Zinc	15	0.0005	0.0005	0.0005	0.0005	0.0014	0.0019	0.0022	0.0009	0.0006	6.7E-01
Total Metals											
Aluminum	15	0.0161	0.0179	0.0353	0.1210	0.2020	0.5423	0.7110	0.1779	0.1978	1.1E+00
Antimony	15	0.00005	0.00005	0.00012	0.00013	0.00017	0.00021	0.00021	0.00013	0.00005	3.9E-01
Arsenic	15	0.0014	0.0014	0.0015	0.0017	0.0027	0.0036	0.0038	0.0021	0.0008	3.8E-01
Barium	15	0.050	0.051	0.064	0.092	0.120	0.147	0.149	0.095	0.034	3.5E-01
Beryllium	15	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	2.8E-16
Bismuth	15	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00000	4.5E-16
Boron	15	0.005	0.005	0.014	0.015	0.021	0.027	0.030	0.016	0.008	4.6E-01
Cadmium	15	0.000005	0.000005	0.000005	0.000005	0.000013	0.000018	0.000018	0.000009	0.000005	5.8E-01
Calcium	15	33	37	40	44	47	48	48	43	4	9.6E-02
Chromium	15	0.00012	0.00013	0.00016	0.00031	0.00043	0.00099	0.00125	0.00039	0.00032	8.2E-01
Cobalt	15	0.00028	0.00028	0.00050	0.00073	0.00135	0.00190	0.00204	0.00094	0.00059	6.3E-01
Copper	15	0.0020	0.0023	0.0042	0.0061	0.0076	0.0104	0.0133	0.0062	0.0030	4.8E-01
Iron	15	0.07	0.09	0.16	0.27	0.50	0.92	1.10	0.39	0.31	8.1E-01
Lead	15	0.000025	0.000025	0.000025	0.000053	0.000059	0.000162	0.000215	0.000062	0.000055	8.9E-01
Lithium	15	0.0041	0.0047	0.0054	0.0070	0.0095	0.0105	0.0123	0.0075	0.0024	3.2E-01
Magnesium	15	50	59	68	70	72	74	74	69	6	8.8E-02
Manganese	15	0.03	0.03	0.17	0.28	0.63	0.81	1.04	0.38	0.30	7.7E-01
Mercury	15	0.0000050	0.0000050	0.0000095	0.0000190	0.0000260	0.0000317	0.0000380	0.0000183	0.0000102	5.6E-01
Molybdenum	15	0.002	0.002	0.004	0.005	0.005	0.007	0.009	0.005	0.002	3.8E-01
Nickel	15	0.0011	0.0012	0.0030	0.0050	0.0068	0.0086	0.0100	0.0050	0.0027	5.3E-01
Phosphorus	15	0.03	0.04	0.08	0.11	0.16	0.34	0.63	0.15	0.14	9.8E-01
Potassium	15	12	12	13	16	18	21	21	16	3	2.0E-01
Selenium	15	0.00011	0.00011	0.00011	0.00012	0.00017	0.00019	0.00021	0.00014	0.00003	2.4E-01
Silicon	15	0.7	0.8	2.8	4.3	6.2	7.1	7.2	4.3	2.3	5.4E-01
Silver	15	0.0000050	0.0000050	0.0000100	0.0000160	0.0000195	0.0000463	0.0000610	0.0000189	0.0000148	7.8E-01
Sodium	15	36	48	54	56	57	59	59	55	5	1.0E-01
Strontium	15	0.26	0.26	0.32	0.37	0.41	0.43	0.43	0.36	0.06	1.7E-01
Sulphur	15	6	7	10	13	15	16	19	12	3	2.8E-01
Thallium	15	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Tin	15	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	2.8E-16
Titanium	15	0.0050	0.0050	0.0050	0.0050	0.0050	0.0190	0.0260	0.0077	0.0062	8.0E-01
Uranium	15	0.0012	0.0013	0.0015	0.0019	0.0020	0.0022	0.0023	0.0018	0.0003	1.8E-01
Vanadium	15	0.0015	0.0016	0.0024	0.0031	0.0038	0.0067	0.0068	0.0034	0.0016	4.6E-01
Zinc	15	0.0015	0.0015	0.0015	0.0015	0.0015	0.0057	0.0062	0.0023	0.0017	7.3E-01
Organics											
Carbon Organic (Dissolved)	15	14.3	15.0	16.3	18.0	19.1	19.6	19.6	17.6	1.7	9.7E-02
Carbon Organic (Total)	15	15.4	15.5	16.6	18.3	20.0	20.9	21.9	18.4	2.0	1.1E-01
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.16 - HUMPH-10
(PAGE 2 OF 2)

Seasonal Statistics - HUMPH-10

Parameter	Count				Average				Min				Median				Max			
	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall
In Situ Parameters																				
Conductivity µS/cm	3	5	6	0	504	596	849	-	386	364	727	-	539	638	863	-	588	797	930	-
Oxygen Dissolved %	3	4	6	0	66	75	70	-	56.9	52.9	50	-	66.6	75.35	72	-	73.6	95.6	87	-
Oxygen Dissolved	3	4	6	0	9	8	6	-	7.57	6.81	4	-	8.89	8.435	6	-	9.61	9.41	8	-
pH (unitless)	3	5	6	1	8	8	8	8	7.75	7.76	8	8	7.75	7.92	8	8	7.86	8.72	9	8
Redox Potential mV	3	5	6	0	-1	58	50	-	-24.3	-22.8	31	-	-9	49	46	-	30.7	175	83	-
Salinity ppt	3	5	6	0	0.42	0.45	0.45	-	0.32	0.41	0.40	-	0.45	0.45	0.46	-	0.48	0.48	0.50	-
Specific Conductivity µS/cm	3	5	6	0	855	909	920	-	658	837	813	-	926	908	922	-	982	963	1007	-
Temperature °C	3	5	6	1	4	11	22	18	3.09	4.61	17	18	3.48	9.53	21	18	3.95	17.8	27	18
Total Dissolved Solids	3	5	6	0	556	590	603	-	427	544	529	-	602	591	605	-	638	626	655	-
Turbidity NTU	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	3	5	6	1	394	409	444	462	280	382	396	462	451	407	447	462	452	438	487	462
Bicarbonate Alkalinity	3	5	6	1	394	401	420	438	280	379	340	438	451	397	428	438	452	438	487	438
Carbonate Alkalinity	3	5	6	1	0.83	9	25	25	0.5	1	1	25	1	1	19	25	1	31.9	55	25
Color TCU	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	3	5	6	1	389	401	411	415	292	369	397	415	437	401	407	415	437	421	436	415
Hydroxide Alkalinity	3	5	6	1	0.83	0.80	0.58	0.50	0.5	0.5	0.50	0.50	1	1	0.50	0.50	1	1	1.00	0.50
pH (unitless)	3	5	6	1	8	8	8	8	8.22	8.1	8	8	8.24	8.28	8	8	8.33	8.59	9	8
Specific Conductivity µS/cm	3	5	6	1	852	871	933	936	671	820	862	936	926	877	957	936	959	895	978	936
Total Dissolved Solids	3	5	6	1	485	506	554	552	372	469	526	552	537	497	553	552	546	541	592	552
Total Suspended Solids	3	5	6	1	7	21	31	8	6.4	1.5	6	8	7.1	4.5	24	8	8.3	84.5	69	8
Turbidity NTU	3	5	6	1	2	1	6	3	0.78	0.92	2	3	0.84	1.04	6	3	3.51	2.14	11	3
Dissolved Anions																				
Bromide	3	5	6	1	0.18	0.25	0.23	0.25	0.025	0.25	0.13	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Chloride	3	5	6	1	44	46	51	51	31.1	41	49	51	49.5	47.4	50	51	52.5	50.5	53	51
Fluoride	3	5	6	1	0.22	0.24	0.32	0.29	0.177	0.23	0.24	0.29	0.23	0.24	0.31	0.29	0.24	0.25	0.46	0.29
Sulphate	3	5	6	1	37	42	29	22	32.4	37	15	22	37.9	40.3	28	22	39.2	52.6	42	22
Nutrients								-												
Ammonia (Total)	3	5	6	1	0.177	0.058	0.176	0.089	0.0571	0.0199	0.056	0.089	0.088	0.0769	0.087	0.089	0.386	0.0869	0.535	0.089
Nitrate (as N)	3	5	6	1	0.06	0.03	0.023	0.025	0.025	0.025	0.013	0.025	0.068	0.025	0.025	0.025	0.0779	0.025	0.025	0.025
Nitrite (as N)	3	5	6	1	0.005	0.0050	0.0079	0.0250	0.005	0.005	0.0050	0.0250	0.005	0.005	0.0051	0.0250	0.0058	0.005	0.0170	0.0250
Nitrogen (Dissolved)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	1	0	0	-	1.25	-	-	-	1.25	-	-	-	1.25	-	-	-	1.25	-	-
Nitrogen Kjeldahl (Total)	3	5	6	1	1.50	1.26	1.74	1.29	1.16	1.01	1.37	1.29	1.21	1.32	1.62	1.29	2.13	1.53	2.35	1.29
Orthophosphate (Dissolved)	3	5	6	1	0.16	0.036	0.048	0.035	0.0423	0.0098	0.001	0.035	0.0493	0.0363	0.053	0.035	0.401	0.0543	0.097	0.035
Phosphorus - Dissolved	3	5	5	1	0.202	0.064	0.07	0.05	0.058	0.0316	0.02	0.05	0.0697	0.0624	0.07	0.05	0.479	0.107	0.13	0.05
Phosphorus - Total	3	5	6	1	0.28	0.08	0.14	0.06	0.113	0.0528	0.05	0.06	0.14	0.0747	0.15	0.06	0.574	0.11	0.25	0.06
Cyanide																				
Cyanide (Free)	3	5	6	1	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Cyanide (Total)	3	5	6	1	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Cyanide (WAD)	3	5	6	1	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Dissolved Metals																				
Aluminum	3	5	6	1	0.0016	0.0016	0.0033	0.0020	0.0005	0.0005	0.0015	0.0020	0.0016	0.0017	0.0029	0.0020	0.0027	0.0028	0.0051	0.0020
Antimony	3	5	6	1	0.000050	0.00011	0.00016	0.00016	0.00005	0.00005	0.00013	0.00016	0.00005	0.00011	0.00015	0.00016	0.00005	0.00013	0.00019	0.00016
Arsenic	3	5	6	1	0.0014	0.0016	0.0025	0.0028	0.00133	0.00143	0.0016	0.0028	0.00137	0.00158	0.0025	0.0028	0.00149	0.00192	0.0038	0.0028
Barium	3	5	6	1	0.081	0.076	0.102	0.118	0.0658	0.0576	0.047	0.118	0.0879	0.0805	0.118	0.118	0.0903	0.093	0.145	0.118
Beryllium	3	5	6	1	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
Bismuth	3	5	6	1	0.00025	0.000	0.000	0.000	0.00025	0.00025	0.000	0.000	0.00025	0.00025	0.000	0.000	0.00025	0.00025	0.000	0.000
Boron	3	5	6	1	0.007	0.009	0.020	0.021	0.005	0.005	0.014	0.021	0.005	0.005	0.020	0.021	0.012	0.017	0.025	0.021
Cadmium	3	5	6	1	0.00001	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005
Calcium	3	5	6	1	42	43	45	48	33.3	41.2	40	48	45.5	42.4	46	48	47.5	45.2	51	48
Chromium	3	5	6	1	0.00005	0.0001	0.00007	0.00016	0.00005	0.00005	0.00005	0.00016	0.00005	0.00005	0.00005	0.00016	0.00005	0.00005	0.00012	0.00016
Cobalt	3	5	6	1	0.00052	0.00055	0.00089	0.00080	0.00049	0.00023	0.00016	0.00080	0.00053	0.00062	0.00108	0.00080	0.00055	0.00077	0.00146	0.00080
Copper	3	5	6	1	0.0035	0.0025	0.0025	0.0038	0.00308	0.00142	0.0012	0.0038	0.00329	0.00269	0.0028	0.0038	0.00399	0.00331	0.0042	0.0038
Iron	3	5	6	1	0.079	0.061	0.074	0.044	0.074	0.024	0.005	0.044	0.076	0.055	0.089	0.044	0.086	0.097	0.151	0.044
Lead	3	5	6	1	0.00003	0.00003	0.00003	0.00003	0.000025	0.000025	0.00003	0.00003	0.000025	0.000025	0.00003	0.00003	0.000025	0.000025	0.00003	0.00003
Lithium	3	5	6	1	0.0051	0.0074	0.0094	0.0093	0.00424	0.00506	0.0074	0.0093	0.00513	0.00596	0.0090	0.0093	0.00601	0.0107	0.0121	0.0093
Magnesium	3	5	6	1	68.9	71.2	72.4	71.5	50.6	64.7	68.8	71.5	77.4	71.8	72.6	71.5	78.6	75.4	75.2	71.5
Manganese	3	5	6	1	0.238	0.257	0.421	0.203	0.221	0.0717	0.015	0.203	0.232	0.283	0.569	0.203	0.262	0.428	0.694	0.203
Mercury	3	5	6	1	0.0000050	0.0000090	0.0000080	0.0000120	0.000005	0.000005	0.0000050	0.0000120	0.000005	0.00001	0.0000050	0.0000120	0.000005	0.000013	0.0000150	0.0000120
Molybdenum	3	5	6	1	0.0043	0.0041	0.0049	0.0043	0.00379	0.00285	0.0020	0.0043	0.00442	0.00435	0.0047	0.0043	0.00455	0.00498	0.0085	0.0043
Nickel	3	5	6	1	0.0042	0.0035	0.0046	0.0070	0.00366	0.00127	0.0007	0.0070	0.00426	0.00463	0.0061	0.0070	0.00457	0.00477	0.0074	0.0070
Phosphorus	3	5	6	1	0.21	0.06	0.08	0.03	0.059	0.025	0.03	0.03	0.066	0.063	0.08	0.03	0.504	0.089	0.14	0.03
Potassium	3	5	6	1	13	15	19	20	13	12.4	16	20	13	13.5	20	20	13.4	17.8	22	20
Selenium	3	5	6	1	0.00011	0.00014	0.00014	0.00016	0.0001	0.00012	0.00005	0.00016	0.00011	0.00013	0.00016	0.00016	0.00012	0.00021	0.00018	0.00016
Silicon	3	5	6	1	3.94	3.10	4.21	6.78	3.64	0.761	0.58	6.78	4.05	4.2	5.70	6.78	4.14	4.59	6.53	6.78
Silver	3	5	6	1	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005
Sodium	3	5	6	1	52	55	58	56	36.4	51.1	55	56	58	53.6	58	56	60.2	58.6	61	56
Strontium	3	5	6	1	0.35	0.34	0.38	0.38	0.27	0.299	0.27	0.38	0.37	0.345	0.40	0.38	0.402	0.379	0.45	0.38
Sulphur	3	5	6	1	12	15	11	8	10.8	12.5	6	8	12.9	14.4	10	8	13.7	18	15	8
Thallium	3	5	6	1	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005
Tin	3	5	6	1	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
Titanium	3	5	6	1	0.0050	0.005	0.0050	0.0050	0.005	0.005	0.0050	0.0050	0.005	0.005	0.0050	0.0050	0.005	0.005	0.0050	0.0050
Uranium	3	5	6	1	0.0019	0.0019	0.0017	0.0011	0.00144	0.00169	0.0013	0.0011	0.0021	0.00178	0.0017	0.0011	0.00216	0.00216	0.0020	0.0011
Vanadium	3	5	6	1	0.0015	0.0021	0.0037	0.0032	0.0012	0.0015	0.0024	0.0032	0.0013	0.0019	0.0033	0.0032	0.002	0.0026	0.0055	0.0032
Zinc	3	5	6	1	0.0008	0.0010	0.0008	0.0013	0.0005	0.0005	0.0005	0.0013	0.0005	0.0005	0.0005	0.0013	0.0015	0.0017	0.0022	0.0013
Total Metals																				
Aluminum	3	5	6	1	0.05	0.14	0.29	0.14	0.0187	0.0161	0.10	0.14	0.0329	0.0376	0.20	0.14	0.0857	0.47	0.71	0.14
Antimony	3	5	6	1	0.00005	0.00013	0.00016	0.00017	0.00005	0.00012	0.00012	0.00017	0.00005	0.00013	0.00015	0.00017	0.00005	0.00017	0.00021	0.00017
Arsenic	3	5	6	1	0.0015	0.0017	0.0027	0.0030	0.00142	0.00148	0.0017	0.0030	0.00146	0.00161	0.0027	0.0030	0.00147	0.00182	0.0038	0.0030
Barium	3	5	6	1	0.082	0.083	0.108	0.123	0.0654	0.0563	0.050	0.123	0.09	0.0889	0.125	0.123	0.0918	0.112	0.149	0.123
Beryllium	3	5	6	1	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
Bismuth	3	5	6	1	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025
Boron	3	5	6	1	0.008	0.013	0.022	0.023	0.005	0.005	0.015	0.023	0.005	0.014	0.022	0.023	0.014	0.017	0.030	0.023
Cadmium	3	5	6	1	0.00001	0.000008	0.000011	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000013	0.000005	0.000013	0.000018	0.000018	0.000005
Calcium	3	5	6	1	42	42	44	48	32.7	40.3	39	48	44.9	42.5	46	48	46.9	43.5	48	48
Chromium	3	5	6	1	0.00017	0.0003	0.0006	0.0004	0.00013	0.00012	0.0002	0.0004	0.00013	0.00017	0.0004	0.0004	0.0002	0.00088	0.0013	0.0004
Cobalt	3	5	6	1	0.00063	0.00082	0.00119	0.00096	0.00058	0.00028	0.00028	0.00096	0.00066	0.00073	0.00135	0.00096	0.0007	0.0018	0.00204	0.00096
Copper	3	5	6	1	0.0056	0.0054	0.0069	0.0082	0.00529	0.00203	0.0024	0.0082	0.00559	0.00611	0.0070	0.0082	0.00601	0.00916	0.0133	0.0082
Iron	3	5	6	1	0.18	0.31	0.56	0.37	0.147	0.073	0.14	0.37	0.174	0.207	0.50	0.37	0.206	0.836	1.10	0.37
Lead	3	5	6	1	0.00003	0.00004	0.00010	0.00006	0.000025	0.000025	0.00005	0.00006	0.000025	0.00003	0.00006	0.00006	0.00003	0.0001	0.00022	0.00006
Lithium	3	5	6	1	0.0050	0.0070	0.0090	0.0092	0.00407	0.00504	0.0070	0.0092	0.00534	0.00562	0.0090	0.0092	0.00544	0.00972	0.0123	0.0092
Magnesium	3	5	6	1	65	68	70	72	49.9	62.7	69	72	72.8	67.7	70	72	73.5	73.8	73	72
Manganese	3	5	6	1	0.28	0.40	0.45	0.22	0.254	0.081	0.03	0.22	0.273	0.278	0.63	0.22	0.309	1.04	0.71	0.22
Mercury	3	5	6	1	0.0000153	0.0000170	0.0000195	0.0000270	0.000014	0.000005	0.0000050	0.0000270	0.000015	0.000023	0.0000200	0.0000270	0.000017	0.000027	0.0000380	0.0000270
Molybdenum	3	5	6	1	0.005	0.004	0.005	0.005	0.00413	0.00273	0.002	0.005	0.00474	0.0041	0.005	0.005	0.00505	0.00512	0.009	0.005
Nickel	3	5	6	1	0.0044	0.0041	0.0056	0.0078	0.0038	0.0015	0.0011	0.0078	0.0046	0.0050	0.0066	0.0078	0.0047	0.0067	0.0100	0.0078
Phosphorus	3	5	6	1	0.27	0.11	0.13	0.08	0.084	0.051	0.03	0.08	0.087	0.107	0.15	0.08	0.63	0.179	0.22	0.08
Potassium	3	5	6	1	12.8	14.4	18.6	20.5	12.6	12.2	15.9	20.5	12.9	13.2	18.5	20.5	12.9	17.7	20.9	20.5
Selenium	3	5	6	1	0.00012	0.00015	0.00014	0.00014	0.00011	0.00012	0.00011	0.00014	0.00011	0.0001	0.00014	0.00014	0.0001	0.0002	0.00018	0.00014
Silicon	3	5	6	1	4.0	3.3	4.7	7.1	3.9	0.8	0.7	7.1	4.0	4.3	6.2	7.1	4.1	5.1	7.2	7.1
Silver	3	5	6	1	0.0000160	0.0000218	0.0000187	0.0000150	0.000016	0.000005	0.0000050	0.0000150	0.000016	0.000019	0.0000195	0.0000150	0.000016	0.000061	0.0000400	0.0000150
Sodium	3	5	6	1	50	54	57	57	36.2	52.5	55	57	57.2	54.2	56	57	57.8	56.4	59	57
Strontium	3	5	6	1	0.4	0.3	0.37	0.40	0.27	0.28	0.26	0.40	0.379	0.4	0.41	0.40	0.4	0.4	0.43	0.40
Sulphur	3	5	6	1	13	15	11	8	10.9	12.7	6	8	13.4	14.4	10	8	13.9	18.9	15	8
Thallium	3	5	6	1	0.00001	0.00001	0.00001	0.00001	0.000005	0.000005	0.00001	0.00001	0.000005	0.000005	0.00001	0.00001	0.000005	0.000005	0.00001	0.00001
Tin	3	5	6	1	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
Titanium	3	5	6	1	0.005	0.007	0.010	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.016	0.026	0.005
Uranium	3	5	6	1	0.0020	0.0019	0.0017	0.0012	0.0016	0.0018	0.0014	0.0012	0.0022	0.0019	0.0016	0.0012	0.0023	0.0022	0.0021	0.0012
Vanadium	3	5	6	1	0.0018	0.0027	0.0047	0.0037	0.0015	0.0022	0.0031	0.0037	0.0016	0.0028	0.0040	0.0037	0.0024	0.0034	0.0068	0.0037
Zinc	3	5	6	1	0.0015	0.0023	0.0029	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0055	0.0062	0.0015
Organics																				
Carbon Organic (Dissolved)	3	5	6	1	16.5	16.2	19	19	16.2	14.3	18	19	16.4	15.8	19	19	17	18	20	19
Carbon Organic (Total)	3	5	6	1	17.0	17	20	19	16.1	15.4	19	19	16.8	16.3	20	19	18	18	22	19
Nitrogen Organic (Dissolved)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.
2. SEASONS ARE SPECIFIED AS FOLLOWS: WIN (WINTER; DECEMBER THROUGH MARCH), SPR (SPRING; APRIL AND MAY), SUMMER(JUNE THROUGH AUGUST), FALL (SEPTEMBER THROUGH NOVEMBER).

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.17 - INKS-S
(PAGE 1 OF 2)

Parameter	Total Count	Complete Dataset - INKS-S									
		Min	Percentiles 5th	25th	50th	75th	95th	Max	Average	Standard Deviation	Coefficient of Variation
In Situ Parameters											
Conductivity µS/cm	27	1082	1202	6495	7570	9133	12412	13620	7398	3265	4.4E-01
Oxygen Dissolved %	17	7	24	53	67	81	94	106	65	25	3.8E-01
Oxygen Dissolved	20	0.7	3.0	6.5	8.7	11.0	14.0	30.5	9.0	6.0	6.6E-01
pH (unitless)	29	8.3	8.6	8.8	8.8	9.0	9.2	9.3	8.9	0.2	2.4E-02
Redox Potential mV	28	-295	-227	9	112	154	225	244	66	139	2.1E+00
Salinity ppt	24	3.42	4.27	5.57	6.69	7.19	7.82	7.94	6.33	1.18	1.9E-01
Specific Conductivity µS/cm	29	792	935	7802	9907	12270	13238	13687	9198	4133	4.5E-01
Temperature °C	29	-0.2	-0.1	4.1	14.1	17.7	23.6	25.2	12.0	8.4	7.0E-01
Total Dissolved Solids	26	1620	4266	6255	7483	8254	8818	8898	6954	1720	2.5E-01
Turbidity NTU	21	0.5	1.3	3.8	8.7	17.1	25.7	182.0	18.1	38.3	2.1E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0E+00
Alkalinity (Total as CaCO3)	29	183	506	641	721	814	862	876	705	143	2.0E-01
Bicarbonate Alkalinity	18	293	312	518	552	598	785	790	561	130	2.3E-01
Carbonate Alkalinity	18	70.4	76.1	163.0	198.5	256.5	303.6	324.0	200.2	74.5	3.7E-01
Color TCU	28	15.8	17.0	19.4	20.8	22.5	25.7	28.6	21.0	2.9	1.4E-01
Hardness as CaCO3 (Dissolved)	29	741	2732	3480	4170	4660	5134	5280	4014	962	2.4E-01
Hydroxide Alkalinity	18	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0E+00
pH (unitless)	29	8.5	8.5	8.7	8.8	8.9	9.1	9.2	8.8	0.2	1.8E-02
Specific Conductivity µS/cm	29	2360	7400	9380	10900	12100	12860	13300	10605	2250	2.1E-01
Total Dissolved Solids	28	1810	6915	8970	10950	12250	12860	13700	10306	2507	2.4E-01
Total Suspended Solids	29	5.3	5.9	8.4	14.5	28.8	47.3	283.0	27.4	50.6	1.8E+00
Turbidity NTU	29	0.7	0.9	2.4	4.0	10.5	22.4	41.5	7.9	8.9	1.1E+00
Dissolved Anions											
Bromide	29	0.50	1.25	1.25	1.25	1.25	2.73	10.00	1.76	1.68	9.5E-01
Chloride	29	76	308	391	459	505	551	574	440	101	2.3E-01
Fluoride	29	0.20	0.20	0.50	0.50	0.50	1.00	1.10	0.52	0.21	4.0E-01
Sulphate	29	1090	4206	5540	6620	7540	8014	8390	6392	1549	2.4E-01
Nutrients											
Ammonia (Total)	29	0.009	0.028	0.043	0.070	0.161	1.610	1.680	0.275	0.490	1.8E+00
Nitrate (as N)	29	0.050	0.05	0.13	0.13	0.13	0.20	0.25	0.13	0.041	3.3E-01
Nitrite (as N)	29	0.0100	0.01	0.03	0.03	0.03	0.05	0.09	0.03	0.0153	5.3E-01
Nitrogen (Dissolved)	19	0.41	2.18	2.98	3.51	4.34	5.11	5.49	3.57	1.16	3.3E-01
Nitrogen (Total)	28	0.08	1.60	3.25	3.55	4.39	5.39	17.50	4.03	2.87	7.1E-01
Nitrogen Kjeldahl (Total)	29	0.08	1.64	3.25	3.50	4.03	5.52	6.19	3.59	1.23	3.4E-01
Orthophosphate (Dissolved)	27	0.001	0.001	0.003	0.042	0.094	0.173	0.204	0.059	0.063	1.1E+00
Phosphorus - Dissolved	28	0.037	0.058	0.081	0.105	0.183	0.242	0.275	0.130	0.068	5.2E-01
Phosphorus - Total	28	0.085	0.092	0.120	0.181	0.293	0.380	2.770	0.291	0.494	1.7E+00
Cyanide											
Cyanide (Free)	26	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	1.8E-16
Cyanide (Total)	27	0.0025	0.0025	0.0025	0.0025	0.0077	0.0091	0.0094	0.0049	0.0028	5.7E-01
Cyanide (WAD)	26	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	1.8E-16
Dissolved Metals											
Aluminum	29	0.0050	0.0050	0.0050	0.0125	0.0250	0.0500	0.0500	0.0191	0.0184	9.7E-01
Antimony	29	0.00050	0.00050	0.00050	0.00100	0.00250	0.00500	0.00500	0.00181	0.00188	1.0E+00
Arsenic	29	0.0068	0.0096	0.0160	0.0173	0.0210	0.0230	0.0235	0.0178	0.0044	2.5E-01
Barium	29	0.010	0.019	0.021	0.028	0.032	0.037	0.054	0.028	0.008	3.0E-01
Beryllium	29	0.000500	0.000500	0.000500	0.000500	0.005000	0.010000	0.010000	0.003034	0.004097	1.4E+00
Bismuth	27	0.00250	0.00250	0.00250	0.00250	0.05250	0.30000	0.30000	0.06120	0.10724	1.8E+00
Boron	29	0.370	1.382	1.800	2.050	2.320	2.660	2.680	2.021	0.488	2.4E-01
Cadmium	29	0.0000425	0.0000500	0.0000500	0.0000500	0.0001000	0.0001700	0.0001700	0.0000816	0.0000519	6.4E-01
Calcium	29	32	60	73	80	90	97	103	80	14	1.8E-01
Chromium	29	0.00050	0.00050	0.00050	0.00050	0.00500	0.01000	0.01000	0.00303	0.00410	1.4E+00
Cobalt	29	0.00050	0.00050	0.00050	0.00050	0.00150	0.00300	0.00300	0.00116	0.00107	9.2E-01
Copper	29	0.0010	0.0010	0.0025	0.0030	0.0100	0.0100	0.0124	0.0050	0.0038	7.7E-01
Iron	29	0.015	0.015	0.025	0.030	0.045	0.054	0.057	0.036	0.013	3.6E-01
Lead	29	0.000250	0.000250	0.000250	0.000250	0.002500	0.005000	0.005000	0.001517	0.002048	1.4E+00
Lithium	29	0.01250	0.02428	0.04270	0.04990	0.05000	0.06022	0.06270	0.04625	0.01139	2.5E-01
Magnesium	29	161	627	797	963	1070	1196	1220	924	225	2.4E-01
Manganese	29	0.018	0.034	0.048	0.070	0.101	0.160	0.205	0.082	0.045	5.4E-01
Mercury	29	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	3.4E-16
Molybdenum	29	0.007	0.022	0.029	0.032	0.037	0.039	0.041	0.032	0.007	2.1E-01
Nickel	29	0.0025	0.0025	0.0025	0.0025	0.0082	0.0100	0.0100	0.0047	0.0033	7.0E-01
Phosphorus	27	0.05	0.09	0.13	0.30	0.45	0.45	0.75	0.30	0.17	5.7E-01
Potassium	29	37	143	183	224	253	277	291	216	54	2.5E-01
Selenium	29	0.00050	0.00050	0.00050	0.00050	0.00500	0.01000	0.01000	0.00310	0.00406	1.3E+00
Silicon	27	0.2	0.2	0.9	1.1	2.4	3.6	3.7	1.6	1.1	7.1E-01
Silver	29	0.0000500	0.0000500	0.0000500	0.0000500	0.0001000	0.0002000	0.0002000	0.0000897	0.0000646	7.2E-01
Sodium	29	288	1088	1490	1790	1950	2158	2260	1679	409	2.4E-01
Strontium	27	1.13	4.00	5.56	6.30	6.83	7.48	7.57	5.95	1.35	2.3E-01
Sulphur	11	1690	1965	2345	2470	2580	2665	2700	2412	277	1.1E-01
Thallium	29	0.0000500	0.0000500	0.0000500	0.0000500	0.0010000	0.0020000	0.0020000	0.0005707	0.0008422	1.5E+00
Tin	29	0.000500	0.000500	0.000500	0.000500	0.002500	0.005000	0.005000	0.001698	0.001936	1.1E+00
Titanium	29	0.0050	0.0100	0.0100	0.0150	0.0500	0.0500	0.1000	0.0288	0.0226	7.9E-01
Uranium	29	0.0005	0.0020	0.0020	0.0033	0.0039	0.0042	0.0043	0.0031	0.0009	3.0E-01
Vanadium	29	0.0025	0.0050	0.0050	0.0050	0.0100	0.0100	0.0120	0.0065	0.0026	4.0E-01
Zinc	29	0.0025	0.0050	0.0050	0.0050	0.0100	0.0318	0.1290	0.0129	0.0236	1.8E+00
Total Metals											
Aluminum	29	0.0150	0.0150	0.0250	0.0500	0.1700	0.8686	1.3300	0.2006	0.3275	1.6E+00
Antimony	29	0.00050	0.00050	0.00050	0.00100	0.00320	0.00500	0.00500	0.00190	0.00188	9.9E-01
Arsenic	29	0.0066	0.0112	0.0150	0.0180	0.0210	0.0232	0.0236	0.0180	0.0042	2.3E-01
Barium	29	0.010	0.020	0.022	0.030	0.034	0.042	0.044	0.029	0.008	2.9E-01
Beryllium	29	0.000500	0.000500	0.000500	0.000500	0.005000	0.010000	0.010000	0.003034	0.004097	1.4E+00
Bismuth	27	0.00250	0.00250	0.00250	0.00250	0.05250	0.30000	0.30000	0.06120	0.10724	1.8E+00
Boron	29	0.360	1.410	1.890	2.050	2.220	2.698	2.770	2.045	0.484	2.4E-01
Cadmium	29	0.000043	0.000050	0.000050	0.000050	0.000100	0.000170	0.000170	0.000083	0.000052	6.2E-01
Calcium	29	31	63	73	81	93	103	105	82	15	1.9E-01
Chromium	29	0.00050	0.00050	0.00050	0.00050	0.00500	0.01000	0.01000	0.00322	0.00401	1.2E+00
Cobalt	29	0.00050	0.00050	0.00050	0.00050	0.00150	0.00300	0.00300	0.00116	0.00107	9.2E-01
Copper	29	0.0025	0.0025	0.0025	0.0050	0.0100	0.0106	0.0183	0.0061	0.0042	6.9E-01
Iron	29	0.03	0.03	0.05	0.11	0.19	0.77	1.19	0.19	0.27	1.4E+00
Lead	29	0.000250	0.000250	0.000250	0.000250	0.002500	0.005000	0.005000	0.001517	0.002048	1.4E+00
Lithium	29	0.0125	0.0278	0.0459	0.0500	0.0512	0.0632	0.0648	0.0476	0.0108	2.3E-01
Magnesium	29	158	644	818	941	1100	1216	1240	938	228	2.4E-01
Manganese	29	0.05	0.05	0.07	0.09	0.13	0.16	0.20	0.10	0.04	4.2E-01
Mercury	29	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	3.4E-16
Molybdenum	29	0.007	0.017	0.030	0.032	0.038	0.039	0.044	0.032	0.008	2.4E-01
Nickel	29	0.0025	0.0025	0.0025	0.0025	0.0052	0.0100	0.0100	0.0046	0.0032	7.0E-01
Phosphorus	27	0.08	0.17	0.30	0.31	0.45	0.45	0.75	0.36	0.13	3.6E-01
Potassium	29	36	138	186	214	260	277	296	217	55	2.5E-01
Selenium	29	0.00050	0.00050	0.00050	0.00100	0.00500	0.01000	0.01500	0.00334	0.00441	1.3E+00
Silicon	27	0.2	0.3	1.0	1.5	3.3	3.8	4.8	2.0	1.3	6.6E-01
Silver	29	0.0000500	0.0000500	0.0000500	0.0000500	0.0001200	0.0002000	0.0002000	0.0000921	0.0000644	7.0E-01
Sodium	29	280	1062	1520	1680	1920	2148	2260	1675	403	2.4E-01
Strontium	27	1.12	3.96	5.68	6.16	6.88	7.45	7.54	6.01	1.34	2.2E-01
Sulphur	11	1780	2050	2355	2500	2645	2755	2770	2469	279	1.1E-01
Thallium	29	0.0000500	0.0000500	0.0000500	0.0000500	0.0010000	0.0020000	0.0020000	0.0005772	0.0008388	1.5E+00
Tin	29	0.000500	0.000500	0.000500	0.000500	0.002500	0.005000	0.005000	0.001698	0.001936	1.1E+00
Titanium	29	0.0050	0.0100	0.0100	0.0150	0.0500	0.0512	0.1000	0.0301	0.0229	7.6E-01
Uranium	29	0.0005	0.0020	0.0020	0.0032	0.0040	0.0042	0.0042	0.0031	0.0010	3.1E-01
Vanadium	29	0.0025	0.0050	0.0050	0.0050	0.0100	0.0106	0.0130	0.0068	0.0028	4.1E-01
Zinc	29	0.0025	0.0050	0.0075	0.0150	0.0150	0.0306	0.0630	0.0148	0.0114	7.7E-01
Organics											
Carbon Organic (Dissolved)	29	12.2	31.1	39.9	45.0	47.2	50.9	53.2	42.5	8.1	1.9E-01
Carbon Organic (Total)	26	27.8	36.3	40.7	46.4	50.5	55.1	56.3	45.2	6.8	1.5E-01
Nitrogen Organic (Dissolved)	17	0.27	1.90	2.81	3.25	3.40	4.38	4.84	3.11	0.96	3.1E-01
Nitrogen Organic (Total)	19	0.04	1.96	3.05	3.33	3.98	4.52	4.64	3.30	1.04	3.2E-01

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.17 - INKS-S
(PAGE 2 OF 2)

Seasonal Statistics - INKS-S

Parameter	Count				Average				Min				Median				Max			
	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall
In Situ Parameters																				
Conductivity µS/cm	6	5	11	5	5357	7607	8042	8223	1355	4417	1082	3719	6494.5	7949	8530	7735	7024	10470	12760	13620
Oxygen Dissolved %	5	1	7	4	62	106	59	68	47.7	106	7	28	63.3	106	66	77	78.8	106	88	91
Oxygen Dissolved	6	3	7	4	12	12	5	8	6.61	11	1	3	9.105	11.1	6	9	30.5	13.1	9	12
pH (unitless)	6	5	11	7	9	9	9	9	8.78	8.28	9	9	8.92	8.94	9	9	9.25	9.15	9	9
Redox Potential mV	6	5	10	7	106	112	24	58	-295	71.1	-176	-254	152.5	106	9	118	244	155	196	171
Salinity ppt	5	4	9	6	6.54	5.95	6.14	6.70	4.19	5.23	4.75	3.42	7.1	5.795	5.96	7.13	7.5	6.99	7.40	7.94
Specific Conductivity µS/cm	6	5	11	7	10244	8539	8649	9636	2493	792	1131	804	12395	9907	9586	11700	13430	12170	12890	13687
Temperature °C	6	5	11	7	0	13	20	10	-0.21	5.23	14	3	0.015	13.5	20	11	1.09	17.7	25	19
Total Dissolved Solids	6	5	9	6	6661	6368	7018	7639	1620	4613	5500	4150	8063.5	6432	6833	8165	8731	7910	8377	8898
Turbidity NTU	4	4	7	6	3	9	36	14	0.5	3	1	4	2.1	5.15	14	14	6.6	23.1	182	26
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	0	0	2	2	-	-	0.5	0.5	-	-	0.5	0.5	-	-	0.5	0.5	-	-	0.5	0.5
Alkalinity (Total as CaCO3)	6	5	11	7	670	648	699	785	183	498	580	700	798.5	671	683	793	867	771	815	876
Bicarbonate Alkalinity	4	3	6	5	618	500	515	608	293	493	315	542	695	495	554	553	790	513	573	728
Carbonate Alkalinity	4	3	6	5	133.38	207	236	207	70.4	178	169	100	119.05	185	250	210	225	258	300	324
Color TCU	6	5	11	6	22	19	21	23	17	15.8	17	21	21.6	19.3	20	23	28.6	20.7	26	25
Hardness as CaCO3 (Dissolved)	6	5	11	7	3904	3548	3855	4691	741	2500	3170	3990	4665	3690	3860	4800	5280	4480	4640	5150
Hydroxide Alkalinity	4	3	6	5	0.50	0.50	0.50	0.50	0.5	0.5	0.50	0.50	0.5	0.5	0.50	0.50	0.5	0.5	0.50	0.50
pH (unitless)	6	5	11	7	9	9	9	9	8.5	8.78	9	9	8.665	8.78	9	9	9.13	8.94	9	9
Specific Conductivity µS/cm	6	5	11	7	9847	9644	10513	12086	2360	6920	8500	10700	11800	10300	10600	12000	12600	11700	12400	13300
Total Dissolved Solids	6	5	11	6	9580	9446	10433	11518	1810	6670	7900	8310	11350	9660	9750	11950	13000	11300	12600	13700
Total Suspended Solids	6	5	11	7	11	20	42	24	6	5.3	6	8	8.25	14.5	14	29	17.3	33.8	283	36
Turbidity NTU	6	5	11	7	4	7	9	10	2.45	2.56	1	2	3.675	3.84	2	8	8.74	14.2	42	19
Dissolved Anions																				
Bromide	6	5	11	7	1.50	3.00	1.31	1.80	1.25	1.25	0.50	1.25	1.25	1.25	1.25	1.25	2.75	10	2.70	2.60
Chloride	6	5	11	7	408	408	434	502	76	285	345	382	488	426	431	524	529	486	529	574
Fluoride	6	5	11	7	0.45	0.50	0.57	0.49	0.2	0.5	0.20	0.20	0.5	0.5	0.50	0.50	0.5	0.5	1.10	1.00
Sulphate	6	5	11	7	5932	5854	6285	7341	1090	3990	4840	5570	7085	6130	6150	7650	7930	7220	7900	8390
Nutrients								-												
Ammonia (Total)	6	5	11	7	0.656	0.042	0.096	0.396	0.0086	0.0271	0.029	0.043	0.2675	0.0355	0.075	0.132	1.68	0.07	0.221	1.520
Nitrate (as N)	6	5	11	7	0.11	0.13	0.118	0.150	0.05	0.125	0.050	0.050	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.250
Nitrite (as N)	6	5	11	7	0.042	0.0250	0.0236	0.0300	0.01	0.025	0.0100	0.0100	0.038	0.025	0.0250	0.0250	0.086	0.025	0.0250	0.0500
Nitrogen (Dissolved)	5	3	7	4	4.10	2.78	3.30	3.98	2.67	2.38	0.41	3.19	3.75	2.85	3.44	4.02	5.49	3.11	5.06	4.70
Nitrogen (Total)	6	5	11	6	3.52	3.38	3.49	6.06	0.078	2.19	2.52	1.28	3.515	3.36	3.54	4.50	5.51	4.71	4.36	17.50
Nitrogen Kjeldahl (Total)	6	5	11	7	3.70	3.38	3.39	3.98	0.078	2.19	2.52	1.28	3.445	3.36	3.50	4.58	6.19	4.71	4.03	5.21
Orthophosphate (Dissolved)	6	4	10	7	0.08	0.005	0.062	0.065	0.0005	0.0005	0.002	0.002	0.06265	0.0022	0.053	0.042	0.204	0.0164	0.133	0.178
Phosphorus - Dissolved	5	5	11	7	0.166	0.073	0.14	0.13	0.0564	0.0373	0.07	0.07	0.142	0.0764	0.12	0.11	0.275	0.0956	0.23	0.24
Phosphorus - Total	6	5	10	7	0.24	0.17	0.17	0.60	0.105	0.0908	0.08	0.11	0.234	0.135	0.15	0.29	0.394	0.354	0.32	2.77
Cyanide																				
Cyanide (Free)	6	4	9	7	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Cyanide (Total)	6	4	10	7	0.0059	0.0042	0.00515	0.00411429	0.0025	0.0025	0.0025	0.0025	0.00715	0.0025	0.00425	0.0025	0.0082	0.0093	0.0094	0.0085
Cyanide (WAD)	6	4	9	7	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Dissolved Metals																				
Aluminum	6	5	11	7	0.0121	0.0180	0.0273	0.0129	0.005	0.005	0.0050	0.0050	0.01375	0.015	0.0250	0.0050	0.015	0.05	0.0500	0.0500
Antimony	6	5	11	7	0.000708	0.00140	0.00285	0.00140	0.0005	0.0005	0.00050	0.00050	0.0005	0.0005	0.00250	0.00100	0.00125	0.005	0.00500	0.00500
Arsenic	6	5	11	7	0.0159	0.0142	0.0191	0.0198	0.0068	0.0094	0.0100	0.0161	0.01565	0.0146	0.0207	0.0204	0.0219	0.0171	0.0235	0.0230
Barium	6	5	11	7	0.028	0.024	0.029	0.027	0.01	0.02	0.019	0.020	0.03095	0.0266	0.030	0.029	0.0391	0.0278	0.054	0.034
Beryllium	6	5	11	7	0.00092	0.00240	0.00523	0.00186	0.0005	0.0005	0.00050	0.00050	0.0005	0.0005	0.00500	0.00050	0.0025	0.01	0.01000	0.01000
Bismuth	6	5	9	7	0.01916667	0.042	0.113	0.045	0.0025	0.0025	0.003	0.003	0.0025	0.0025	0.003	0.003	0.1	0.2	0.300	0.300
Boron	6	5	11	7	1.968	1.788	1.939	2.361	0.37	1.25	1.580	1.840	2.27	1.88	1.890	2.320	2.63	2.21	2.440	2.680
Cadmium	6	5	11	7	0.00006	0.000074	0.000108	0.000067	0.0000425	0.00005	0.000050	0.000050	0.00005	0.00005	0.000085	0.0000050	0.0001	0.00017	0.000170	0.000170
Calcium	6	5	11	7	81	73	80	84	31.6	56.3	70	76	95.3	72.9	80	83	103	92.2	90	96
Chromium	6	5	11	7	0.00092	0.0024	0.00523	0.00186	0.0005	0.0005	0.00050	0.00050	0.0005	0.0005	0.00500	0.00050	0.0025	0.01	0.01000	0.01000
Cobalt	6	5	11	7	0.00063	0.00100	0.00173	0.00086	0.0005	0.0005	0.00050	0.00050	0.0005	0.0005	0.00150	0.00050	0.001	0.003	0.00300	0.00300
Copper	6	5	11	7	0.0047	0.0047	0.0066	0.0028	0.002	0.0025	0.0010	0.0010	0.0025	0.003	0.0100	0.0010	0.0124	0.01	0.0100	0.0100
Iron	6	5	11	7	0.040	0.029	0.034	0.039	0.015	0.015	0.015	0.025	0.045	0.03	0.030	0.045	0.055	0.045	0.050	0.057
Lead	6	5	11	7	0.00046	0.00120	0.00261	0.00093	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00250	0.00025	0.00125	0.005	0.00500	0.00500
Lithium	6	5	11	7	0.0426	0.0448	0.0456	0.0514	0.0125	0.0298	0.0250	0.0238	0.04545	0.0479	0.0499	0.0537	0.0603	0.0545	0.0500	0.0627
Magnesium	6	5	11	7	896.5	803.8	888.3	1089.4	161.0	573.0	727.0	922.0	1070.0	852.0	887.0	1110.0	1220.0	963.0	1070.0	1200.0
Manganese	6	5	11	7	0.070	0.104	0.094	0.058	0.0451	0.0423	0.042	0.018	0.06805	0.132	0.096	0.049	0.101	0.138	0.205	0.100
Mercury	6	5	11	7	0.0000050	0.0000050	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050
Molybdenum	6	5	11	7	0.0300	0.0300	0.0310	0.0364	0.0073	0.02	0.0252	0.0320	0.0352	0.0305	0.0300	0.0379	0.0387	0.0411	0.0368	0.0387
Nickel	6	5	11	7	0.0029	0.0051	0.0061	0.0036	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0050	0.0025	0.005	0.01	0.0100	0.0100
Phosphorus	6	5	9	7	0.29	0.24	0.31	0.33	0.125	0.05	0.13	0.13	0.27	0.3	0.30	0.26	0.45	0.45	0.45	0.75
Potassium	6	5	11	7	210	187	207	254	36.5	129	163	214	251	200	202	263	291	239	253	281
Selenium	6	5	11	7	0.00092	0.00264	0.00523	0.00194	0.0005	0.0005	0.00050	0.00050	0.0005	0.0005	0.00500	0.00050	0.0025	0.01	0.01000	0.01000
Silicon	6	5	9	7	1.63	1.45	0.88	2.59	0.496	0.45	0.16	1.06	1.045	1.12	0.85	2.70	3.25	2.96	2.01	3.74
Silver	6	5	11	7	0.000058	0.000080	0.000123	0.000071	0.00005	0.00005	0.000050	0.000050	0.00005	0.00005	0.000100	0.000050	0.0001	0.0002	0.000200	0.000200
Sodium	6	5	11	7	1571	1474	1667	1937	288	1000	1220	1550	1870	1600	1660	1950	2030	1870	2170	2260
Strontium	6	5	9	7	5.43	5.25	5.94	6.90	1.13	3.75	4.86	5.99	6.47	5.55	5.95	6.89	7.11	6.63	7.20	7.57
Sulphur	2	2	3	4	2520	2000	2380	2588	2470	1690	2240	2430	2520	2000	2380	2610	2570	2310	2520	2700
Thallium	6	5	11	7	0.000133	0.000440	0.001023	0.000329	0.00005	0.00005	0.000050	0.000050	0.00005	0.00005	0.001000	0.000050	0.0005	0.002	0.002000	0.002000
Tin	6	5	11	7	0.00071	0.00140	0.00273	0.00114	0.0005	0.0005	0.00050	0.00050	0.0005	0.0005	0.00250	0.00050	0.00125	0.005	0.00500	0.00500
Titanium	6	5	11	7	0.0325	0.027	0.0227	0.0364	0.005	0.01	0.0100	0.0150	0.015	0.015	0.0150	0.0500	0.1	0.05	0.0500	0.0500
Uranium	6	5	11	7	0.0030	0.0031	0.0028	0.0036	0.0005	0.002	0.0020	0.0020	0.003545	0.00328	0.0028	0.0039	0.00426	0.00408	0.0039	0.0042
Vanadium	6	5	11	7	0.0054	0.0074	0.0073	0.0057	0.0025	0.005	0.0050	0.0050	0.005	0.005	0.0050	0.0050	0.01	0.012	0.0100	0.0100
Zinc	6	5	11	7	0.0349	0.0106	0.0059	0.0068	0.0025	0.005	0.0050	0.0050	0.0125	0.013	0.0050	0.0050	0.129	0.015	0.0100	0.0150
Total Metals																				
Aluminum	6	5	11	7	0.26	0.25	0.07	0.32	0.015	0.044	0.02	0.02	0.0225	0.17	0.05	0.12	1.33	0.805	0.42	0.91
Antimony	6	5	11	7	0.00079167	0.00140	0.00309	0.00134	0.0005	0.0005	0.00050	0.00050	0.00075	0.0005	0.00320	0.00050	0.00125	0.005	0.00500	0.00500
Arsenic	6	5	11	7	0.0160	0.0146	0.0196	0.0197	0.0066	0.01	0.0150	0.0149	0.01535	0.0145	0.0199	0.0203	0.0229	0.018	0.0236	0.0234
Barium	6	5	11	7	0.030	0.026	0.028	0.031	0.01	0.02	0.020	0.020	0.0317	0.0276	0.030	0.030	0.0418	0.0296	0.042	0.044
Beryllium	6	5	11	7	0.00092	0.00240	0.00523	0.00186	0.0005	0.0005	0.00050	0.00050	0.0005	0.0005	0.00500	0.00050	0.0025	0.01	0.01000	0.01000
Bismuth	6	5	9	7	0.01916667	0.042	0.1125	0.045	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.1	0.2	0.3	0.3
Boron	6	5	11	7	2.033	1.826	1.977	2.319	0.36	1.29	1.590	2.030	2.345	1.94	2.000	2.220	2.77	2.21	2.490	2.710
Cadmium	6	5	11	7	0.00006	0.000074	0.000112	0.000067	0.0000425	0.00005	0.000050	0.000050	0.00005	0.00005	0.000100	0.000050	0.0001	0.00017	0.000170	0.000170
Calcium	6	5	11	7	84	74	82	86	31.1	58.6	73	72	97.9	72	80	81	105	92.9	95	102
Chromium	6	5	11	7	0.00103	0.0024	0.0052	0.0025	0.0005	0.0005	0.0005	0.0005	0.00075	0.0005	0.0050	0.0015	0.0025	0.01	0.0100	0.0100
Cobalt	6	5	11	7	0.00063	0.00100	0.00173	0.00086	0.0005	0.0005	0.00050	0.00050	0.0005	0.0005	0.00150	0.00050	0.0010	0.0030	0.00300	0.00300
Copper	6	5	11	7	0.0070	0.0045	0.0066	0.0057	0.0025	0.0025	0.0025	0.0025	0.00375	0.0025	0.0100	0.0053	0.0183	0.01	0.0100	0.0100
Iron	6	5	11	7	0.12	0.16	0.09	0.44	0.045	0.03	0.03	0.03	0.1265	0.161	0.05	0.19	0.226	0.254	0.46	1.19
Lead	6	5	11	7	0.00046	0.00120	0.00261	0.00093	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00250	0.00025	0.00125	0.0050	0.00500	0.00500
Lithium	6	5	11	7	0.0450	0.0460	0.0466	0.0526	0.0125	0.032	0.0250	0.0361	0.0491	0.0485	0.0500	0.0500	0.0631	0.0553	0.0516	0.0648
Magnesium	6	5	11	7	932	810	909	1078	158	586	731	894	1115	825	905	1090	1240	959	1120	1210
Manganese	6	5	11	7	0.08	0.12	0.11	0.09	0.0472	0.0733	0.05	0.05	0.07555	0.141	0.11	0.08	0.112	0.15	0.20	0.14
Mercury	6	5	11	7	0.0000050	0.0000050	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050
Molybdenum	6	5	11	7	0.031	0.029	0.032	0.036	0.0073	0.01	0.027	0.031	0.0373	0.031	0.031	0.038	0.0378	0.0437	0.039	0.039
Nickel	6	5	11	7	0.0029	0.0040	0.0061	0.0040	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0050	0.0025	0.0050	0.0100	0.0100	0.0100
Phosphorus	6	5	9	7	0.33	0.30	0.36	0.42	0.15	0.075	0.21	0.30	0.31	0.3	0.33	0.36	0.45	0.45	0.45	0.75
Potassium	6	5	11	7	216.3	186.2	211.0	249.7	35.6	122.0	161.0	211.0	257.0	196.0	209.0	260.0	296.0	237.0	267.0	279.0
Selenium	6	5	11	7	0.00103	0.00268	0.00573	0.00204	0.00050	0.00050	0.00050	0.00050	0.00075	0.0005	0.00500	0.00050	0.0025	0.0100	0.01500	0.01000
Silicon	6	5	9	7	1.8	1.7	1.1	3.5	0.8	0.8	0.2	1.5	1.3	1.3	1.0	3.7	3.4	3.1	2.2	4.8
Silver	6	5	11	7	0.0000583	0.0000800	0.0001227	0.0000814	0.00005	0.00005	0.0000500	0.0000500	0.00005	0.00005	0.0001000	0.0000500	0.0001	0.0002	0.0002000	0.0002000
Sodium	6	5	11	7	1587	1465	1679	1894	280	964	1210	1530	1885	1560	1680	1940	2060	1870	2180	2260
Strontium	6	5	9	7	5.6	5.3	6.15	6.73	1.12	3.61	5.08	5.85	6.835	5.6	6.09	6.85	7.0	6.7	7.31	7.54
Sulphur	2	2	3	4	2680	2055	2470	2570	2620	1780	2320	2380	2680	2055	2430	2565	2740	2330	2660	2770
Thallium	6	5	11	7	0.00013	0.00044	0.00104	0.00033	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00100	0.00005	0.0005	0.002	0.00200	0.00200
Tin	6	5	11	7	0.00071	0.00140	0.00273	0.00114	0.0005	0.0005	0.00050	0.00050	0.0005	0.0005	0.00250	0.00050	0.00125	0.005	0.00500	0.00500
Titanium	6	5	11	7	0.0325	0.027	0.023	0.042	0.005	0.01	0.010	0.015	0.015	0.015	0.015	0.050	0.1	0.05	0.050	0.052
Uranium	6	5	11	7	0.0030	0.0031	0.0029	0.0036	0.0005	0.0020	0.0020	0.0020	0.0036	0.0032	0.0032	0.0040	0.0042	0.0041	0.0041	0.0042
Vanadium	6	5	11	7	0.0054	0.0076	0.0078	0.0057	0.0025	0.005	0.0050	0.0050	0.005	0.005	0.0100	0.0050	0.01	0.013	0.0110	0.0100
Zinc	6	5	11	7	0.0234	0.0162	0.0100	0.0139	0.0025	0.005	0.0050	0.0075	0.015	0.015	0.0075	0.0150	0.063	0.031	0.0150	0.0150
Organics																				
Carbon Organic (Dissolved)	6	5	11	7	39.8	38.2	43	47	12.2	29.2	34	43	45.6	40.2	43	47	51	45	53	50
Carbon Organic (Total)	5	5	9	7	45.5	39	44	51	38.5	27.8	36	46	46.3	40.8	44	51	51	48	56	55
Nitrogen Organic (Dissolved)	4	3	6	4	3.14	2.73	3.13	3.35	2.58	2.31	0.27	2.83	3.295	2.81	3.33	3.33	3.39	3.08	4.84	3.90
Nitrogen Organic (Total)	5	4	6	4	3.64	3.25	3.33	2.89	3.01	2.17	2.42	0.04	3.52	3.09	3.32	3.58	4.51	4.6	4.31	4.35

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.
2. SEASONS ARE SPECIFIED AS FOLLOWS: WIN (WINTER; DECEMBER THROUGH MARCH), SPR (SPRING; APRIL AND MAY), SUMMER(JUNE THROUGH AUGUST), FALL (SEPTEMBER THROUGH NOVEMBER).

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.18 - JACL-D
(PAGE 1 OF 2)

Parameter	Total Count	Complete Dataset - JACL-D									
		Min	Percentiles 5th	25th	50th	75th	95th	Max	Average	Standard Deviation	Coefficient of Variation
In Situ Parameters											
Conductivity µS/cm	38	144	424	442	467	503	621	804	485	98	2.0E-01
Oxygen Dissolved %	33	0	0	2	4	33	69	87	19	25	1.3E+00
Oxygen Dissolved	37	0.0	0.0	0.2	0.5	5.1	8.8	13.2	2.7	3.6	1.3E+00
pH (unitless)	39	6.5	7.3	7.5	7.7	8.0	8.7	8.8	7.8	0.5	6.1E-02
Redox Potential mV	32	-276	-258	-128	0	126	224	258	1	160	1.3E+02
Salinity ppt	30	0.11	0.30	0.34	0.36	0.37	0.41	0.65	0.36	0.08	2.1E-01
Specific Conductivity µS/cm	40	232	643	714	749	791	848	1302	751	133	1.8E-01
Temperature °C	40	1.5	2.6	3.9	4.9	5.4	18.1	20.5	6.1	4.5	7.4E-01
Total Dissolved Solids	31	153	412	455	477	495	549	846	478	96	2.0E-01
Turbidity NTU	26	-10.9	-0.3	0.5	1.0	1.6	9.5	300.0	12.5	58.7	4.7E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	5	0.5	1.2	4.2	4.9	5.2	7.2	7.7	4.5	2.6	5.8E-01
Alkalinity (Total as CaCO3)	40	219	236	247	252	259	280	285	254	13	5.2E-02
Bicarbonate Alkalinity	30	214	227	245	252	258	275	285	252	14	5.7E-02
Carbonate Alkalinity	30	0.5	0.5	0.6	1.0	1.0	4.1	22.6	1.8	4.1	2.3E+00
Color TCU	27	12.6	13.3	14.8	16.0	16.4	17.5	21.3	15.7	1.7	1.1E-01
Hardness as CaCO3 (Dissolved)	40	281	294	300	316	323	336	341	314	14	4.6E-02
Hydroxide Alkalinity	30	0.5	0.5	0.5	1.0	1.0	1.0	1.0	0.8	0.2	2.9E-01
pH (unitless)	40	7.9	8.0	8.1	8.2	8.2	8.3	8.6	8.2	0.1	1.7E-02
Specific Conductivity µS/cm	40	637	677	704	740	770	801	811	736	43	5.8E-02
Total Dissolved Solids	40	362	398	429	453	470	492	507	448	32	7.1E-02
Total Suspended Solids	40	1.5	1.5	1.5	1.5	1.9	5.3	7.3	2.2	1.5	6.7E-01
Turbidity NTU	36	0.5	0.8	1.2	1.9	2.4	11.5	23.4	3.3	4.5	1.4E+00
Dissolved Anions											
Bromide	40	0.03	0.03	0.03	0.13	0.13	0.25	0.25	0.11	0.08	6.8E-01
Chloride	40	54	55	56	59	61	63	65	59	3	4.8E-02
Fluoride	39	0.10	0.16	0.20	0.21	0.22	0.30	0.34	0.21	0.04	2.1E-01
Sulphate	40	45	51	53	65	73	84	86	64	12	1.8E-01
Nutrients											
Ammonia (Total)	40	0.007	0.020	0.121	0.342	0.874	1.571	1.940	0.503	0.485	9.7E-01
Nitrate (as N)	40	0.003	0.00	0.01	0.03	0.12	0.51	0.56	0.10	0.154	1.6E+00
Nitrite (as N)	40	0.0005	0.00	0.00	0.01	0.01	0.03	0.04	0.01	0.0089	1.2E+00
Nitrogen (Dissolved)	18	0.92	1.11	1.42	1.52	2.18	2.93	3.50	1.77	0.66	3.7E-01
Nitrogen (Total)	23	1.01	1.05	1.31	1.45	1.73	2.55	2.77	1.61	0.50	3.1E-01
Nitrogen Kjeldahl (Total)	40	0.85	0.89	1.01	1.31	1.80	2.52	3.17	1.47	0.58	4.0E-01
Orthophosphate (Dissolved)	40	0.001	0.025	0.071	0.114	0.217	0.336	0.343	0.146	0.101	6.9E-01
Phosphorus - Dissolved	33	0.011	0.047	0.099	0.122	0.193	0.354	0.392	0.163	0.099	6.1E-01
Phosphorus - Total	39	0.019	0.049	0.092	0.140	0.231	0.364	0.430	0.173	0.108	6.3E-01
Cyanide											
Cyanide (Free)	36	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	3.5E-16
Cyanide (Total)	38	0.0025	0.0025	0.0025	0.0025	0.0025	0.0065	0.0117	0.0035	0.0020	5.7E-01
Cyanide (WAD)	36	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0063	0.0026	0.0006	2.4E-01
Dissolved Metals											
Aluminum	40	0.0005	0.0005	0.0005	0.0015	0.0025	0.0050	0.0090	0.0018	0.0017	9.6E-01
Antimony	40	0.00005	0.00005	0.00005	0.00010	0.00025	0.00050	0.00050	0.00015	0.00013	8.9E-01
Arsenic	40	0.0012	0.0012	0.0013	0.0013	0.0014	0.0014	0.0016	0.0013	0.0001	6.3E-02
Barium	40	0.045	0.050	0.064	0.067	0.071	0.075	0.079	0.066	0.008	1.2E-01
Beryllium	40	0.000050	0.000050	0.000050	0.000050	0.000500	0.001000	0.001000	0.000234	0.000294	1.3E+00
Bismuth	32	0.00025	0.00025	0.00025	0.00025	0.00025	0.10000	0.10000	0.01584	0.03680	2.3E+00
Boron	40	0.019	0.020	0.021	0.024	0.050	0.050	0.050	0.031	0.013	4.3E-01
Cadmium	40	0.0000050	0.0000050	0.0000050	0.0000050	0.0000085	0.0000170	0.0000170	0.0000068	0.0000033	4.9E-01
Calcium	40	50	52	56	57	58	60	61	57	3	4.5E-02
Chromium	40	0.00005	0.00005	0.00005	0.00005	0.00050	0.00100	0.00200	0.00029	0.00042	1.5E+00
Cobalt	40	0.00005	0.00005	0.00005	0.00005	0.00015	0.00030	0.00030	0.00009	0.00007	7.8E-01
Copper	40	0.0001	0.0001	0.0003	0.0005	0.0010	0.0015	0.0022	0.0007	0.0005	7.5E-01
Iron	40	0.005	0.005	0.005	0.015	0.015	0.017	0.019	0.012	0.005	4.1E-01
Lead	40	0.000025	0.000025	0.000025	0.000025	0.000250	0.000500	0.000500	0.000119	0.000146	1.2E+00
Lithium	40	0.00250	0.00455	0.00548	0.00582	0.00627	0.00720	0.00820	0.00578	0.00103	1.8E-01
Magnesium	40	33	37	39	42	44	47	49	42	3	8.1E-02
Manganese	40	0.001	0.001	0.019	0.050	0.102	0.123	0.168	0.061	0.047	7.7E-01
Mercury	40	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000100	0.0000100	0.0000058	0.0000018	3.1E-01
Molybdenum	40	0.001	0.001	0.002	0.002	0.002	0.003	0.003	0.002	0.001	3.0E-01
Nickel	40	0.0005	0.0005	0.0006	0.0007	0.0007	0.0010	0.0011	0.0007	0.0002	2.2E-01
Phosphorus	32	0.03	0.05	0.11	0.15	0.15	0.33	0.36	0.16	0.08	5.4E-01
Potassium	40	10	11	12	12	13	14	15	12	1	8.0E-02
Selenium	39	0.00012	0.00012	0.00014	0.00017	0.00050	0.00205	0.01070	0.00071	0.00175	2.5E+00
Silicon	32	3.1	3.3	3.9	4.5	5.8	6.8	7.2	4.8	1.2	2.5E-01
Silver	40	0.0000050	0.0000050	0.0000050	0.0000050	0.0000100	0.0000200	0.0000200	0.0000074	0.0000042	5.7E-01
Sodium	40	32	33	35	39	41	43	47	39	4	9.2E-02
Strontium	32	0.33	0.35	0.37	0.39	0.42	0.44	0.45	0.39	0.03	7.2E-02
Sulphur	18	0	12	17	18	20	31	39	19	7	3.9E-01
Thallium	40	0.0000050	0.0000050	0.0000050	0.0000050	0.0001000	0.0002000	0.0002000	0.0000434	0.0000611	1.4E+00
Tin	40	0.000050	0.000050	0.000050	0.000050	0.000250	0.000500	0.000500	0.000134	0.000137	1.0E+00
Titanium	40	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0000	5.3E-16
Uranium	40	0.0009	0.0010	0.0010	0.0011	0.0012	0.0012	0.0013	0.0011	0.0001	7.9E-02
Vanadium	40	0.0010	0.0015	0.0017	0.0018	0.0020	0.0150	0.0150	0.0028	0.0035	1.2E+00
Zinc	40	0.0005	0.0005	0.0012	0.0016	0.0025	0.0039	0.0050	0.0020	0.0011	5.7E-01
Total Metals											
Aluminum	40	0.0015	0.0025	0.0030	0.0050	0.0081	0.0179	0.0841	0.0083	0.0133	1.6E+00
Antimony	40	0.00005	0.00005	0.00011	0.00012	0.00025	0.00050	0.00050	0.00017	0.00012	6.9E-01
Arsenic	40	0.0011	0.0012	0.0013	0.0013	0.0014	0.0014	0.0016	0.0013	0.0001	6.9E-02
Barium	40	0.049	0.051	0.064	0.068	0.071	0.075	0.077	0.066	0.007	1.1E-01
Beryllium	40	0.000050	0.000050	0.000050	0.000050	0.000500	0.001000	0.001000	0.000234	0.000294	1.3E+00
Bismuth	32	0.00025	0.00025	0.00025	0.00025	0.00025	0.10000	0.10000	0.01584	0.03680	2.3E+00
Boron	40	0.020	0.022	0.025	0.026	0.050	0.050	0.050	0.033	0.012	3.6E-01
Cadmium	40	0.000005	0.000005	0.000005	0.000005	0.000009	0.000017	0.000017	0.000007	0.000003	4.8E-01
Calcium	40	49	53	55	56	58	61	62	56	3	4.7E-02
Chromium	40	0.00005	0.00005	0.00013	0.00020	0.00050	0.00100	0.00150	0.00033	0.00032	9.5E-01
Cobalt	40	0.00005	0.00005	0.00005	0.00005	0.00015	0.00030	0.00030	0.00010	0.00007	7.5E-01
Copper	40	0.0003	0.0005	0.0005	0.0007	0.0012	0.0025	0.0059	0.0011	0.0010	9.1E-01
Iron	40	0.01	0.01	0.02	0.02	0.02	0.04	0.14	0.02	0.02	9.9E-01
Lead	40	0.000025	0.000025	0.000025	0.000043	0.000250	0.000504	0.000588	0.000155	0.000174	1.1E+00
Lithium	40	0.0043	0.0050	0.0053	0.0059	0.0063	0.0074	0.0077	0.0059	0.0008	1.4E-01
Magnesium	40	32	36	39	42	44	46	48	41	4	8.7E-02
Manganese	40	0.00	0.01	0.03	0.06	0.11	0.13	0.17	0.07	0.04	6.6E-01
Mercury	40	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000100	0.0000100	0.0000058	0.0000018	3.1E-01
Molybdenum	40	0.001	0.001	0.002	0.002	0.002	0.003	0.003	0.002	0.000	2.1E-01
Nickel	40	0.0005	0.0005	0.0006	0.0008	0.0008	0.0010	0.0016	0.0008	0.0002	2.9E-01
Phosphorus	32	0.03	0.05	0.11	0.15	0.15	0.35	0.37	0.16	0.09	5.5E-01
Potassium	40	10	11	11	12	13	14	14	12	1	8.0E-02
Selenium	40	0.00005	0.00012	0.00013	0.00015	0.00050	0.00112	0.01710	0.00077	0.00270	3.5E+00
Silicon	32	3.2	3.3	3.9	4.6	5.8	6.7	7.3	4.8	1.2	2.5E-01
Silver	40	0.0000050	0.0000050	0.0000050	0.0000050	0.0000100	0.0000200	0.0000200	0.0000074	0.0000042	5.7E-01
Sodium	40	31	33	36	39	41	44	45	39	4	9.1E-02
Strontium	32	0.35	0.35	0.38	0.39	0.42	0.44	0.46	0.40	0.03	7.0E-02
Sulphur	18	14	16	18	18	19	21	22	18	2	9.6E-02
Thallium	40	0.0000050	0.0000050	0.0000050	0.0000050	0.0001000	0.0002000	0.0002000	0.0000434	0.0000611	1.4E+00
Tin	40	0.000050	0.000050	0.000050	0.000050	0.000250	0.000500	0.000500	0.000134	0.000137	1.0E+00
Titanium	40	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0000	5.3E-16
Uranium	40	0.0008	0.0009	0.0011	0.0012	0.0013	0.0013	0.0014	0.0012	0.0001	1.2E-01
Vanadium	40	0.0010	0.0016	0.0019	0.0020	0.0022	0.0150	0.0150	0.0030	0.0035	1.2E+00
Zinc	40	0.0015	0.0015	0.0015	0.0015	0.0025	0.0026	0.0050	0.0020	0.0008	3.9E-01
Organics											
Carbon Organic (Dissolved)	40	12.3	12.8	13.6	14.4	14.7	15.9	16.8	14.3	1.0	7.2E-02
Carbon Organic (Total)	32	12.4	13.0	13.9	14.9	15.5	16.4	18.0	14.7	1.3	8.6E-02
Nitrogen Organic (Dissolved)	17	0.62	0.64	0.83	0.92	1.09	2.50	2.64	1.10	0.58	5.2E-01
Nitrogen Organic (Total)	18	0.62	0.77	0.85	0.90	1.06	1.74	2.41	1.04	0.40	3.9E-01

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.18 - JACL-D
(PAGE 2 OF 2)

Seasonal Statistics - JACL-D

Parameter	Count				Average				Min				Median				Max			
	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall
In Situ Parameters																				
Conductivity µS/cm	6	8	15	9	433	516	491	480	414	426	432	144	431	488	483	470	457	739	600	804
Oxygen Dissolved %	6	7	11	9	24	37	11	13	5.2	2.5	0	0	22.25	39.7	2	2	39.1	69.2	87	57
Oxygen Dissolved	6	8	12	11	3	5	1	2	0.7	0.33	0	0	2.985	6.115	0	0	5.31	13.2	8	12
pH (unitless)	6	8	14	11	8	8	8	8	7.62	7.48	7	7	7.725	7.985	8	7	8.23	8.55	9	8
Redox Potential mV	6	6	12	8	158	120	-95	-61	75.1	41.3	-264	-276	168.5	112	-77	-133	219	229	21	258
Salinity ppt	6	6	11	7	0.36	0.35	0.36	0.37	0.35	0.3	0.31	0.11	0.36	0.35	0.35	0.37	0.38	0.37	0.41	0.65
Specific Conductivity µS/cm	6	8	15	11	746	726	748	776	726	624	644	232	744	746.5	744	770	782	790	847	1302
Temperature °C	6	8	15	11	3	7	7	5	2.51	3.76	1	4	3.235	5.15	5	5	3.26	13.8	21	6
Total Dissolved Solids	6	6	12	7	485	461	479	486	472	405	418	153	483.5	461.5	469	487	508	494	550	846
Turbidity NTU	6	5	10	5	1	1	32	-2	0.1	-0.4	0	-11	0.6	1.2	1	1	2	2.6	300	1
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	0	1	2	2	-	4.2	6.45	2.7	-	4.2	5.2	0.5	-	4.2	6.45	2.7	-	4.2	7.7	4.9
Alkalinity (Total as CaCO3)	6	8	15	11	252	248	252	263	246	219	236	244	251.5	252.5	250	264	258	259	280	285
Bicarbonate Alkalinity	6	7	9	8	252	247	245	263	246	219	214	245	251.5	252	247	260	258	258	264	285
Carbonate Alkalinity	6	7	9	8	0.92	2	3	1	0.5	0.5	1	1	1	1	1	1	1	6.6	23	1
Color TCU	6	4	9	8	16	17	15	15	15	13.1	13	14	16.15	17	16	15	16.7	21.3	17	17
Hardness as CaCO3 (Dissolved)	6	8	15	11	310	311	314	316	297	291	281	296	312	310.5	318	320	321	341	337	336
Hydroxide Alkalinity	6	7	9	8	0.92	0.86	0.78	0.81	0.5	0.5	0.50	0.50	1	1	1.00	1.00	1	1	1.00	1.00
pH (unitless)	6	8	15	11	8	8	8	8	8.11	8.12	8	8	8.19	8.21	8	8	8.33	8.35	9	8
Specific Conductivity µS/cm	6	8	15	11	721	724	739	748	680	659	637	686	725.5	726	740	744	746	790	811	809
Total Dissolved Solids	6	8	15	11	440	427	455	459	413	362	399	428	448.5	443	458	465	458	462	507	486
Total Suspended Solids	6	8	15	11	3	2	2	2	1.5	1.5	2	2	1.5	1.5	2	2	7.3	4.7	7	4
Turbidity NTU	6	7	14	9	2	1	3	6	1.04	0.46	1	1	1.52	1.21	2	2	5.24	2.43	13	23
Dissolved Anions																				
Bromide	6	8	15	11	0.17	0.06	0.10	0.14	0.125	0.025	0.03	0.03	0.125	0.025	0.13	0.13	0.25	0.125	0.25	0.25
Chloride	6	8	15	11	58	58	59	59	55.9	54.2	55	54	58.6	57.9	60	60	60	61.4	65	64
Fluoride	6	8	14	11	0.22	0.21	0.22	0.20	0.2	0.172	0.10	0.10	0.21	0.211	0.21	0.21	0.28	0.23	0.34	0.26
Sulphate	6	8	15	11	62	65	65	64	53.4	51.3	45	46	62.95	62.85	66	64	67.9	86.4	85	83
Nutrients								-												
Ammonia (Total)	6	8	15	11	0.215	0.119	0.500	0.943	0.0207	0.0068	0.011	0.251	0.1613	0.0833	0.499	0.906	0.472	0.39	1.190	1.940
Nitrate (as N)	6	8	15	11	0.35	0.14	0.029	0.027	0.08	0.0025	0.003	0.003	0.4	0.128	0.013	0.013	0.562	0.357	0.245	0.121
Nitrite (as N)	6	8	15	11	0.010	0.0124	0.0050	0.0062	0.0025	0.0027	0.0005	0.0005	0.0068	0.0055	0.0025	0.0050	0.0232	0.0363	0.0214	0.0312
Nitrogen (Dissolved)	5	2	6	5	1.42	1.19	1.78	2.33	1.24	1.14	1.41	0.92	1.44	1.185	1.60	2.45	1.52	1.23	2.28	3.50
Nitrogen (Total)	5	4	7	7	1.46	1.17	1.73	1.86	1.39	1.01	1.06	1.14	1.44	1.155	1.56	1.77	1.59	1.36	2.55	2.77
Nitrogen Kjeldahl (Total)	6	8	15	11	1.10	1.00	1.46	2.02	0.852	0.888	0.93	1.14	1.05	1.005	1.45	1.90	1.48	1.13	2.30	3.17
Orthophosphate (Dissolved)	6	8	15	11	0.09	0.068	0.139	0.246	0.0676	0.0281	0.001	0.058	0.0813	0.06725	0.142	0.277	0.113	0.115	0.302	0.343
Phosphorus - Dissolved	6	6	12	9	0.100	0.101	0.16	0.25	0.0863	0.0798	0.01	0.07	0.0992	0.10095	0.17	0.28	0.119	0.122	0.35	0.39
Phosphorus - Total	6	8	15	10	0.10	0.10	0.17	0.28	0.0885	0.0558	0.02	0.08	0.0955	0.0914	0.18	0.31	0.125	0.14	0.36	0.43
Cyanide																				
Cyanide (Free)	6	7	13	10	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Cyanide (Total)	6	8	14	10	0.0025	0.0035	0.00361429	0.00381	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.007	0.0063	0.0117
Cyanide (WAD)	6	7	13	10	0.0025	0.0025	0.00279231	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0063	0.0025
Dissolved Metals																				
Aluminum	6	8	15	11	0.0011	0.0016	0.0017	0.0024	0.0005	0.0005	0.0005	0.0005	0.00135	0.001	0.0021	0.0015	0.0015	0.005	0.0050	0.0090
Antimony	6	8	15	11	0.000098	0.00014	0.00016	0.00016	0.00005	0.00005	0.00005	0.00005	0.00105	0.000075	0.00005	0.00010	0.00012	0.0005	0.00050	0.00050
Arsenic	6	8	15	11	0.0014	0.0013	0.0013	0.0013	0.00132	0.00123	0.0012	0.0012	0.0014	0.00129	0.0013	0.0013	0.00142	0.0014	0.0015	0.0016
Barium	6	8	15	11	0.062	0.063	0.067	0.069	0.0478	0.0547	0.054	0.045	0.06365	0.0646	0.068	0.070	0.0751	0.0724	0.075	0.079
Beryllium	6	8	15	11	0.00005	0.00023	0.00029	0.00026	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.001	0.00100	0.00100
Bismuth	6	6	12	8	0.00025	0.000	0.034	0.013	0.00025	0.00025	0.000	0.000	0.00025	0.00025	0.000	0.000	0.00025	0.00025	0.100	0.100
Boron	6	8	15	11	0.022	0.029	0.035	0.032	0.02	0.02	0.020	0.019	0.022	0.022	0.024	0.026	0.025	0.05	0.050	0.050
Cadmium	6	8	15	11	0.00001	0.000007	0.000007	0.000007	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000017	0.000017	0.000017
Calcium	6	8	15	11	55	57	57	57	52.3	53.9	50	52	55.15	57.05	57	57	59.7	58.3	60	61
Chromium	6	8	15	11	0.00005	0.0002	0.00036	0.00035	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.001	0.00100	0.00200
Cobalt	6	8	15	11	0.00005	0.00009	0.00011	0.00010	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.0003	0.00030	0.00030
Copper	6	8	15	11	0.0007	0.0009	0.0007	0.0004	0.00025	0.00025	0.0001	0.0001	0.000355	0.0008	0.0005	0.0004	0.00159	0.00219	0.0015	0.0010
Iron	6	8	15	11	0.012	0.010	0.012	0.012	0.005	0.005	0.005	0.005	0.0125	0.01	0.015	0.015	0.015	0.015	0.018	0.019
Lead	6	8	15	11	0.00003	0.00012	0.00015	0.00013	0.000025	0.000025	0.00003	0.00003	0.000025	0.000025	0.00003	0.00003	0.000025	0.0005	0.00050	0.00050
Lithium	6	8	15	11	0.0060	0.0058	0.0055	0.0060	0.00572	0.005	0.0025	0.0050	0.005985	0.00582	0.0056	0.0061	0.00627	0.00633	0.0082	0.0072
Magnesium	6	8	15	11	41.8	41.0	41.7	42.2	40.4	36.7	33.2	38.5	41.9	41.6	43.1	42.3	43.1	46.7	46.8	49.2
Manganese	6	8	15	11	0.019	0.033	0.071	0.091	0.00371	0.00107	0.002	0.020	0.01865	0.01953	0.094	0.102	0.031	0.147	0.122	0.168
Mercury	6	8	15	11	0.0000050	0.0000063	0.0000057	0.0000059	0.0000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.00001	0.0000100	0.0000100
Molybdenum	6	8	15	11	0.0026	0.0023	0.0019	0.0014	0.00223	0.00184	0.0012	0.0005	0.002405	0.002195	0.0020	0.0014	0.00325	0.00324	0.0025	0.0023
Nickel	6	8	15	11	0.0007	0.0008	0.0007	0.0007	0.00069	0.0005	0.0005	0.0005	0.00071	0.000715	0.0007	0.0007	0.00077	0.00109	0.0010	0.0010
Phosphorus	6	6	12	8	0.13	0.11	0.14	0.23	0.104	0.065	0.03	0.08	0.1405	0.102	0.15	0.24	0.15	0.15	0.34	0.36
Potassium	6	8	15	11	12	12	12	13	11.6	10.1	10	11	12.35	12	13	12	13.1	12.5	15	14
Selenium	6	8	15	10	0.00015	0.00030	0.00071	0.00137	0.00013	0.00014	0.00012	0.00012	0.00015	0.000145	0.00050	0.00043	0.00015	0.001	0.00340	0.01070
Silicon	6	6	12	8	4.22	4.71	4.95	5.15	3.42	3.73	3.13	3.33	3.885	4.565	4.91	5.32	6.49	5.85	7.15	7.11
Silver	6	8	15	11	0.000005	0.000008	0.000008	0.000008	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.00002	0.000020	0.000020
Sodium	6	8	15	11	38	38	39	39	34.2	33.5	32	33	38.5	38.3	39	39	39.2	40.7	43	47
Strontium	6	6	12	8	0.39	0.38	0.40	0.40	0.369	0.364	0.34	0.33	0.387	0.3795	0.39	0.40	0.418	0.39	0.44	0.45
Sulphur	3	4	6	5	20	18	17	20	18.8	17.4	15	0	20.5	17.45	18	17	20.5	20.9	19	39
Thallium	6	8	15	11	0.000005	0.000041	0.000056	0.000049	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.0002	0.000200	0.000200
Tin	6	8	15	11	0.00005	0.00013	0.00016	0.00015	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.0005	0.00050	0.00050
Titanium	6	8	15	11	0.0050	0.005	0.0050	0.0050	0.005	0.005	0.0050	0.0050	0.005	0.005	0.0050	0.0050	0.005	0.005	0.0050	0.0050
Uranium	6	8	15	11	0.0012	0.0011	0.0011	0.0010	0.00112	0.00102	0.0010	0.0009	0.00119	0.0011	0.0011	0.0010	0.00122	0.00129	0.0012	0.0012
Vanadium	6	8	15	11	0.0021	0.0035	0.0027	0.0029	0.0017	0.0016	0.0010	0.0010	0.0021	0.0019	0.0018	0.0017	0.0022	0.015	0.0150	0.0150
Zinc	6	8	15	11	0.0022	0.0027	0.0018	0.0016	0.0015	0.0005	0.0005	0.0005	0.00155	0.0029	0.0025	0.0015	0.0043	0.005	0.0039	0.0025
Total Metals																				
Aluminum	6	8	15	11	0.03	0.01	0.00	0.01	0.008	0.0015	0.00	0.00	0.0162	0.00495	0.00	0.00	0.0841	0.0081	0.01	0.02
Antimony	6	8	15	11	0.00011167	0.00017	0.00020	0.00018	0.0001	0.00005	0.00005	0.00005	0.00011	0.000115	0.00020	0.00011	0.00012	0.0005	0.00050	0.00050
Arsenic	6	8	15	11	0.0013	0.0013	0.0013	0.0013	0.00119	0.00117	0.0011	0.0012	0.00131	0.001275	0.0013	0.0013	0.00143	0.00139	0.0014	0.0016
Barium	6	8	15	11	0.061	0.064	0.067	0.068	0.0486	0.0553	0.054	0.050	0.0643	0.065	0.068	0.070	0.0707	0.0723	0.075	0.077
Beryllium	6	8	15	11	0.00005	0.00023	0.00029	0.00026	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.001	0.00100	0.00100
Bismuth	6	6	12	8	0.00025	0.00025	0.0335	0.01271875	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.1	0.1
Boron	6	8	15	11	0.026	0.030	0.037	0.035	0.02	0.023	0.022	0.020	0.0255	0.0245	0.028	0.030	0.03	0.05	0.050	0.050
Cadmium	6	8	15	11	0.00001	0.000007	0.000008	0.000007	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000009	0.000005	0.00001	0.000017	0.000017	0.000017
Calcium	6	8	15	11	55	57	57	56	52.9	53.9	49	52	54.45	56.35	57	56	58	58.8	61	62
Chromium	6	8	15	11	0.00023	0.0003	0.0004	0.0004	0.00014	0.00005	0.0001	0.0001	0.000205	0.000155	0.0002	0.0002	0.0004	0.001	0.0010	0.0015
Cobalt	6	8	15	11	0.00006	0.00009	0.00011	0.00010	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.0001	0.0003	0.00030	0.00030
Copper	6	8	15	11	0.0011	0.0015	0.0011	0.0008	0.00025	0.00025	0.0005	0.0005	0.00085	0.000855	0.0008	0.0007	0.00282	0.00589	0.0025	0.0015
Iron	6	8	15	11	0.04	0.01	0.02	0.03	0.015	0.005	0.01	0.02	0.0235	0.015	0.02	0.02	0.144	0.019	0.04	0.06
Lead	6	8	15	11	0.00015	0.00019	0.00015	0.00013	0.000025	0.000025	0.00003	0.00003	0.0000425	0.00007	0.00008	0.00003	0.00059	0.0006	0.00050	0.00050
Lithium	6	8	15	11	0.0059	0.0056	0.0060	0.0060	0.00549	0.00433	0.0045	0.0050	0.00588	0.005735	0.0059	0.0060	0.00634	0.0064	0.0077	0.0077
Magnesium	6	8	15	11	41	41	42	41	39.2	35.9	32	37	40.7	41.6	43	42	43.5	47.2	46	48
Manganese	6	8	15	11	0.03	0.05	0.08	0.10	0.00974	0.0048	0.00	0.03	0.0272	0.0415	0.10	0.11	0.0421	0.149	0.13	0.17
Mercury	6	8	15	11	0.0000050	0.0000063	0.0000057	0.0000059	0.0000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.00001	0.0000100	0.0000100
Molybdenum	6	8	15	11	0.003	0.002	0.002	0.002	0.00239	0.002	0.002	0.001	0.0026	0.00227	0.002	0.002	0.0031	0.0033	0.003	0.003
Nickel	6	8	15	11	0.0008	0.0008	0.0007	0.0008	0.0007	0.0005	0.0005	0.0005	0.0008	0.0008	0.0007	0.0008	0.0009	0.0012	0.0010	0.0016
Phosphorus	6	6	12	8	0.13	0.12	0.16	0.23	0.101	0.082	0.03	0.08	0.1445	0.1135	0.15	0.23	0.15	0.15	0.36	0.37
Potassium	6	8	15	11	12.2	11.7	12.4	12.4	11.4	10.1	9.7	10.6	12.3	12.0	12.6	12.6	12.9	12.4	13.9	13.9
Selenium	6	8	15	11	0.00015	0.00029	0.00053	0.00177	0.00012	0.00012	0.00012	0.00005	0.00015	0.0001	0.00016	0.00013	0.0002	0.0010	0.00340	0.01710
Silicon	6	6	12	8	4.3	4.7	5.0	5.2	3.4	3.6	3.2	3.4	4.0	4.6	4.9	5.4	6.4	5.7	7.3	6.8
Silver	6	8	15	11	0.0000050	0.0000075	0.0000080	0.0000077	0.0000005	0.0000005	0.0000050	0.0000050	0.0000005	0.0000005	0.0000050	0.0000050	0.000005	0.00002	0.0000200	0.0000200
Sodium	6	8	15	11	38	38	39	39	33.5	34	31	34	37.7	38.45	40	39	41	41.4	44	45
Strontium	6	6	12	8	0.4	0.4	0.40	0.40	0.38	0.35	0.36	0.35	0.3905	0.4	0.39	0.41	0.4	0.4	0.46	0.43
Sulphur	3	4	6	5	20	19	18	18	18.3	17.5	14	16	20.3	17.7	18	18	21.2	21.7	19	20
Thallium	6	8	15	11	0.00001	0.00004	0.00006	0.00005	0.000005	0.000005	0.00001	0.00001	0.000005	0.000005	0.00001	0.00001	0.000005	0.0002	0.00020	0.00020
Tin	6	8	15	11	0.00005	0.00013	0.00016	0.00015	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.0005	0.00050	0.00050
Titanium	6	8	15	11	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Uranium	6	8	15	11	0.0013	0.0011	0.0012	0.0011	0.0012	0.0008	0.0010	0.0008	0.0013	0.0012	0.0012	0.0011	0.0014	0.0013	0.0013	0.0014
Vanadium	6	8	15	11	0.0022	0.0037	0.0029	0.0030	0.0018	0.0017	0.0010	0.0010	0.00225	0.0021	0.0020	0.0019	0.0026	0.015	0.0150	0.0150
Zinc	6	8	15	11	0.0015	0.0024	0.0020	0.0019	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.005	0.0025	0.0025
Organics																				
Carbon Organic (Dissolved)	6	8	15	11	14.5	14.2	15	14	13	12.4	13	12	14.3	14.3	15	14	16	16	17	16
Carbon Organic (Total)	6	6	12	8	15.1	14	15	14	13.3	13.0	13	12	14.6	13.9	15	15	18	16	17	16
Nitrogen Organic (Dissolved)	4	2	6	5	0.83	0.79	1.05	1.52	0.64	0.74	0.74	0.62	0.875	0.7875	1.09	0.99	0.92	0.84	1.32	2.64
Nitrogen Organic (Total)	5	2	6	5	0.91	0.74	1.12	1.21	0.791	0.62	0.84	0.81	0.88	0.74	1.09	0.91	1.03	0.9	1.62	2.41

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.
2. SEASONS ARE SPECIFIED AS FOLLOWS: WIN (WINTER; DECEMBER THROUGH MARCH), SPR (SPRING; APRIL AND MAY), SUMMER(JUNE THROUGH AUGUST), FALL (SEPTEMBER THROUGH NOVEMBER).

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.19 - JACL-M
(PAGE 1 OF 2)

Parameter	Total Count	Complete Dataset - JACL-M									
		Min	Percentiles 5th	25th	50th	75th	95th	Max	Average	Standard Deviation	Coefficient of Variation
In Situ Parameters											
Conductivity µS/cm	5	453	467	525	530	553	858	934	599	191	3.2E-01
Oxygen Dissolved %	5	18	19	24	46	54	65	68	42	21	5.0E-01
Oxygen Dissolved	5	1.9	2.1	3.0	4.9	5.5	6.7	7.0	4.5	2.0	4.5E-01
pH (unitless)	5	7.0	7.1	7.7	8.3	8.4	8.4	8.4	8.0	0.6	7.9E-02
Redox Potential mV	5	-143	-123	-45	35	97	148	161	21	119	5.7E+00
Salinity ppt	5	0.33	0.33	0.35	0.36	0.60	28.12	35.00	7.33	15.47	2.1E+00
Specific Conductivity µS/cm	5	678	686	718	721	734	1103	1195	809	217	2.7E-01
Temperature °C	5	5.5	6.0	7.9	11.1	13.5	13.6	13.6	10.3	3.5	3.4E-01
Total Dissolved Solids	5	440	445	465	469	478	718	778	526	142	2.7E-01
Turbidity NTU	4	-11.4	-9.6	-2.3	1.1	1.8	2.8	3.1	-1.6	6.6	-4.3E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	0	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	5	213	217	234	237	247	248	248	236	14	6.0E-02
Bicarbonate Alkalinity	3	205	208	218	230	237	243	244	226	20	8.7E-02
Carbonate Alkalinity	3	3.7	3.7	3.8	3.8	5.8	7.3	7.7	5.1	2.3	4.5E-01
Color TCU	2	10.6	10.8	11.6	12.6	13.5	14.3	14.5	12.6	2.8	2.2E-01
Hardness as CaCO3 (Dissolved)	5	285	287	293	296	308	310	310	298	11	3.5E-02
Hydroxide Alkalinity	3	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0E+00
pH (unitless)	5	8.2	8.2	8.2	8.4	8.5	8.5	8.5	8.3	0.1	1.4E-02
Specific Conductivity µS/cm	5	661	662	664	684	716	750	758	697	41	5.8E-02
Total Dissolved Solids	5	419	419	419	427	447	448	448	432	15	3.4E-02
Total Suspended Solids	5	1.5	1.5	1.5	1.5	1.5	3.6	4.1	2.0	1.2	5.8E-01
Turbidity NTU	5	0.5	0.5	0.7	1.7	1.8	6.2	7.3	2.4	2.8	1.2E+00
Dissolved Anions											
Bromide	5	0.03	0.03	0.03	0.03	0.13	0.13	0.13	0.07	0.05	8.4E-01
Chloride	5	54	54	56	56	60	60	60	57	3	4.8E-02
Fluoride	5	0.20	0.21	0.22	0.22	0.23	0.24	0.24	0.22	0.01	6.5E-02
Sulphate	5	48	48	49	50	72	73	74	59	13	2.2E-01
Nutrients											
Ammonia (Total)	5	0.010	0.013	0.024	0.087	0.088	0.097	0.099	0.062	0.041	6.7E-01
Nitrate (as N)	5	0.003	0.00	0.01	0.04	0.06	0.08	0.08	0.04	0.035	8.5E-01
Nitrite (as N)	5	0.0005	0.00	0.00	0.00	0.01	0.02	0.02	0.01	0.0089	1.2E+00
Nitrogen (Dissolved)	2	1.06	1.07	1.10	1.14	1.18	1.21	1.22	1.14	0.11	9.9E-02
Nitrogen (Total)	2	1.10	1.10	1.12	1.13	1.15	1.16	1.16	1.13	0.04	3.8E-02
Nitrogen Kjeldahl (Total)	5	0.89	0.90	0.93	1.06	1.06	1.10	1.11	1.01	0.10	9.4E-02
Orthophosphate (Dissolved)	5	0.001	0.001	0.001	0.002	0.021	0.022	0.022	0.009	0.011	1.2E+00
Phosphorus - Dissolved	5	0.012	0.012	0.013	0.013	0.034	0.036	0.036	0.022	0.012	5.7E-01
Phosphorus - Total	5	0.016	0.016	0.016	0.018	0.041	0.041	0.042	0.026	0.013	5.1E-01
Cyanide											
Cyanide (Free)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Cyanide (Total)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Cyanide (WAD)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Dissolved Metals											
Aluminum	5	0.0005	0.0007	0.0013	0.0019	0.0025	0.0065	0.0075	0.0027	0.0028	1.0E+00
Antimony	5	0.00005	0.00005	0.00005	0.00010	0.00025	0.00025	0.00025	0.00014	0.00010	7.3E-01
Arsenic	5	0.0013	0.0013	0.0013	0.0013	0.0014	0.0014	0.0014	0.0013	0.0000	3.3E-02
Barium	5	0.058	0.058	0.059	0.060	0.060	0.062	0.063	0.060	0.002	2.7E-02
Beryllium	5	0.000050	0.000050	0.000050	0.000050	0.000500	0.000500	0.000500	0.000230	0.000246	1.1E+00
Bismuth	5	0.00025	0.00025	0.00025	0.00025	0.10000	0.10000	0.10000	0.04015	0.05464	1.4E+00
Boron	5	0.021	0.021	0.022	0.023	0.050	0.050	0.050	0.033	0.015	4.6E-01
Cadmium	5	0.0000050	0.0000050	0.0000050	0.0000050	0.0000085	0.0000085	0.0000085	0.0000064	0.0000019	3.0E-01
Calcium	5	54	54	54	54	56	57	57	55	2	3.0E-02
Chromium	5	0.00005	0.00005	0.00005	0.00005	0.00050	0.00090	0.00100	0.00033	0.00042	1.3E+00
Cobalt	5	0.00005	0.00005	0.00005	0.00005	0.00015	0.00015	0.00015	0.00009	0.00005	6.1E-01
Copper	5	0.0005	0.0005	0.0005	0.0010	0.0015	0.0025	0.0028	0.0012	0.0009	7.5E-01
Iron	5	0.005	0.005	0.005	0.005	0.015	0.015	0.015	0.009	0.005	6.1E-01
Lead	5	0.000025	0.000025	0.000025	0.000025	0.000250	0.000250	0.000250	0.000115	0.000123	1.1E+00
Lithium	5	0.00514	0.00519	0.00541	0.00550	0.00583	0.00613	0.00620	0.00562	0.00041	7.3E-02
Magnesium	5	37	37	37	38	42	43	43	39	3	7.7E-02
Manganese	5	0.001	0.001	0.001	0.002	0.003	0.004	0.004	0.002	0.001	7.1E-01
Mercury	5	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Molybdenum	5	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.003	0.000	1.4E-01
Nickel	5	0.0005	0.0005	0.0005	0.0006	0.0006	0.0006	0.0006	0.0006	0.0001	1.1E-01
Phosphorus	5	0.03	0.03	0.03	0.03	0.15	0.15	0.15	0.08	0.07	9.1E-01
Potassium	5	11	11	11	11	12	12	13	12	1	6.2E-02
Selenium	5	0.00011	0.00011	0.00012	0.00014	0.00050	0.00050	0.00050	0.00027	0.00021	7.5E-01
Silicon	5	1.6	1.6	1.8	5.4	5.7	6.1	6.3	4.1	2.3	5.5E-01
Silver	5	0.0000050	0.0000050	0.0000050	0.0000050	0.0000100	0.0000100	0.0000100	0.0000070	0.0000027	3.9E-01
Sodium	5	34	34	35	35	41	41	41	37	3	9.0E-02
Strontium	5	0.36	0.37	0.37	0.38	0.40	0.41	0.41	0.38	0.02	5.2E-02
Sulphur	3	16	16	16	17	17	17	17	17	0	2.8E-02
Thallium	5	0.0000050	0.0000050	0.0000050	0.0000050	0.0001000	0.0001000	0.0001000	0.0000430	0.0000520	1.2E+00
Tin	5	0.000050	0.000050	0.000050	0.000050	0.000250	0.000250	0.000250	0.000130	0.000110	8.4E-01
Titanium	5	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0000	0.0E+00
Uranium	5	0.0010	0.0011	0.0011	0.0011	0.0012	0.0012	0.0012	0.0011	0.0001	6.0E-02
Vanadium	5	0.0017	0.0018	0.0023	0.0023	0.0023	0.0027	0.0028	0.0023	0.0004	1.7E-01
Zinc	5	0.0005	0.0005	0.0005	0.0025	0.0025	0.0037	0.0040	0.0020	0.0015	7.5E-01
Total Metals											
Aluminum	5	0.0025	0.0035	0.0077	0.0083	0.0086	0.0096	0.0099	0.0074	0.0029	3.9E-01
Antimony	5	0.00005	0.00005	0.00005	0.00010	0.00025	0.00025	0.00025	0.00014	0.00010	7.3E-01
Arsenic	5	0.0012	0.0012	0.0012	0.0013	0.0013	0.0013	0.0013	0.0013	0.0001	4.3E-02
Barium	5	0.055	0.056	0.061	0.061	0.062	0.062	0.062	0.060	0.003	4.8E-02
Beryllium	5	0.000050	0.000050	0.000050	0.000050	0.000500	0.000500	0.000500	0.000230	0.000246	1.1E+00
Bismuth	5	0.00025	0.00025	0.00025	0.00025	0.10000	0.10000	0.10000	0.04015	0.05464	1.4E+00
Boron	5	0.024	0.024	0.025	0.027	0.050	0.050	0.050	0.035	0.014	3.9E-01
Cadmium	5	0.000005	0.000005	0.000005	0.000005	0.000009	0.000016	0.000018	0.000008	0.000006	6.8E-01
Calcium	5	50	51	54	54	55	57	58	54	3	5.1E-02
Chromium	5	0.00013	0.00013	0.00015	0.00018	0.00050	0.00050	0.00050	0.00029	0.00019	6.5E-01
Cobalt	5	0.00005	0.00005	0.00005	0.00005	0.00015	0.00015	0.00015	0.00009	0.00005	6.1E-01
Copper	5	0.0005	0.0005	0.0005	0.0012	0.0012	0.0019	0.0021	0.0011	0.0007	6.1E-01
Iron	5	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.01	0.00	7.8E-02
Lead	5	0.000025	0.000025	0.000025	0.000025	0.000250	0.000250	0.000250	0.000115	0.000123	1.1E+00
Lithium	5	0.0025	0.0030	0.0049	0.0054	0.0059	0.0066	0.0068	0.0051	0.0016	3.2E-01
Magnesium	5	35	35	35	37	43	43	43	39	4	1.0E-01
Manganese	5	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	4.9E-01
Mercury	5	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Molybdenum	5	0.002	0.002	0.003	0.003	0.003	0.003	0.003	0.003	0.000	8.5E-02
Nickel	5	0.0005	0.0005	0.0005	0.0006	0.0007	0.0008	0.0008	0.0006	0.0001	1.9E-01
Phosphorus	5	0.03	0.03	0.03	0.03	0.15	0.15	0.15	0.08	0.07	9.1E-01
Potassium	5	10	10	11	12	13	13	13	12	1	9.2E-02
Selenium	5	0.00011	0.00012	0.00014	0.00015	0.00050	0.00050	0.00050	0.00028	0.00020	7.2E-01
Silicon	5	1.6	1.7	1.8	5.5	5.6	5.9	5.9	4.1	2.2	5.4E-01
Silver	5	0.0000050	0.0000050	0.0000050	0.0000050	0.0000100	0.0000100	0.0000100	0.0000070	0.0000027	3.9E-01
Sodium	5	32	33	35	36	41	41	41	37	4	1.1E-01
Strontium	5	0.37	0.37	0.37	0.38	0.41	0.41	0.42	0.39	0.02	5.8E-02
Sulphur	3	16	16	16	17	17	17	17	17	1	5.9E-02
Thallium	5	0.0000050	0.0000050	0.0000050	0.0000050	0.0001000	0.0001000	0.0001000	0.0000430	0.0000520	1.2E+00
Tin	5	0.000050	0.000050	0.000050	0.000050	0.000250	0.000250	0.000250	0.000130	0.000110	8.4E-01
Titanium	5	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0000	0.0E+00
Uranium	5	0.0011	0.0011	0.0012	0.0012	0.0013	0.0014	0.0014	0.0012	0.0001	1.0E-01
Vanadium	5	0.0019	0.0020	0.0025	0.0026	0.0027	0.0027	0.0027	0.0025	0.0003	1.3E-01
Zinc	5	0.0015	0.0015	0.0015	0.0015	0.0025	0.0025	0.0025	0.0019	0.0005	2.9E-01
Organics											
Carbon Organic (Dissolved)	5	13.8	13.8	14.0	14.2	14.3	14.9	15.1	14.3	0.5	3.5E-02
Carbon Organic (Total)	5	14.3	14.3	14.4	14.4	15.1	15.1	15.1	14.7	0.4	2.8E-02
Nitrogen Organic (Dissolved)	2	0.93	0.94	0.96	0.99	1.01	1.03	1.04	0.99	0.08	7.8E-02
Nitrogen Organic (Total)	2	0.97	0.97	0.97	0.97	0.97	0.98	0.98	0.97	0.00	3.6E-03

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.19 - JACL-M
(PAGE 2 OF 2)

Seasonal Statistics - JACL-M

Parameter	Count				Average				Min				Median				Max			
	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall
In Situ Parameters																				
Conductivity µS/cm	0	0	3	2	-	-	512	730	-	-	453	525	-	-	530	730	-	-	553	934
Oxygen Dissolved %	0	0	3	2	-	-	41	43	-	-	24	18	-	-	46	43	-	-	54	68
Oxygen Dissolved	0	0	3	2	-	-	4	4	-	-	3	2	-	-	5	4	-	-	5	7
pH (unitless)	0	0	3	2	-	-	8	8	-	-	7	8	-	-	8	8	-	-	8	8
Redox Potential mV	0	0	3	2	-	-	-51	129	-	-	-143	97	-	-	-45	129	-	-	35	161
Salinity ppt	0	0	3	2	-	-	11.90	0.48	-	-	0.33	0.35	-	-	0.36	0.48	-	-	35.00	0.60
Specific Conductivity µS/cm	0	0	3	2	-	-	711	957	-	-	678	718	-	-	721	957	-	-	734	1195
Temperature °C	0	0	3	2	-	-	9	12	-	-	6	11	-	-	8	12	-	-	14	14
Total Dissolved Solids	0	0	3	2	-	-	462	622	-	-	440	465	-	-	469	622	-	-	478	778
Turbidity NTU	0	0	2	2	-	-	2	-5	-	-	1	-11	-	-	2	-5	-	-	3	1
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	0	0	3	2	-	-	240	230	-	-	234	213	-	-	237	230	-	-	248	247
Bicarbonate Alkalinity	0	0	1	2	-	-	230	225	-	-	230	205	-	-	230	225	-	-	230	244
Carbonate Alkalinity	0	0	1	2	-	-	4	6	-	-	4	4	-	-	4	6	-	-	4	8
Color TCU	0	0	2	0	-	-	13	-	-	-	11	-	-	-	13	-	-	-	15	-
Hardness as CaCO3 (Dissolved)	0	0	3	2	-	-	304	291	-	-	293	285	-	-	308	291	-	-	310	296
Hydroxide Alkalinity	0	0	1	2	-	-	0.50	0.50	-	-	0.50	0.50	-	-	0.50	0.50	-	-	0.50	0.50
pH (unitless)	0	0	3	2	-	-	8	8	-	-	8	8	-	-	8	8	-	-	8	8
Specific Conductivity µS/cm	0	0	3	2	-	-	712	674	-	-	661	664	-	-	716	674	-	-	758	684
Total Dissolved Solids	0	0	3	2	-	-	438	423	-	-	419	419	-	-	447	423	-	-	448	427
Total Suspended Solids	0	0	3	2	-	-	2	2	-	-	2	2	-	-	2	2	-	-	4	2
Turbidity NTU	0	0	3	2	-	-	3	1	-	-	0	1	-	-	2	1	-	-	7	2
Dissolved Anions																				
Bromide	0	0	3	2	-	-	0.06	0.08	-	-	0.03	0.03	-	-	0.03	0.08	-	-	0.13	0.13
Chloride	0	0	3	2	-	-	58	56	-	-	54	56	-	-	60	56	-	-	60	56
Fluoride	0	0	3	2	-	-	0.22	0.22	-	-	0.22	0.20	-	-	0.22	0.22	-	-	0.24	0.23
Sulphate	0	0	3	2	-	-	65	49	-	-	49	48	-	-	72	49	-	-	74	50
Nutrients								-												
Ammonia (Total)	0	0	3	2	-	-	0.062	0.062	-	-	0.010	0.024	-	-	0.087	0.062	-	-	0.088	0.099
Nitrate (as N)	0	0	3	2	-	-	0.043	0.037	-	-	0.003	0.011	-	-	0.042	0.037	-	-	0.085	0.064
Nitrite (as N)	0	0	3	2	-	-	0.0045	0.0126	-	-	0.0005	0.0029	-	-	0.0025	0.0126	-	-	0.0105	0.0222
Nitrogen (Dissolved)	0	0	2	0	-	-	1.14	-	-	-	1.06	-	-	-	1.14	-	-	-	1.22	-
Nitrogen (Total)	0	0	2	0	-	-	1.13	-	-	-	1.10	-	-	-	1.13	-	-	-	1.16	-
Nitrogen Kjeldahl (Total)	0	0	3	2	-	-	1.08	0.91	-	-	1.06	0.89	-	-	1.06	0.91	-	-	1.11	0.93
Orthophosphate (Dissolved)	0	0	3	2	-	-	0.014	0.001	-	-	0.001	0.001	-	-	0.021	0.001	-	-	0.022	0.002
Phosphorus - Dissolved	0	0	3	2	-	-	0.03	0.01	-	-	0.01	0.01	-	-	0.03	0.01	-	-	0.04	0.01
Phosphorus - Total	0	0	3	2	-	-	0.03	0.02	-	-	0.02	0.02	-	-	0.04	0.02	-	-	0.04	0.02
Cyanide																				
Cyanide (Free)	0	0	3	2	-	-	0.0025	0.0025	-	-	0.0025	0.0025	-	-	0.0025	0.0025	-	-	0.0025	0.0025
Cyanide (Total)	0	0	3	2	-	-	0.0025	0.0025	-	-	0.0025	0.0025	-	-	0.0025	0.0025	-	-	0.0025	0.0025
Cyanide (WAD)	0	0	3	2	-	-	0.0025	0.0025	-	-	0.0025	0.0025	-	-	0.0025	0.0025	-	-	0.0025	0.0025
Dissolved Metals																				
Aluminum	0	0	3	2	-	-	0.0040	0.0009	-	-	0.0019	0.0005	-	-	0.0025	0.0009	-	-	0.0075	0.0013
Antimony	0	0	3	2	-	-	0.00018	0.00008	-	-	0.00005	0.00005	-	-	0.00025	0.00008	-	-	0.00025	0.00010
Arsenic	0	0	3	2	-	-	0.0013	0.0013	-	-	0.0013	0.0013	-	-	0.0013	0.0013	-	-	0.0014	0.0014
Barium	0	0	3	2	-	-	0.060	0.060	-	-	0.059	0.058	-	-	0.060	0.060	-	-	0.060	0.063
Beryllium	0	0	3	2	-	-	0.00035	0.00005	-	-	0.00005	0.00005	-	-	0.00050	0.00005	-	-	0.00050	0.00005
Bismuth	0	0	3	2	-	-	0.067	0.000	-	-	0.000	0.000	-	-	0.100	0.000	-	-	0.100	0.000
Boron	0	0	3	2	-	-	0.040	0.023	-	-	0.021	0.022	-	-	0.050	0.023	-	-	0.050	0.023
Cadmium	0	0	3	2	-	-	0.000007	0.000005	-	-	0.000005	0.000005	-	-	0.000009	0.000005	-	-	0.000009	0.000005
Calcium	0	0	3	2	-	-	55	55	-	-	54	54	-	-	54	55	-	-	57	56
Chromium	0	0	3	2	-	-	0.00052	0.00005	-	-	0.00005	0.00005	-	-	0.00050	0.00005	-	-	0.00100	0.00005
Cobalt	0	0	3	2	-	-	0.00012	0.00005	-	-	0.00005	0.00005	-	-	0.00015	0.00005	-	-	0.00015	0.00005
Copper	0	0	3	2	-	-	0.0008	0.0019	-	-	0.0005	0.0010	-	-	0.0005	0.0019	-	-	0.0015	0.0028
Iron	0	0	3	2	-	-	0.012	0.005	-	-	0.005	0.005	-	-	0.015	0.005	-	-	0.015	0.005
Lead	0	0	3	2	-	-	0.00018	0.00003	-	-	0.00003	0.00003	-	-	0.00025	0.00003	-	-	0.00025	0.00003
Lithium	0	0	3	2	-	-	0.0056	0.0056	-	-	0.0051	0.0054	-	-	0.0055	0.0056	-	-	0.0062	0.0058
Magnesium	0	0	3	2	-	-	40.4	37.2	-	-	36.5	36.6	-	-	42.1	37.2	-	-	42.7	37.8
Manganese	0	0	3	2	-	-	0.003	0.001	-	-	0.002	0.001	-	-	0.003	0.001	-	-	0.004	0.001
Mercury	0	0	3	2	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050
Molybdenum	0	0	3	2	-	-	0.0024	0.0027	-	-	0.0023	0.0023	-	-	0.0024	0.0027	-	-	0.0025	0.0032
Nickel	0	0	3	2	-	-	0.0005	0.0006	-	-	0.0005	0.0006	-	-	0.0005	0.0006	-	-	0.0006	0.0006
Phosphorus	0	0	3	2	-	-	0.11	0.03	-	-	0.03	0.03	-	-	0.15	0.03	-	-	0.15	0.03
Potassium	0	0	3	2	-	-	12	11	-	-	11	11	-	-	12	11	-	-	13	11
Selenium	0	0	3	2	-	-	0.00037	0.00013	-	-	0.00011	0.00012	-	-	0.00050	0.00013	-	-	0.00050	0.00014
Silicon	0	0	3	2	-	-	2.90	5.98	-	-	1.57	5.70	-	-	1.76	5.98	-	-	5.36	6.25
Silver	0	0	3	2	-	-	0.000008	0.000005	-	-	0.000005	0.000005	-	-	0.000010	0.000005	-	-	0.000010	0.000005
Sodium	0	0	3	2	-	-	38	35	-	-	34	35	-	-	41	35	-	-	41	35
Strontium	0	0	3	2	-	-	0.40	0.37	-	-	0.37	0.36	-	-	0.40	0.37	-	-	0.41	0.38
Sulphur	0	0	1	2	-	-	17	17	-	-	17	16	-	-	17	17	-	-	17	17
Thallium	0	0	3	2	-	-	0.000068	0.000005	-	-	0.000005	0.000005	-	-	0.000100	0.000005	-	-	0.000100	0.000005
Tin	0	0	3	2	-	-	0.00018	0.00005	-	-	0.00005	0.00005	-	-	0.00025	0.00005	-	-	0.00025	0.00005
Titanium	0	0	3	2	-	-	0.0050	0.0050	-	-	0.0050	0.0050	-	-	0.0050	0.0050	-	-	0.0050	0.0050
Uranium	0	0	3	2	-	-	0.0012	0.0011	-	-	0.0011	0.0010	-	-	0.0012	0.0011	-	-	0.0012	0.0011
Vanadium	0	0	3	2	-	-	0.0021	0.0026	-	-	0.0017	0.0023	-	-	0.0023	0.0026	-	-	0.0023	0.0028
Zinc	0	0	3	2	-	-	0.0030	0.0005	-	-	0.0025	0.0005	-	-	0.0025	0.0005	-	-	0.0040	0.0005
Total Metals																				
Aluminum	0	0	3	2	-	-	0.01	0.01	-	-	0.00	0.01	-	-	0.01	0.01	-	-	0.01	0.01
Antimony	0	0	3	2	-	-	0.00018	0.00008	-	-	0.00005	0.00005	-	-	0.00025	0.00008	-	-	0.00025	0.00010
Arsenic	0	0	3	2	-	-	0.0012	0.0013	-	-	0.0012	0.0013	-	-	0.0012	0.0013	-	-	0.0013	0.0013
Barium	0	0	3	2	-	-	0.062	0.058	-	-	0.061	0.055	-	-	0.062	0.058	-	-	0.062	0.061
Beryllium	0	0	3	2	-	-	0.00035	0.00005	-	-	0.00005	0.00005	-	-	0.00050	0.00005	-	-	0.00050	0.00005
Bismuth	0	0	3	2	-	-	0.06675	0.00025	-	-	0.00025	0.00025	-	-	0.1	0.00025	-	-	0.1	0.00025
Boron	0	0	3	2	-	-	0.041	0.026	-	-	0.024	0.025	-	-	0.050	0.026	-	-	0.050	0.027
Cadmium	0	0	3	2	-	-	0.000011	0.000005	-	-	0.000005	0.000005	-	-	0.000009	0.000005	-	-	0.000018	0.000005
Calcium	0	0	3	2	-	-	55	52	-	-	54	50	-	-	54	52	-	-	58	55
Chromium	0	0	3	2	-	-	0.0004	0.0002	-	-	0.0001	0.0002	-	-	0.0005	0.0002	-	-	0.0005	0.0002
Cobalt	0	0	3	2	-	-	0.00012	0.00005	-	-	0.00005	0.00005	-	-	0.00015	0.00005	-	-	0.00015	0.00005
Copper	0	0	3	2	-	-	0.0007	0.0017	-	-	0.0005	0.0012	-	-	0.0005	0.0017	-	-	0.0012	0.0021
Iron	0	0	3	2	-	-	0.02	0.01	-	-	0.02	0.01	-	-	0.02	0.01	-	-	0.02	0.01
Lead	0	0	3	2	-	-	0.00018	0.00003	-	-	0.00003	0.00003	-	-	0.00025	0.00003	-	-	0.00025	0.00003
Lithium	0	0	3	2	-	-	0.0049	0.0054	-	-	0.0025	0.0049	-	-	0.0054	0.0054	-	-	0.0068	0.0059
Magnesium	0	0	3	2	-	-	41	35	-	-	37	35	-	-	43	35	-	-	43	35
Manganese	0	0	3	2	-	-	0.01	0.00	-	-	0.00	0.00	-	-	0.01	0.00	-	-	0.01	0.00
Mercury	0	0	3	2	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050
Molybdenum	0	0	3	2	-	-	0.003	0.003	-	-	0.003	0.002	-	-	0.003	0.003	-	-	0.003	0.003
Nickel	0	0	3	2	-	-	0.0006	0.0007	-	-	0.0005	0.0006	-	-	0.0005	0.0007	-	-	0.0007	0.0008
Phosphorus	0	0	3	2	-	-	0.11	0.03	-	-	0.03	0.03	-	-	0.15	0.03	-	-	0.15	0.03
Potassium	0	0	3	2	-	-	12.3	10.5	-	-	11.8	10.3	-	-	12.5	10.5	-	-	12.7	10.7
Selenium	0	0	3	2	-	-	0.00038	0.00013	-	-	0.00014	0.00011	-	-	0.00050	0.00013	-	-	0.00050	0.00015
Silicon	0	0	3	2	-	-	3.0	5.8	-	-	1.6	5.6	-	-	1.8	5.8	-	-	5.5	5.9
Silver	0	0	3	2	-	-	0.0000083	0.0000050	-	-	0.0000050	0.0000050	-	-	0.0000100	0.0000050	-	-	0.0000100	0.0000050
Sodium	0	0	3	2	-	-	39	33	-	-	36	32	-	-	41	33	-	-	41	35
Strontium	0	0	3	2	-	-	0.40	0.37	-	-	0.38	0.37	-	-	0.41	0.37	-	-	0.42	0.37
Sulphur	0	0	1	2	-	-	17	16	-	-	17	16	-	-	17	16	-	-	17	17
Thallium	0	0	3	2	-	-	0.00007	0.00001	-	-	0.00001	0.00001	-	-	0.00010	0.00001	-	-	0.00010	0.00001
Tin	0	0	3	2	-	-	0.00018	0.00005	-	-	0.00005	0.00005	-	-	0.00025	0.00005	-	-	0.00025	0.00005
Titanium	0	0	3	2	-	-	0.005	0.005	-	-	0.005	0.005	-	-	0.005	0.005	-	-	0.005	0.005
Uranium	0	0	3	2	-	-	0.0013	0.0011	-	-	0.0012	0.0011	-	-	0.0013	0.0011	-	-	0.0014	0.0012
Vanadium	0	0	3	2	-	-	0.0023	0.0027	-	-	0.0019	0.0027	-	-	0.0025	0.0027	-	-	0.0026	0.0027
Zinc	0	0	3	2	-	-	0.0022	0.0015	-	-	0.0015	0.0015	-	-	0.0025	0.0015	-	-	0.0025	0.0015
Organics																				
Carbon Organic (Dissolved)	0	0	3	2	-	-	14	14	-	-	14	14	-	-	14	14	-	-	14	15
Carbon Organic (Total)	0	0	3	2	-	-	15	15	-	-	14	14	-	-	14	15	-	-	15	15
Nitrogen Organic (Dissolved)	0	0	2	0	-	-	0.99	-	-	-	0.93	-	-	-	0.99	-	-	-	1.04	-
Nitrogen Organic (Total)	0	0	2	0	-	-	0.97	-	-	-	0.97	-	-	-	0.97	-	-	-	0.98	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.
2. SEASONS ARE SPECIFIED AS FOLLOWS: WIN (WINTER; DECEMBER THROUGH MARCH), SPR (SPRING; APRIL AND MAY), SUMMER(JUNE THROUGH AUGUST), FALL (SEPTEMBER THROUGH NOVEMBER).

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.20 - JACL-S
(PAGE 1 OF 2)

Parameter	Complete Dataset - JACL-S									
	Total Count	Percentiles						Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max		
In Situ Parameters										
Conductivity µS/cm	39	113	277	433	542	594	665	934	516	137	2.7E-01
Oxygen Dissolved %	35	8	34	66	80	93	107	129	76	24	3.2E-01
Oxygen Dissolved	38	4.6	5.9	7.8	8.5	9.8	12.3	14.7	8.8	2.0	2.3E-01
pH (unitless)	41	7.6	7.8	8.2	8.5	8.7	8.9	9.2	8.4	0.4	4.3E-02
Redox Potential mV	33	-116	-36	34	112	149	228	277	99	89	9.0E-01
Salinity ppt	28	0.12	0.30	0.32	0.34	0.34	0.37	0.60	0.33	0.07	2.1E-01
Specific Conductivity µS/cm	40	211	274	657	689	735	771	1182	674	151	2.2E-01
Temperature °C	41	0.4	1.0	6.4	14.5	17.9	22.5	23.0	12.8	6.9	5.4E-01
Total Dissolved Solids	31	165	404	427	446	452	494	778	445	83	1.9E-01
Turbidity NTU	28	-11.4	-0.9	0.2	1.0	1.6	15.7	20.4	2.3	5.9	2.6E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0E+00
Alkalinity (Total as CaCO3)	40	113	191	227	231	243	252	253	229	24	1.1E-01
Bicarbonate Alkalinity	29	184	197	212	221	239	253	253	225	19	8.5E-02
Carbonate Alkalinity	29	0.5	0.5	1.0	8.5	15.7	23.5	27.4	9.0	8.3	9.2E-01
Color TCU	28	11.4	12.1	14.5	16.2	18.7	22.2	24.5	16.7	3.2	1.9E-01
Hardness as CaCO3 (Dissolved)	41	165	242	281	287	301	322	335	286	28	9.7E-02
Hydroxide Alkalinity	29	0.5	0.5	0.5	0.5	1.0	1.0	1.0	0.6	0.2	3.6E-01
pH (unitless)	41	8.1	8.1	8.4	8.4	8.6	8.7	8.7	8.4	0.2	2.0E-02
Specific Conductivity µS/cm	41	367	556	643	665	695	732	777	661	66	1.0E-01
Total Dissolved Solids	41	213	335	398	413	427	455	465	406	45	1.1E-01
Total Suspended Solids	41	1.5	1.5	1.5	1.5	3.2	7.9	11.3	2.8	2.5	8.9E-01
Turbidity NTU	37	0.3	0.3	0.8	1.2	1.9	11.1	15.9	2.7	3.7	1.4E+00
Dissolved Anions											
Bromide	40	0.03	0.03	0.03	0.03	0.10	0.13	0.25	0.05	0.05	9.7E-01
Chloride	40	25	44	52	54	56	60	62	53	6	1.1E-01
Fluoride	39	0.09	0.17	0.19	0.21	0.22	0.23	0.30	0.20	0.03	1.5E-01
Sulphate	40	37	44	48	53	62	84	85	57	12	2.1E-01
Nutrients											
Ammonia (Total)	41	0.003	0.008	0.018	0.033	0.063	0.252	0.361	0.069	0.087	1.3E+00
Nitrate (as N)	40	0.003	0.00	0.00	0.01	0.04	0.28	0.55	0.06	0.121	2.0E+00
Nitrite (as N)	40	0.0005	0.00	0.00	0.00	0.01	0.02	0.03	0.01	0.0076	1.4E+00
Nitrogen (Dissolved)	18	0.58	0.75	0.88	0.98	1.23	1.57	2.10	1.07	0.35	3.2E-01
Nitrogen (Total)	23	0.72	0.77	0.87	1.06	1.30	1.46	1.99	1.10	0.30	2.7E-01
Nitrogen Kjeldahl (Total)	41	0.69	0.77	0.87	0.94	1.12	1.38	1.99	1.03	0.25	2.5E-01
Orthophosphate (Dissolved)	40	0.001	0.001	0.001	0.001	0.013	0.075	0.098	0.016	0.028	1.7E+00
Phosphorus - Dissolved	33	0.011	0.012	0.014	0.017	0.049	0.101	0.135	0.035	0.033	9.3E-01
Phosphorus - Total	40	0.015	0.016	0.022	0.033	0.050	0.116	0.140	0.044	0.032	7.4E-01
Cyanide											
Cyanide (Free)	36	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	3.5E-16
Cyanide (Total)	39	0.0025	0.0025	0.0025	0.0025	0.0061	0.0099	0.0106	0.0043	0.0026	6.0E-01
Cyanide (WAD)	36	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	3.5E-16
Dissolved Metals											
Aluminum	41	0.0005	0.0005	0.0013	0.0015	0.0025	0.0034	0.0093	0.0019	0.0015	7.6E-01
Antimony	41	0.00005	0.00005	0.00005	0.00011	0.00025	0.00025	0.00050	0.00014	0.00010	7.0E-01
Arsenic	41	0.0008	0.0010	0.0012	0.0013	0.0014	0.0014	0.0017	0.0013	0.0001	1.1E-01
Barium	41	0.027	0.042	0.049	0.055	0.060	0.066	0.071	0.054	0.009	1.7E-01
Beryllium	41	0.000050	0.000050	0.000050	0.000050	0.000500	0.000500	0.001000	0.000216	0.000245	1.1E+00
Bismuth	33	0.00025	0.00025	0.00025	0.00025	0.00025	0.10000	0.10000	0.01839	0.03907	2.1E+00
Boron	41	0.017	0.018	0.020	0.021	0.050	0.050	0.050	0.030	0.014	4.7E-01
Cadmium	41	0.0000050	0.0000050	0.0000050	0.0000050	0.0000085	0.0000110	0.0000340	0.0000073	0.0000049	6.8E-01
Calcium	41	29	43	51	54	56	58	59	52	6	1.1E-01
Chromium	41	0.00005	0.00005	0.00005	0.00005	0.00050	0.00075	0.00100	0.00025	0.00029	1.2E+00
Cobalt	41	0.00005	0.00005	0.00005	0.00005	0.00015	0.00015	0.00030	0.00009	0.00006	6.6E-01
Copper	41	0.0003	0.0004	0.0005	0.0008	0.0011	0.0015	0.0016	0.0009	0.0004	4.4E-01
Iron	41	0.005	0.005	0.005	0.015	0.015	0.015	0.023	0.011	0.005	4.8E-01
Lead	41	0.000025	0.000025	0.000025	0.000025	0.000250	0.000250	0.000500	0.000108	0.000123	1.1E+00
Lithium	41	0.00250	0.00350	0.00508	0.00542	0.00579	0.00660	0.00690	0.00534	0.00089	1.7E-01
Magnesium	41	23	33	35	37	41	44	47	38	4	1.2E-01
Manganese	41	0.001	0.001	0.001	0.003	0.006	0.020	0.027	0.006	0.007	1.2E+00
Mercury	41	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000100	0.0000100	0.0000057	0.0000018	3.1E-01
Molybdenum	41	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.002	0.000	1.4E-01
Nickel	41	0.0005	0.0005	0.0005	0.0006	0.0007	0.0010	0.0015	0.0007	0.0002	3.0E-01
Phosphorus	33	0.03	0.03	0.03	0.11	0.15	0.15	0.15	0.09	0.06	6.4E-01
Potassium	41	7	10	10	11	12	13	14	11	1	1.1E-01
Selenium	41	0.00010	0.00011	0.00014	0.00015	0.00050	0.00050	0.00110	0.00029	0.00024	8.3E-01
Silicon	33	0.9	1.3	2.6	3.9	5.8	6.5	6.8	4.1	1.8	4.4E-01
Silver	41	0.0000050	0.0000050	0.0000050	0.0000050	0.0000100	0.0000100	0.0000200	0.0000070	0.0000031	4.5E-01
Sodium	41	21	31	33	35	37	41	44	35	4	1.1E-01
Strontium	33	0.23	0.30	0.35	0.36	0.37	0.39	0.40	0.35	0.03	8.6E-02
Sulphur	18	0	12	16	16	17	20	21	16	4	2.7E-01
Thallium	41	0.0000050	0.0000050	0.0000050	0.0000050	0.0001000	0.0001000	0.0002000	0.0000399	0.0000514	1.3E+00
Tin	41	0.000050	0.000050	0.000050	0.000050	0.000250	0.000250	0.000500	0.000124	0.000111	8.9E-01
Titanium	41	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0000	5.3E-16
Uranium	41	0.0006	0.0009	0.0010	0.0011	0.0012	0.0013	0.0014	0.0011	0.0001	1.3E-01
Vanadium	41	0.0011	0.0016	0.0020	0.0023	0.0026	0.0150	0.0150	0.0032	0.0034	1.1E+00
Zinc	39	0.0005	0.0005	0.0010	0.0025	0.0025	0.0150	0.0497	0.0043	0.0084	1.9E+00
Total Metals											
Aluminum	41	0.0015	0.0025	0.0051	0.0068	0.0081	0.0709	0.1910	0.0143	0.0322	2.2E+00
Antimony	41	0.00005	0.00005	0.00011	0.00012	0.00025	0.00025	0.00050	0.00017	0.00009	5.3E-01
Arsenic	41	0.0008	0.0011	0.0012	0.0013	0.0014	0.0015	0.0018	0.0013	0.0002	1.3E-01
Barium	41	0.026	0.043	0.048	0.056	0.060	0.067	0.070	0.054	0.009	1.7E-01
Beryllium	41	0.000050	0.000050	0.000050	0.000050	0.000500	0.000500	0.001000	0.000216	0.000245	1.1E+00
Bismuth	33	0.00025	0.00025	0.00025	0.00025	0.00025	0.10000	0.10000	0.01839	0.03907	2.1E+00
Boron	41	0.020	0.020	0.022	0.026	0.050	0.050	0.050	0.033	0.013	4.0E-01
Cadmium	41	0.000005	0.000005	0.000005	0.000005	0.000009	0.000019	0.000043	0.000008	0.000007	8.3E-01
Calcium	41	29	42	50	53	55	58	59	52	6	1.1E-01
Chromium	41	0.00005	0.00005	0.00011	0.00017	0.00050	0.00072	0.00100	0.00031	0.00025	8.1E-01
Cobalt	41	0.00005	0.00005	0.00005	0.00005	0.00015	0.00019	0.00030	0.00010	0.00006	6.0E-01
Copper	41	0.0003	0.0005	0.0010	0.0011	0.0014	0.0023	0.0037	0.0012	0.0006	5.0E-01
Iron	41	0.01	0.01	0.01	0.02	0.02	0.08	0.24	0.02	0.04	1.6E+00
Lead	41	0.000025	0.000025	0.000025	0.000025	0.000250	0.000250	0.000500	0.000109	0.000122	1.1E+00
Lithium	41	0.0025	0.0040	0.0048	0.0054	0.0059	0.0069	0.0075	0.0053	0.0010	1.9E-01
Magnesium	41	23	33	35	36	41	44	47	37	5	1.3E-01
Manganese	41	0.00	0.00	0.00	0.01	0.01	0.03	0.03	0.01	0.01	9.3E-01
Mercury	41	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000100	0.0000100	0.0000057	0.0000018	3.1E-01
Molybdenum	41	0.002	0.002	0.002	0.002	0.003	0.004	0.004	0.003	0.000	1.5E-01
Nickel	41	0.0005	0.0005	0.0005	0.0007	0.0008	0.0011	0.0012	0.0007	0.0002	2.6E-01
Phosphorus	33	0.03	0.03	0.03	0.12	0.15	0.15	0.15	0.09	0.06	6.1E-01
Potassium	41	7	10	10	11	12	13	13	11	1	1.1E-01
Selenium	41	0.00005	0.00012	0.00014	0.00016	0.00050	0.00050	0.00100	0.00029	0.00023	8.0E-01
Silicon	33	0.9	1.4	2.7	3.9	5.8	6.4	6.7	4.1	1.7	4.2E-01
Silver	41	0.0000050	0.0000050	0.0000050	0.0000050	0.0000100	0.0000100	0.0000330	0.0000075	0.0000051	6.8E-01
Sodium	41	22	31	33	35	37	41	45	35	4	1.1E-01
Strontium	33	0.24	0.31	0.35	0.36	0.37	0.39	0.41	0.36	0.03	8.7E-02
Sulphur	18	14	15	16	16	19	21	22	17	2	1.3E-01
Thallium	41	0.0000050	0.0000050	0.0000050	0.0000050	0.0001000	0.0001000	0.0002000	0.0000399	0.0000514	1.3E+00
Tin	41	0.000050	0.000050	0.000050	0.000050	0.000250	0.000250	0.000500	0.000124	0.000111	8.9E-01
Titanium	41	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0170	0.0053	0.0019	3.5E-01
Uranium	41	0.0007	0.0009	0.0011	0.0012	0.0012	0.0013	0.0016	0.0011	0.0002	1.4E-01
Vanadium	41	0.0015	0.0015	0.0022	0.0025	0.0028	0.0150	0.0150	0.0033	0.0033	1.0E+00
Zinc	41	0.0015	0.0015	0.0015	0.0025	0.0025	0.0295	0.0590	0.0060	0.0113	1.9E+00
Organics											
Carbon Organic (Dissolved)	41	9.1	11.6	13.5	14.1	15.0	16.0	16.8	14.0	1.5	1.0E-01
Carbon Organic (Total)	32	10.7	12.3	13.6	14.4	15.0	17.2	17.7	14.3	1.5	1.0E-01
Nitrogen Organic (Dissolved)	17	0.41	0.46	0.68	0.85	0.92	1.38	1.97	0.87	0.36	4.1E-01
Nitrogen Organic (Total)	18	0.50	0.56	0.80	0.85	0.95	1.42	1.96	0.93	0.33	3.5E-01

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.20 - JACL-S
(PAGE 2 OF 2)

Seasonal Statistics - JACL-S

Parameter	Count				Average				Min				Median				Max			
	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall
In Situ Parameters																				
Conductivity µS/cm	7	8	15	9	357	510	572	551	113	426	278	264	406	510	588	555	420	563	692	934
Oxygen Dissolved %	7	7	11	10	60	77	90	72	42.7	12.4	64	8	63.3	85.9	92	78	74.9	109	129	106
Oxygen Dissolved	7	8	12	11	8	11	8	8	5.95	7.15	6	5	8.71	10.9	8	8	9.8	14.7	12	11
pH (unitless)	7	8	15	11	8	8	9	8	7.59	7.77	8	8	7.91	8.5	9	8	8.46	8.73	9	9
Redox Potential mV	7	6	13	7	155	143	37	122	51.2	102	-116	13	149	113.5	28	134	232	277	155	223
Salinity ppt	6	6	11	5	0.31	0.33	0.32	0.40	0.12	0.3	0.30	0.34	0.355	0.34	0.32	0.34	0.37	0.34	0.33	0.60
Specific Conductivity µS/cm	7	8	14	11	642	701	638	722	211	624	263	275	725	692	657	731	760	778	745	1182
Temperature °C	7	8	15	11	2	11	19	13	0.38	5.61	14	5	1.38	10.4	20	15	4.37	15.1	23	18
Total Dissolved Solids	7	6	11	7	422	443	425	502	165	405	408	427	469	449	427	447	494	452	437	778
Turbidity NTU	6	6	11	5	0	0	6	-2	-1.1	-0.4	1	-11	0.2	0.3	2	1	2	2.1	20	1
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	0	1	2	2	-	0.5	0.5	0.5	-	0.5	0.5	0.5	-	0.5	0.5	0.5	-	0.5	0.5	0.5
Alkalinity (Total as CaCO3)	7	8	14	11	213	238	228	234	113	220	206	215	250	240.5	229	235	253	252	237	251
Bicarbonate Alkalinity	6	7	8	8	230	231	212	228	184	212	205	206	250	235	213	227	253	252	219	251
Carbonate Alkalinity	6	7	8	8	0.92	6	20	7	0.5	0.5	16	1	1	8.3	18	8	1	12	27	13
Color TCU	7	4	9	8	14	15	19	16	11.4	12.4	14	13	14.5	15.95	19	17	15.9	17.1	25	20
Hardness as CaCO3 (Dissolved)	7	8	15	11	266	301	283	291	165	284	266	265	300	294.5	282	291	314	335	323	309
Hydroxide Alkalinity	6	7	8	8	0.92	0.64	0.50	0.56	0.5	0.5	0.50	0.50	1	0.5	0.50	0.50	1	1	0.50	1.00
pH (unitless)	7	8	15	11	8	8	9	8	8.06	8.1	8	8	8.19	8.415	9	8	8.35	8.63	9	9
Specific Conductivity µS/cm	7	8	15	11	617	687	649	687	367	645	582	634	687	678	651	693	721	777	732	736
Total Dissolved Solids	7	8	15	11	374	409	409	420	213	344	362	394	414	422	407	416	454	465	453	461
Total Suspended Solids	7	8	15	11	2	3	4	2	1.5	1.5	2	2	1.5	1.5	3	2	1.5	5.8	11	10
Turbidity NTU	7	7	14	9	2	1	4	2	0.3	0.54	1	1	0.7	0.87	2	1	10.5	2.56	16	7
Dissolved Anions																				
Bromide	7	8	15	10	0.11	0.03	0.05	0.06	0.025	0.025	0.03	0.03	0.125	0.025	0.03	0.03	0.25	0.025	0.13	0.13
Chloride	7	8	15	10	49	56	52	56	25.2	51.7	48	51	56.5	54.5	53	56	59	60.5	60	62
Fluoride	7	8	14	10	0.19	0.20	0.20	0.21	0.088	0.174	0.16	0.19	0.2	0.2095	0.21	0.20	0.3	0.217	0.23	0.24
Sulphate	7	8	15	10	54	62	54	58	37	45.9	44	44	55.1	58.25	50	56	65.9	84.5	82	84
Nutrients								-												
Ammonia (Total)	7	8	15	11	0.130	0.034	0.034	0.103	0.0025	0.0064	0.011	0.015	0.025	0.0307	0.029	0.063	0.361	0.0655	0.121	0.252
Nitrate (as N)	7	8	15	10	0.25	0.02	0.007	0.047	0.0253	0.0025	0.003	0.003	0.2	0.0025	0.003	0.033	0.546	0.0382	0.035	0.129
Nitrite (as N)	7	8	15	10	0.006	0.0014	0.0027	0.0128	0.0005	0.0005	0.0005	0.0021	0.0028	0.0005	0.0005	0.0119	0.018	0.0036	0.0175	0.0313
Nitrogen (Dissolved)	5	2	6	5	1.17	0.84	0.99	1.16	0.82	0.78	0.58	0.82	1.27	0.835	0.98	0.97	1.48	0.89	1.40	2.10
Nitrogen (Total)	6	4	7	6	1.14	0.85	1.20	1.11	0.716	0.767	0.83	0.87	1.19	0.8535	0.99	1.11	1.44	0.909	1.99	1.34
Nitrogen Kjeldahl (Total)	7	8	15	11	0.92	0.98	1.09	1.06	0.691	0.726	0.83	0.86	0.852	0.9125	0.96	1.03	1.22	1.62	1.99	1.34
Orthophosphate (Dissolved)	7	8	14	11	0.06	0.007	0.001	0.016	0.0125	0.0005	0.001	0.001	0.0641	0.00765	0.001	0.002	0.0981	0.0132	0.001	0.096
Phosphorus - Dissolved	6	6	12	9	0.081	0.029	0.01	0.04	0.0489	0.0139	0.01	0.01	0.08495	0.02755	0.01	0.03	0.115	0.0542	0.02	0.14
Phosphorus - Total	7	8	15	10	0.08	0.05	0.03	0.04	0.0498	0.0329	0.02	0.02	0.0902	0.0366	0.03	0.02	0.116	0.124	0.04	0.14
Cyanide																				
Cyanide (Free)	7	7	13	9	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Cyanide (Total)	7	8	14	10	0.0044	0.0034	0.00447143	0.00485	0.0025	0.0025	0.0025	0.0025	0.0054	0.0025	0.0025	0.0025	0.0061	0.0062	0.0103	0.0106
Cyanide (WAD)	7	7	13	9	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Dissolved Metals																				
Aluminum	7	8	15	11	0.0012	0.0021	0.0024	0.0017	0.0005	0.0005	0.0005	0.0005	0.0015	0.0015	0.0025	0.0015	0.0025	0.005	0.0093	0.0025
Antimony	7	8	15	11	0.000104	0.00014	0.00017	0.00015	0.00005	0.00005	0.00005	0.00005	0.00011	0.00005	0.00011	0.00012	0.00025	0.0005	0.00025	0.00025
Arsenic	7	8	15	11	0.0012	0.0012	0.0013	0.0014	0.00081	0.00114	0.0012	0.0013	0.00131	0.0012	0.0013	0.0013	0.00144	0.00124	0.0014	0.0017
Barium	7	8	15	11	0.052	0.057	0.051	0.058	0.031	0.0488	0.027	0.045	0.0493	0.05875	0.054	0.059	0.0712	0.0619	0.063	0.071
Beryllium	7	8	15	11	0.00011	0.00023	0.00026	0.00021	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.0005	0.001	0.00050	0.00050
Bismuth	7	6	12	8	0.0145	0.000	0.034	0.013	0.00025	0.00025	0.000	0.000	0.00025	0.00025	0.000	0.000	0.1	0.00025	0.100	0.100
Boron	7	8	15	11	0.025	0.027	0.034	0.031	0.018	0.018	0.017	0.019	0.02	0.02	0.021	0.021	0.05	0.05	0.050	0.050
Cadmium	7	8	15	11	0.00001	0.000007	0.000007	0.000006	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000034	0.000017	0.000009	0.000009
Calcium	7	8	15	11	47	57	53	52	28.9	52.8	45	48	52.5	56.65	54	52	58.3	59	58	54
Chromium	7	8	15	11	0.00015	0.0002	0.00029	0.00026	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00027	0.00005	0.00075	0.001	0.00075	0.00100
Cobalt	7	8	15	11	0.00006	0.00009	0.00010	0.00009	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00015	0.0003	0.00015	0.00015
Copper	7	8	15	11	0.0008	0.0008	0.0010	0.0008	0.00025	0.00025	0.0005	0.0004	0.00055	0.000855	0.0009	0.0007	0.00152	0.00136	0.0016	0.0016
Iron	7	8	15	11	0.011	0.012	0.011	0.010	0.005	0.005	0.005	0.005	0.015	0.014	0.015	0.011	0.015	0.015	0.023	0.015
Lead	7	8	15	11	0.00006	0.00011	0.00013	0.00011	0.000025	0.000025	0.00003	0.00003	0.000025	0.000025	0.00003	0.00003	0.00025	0.0005	0.00025	0.00025
Lithium	7	8	15	11	0.0050	0.0055	0.0051	0.0058	0.0025	0.00482	0.0025	0.0050	0.00576	0.00551	0.0053	0.0056	0.00602	0.0063	0.0068	0.0069
Magnesium	7	8	15	11	35.8	38.9	36.5	39.4	22.6	33.7	33.4	35.6	40.4	38.5	35.7	40.0	41.8	46.7	45.7	44.3
Manganese	7	8	15	11	0.014	0.003	0.003	0.008	0.00152	0.00083	0.001	0.001	0.0158	0.0027	0.003	0.002	0.0206	0.0061	0.006	0.027
Mercury	7	8	15	11	0.0000050	0.0000063	0.0000057	0.0000059	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.00001	0.0000100	0.0000100
Molybdenum	7	8	15	11	0.0024	0.0023	0.0024	0.0025	0.00175	0.002	0.0020	0.0020	0.00226	0.002305	0.0024	0.0025	0.0035	0.0025	0.0030	0.0031
Nickel	7	8	15	11	0.0007	0.0008	0.0006	0.0007	0.0005	0.0005	0.0005	0.0005	0.00065	0.000685	0.0006	0.0006	0.00094	0.00118	0.0008	0.0015
Phosphorus	7	6	12	8	0.13	0.07	0.09	0.09	0.089	0.025	0.03	0.03	0.15	0.025	0.09	0.09	0.15	0.15	0.15	0.15
Potassium	7	8	15	11	11	11	11	12	7.3	9.23	10	11	11.4	11.05	11	12	13.1	12.1	14	13
Selenium	7	8	15	11	0.00018	0.00030	0.00031	0.00032	0.0001	0.00011	0.00013	0.00011	0.00013	0.00016	0.00016	0.00015	0.0005	0.001	0.00050	0.00110
Silicon	7	6	12	8	3.25	3.59	4.42	4.59	1.11	1.87	0.93	2.11	3.4	3.97	4.70	4.61	6.06	4.8	6.77	6.48
Silver	7	8	15	11	0.000006	0.000008	0.000007	0.000007	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.00001	0.00002	0.000010	0.000010
Sodium	7	8	15	11	33	35	34	37	21.4	31.6	31	34	35.3	35.25	34	36	39.7	40.7	42	44
Strontium	7	6	12	8	0.34	0.36	0.35	0.35	0.232	0.35	0.31	0.34	0.362	0.361	0.36	0.36	0.395	0.379	0.38	0.37
Sulphur	3	4	6	5	20	17	15	13	18.8	15.5	15	0	20.1	16.65	16	16	20.9	19.2	16	17
Thallium	7	8	15	11	0.000019	0.000041	0.000049	0.000040	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.0001	0.0002	0.000100	0.000100
Tin	7	8	15	11	0.00008	0.00013	0.00014	0.00012	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00025	0.0005	0.00025	0.00025
Titanium	7	8	15	11	0.0050	0.005	0.0050	0.0050	0.005	0.005	0.0050	0.0050	0.005	0.005	0.0050	0.0050	0.005	0.005	0.0050	0.0050
Uranium	7	8	15	11	0.0010	0.0011	0.0011	0.0011	0.00058	0.00104	0.0009	0.0009	0.00109	0.001135	0.0010	0.0011	0.00115	0.00129	0.0014	0.0013
Vanadium	7	8	15	11	0.0018	0.0038	0.0032	0.0036	0.0011	0.0016	0.0018	0.0019	0.0019	0.0022	0.0026	0.0024	0.0023	0.015	0.0150	0.0150
Zinc	6	8	14	11	0.0142	0.0026	0.0018	0.0033	0.0012	0.0005	0.0005	0.0005	0.00875	0.00175	0.0019	0.0018	0.0497	0.007	0.0046	0.0122
Total Metals																				
Aluminum	7	8	15	11	0.03	0.01	0.01	0.02	0.0015	0.0025	0.00	0.01	0.004	0.0063	0.01	0.01	0.0816	0.0086	0.01	0.19
Antimony	7	8	15	11	0.00012429	0.00017	0.00018	0.00017	0.00005	0.00005	0.00010	0.00010	0.00012	0.00012	0.00014	0.00012	0.00025	0.0005	0.00025	0.00026
Arsenic	7	8	15	11	0.0012	0.0012	0.0013	0.0014	0.00079	0.00116	0.0011	0.0012	0.0013	0.001185	0.0013	0.0014	0.00146	0.00127	0.0014	0.0018
Barium	7	8	15	11	0.052	0.058	0.051	0.057	0.033	0.051	0.026	0.045	0.0488	0.05915	0.054	0.058	0.0702	0.0617	0.061	0.070
Beryllium	7	8	15	11	0.00011	0.00023	0.00026	0.00021	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.0005	0.001	0.00050	0.00050
Bismuth	7	6	12	8	0.0145	0.00025	0.0335	0.01271875	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.1	0.00025	0.1	0.1
Boron	7	8	15	11	0.029	0.028	0.036	0.034	0.02	0.02	0.020	0.020	0.026	0.0215	0.027	0.026	0.05	0.05	0.050	0.050
Cadmium	7	8	15	11	0.00002	0.000007	0.000007	0.000006	0.000005	0.000005	0.000005	0.000005	0.000011	0.000005	0.000005	0.000005	0.000043	0.000017	0.000009	0.000009
Calcium	7	8	15	11	47	56	53	51	28.9	53	44	48	52	56.5	53	50	58.7	59.3	58	55
Chromium	7	8	15	11	0.00024	0.0003	0.0003	0.0003	0.00005	0.00005	0.0001	0.0001	0.00017	0.00011	0.0005	0.0003	0.0005	0.001	0.0007	0.0010
Cobalt	7	8	15	11	0.00007	0.00011	0.00010	0.00010	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00010	0.00010	0.0002	0.0003	0.00015	0.00020
Copper	7	8	15	11	0.0014	0.0010	0.0013	0.0010	0.00025	0.0005	0.0005	0.0005	0.00086	0.000985	0.0013	0.0011	0.00374	0.00127	0.0023	0.0018
Iron	7	8	15	11	0.03	0.02	0.01	0.04	0.005	0.014	0.01	0.01	0.015	0.015	0.02	0.02	0.096	0.024	0.03	0.24
Lead	7	8	15	11	0.00006	0.00011	0.00013	0.00011	0.000025	0.000025	0.00003	0.00003	0.000025	0.00003	0.00003	0.00005	0.00025	0.0005	0.00025	0.00025
Lithium	7	8	15	11	0.0050	0.0052	0.0051	0.0058	0.0025	0.00396	0.0025	0.0048	0.00588	0.0054	0.0051	0.0055	0.006	0.0062	0.0069	0.0075
Magnesium	7	8	15	11	36	39	36	39	22.6	32.6	33	35	40.5	38.5	36	39	41.2	46.9	46	44
Manganese	7	8	15	11	0.02	0.01	0.01	0.01	0.00335	0.00356	0.00	0.00	0.0184	0.005375	0.00	0.00	0.0253	0.0101	0.01	0.03
Mercury	7	8	15	11	0.0000050	0.0000063	0.0000057	0.0000059	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.00001	0.0000100	0.0000100
Molybdenum	7	8	15	11	0.003	0.002	0.003	0.003	0.00199	0.002	0.002	0.002	0.00238	0.002455	0.003	0.003	0.004	0.00255	0.004	0.004
Nickel	7	8	15	11	0.0008	0.0007	0.0007	0.0007	0.0006	0.0005	0.0005	0.0005	0.0008	0.0007	0.0007	0.0007	0.0011	0.0010	0.0012	0.0011
Phosphorus	7	6	12	8	0.13	0.07	0.09	0.09	0.09	0.025	0.03	0.03	0.15	0.049	0.09	0.10	0.15	0.15	0.15	0.15
Potassium	7	8	15	11	11.1	11.1	10.8	11.7	7.3	9.5	9.7	10.2	11.8	11.2	10.7	11.6	13.4	12.3	12.7	13.2
Selenium	7	8	15	11	0.00018	0.00030	0.00031	0.00032	0.00005	0.00012	0.00013	0.00010	0.00013	0.0002	0.00019	0.00016	0.0005	0.0010	0.00050	0.00100
Silicon	7	6	12	8	3.3	3.6	4.4	4.6	1.3	1.9	0.9	2.1	3.3	4.0	4.7	4.7	6.2	4.8	6.7	6.4
Silver	7	8	15	11	0.0000057	0.0000075	0.0000073	0.0000089	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.00001	0.00002	0.0000100	0.0000330
Sodium	7	8	15	11	33	36	34	37	21.5	30.6	31	33	34.9	35.7	34	36	39.9	41.5	41	45
Strontium	7	6	12	8	0.3	0.4	0.36	0.36	0.24	0.35	0.34	0.34	0.384	0.4	0.36	0.36	0.4	0.4	0.39	0.37
Sulphur	3	4	6	5	21	17	16	17	19.2	15.8	14	15	21.2	16.55	16	16	21.6	19.6	17	20
Thallium	7	8	15	11	0.00002	0.00004	0.00005	0.00004	0.000005	0.000005	0.00001	0.00001	0.000005	0.000005	0.00001	0.00001	0.0001	0.0002	0.00010	0.00010
Tin	7	8	15	11	0.00008	0.00013	0.00014	0.00012	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00025	0.0005	0.00025	0.00025
Titanium	7	8	15	11	0.005	0.005	0.005	0.006	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.017
Uranium	7	8	15	11	0.0011	0.0012	0.0012	0.0012	0.0007	0.0008	0.0010	0.0010	0.0012	0.0012	0.0011	0.0011	0.0012	0.0013	0.0016	0.0015
Vanadium	7	8	15	11	0.0020	0.0038	0.0035	0.0037	0.0015	0.0015	0.0021	0.0020	0.002	0.0024	0.0028	0.0028	0.0026	0.015	0.0150	0.0150
Zinc	7	8	15	11	0.0191	0.0021	0.0046	0.0022	0.0015	0.0015	0.0015	0.0015	0.0133	0.0015	0.0025	0.0025	0.059	0.005	0.0320	0.0037
Organics																				
Carbon Organic (Dissolved)	7	8	15	11	12.7	13.7	15	14	9.13	12.2	13	12	13.2	13.9	14	15	16	15	17	15
Carbon Organic (Total)	6	6	12	8	13.6	14	15	14	10.7	12.3	13	12	13.8	13.6	14	15	16	15	18	15
Nitrogen Organic (Dissolved)	4	2	6	5	0.70	0.75	0.94	0.96	0.41	0.679	0.57	0.47	0.7405	0.7475	0.95	0.86	0.92	0.82	1.23	1.97
Nitrogen Organic (Total)	5	2	6	5	0.81	0.73	1.20	0.79	0.571	0.69	0.82	0.50	0.86	0.73	1.13	0.82	0.9	0.8	1.96	0.96

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.
2. SEASONS ARE SPECIFIED AS FOLLOWS: WIN (WINTER; DECEMBER THROUGH MARCH), SPR (SPRING; APRIL AND MAY), SUMMER(JUNE THROUGH AUGUST), FALL (SEPTEMBER THROUGH NOVEMBER).

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.21 - JC03
(PAGE 1 OF 2)

Parameter	Total Count	Complete Dataset - JC03									
		Min	5th	25th	Percentiles 50th	75th	95th	Max	Average	Standard Deviation	Coefficient of Variation
In Situ Parameters											
Conductivity µS/cm	28	198	251	395	506	578	644	675	479	129	2.7E-01
Oxygen Dissolved %	28	57	59	74	81	85	90	96	79	10	1.3E-01
Oxygen Dissolved	28	6.7	7.9	8.6	9.2	9.9	12.0	13.1	9.4	1.4	1.5E-01
pH (unitless)	28	7.5	7.7	7.9	8.1	8.2	8.3	8.5	8.0	0.2	2.7E-02
Redox Potential mV	28	-305	-124	81	103	141	193	218	85	107	1.3E+00
Salinity ppt	22	0.12	0.19	0.25	0.38	0.49	0.52	0.59	0.36	0.14	3.8E-01
Specific Conductivity µS/cm	29	260	401	519	830	930	1064	1320	746	258	3.5E-01
Temperature °C	29	1.5	1.6	4.4	8.6	11.9	14.2	17.8	8.0	4.6	5.8E-01
Total Dissolved Solids	24	167	258	336	532	623	693	859	487	181	3.7E-01
Turbidity NTU	18	0.1	0.5	3.1	7.5	16.1	60.0	66.0	14.8	19.5	1.3E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	-	-
Alkalinity (Total as CaCO3)	29	151	172	228	295	351	423	439	292	81	2.8E-01
Bicarbonate Alkalinity	16	151	164	203	294	387	430	439	296	102	3.5E-01
Carbonate Alkalinity	16	0.5	0.5	0.5	1.0	2.7	9.7	14.5	3.0	4.2	1.4E+00
Color TCU	29	13.5	15.2	20.0	27.7	38.7	51.1	69.0	30.7	13.1	4.3E-01
Hardness as CaCO3 (Dissolved)	29	184	187	245	383	421	484	512	348	102	2.9E-01
Hydroxide Alkalinity	16	0.5	0.5	0.5	0.5	1.0	1.0	1.0	0.7	0.3	3.6E-01
pH (unitless)	28	8.0	8.1	8.2	8.3	8.4	8.4	8.5	8.3	0.1	1.4E-02
Specific Conductivity µS/cm	29	388	405	527	811	905	989	1020	739	206	2.8E-01
Total Dissolved Solids	28	255	256	336	499	574	644	650	463	131	2.8E-01
Total Suspended Solids	29	1.5	2.1	10.4	19.4	39.2	96.7	116.0	32.7	32.9	1.0E+00
Turbidity NTU	29	1.0	1.3	5.0	8.0	19.8	46.7	66.7	15.0	16.8	1.1E+00
Dissolved Anions											
Bromide	29	0.03	0.03	0.03	0.25	0.25	0.25	0.50	0.16	0.13	7.6E-01
Chloride	29	21	25	34	47	71	120	123	58	32	5.4E-01
Fluoride	29	0.10	0.10	0.10	0.15	0.20	0.28	0.36	0.16	0.07	4.2E-01
Sulphate	29	13	18	22	42	55	68	74	40	18	4.5E-01
Nutrients											
Ammonia (Total)	29	0.003	0.009	0.018	0.023	0.035	0.103	0.139	0.034	0.032	9.2E-01
Nitrate (as N)	29	0.003	0.02	0.03	0.04	0.10	0.17	1.04	0.09	0.188	2.0E+00
Nitrite (as N)	29	0.0005	0.00	0.00	0.01	0.01	0.01	0.01	0.00	0.0025	6.5E-01
Nitrogen (Dissolved)	21	0.29	0.36	0.47	0.51	0.65	1.01	2.10	0.63	0.38	6.0E-01
Nitrogen (Total)	27	0.32	0.34	0.54	0.64	1.08	1.39	2.09	0.79	0.40	5.1E-01
Nitrogen Kjeldahl (Total)	29	0.15	0.35	0.50	0.60	1.04	1.30	2.24	0.75	0.42	5.6E-01
Orthophosphate (Dissolved)	7	0.058	0.060	0.073	0.119	0.123	0.175	0.196	0.109	0.047	4.3E-01
Phosphorus - Dissolved	25	0.031	0.033	0.051	0.064	0.091	0.181	0.206	0.079	0.046	5.8E-01
Phosphorus - Total	29	0.039	0.045	0.087	0.161	0.207	0.260	0.435	0.156	0.088	5.6E-01
Cyanide											
Cyanide (Free)	27	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	1.8E-16
Cyanide (Total)	27	0.0025	0.0025	0.0025	0.0025	0.0080	0.0132	0.0136	0.0056	0.0038	6.9E-01
Cyanide (WAD)	27	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	1.8E-16
Dissolved Metals											
Aluminum	29	0.0013	0.0014	0.0024	0.0025	0.0050	0.0062	0.0080	0.0034	0.0018	5.2E-01
Antimony	29	0.00005	0.00005	0.00005	0.00012	0.00025	0.00050	0.00050	0.00019	0.00017	8.8E-01
Arsenic	29	0.0005	0.0005	0.0009	0.0011	0.0014	0.0021	0.0023	0.0012	0.0004	3.8E-01
Barium	29	0.047	0.049	0.065	0.080	0.090	0.101	0.104	0.078	0.017	2.2E-01
Beryllium	29	0.000050	0.000050	0.000050	0.000050	0.000500	0.001000	0.001000	0.000353	0.000362	1.0E+00
Bismuth	26	0.00025	0.00025	0.00025	0.00025	0.10000	0.10000	0.10000	0.04245	0.05026	1.2E+00
Boron	29	0.005	0.005	0.005	0.016	0.050	0.050	0.050	0.028	0.022	7.8E-01
Cadmium	29	0.0000050	0.0000050	0.0000050	0.0000050	0.0000085	0.0000170	0.0000210	0.0000086	0.0000050	5.8E-01
Calcium	29	52	53	65	93	107	116	118	86	23	2.6E-01
Chromium	29	0.00005	0.00005	0.00016	0.00041	0.00050	0.00100	0.00110	0.00043	0.00035	8.1E-01
Cobalt	29	0.00005	0.00007	0.00015	0.00015	0.00030	0.00053	0.00062	0.00023	0.00014	6.1E-01
Copper	29	0.0010	0.0010	0.0012	0.0017	0.0025	0.0040	0.0047	0.0020	0.0010	5.1E-01
Iron	29	0.015	0.015	0.034	0.049	0.083	0.178	0.242	0.067	0.056	8.4E-01
Lead	29	0.000025	0.000025	0.000025	0.000025	0.000250	0.000500	0.000500	0.000177	0.000181	1.0E+00
Lithium	29	0.00191	0.00239	0.00250	0.00386	0.00500	0.00578	0.00600	0.00390	0.00137	3.5E-01
Magnesium	29	13	13	22	33	40	51	53	32	12	3.7E-01
Manganese	29	0.012	0.016	0.026	0.036	0.098	0.146	0.235	0.064	0.054	8.4E-01
Mercury	29	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000080	0.0000100	0.0000053	0.0000013	2.4E-01
Molybdenum	29	0.001	0.001	0.002	0.002	0.002	0.004	0.004	0.002	0.001	4.0E-01
Nickel	29	0.0005	0.0005	0.0009	0.0010	0.0019	0.0025	0.0026	0.0013	0.0007	5.1E-01
Phosphorus	26	0.03	0.03	0.15	0.15	0.15	0.15	0.15	0.13	0.04	3.4E-01
Potassium	29	5	5	7	9	12	14	14	9	3	3.1E-01
Selenium	29	0.00014	0.00017	0.00027	0.00049	0.00050	0.00100	0.00100	0.00049	0.00029	5.8E-01
Silicon	26	6.6	6.8	8.0	8.8	11.0	11.6	12.1	9.2	1.7	1.8E-01
Silver	29	0.0000050	0.0000050	0.0000050	0.0000050	0.0000100	0.0000200	0.0000200	0.0000091	0.0000055	6.0E-01
Sodium	29	14	14	22	34	38	43	44	31	9	3.0E-01
Strontium	26	0.16	0.18	0.26	0.39	0.43	0.49	0.51	0.35	0.10	3.0E-01
Sulphur	7	5	5	12	19	21	24	25	16	8	4.6E-01
Thallium	29	0.0000050	0.0000050	0.0000050	0.0000050	0.0001000	0.0002000	0.0002000	0.0000681	0.0000746	1.1E+00
Tin	29	0.000050	0.000050	0.000050	0.000050	0.000250	0.000500	0.000500	0.000190	0.000170	9.0E-01
Titanium	29	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0130	0.0053	0.0015	2.8E-01
Uranium	29	0.0006	0.0006	0.0007	0.0014	0.0017	0.0048	0.0075	0.0018	0.0016	9.1E-01
Vanadium	29	0.0010	0.0016	0.0020	0.0024	0.0028	0.0036	0.0044	0.0024	0.0007	2.9E-01
Zinc	29	0.0005	0.0013	0.0023	0.0025	0.0025	0.0087	0.0312	0.0039	0.0056	1.4E+00
Total Metals											
Aluminum	29	0.0113	0.0139	0.1870	0.3690	1.0200	2.0060	2.2200	0.6134	0.6208	1.0E+00
Antimony	29	0.00005	0.00005	0.00005	0.00021	0.00025	0.00050	0.00050	0.00021	0.00016	7.6E-01
Arsenic	29	0.0008	0.0009	0.0011	0.0013	0.0015	0.0020	0.0024	0.0013	0.0004	2.7E-01
Barium	29	0.048	0.055	0.072	0.086	0.101	0.117	0.124	0.086	0.020	2.3E-01
Beryllium	29	0.000050	0.000050	0.000050	0.000050	0.000500	0.001000	0.001000	0.000353	0.000362	1.0E+00
Bismuth	26	0.00025	0.00025	0.00025	0.00025	0.10000	0.10000	0.10000	0.04245	0.05026	1.2E+00
Boron	29	0.005	0.005	0.013	0.019	0.050	0.050	0.050	0.030	0.020	6.7E-01
Cadmium	29	0.000005	0.000005	0.000005	0.000009	0.000017	0.000028	0.000075	0.000014	0.000014	9.9E-01
Calcium	29	50	52	66	94	104	115	121	86	23	2.7E-01
Chromium	29	0.00021	0.00027	0.00083	0.00120	0.00240	0.00524	0.00571	0.00172	0.00149	8.7E-01
Cobalt	29	0.00015	0.00017	0.00032	0.00056	0.00082	0.00169	0.00176	0.00066	0.00045	6.7E-01
Copper	29	0.0010	0.0017	0.0033	0.0050	0.0079	0.0141	0.0151	0.0059	0.0039	6.6E-01
Iron	29	0.20	0.22	0.37	0.62	1.53	3.01	3.27	0.99	0.89	9.0E-01
Lead	29	0.000025	0.000025	0.000088	0.000250	0.000250	0.000500	0.000500	0.000233	0.000162	6.9E-01
Lithium	29	0.0022	0.0025	0.0025	0.0050	0.0055	0.0060	0.0062	0.0043	0.0014	3.3E-01
Magnesium	29	13	13	21	33	39	50	53	32	12	3.7E-01
Manganese	29	0.02	0.03	0.06	0.09	0.14	0.19	0.24	0.10	0.06	5.6E-01
Mercury	29	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000080	0.0000100	0.0000053	0.0000013	2.4E-01
Molybdenum	29	0.001	0.001	0.002	0.002	0.002	0.004	0.004	0.002	0.001	4.0E-01
Nickel	29	0.0005	0.0010	0.0018	0.0026	0.0034	0.0053	0.0059	0.0027	0.0013	4.9E-01
Phosphorus	26	0.03	0.04	0.15	0.15	0.15	0.16	0.22	0.14	0.04	2.8E-01
Potassium	29	5	5	7	9	12	14	15	9	3	3.2E-01
Selenium	29	0.00014	0.00018	0.00031	0.00050	0.00050	0.00100	0.00100	0.00050	0.00029	5.6E-01
Silicon	26	7.0	7.4	9.5	10.7	11.9	12.9	12.9	10.5	1.7	1.6E-01
Silver	29	0.0000050	0.0000050	0.0000050	0.0000100	0.0000100	0.0000200	0.0000200	0.0000100	0.0000055	5.5E-01
Sodium	29	14	14	21	33	36	45	46	31	10	3.2E-01
Strontium	26	0.17	0.18	0.25	0.39	0.43	0.48	0.52	0.35	0.10	2.9E-01
Sulphur	7	4	5	12	19	22	25	26	17	8	4.8E-01
Thallium	29	0.0000050	0.0000050	0.0000050	0.0000110	0.0001000	0.0002000	0.0002000	0.0000683	0.0000744	1.1E+00
Tin	29	0.000050	0.000050	0.000050	0.000050	0.000250	0.000500	0.000500	0.000190	0.000170	9.0E-01
Titanium	29	0.0050	0.0050	0.0120	0.0200	0.0360	0.0846	0.0930	0.0298	0.0257	8.6E-01
Uranium	29	0.0006	0.0006	0.0008	0.0015	0.0017	0.0047	0.0076	0.0018	0.0016	8.8E-01
Vanadium	29	0.0010	0.0019	0.0027	0.0039	0.0053	0.0089	0.0094	0.0043	0.0022	5.0E-01
Zinc	29	0.0015	0.0015	0.0025	0.0025	0.0048	0.0077	0.0084	0.0035	0.0021	5.8E-01
Organics											
Carbon Organic (Dissolved)	29	6.7	7.2	9.2	12.0	13.3	16.3	16.5	11.6	2.8	2.4E-01
Carbon Organic (Total)	25	6.7	7.6	9.5	12.3	14.2	17.0	17.9	12.1	3.1	2.6E-01
Nitrogen Organic (Dissolved)	18	0.20	0.27	0.39	0.43	0.54	0.83	1.02	0.49	0.20	4.0E-01
Nitrogen Organic (Total)	22	0.31	0.37	0.46	0.57	1.00	1.13	1.19	0.68	0.28	4.1E-01

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.21 - JC03
(PAGE 2 OF 2)

Seasonal Statistics - JC03

Parameter	Count				Average				Min				Median				Max			
	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall
In Situ Parameters																				
Conductivity µS/cm	4	14	7	3	540	482	460	426	482	248	351	198	541.5	542.5	480	522	596	675	525	558
Oxygen Dissolved %	4	13	7	4	65	81	82	79	57.1	64	75	58	64.45	83	82	80	75.5	88.8	88	96
Oxygen Dissolved	4	13	7	4	9	10	9	9	7.95	7.92	8	7	8.985	9.48	9	9	10.5	13.1	9	12
pH (unitless)	4	13	7	4	8	8	8	8	7.59	7.5	8	8	7.88	8.09	8	8	8.11	8.5	8	8
Redox Potential mV	4	13	7	4	90	124	4	93	67	82.6	-305	22	89.45	126	96	66	113	177	202	218
Salinity ppt	3	12	4	3	0.49	0.36	0.28	0.33	0.44	0.19	0.23	0.12	0.52	0.355	0.27	0.42	0.52	0.59	0.34	0.45
Specific Conductivity µS/cm	4	14	7	4	975	767	590	721	872	395	480	260	980	855	557	853	1068	1320	699	919
Temperature °C	4	14	7	4	2	7	14	8	1.52	1.56	11	4	1.615	6.74	13	7	1.88	13	18	13
Total Dissolved Solids	4	13	4	3	619	495	366	440	507	257	312	167	637	572	348	556	694	859	455	598
Turbidity NTU	3	7	4	4	2	32	7	2	0.6	10	5	0	0.7	21.8	7	3	6.1	66	9	4
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	0	0	1	0	-	-	0.5	-	-	-	0.5	-	-	-	0.5	-	-	-	0.5	-
Alkalinity (Total as CaCO3)	4	14	7	4	388	262	249	376	308	151	215	351	403	263	231	372	439	417	295	410
Bicarbonate Alkalinity	3	8	3	2	415	253	230	388	379	151	205	365	427	225.5	223	388	439	417	261	410
Carbonate Alkalinity	3	8	3	2	1.00	2	8	4	1	0.5	1	1	1	0.5	8	4	1	8.1	15	8
Color TCU	4	14	7	4	34	29	39	21	27.7	13.5	26	16	33.75	25.15	29	20	40.2	52.5	69	27
Hardness as CaCO3 (Dissolved)	4	14	7	4	462	337	269	412	385	184	223	384	475.5	375.5	259	401	512	470	317	462
Hydroxide Alkalinity	3	8	3	2	1.00	0.56	0.67	0.75	1	0.5	0.50	0.50	1	0.5	0.50	0.75	1	1	1.00	1.00
pH (unitless)	4	13	7	4	8	8	8	8	7.97	8.19	8	8	8.11	8.33	8	8	8.28	8.41	8	8
Specific Conductivity µS/cm	4	14	7	4	947	734	576	832	831	388	498	794	968.5	852	528	814	1020	997	673	905
Total Dissolved Solids	4	14	7	3	603	462	362	513	524	255	315	497	619	526	340	497	650	635	419	546
Total Suspended Solids	4	14	7	4	13	49	23	13	1.5	6.5	12	2	7.2	40.7	21	7	35	116	39	37
Turbidity NTU	4	14	7	4	5	25	8	3	1.21	4.06	5	1	4.465	20.6	8	2	8.36	66.7	12	8
Dissolved Anions																				
Bromide	4	14	7	4	0.25	0.14	0.07	0.31	0.25	0.025	0.03	0.25	0.25	0.1875	0.03	0.25	0.25	0.25	0.25	0.50
Chloride	4	14	7	4	67	71	33	51	64	20.8	24	46	65.25	68.7	32	50	71.6	123	40	57
Fluoride	4	14	7	4	0.22	0.13	0.19	0.15	0.1	0.1	0.10	0.10	0.205	0.121	0.19	0.15	0.36	0.22	0.23	0.21
Sulphate	4	14	7	4	63	43	21	40	52	19.3	13	35	63.95	49	21	39	73.7	67.1	31	47
Nutrients								-												
Ammonia (Total)	4	14	7	4	0.064	0.033	0.027	0.022	0.0346	0.0025	0.014	0.012	0.0514	0.0238	0.023	0.020	0.119	0.139	0.075	0.038
Nitrate (as N)	4	14	7	4	0.09	0.14	0.043	0.031	0.025	0.0025	0.025	0.025	0.0795	0.07435	0.037	0.025	0.168	1.04	0.069	0.050
Nitrite (as N)	4	14	7	4	0.005	0.0037	0.0020	0.0063	0.005	0.0005	0.0005	0.0050	0.005	0.005	0.0012	0.0050	0.005	0.0085	0.0050	0.0100
Nitrogen (Dissolved)	3	10	4	4	0.73	0.66	0.55	0.53	0.652	0.29	0.47	0.41	0.674	0.495	0.50	0.54	0.857	2.1	0.74	0.62
Nitrogen (Total)	4	13	6	4	0.97	0.85	0.70	0.55	0.676	0.317	0.46	0.47	0.9125	0.695	0.57	0.56	1.38	2.09	1.10	0.61
Nitrogen Kjeldahl (Total)	4	14	7	4	0.94	0.82	0.65	0.52	0.705	0.148	0.42	0.46	0.9005	0.648	0.51	0.50	1.25	2.24	1.07	0.61
Orthophosphate (Dissolved)	1	1	5	0	0.13	0.065	0.115	-	0.126	0.0645	0.058	-	0.126	0.0645	0.119	-	0.126	0.0645	0.196	-
Phosphorus - Dissolved	3	13	5	4	0.069	0.077	0.09	0.07	0.0311	0.0315	0.06	0.06	0.0368	0.0539	0.09	0.07	0.138	0.206	0.13	0.10
Phosphorus - Total	4	14	7	4	0.13	0.18	0.16	0.10	0.0387	0.0464	0.09	0.07	0.11135	0.175	0.16	0.10	0.254	0.435	0.26	0.12
Cyanide																				
Cyanide (Free)	4	13	7	3	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Cyanide (Total)	4	13	7	3	0.0033	0.0060	0.00691429	0.00356667	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0079	0.0025	0.0055	0.0136	0.0127	0.0057
Cyanide (WAD)	4	13	7	3	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Dissolved Metals																				
Aluminum	4	14	7	4	0.0020	0.0040	0.0034	0.0028	0.0014	0.0013	0.0025	0.0016	0.0021	0.0047	0.0025	0.0023	0.0025	0.0064	0.0080	0.0050
Antimony	4	14	7	4	0.000100	0.00021	0.00019	0.00021	0.00005	0.00005	0.00005	0.00005	0.00005	0.000085	0.00025	0.00015	0.00025	0.0005	0.00025	0.00050
Arsenic	4	14	7	4	0.0012	0.0009	0.0016	0.0012	0.001	0.0005	0.0011	0.0010	0.001225	0.000865	0.0015	0.0012	0.00139	0.00221	0.0023	0.0013
Barium	4	14	7	4	0.084	0.077	0.069	0.090	0.065	0.0468	0.059	0.084	0.0835	0.086	0.073	0.092	0.103	0.104	0.075	0.094
Beryllium	4	14	7	4	0.00016	0.00039	0.00037	0.00040	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00050	0.00028	0.0005	0.001	0.00050	0.00100
Bismuth	4	13	5	4	0.0251875	0.039	0.060	0.050	0.00025	0.00025	0.000	0.000	0.00025	0.00025	0.100	0.050	0.1	0.1	0.100	0.100
Boron	4	14	7	4	0.016	0.025	0.038	0.032	0.005	0.005	0.005	0.011	0.005	0.0115	0.050	0.033	0.05	0.05	0.050	0.050
Cadmium	4	14	7	4	0.00001	0.000009	0.000009	0.000009	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000009	0.000007	0.0000085	0.000017	0.000021	0.000017
Calcium	4	14	7	4	106	86	68	99	89	51.6	53	93	107.5	96.3	66	99	118	117	81	107
Chromium	4	14	7	4	0.00025	0.0005	0.00039	0.00046	0.00015	0.00005	0.00005	0.00011	0.000175	0.000325	0.00050	0.00036	0.0005	0.0011	0.00050	0.00100
Cobalt	4	14	7	4	0.00043	0.00022	0.00015	0.00023	0.00032	0.00005	0.00013	0.00015	0.000435	0.00015	0.00015	0.00024	0.00054	0.00062	0.00015	0.00030
Copper	4	14	7	4	0.0014	0.0021	0.0024	0.0012	0.00111	0.001	0.0015	0.0010	0.001345	0.002065	0.0021	0.0011	0.0016	0.0047	0.0045	0.0016
Iron	4	14	7	4	0.146	0.047	0.063	0.067	0.109	0.015	0.038	0.028	0.139	0.035	0.059	0.064	0.195	0.242	0.119	0.114
Lead	4	14	7	4	0.00008	0.00019	0.00019	0.00020	0.000025	0.000025	0.00003	0.00003	0.000025	0.000025	0.00025	0.00014	0.00025	0.0005	0.00025	0.00050
Lithium	4	14	7	4	0.0047	0.0039	0.0026	0.0053	0.0025	0.00231	0.0019	0.0050	0.005295	0.00404	0.0025	0.0053	0.00589	0.006	0.0039	0.0056
Magnesium	4	14	7	4	48.2	29.5	24.5	39.7	39.6	13.2	19.3	36.7	50.2	31.9	22.0	37.4	52.9	50.9	33.3	47.2
Manganese	4	14	7	4	0.123	0.048	0.032	0.118	0.0975	0.0124	0.021	0.087	0.124	0.0333	0.032	0.120	0.147	0.235	0.058	0.144
Mercury	4	14	7	4	0.0000050	0.0000054	0.0000057	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.00001	0.0000100	0.0000050
Molybdenum	4	14	7	4	0.0028	0.0018	0.0020	0.0022	0.0022	0.001	0.0014	0.0010	0.002605	0.001645	0.0018	0.0023	0.00381	0.00364	0.0038	0.0033
Nickel	4	14	7	4	0.0020	0.0011	0.0010	0.0019	0.0015	0.0005	0.0005	0.0010	0.001985	0.000955	0.0011	0.0022	0.0025	0.00261	0.0019	0.0023
Phosphorus	4	13	5	4	0.09	0.13	0.15	0.13	0.025	0.025	0.14	0.07	0.0875	0.15	0.15	0.15	0.153	0.15	0.15	0.15
Potassium	4	14	7	4	13	8	8	12	11.6	4.64	6	12	13.7	8.55	7	12	14.4	13.8	12	13
Selenium	4	14	7	4	0.00046	0.00056	0.00041	0.00045	0.00023	0.00022	0.00018	0.00014	0.0003	0.000465	0.00050	0.00033	0.001	0.001	0.00050	0.00100
Silicon	4	13	5	4	10.71	8.24	9.08	11.25	8.85	6.56	8.26	10.80	10.95	7.88	9.10	11.25	12.1	11.3	9.98	11.70
Silver	4	14	7	4	0.000006	0.000010	0.000009	0.000010	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000010	0.000008	0.00001	0.00002	0.000010	0.000020
Sodium	4	14	7	4	40	31	24	33	36	13.6	20	31	40.55	34.95	22	34	42.6	43.9	32	35
Strontium	4	13	5	4	0.46	0.34	0.27	0.42	0.391	0.164	0.23	0.41	0.463	0.379	0.26	0.42	0.507	0.5	0.34	0.44
Sulphur	3	2	1	1	22	13	5	16	20.3	7.68	5	16	22.4	13.24	5	16	24.7	18.8	5	16
Thallium	4	14	7	4	0.000029	0.000074	0.000073	0.000078	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000100	0.000053	0.0001	0.0002	0.000100	0.000200
Tin	4	14	7	4	0.00010	0.00021	0.00019	0.00021	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00025	0.00015	0.00025	0.0005	0.00025	0.00050
Titanium	4	14	7	4	0.0050	0.005	0.0050	0.0070	0.005	0.005	0.0050	0.0050	0.005	0.005	0.0050	0.0050	0.005	0.005	0.0050	0.0130
Uranium	4	14	7	4	0.0045	0.0014	0.0008	0.0017	0.00229	0.000623	0.0006	0.0009	0.004085	0.00145	0.0007	0.0011	0.00752	0.00408	0.0014	0.0038
Vanadium	4	14	7	4	0.0022	0.0026	0.0027	0.0016	0.0017	0.002	0.0018	0.0010	0.0021	0.0024	0.0027	0.0016	0.0027	0.004	0.0044	0.0021
Zinc	4	14	7	4	0.0035	0.0033	0.0064	0.0022	0.0013	0.0005	0.0013	0.0014	0.00215	0.0025	0.0025	0.0024	0.0085	0.0088	0.0312	0.0025
Total Metals																				
Aluminum	4	14	7	4	0.25	0.96	0.35	0.21	0.0113	0.123	0.16	0.02	0.23405	1.05	0.33	0.21	0.51	2.22	0.60	0.42
Antimony	4	14	7	4	0.0001	0.00023	0.00020	0.00025	0.00005	0.00005	0.00005	0.00005	0.00005	0.00014	0.00025	0.00023	0.00025	0.0005	0.00025	0.00050
Arsenic	4	14	7	4	0.0013	0.0012	0.0016	0.0013	0.00104	0.00077	0.0011	0.0012	0.001245	0.00119	0.0014	0.0012	0.00163	0.00211	0.0024	0.0014
Barium	4	14	7	4	0.090	0.090	0.072	0.095	0.072	0.048	0.061	0.086	0.0892	0.0865	0.075	0.097	0.108	0.124	0.080	0.101
Beryllium	4	14	7	4	0.00016	0.00039	0.00037	0.00040	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00050	0.00028	0.0005	0.001	0.00050	0.00100
Bismuth	4	13	5	4	0.0251875	0.03861538	0.0601	0.050125	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.1	0.050125	0.1	0.1	0.1	0.1
Boron	4	14	7	4	0.019	0.027	0.040	0.033	0.005	0.005	0.013	0.013	0.01	0.0155	0.050	0.035	0.05	0.05	0.050	0.050
Cadmium	4	14	7	4	0.00001	0.000014	0.000018	0.000009	0.000005	0.000005	0.000005	0.000005	0.000005	0.000016	0.000009	0.000007	0.000028	0.000028	0.000075	0.000017
Calcium	4	14	7	4	106	86	66	99	87.9	51	50	94	109.5	98.7	67	98	117	121	82	108
Chromium	4	14	7	4	0.00079	0.0025	0.0011	0.0009	0.00021	0.00035	0.0005	0.0004	0.00076	0.00249	0.0011	0.0010	0.0014	0.00571	0.0019	0.0012
Cobalt	4	14	7	4	0.00063	0.00087	0.00039	0.00043	0.00056	0.00021	0.00015	0.00030	0.0006	0.00088	0.00039	0.00042	0.0008	0.0018	0.00077	0.00059
Copper	4	14	7	4	0.0032	0.0082	0.0047	0.0026	0.00156	0.0025	0.0026	0.0010	0.0032	0.0075	0.0041	0.0028	0.00502	0.0151	0.0084	0.0038
Iron	4	14	7	4	0.56	1.49	0.56	0.45	0.198	0.244	0.35	0.22	0.5425	1.56	0.52	0.43	0.939	3.27	0.85	0.70
Lead	4	14	7	4	0.00011	0.00029	0.00021	0.00022	0.000025	0.000025	0.00007	0.00003	0.0000725	0.00025	0.00025	0.00017	0.00025	0.0005	0.00025	0.00050
Lithium	4	14	7	4	0.0050	0.0043	0.0032	0.0055	0.0025	0.00246	0.0022	0.0050	0.00561	0.00498	0.0025	0.0055	0.0062	0.0058	0.0061	0.0058
Magnesium	4	14	7	4	48	29	24	40	39.2	12.9	19	37	49.45	31.6	21	37	53.1	50.4	33	47
Manganese	4	14	7	4	0.14	0.10	0.06	0.15	0.118	0.023	0.04	0.11	0.14	0.0873	0.06	0.14	0.152	0.24	0.07	0.20
Mercury	4	14	7	4	0.0000050	0.0000054	0.0000057	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.00001	0.0000100	0.0000050
Molybdenum	4	14	7	4	0.003	0.002	0.002	0.003	0.0024	0.001	0.002	0.002	0.002755	0.00167	0.002	0.002	0.00392	0.00408	0.004	0.003
Nickel	4	14	7	4	0.0026	0.0031	0.0019	0.0027	0.0023	0.0010	0.0005	0.0021	0.0027	0.0032	0.0018	0.0028	0.0027	0.0059	0.0036	0.0032
Phosphorus	4	13	5	4	0.11	0.15	0.15	0.13	0.025	0.137	0.15	0.08	0.0875	0.15	0.15	0.15	0.223	0.154	0.16	0.15
Potassium	4	14	7	4	13.3	8.3	7.6	12.4	11.5	4.5	6.2	11.7	13.5	8.4	6.8	12.2	14.8	13.5	11.1	13.4
Selenium	4	14	7	4	0.00045	0.00058	0.00042	0.00046	0.00018	0.00027	0.00019	0.00014	0.00030	0.0005	0.00050	0.00034	0.0010	0.0010	0.00050	0.00100
Silicon	4	13	5	4	11.3	10.3	9.5	11.8	10.0	7.0	8.8	11.4	11.7	10.5	9.4	11.8	12.1	12.9	10.5	12.1
Silver	4	14	7	4	0.0000063	0.0000119	0.0000086	0.0000100	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.00001	0.0000100	0.0000075	0.00001	0.00002	0.0000100	0.0000200
Sodium	4	14	7	4	41	30	23	34	35.5	13.6	19	30	41.8	33.85	21	35	45	45.6	30	36
Strontium	4	13	5	4	0.5	0.3	0.27	0.43	0.39	0.17	0.23	0.42	0.459	0.4	0.25	0.43	0.5	0.5	0.34	0.45
Sulphur	3	2	1	1	23	13	4	16	21	7.53	4	16	23.9	13.215	4	16	25.5	18.9	4	16
Thallium	4	14	7	4	0.00003	0.00007	0.00007	0.00008	0.000005	0.000005	0.00001	0.00001	0.000005	0.000008	0.00010	0.00005	0.0001	0.0002	0.00010	0.00020
Tin	4	14	7	4	0.00010	0.00021	0.00019	0.00021	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00025	0.00015	0.00025	0.0005	0.00025	0.00050
Titanium	4	14	7	4	0.014	0.044	0.019	0.017	0.005	0.005	0.012	0.005	0.011	0.0365	0.018	0.013	0.029	0.093	0.026	0.036
Uranium	4	14	7	4	0.0047	0.0015	0.0009	0.0018	0.0026	0.0007	0.0006	0.0009	0.0042	0.0015	0.0008	0.0011	0.0076	0.0036	0.0016	0.0038
Vanadium	4	14	7	4	0.0032	0.0055	0.0039	0.0022	0.0019	0.0025	0.0026	0.0010	0.003	0.0053	0.0035	0.0024	0.0047	0.0094	0.0063	0.0031
Zinc	4	14	7	4	0.0022	0.0049	0.0025	0.0020	0.0015	0.0015	0.0015	0.0015	0.002	0.0049	0.0025	0.0020	0.0034	0.0084	0.0032	0.0025
Organics																				
Carbon Organic (Dissolved)	4	14	7	4	12.5	10.7	13	11	11.7	6.7	10	9	12.0	9.1	12	11	14	17	16	13
Carbon Organic (Total)	3	13	5	4	12.2	12	13	11	12.1	6.7	10	9	12.2	12.4	13	11	12	18	17	13
Nitrogen Organic (Dissolved)	0	10	4	4	-	0.48	0.49	0.51	-	0.196	0.42	0.39	-	0.405	0.43	0.51	-	1.02	0.69	0.61
Nitrogen Organic (Total)	3	11	4	4	0.79	0.74	0.61	0.51	0.67	0.31	0.41	0.43	0.68	0.68	0.49	0.50	1.02	1.2	1.05	0.59

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.
2. SEASONS ARE SPECIFIED AS FOLLOWS: WIN (WINTER; DECEMBER THROUGH MARCH), SPR (SPRING; APRIL AND MAY), SUMMER(JUNE THROUGH AUGUST), FALL (SEPTEMBER THROUGH NOVEMBER).

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.22 - KC03
(PAGE 1 OF 2)

Parameter	Total Count	Complete Dataset - KC03									
		Min	Percentiles 5th	25th	50th	75th	95th	Max	Average	Standard Deviation	Coefficient of Variation
In Situ Parameters											
Conductivity µS/cm	6	828	828	857	951	986	996	997	925	78	8.4E-02
Oxygen Dissolved %	6	36	40	54	60	68	77	78	60	15	2.5E-01
Oxygen Dissolved	6	4.4	5.0	7.1	7.4	8.8	9.7	9.8	7.6	1.9	2.5E-01
pH (unitless)	6	7.9	7.9	7.9	8.0	8.0	8.1	8.1	8.0	0.1	1.1E-02
Redox Potential mV	6	-38	-10	75	113	198	216	216	115	98	8.5E-01
Salinity ppt	6	0.69	0.70	0.72	0.77	0.77	0.78	0.78	0.75	0.04	5.0E-02
Specific Conductivity µS/cm	6	1386	1398	1453	1523	1536	1541	1542	1491	65	4.4E-02
Temperature °C	6	2.9	3.2	4.2	5.3	6.1	6.6	6.7	5.1	1.4	2.8E-01
Total Dissolved Solids	6	901	909	945	990	1000	1003	1003	969	43	4.4E-02
Turbidity NTU	0	-	-	-	-	-	-	-	-	-	-
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	0	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	6	501	509	538	559	573	602	610	556	37	6.7E-02
Bicarbonate Alkalinity	6	473	486	527	549	573	602	610	547	48	8.7E-02
Carbonate Alkalinity	6	0.5	0.5	2.9	10.0	22.9	27.8	28.0	12.7	12.3	9.7E-01
Color TCU	1	32.6	32.6	32.6	32.6	32.6	32.6	32.6	32.6	-	-
Hardness as CaCO3 (Dissolved)	6	628	642	687	700	711	733	739	694	37	5.4E-02
Hydroxide Alkalinity	6	0.5	0.5	0.5	0.5	7.6	10.0	10.0	3.7	4.9	1.3E+00
pH (unitless)	6	8.2	8.2	8.3	8.3	8.4	8.4	8.4	8.3	0.1	1.0E-02
Specific Conductivity µS/cm	6	1370	1393	1465	1485	1490	1498	1500	1465	48	3.3E-02
Total Dissolved Solids	6	963	967	981	999	1010	1048	1060	1002	34	3.4E-02
Total Suspended Solids	6	1.5	1.5	1.5	1.5	3.2	12.3	15.1	4.2	5.4	1.3E+00
Turbidity NTU	6	0.4	0.4	0.4	0.4	0.6	3.0	3.8	1.0	1.4	1.3E+00
Dissolved Anions											
Bromide	6	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.00	0.0E+00
Chloride	6	16	16	17	18	19	21	21	18	2	9.7E-02
Fluoride	6	0.26	0.26	0.26	0.28	0.30	0.30	0.30	0.28	0.02	6.8E-02
Sulphate	6	308	311	324	340	347	350	351	335	17	5.1E-02
Nutrients											
Ammonia (Total)	6	0.006	0.006	0.007	0.009	0.010	0.010	0.010	0.008	0.002	2.1E-01
Nitrate (as N)	6	0.025	0.04	0.07	0.10	0.15	0.19	0.20	0.11	0.063	5.8E-01
Nitrite (as N)	6	0.0050	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.0020	3.5E-01
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	6	0.59	0.61	0.68	0.69	0.72	0.84	0.87	0.71	0.09	1.3E-01
Orthophosphate (Dissolved)	6	0.091	0.092	0.098	0.118	0.133	0.176	0.190	0.124	0.037	2.9E-01
Phosphorus - Dissolved	6	0.096	0.096	0.104	0.142	0.162	0.208	0.223	0.144	0.048	3.4E-01
Phosphorus - Total	6	0.097	0.104	0.129	0.155	0.176	0.202	0.209	0.153	0.040	2.6E-01
Cyanide											
Cyanide (Free)	6	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Cyanide (Total)	6	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Cyanide (WAD)	6	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Dissolved Metals											
Aluminum	6	0.0005	0.0005	0.0007	0.0012	0.0012	0.0017	0.0019	0.0011	0.0005	4.9E-01
Antimony	6	0.00016	0.00016	0.00017	0.00019	0.00020	0.00020	0.00020	0.00018	0.00002	8.9E-02
Arsenic	6	0.0054	0.0054	0.0054	0.0056	0.0061	0.0066	0.0068	0.0058	0.0005	9.3E-02
Barium	6	0.066	0.068	0.073	0.075	0.076	0.078	0.079	0.074	0.004	6.1E-02
Beryllium	6	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	0.0E+00
Bismuth	6	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00000	0.0E+00
Boron	6	0.100	0.101	0.104	0.111	0.118	0.130	0.133	0.113	0.012	1.1E-01
Cadmium	6	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000095	0.0000110	0.0000060	0.0000024	4.1E-01
Calcium	6	66	67	71	72	74	74	74	72	3	4.4E-02
Chromium	6	0.00041	0.00042	0.00044	0.00045	0.00048	0.00051	0.00052	0.00046	0.00004	8.6E-02
Cobalt	6	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00000	0.0E+00
Copper	6	0.0049	0.0050	0.0055	0.0057	0.0060	0.0066	0.0068	0.0058	0.0006	1.1E-01
Iron	6	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.000	0.0E+00
Lead	6	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000000	0.0E+00
Lithium	6	0.01210	0.01215	0.01235	0.01285	0.01350	0.01413	0.01430	0.01300	0.00085	6.6E-02
Magnesium	6	113	116	124	126	128	133	134	125	7	5.6E-02
Manganese	6	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	5.7E-01
Mercury	6	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Molybdenum	6	0.011	0.011	0.012	0.013	0.014	0.014	0.014	0.013	0.001	8.4E-02
Nickel	6	0.0015	0.0015	0.0015	0.0015	0.0016	0.0017	0.0017	0.0015	0.0001	7.6E-02
Phosphorus	6	0.10	0.10	0.10	0.13	0.15	0.18	0.19	0.13	0.03	2.6E-01
Potassium	6	22	22	22	22	23	23	23	22	1	2.4E-02
Selenium	6	0.00437	0.00469	0.00567	0.00615	0.00738	0.00817	0.00833	0.00638	0.00144	2.3E-01
Silicon	6	9.0	9.1	9.4	9.6	9.8	9.8	9.8	9.5	0.3	3.2E-02
Silver	6	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Sodium	6	92	93	98	99	99	100	101	98	3	3.3E-02
Strontium	6	1.13	1.14	1.18	1.22	1.26	1.26	1.26	1.21	0.06	4.6E-02
Sulphur	6	99	102	109	111	113	116	116	110	6	5.3E-02
Thallium	6	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Tin	6	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	0.0E+00
Titanium	6	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0000	0.0E+00
Uranium	6	0.0049	0.0050	0.0052	0.0053	0.0056	0.0058	0.0058	0.0054	0.0003	6.1E-02
Vanadium	6	0.0065	0.0065	0.0067	0.0072	0.0074	0.0075	0.0075	0.0071	0.0004	6.0E-02
Zinc	6	0.0005	0.0005	0.0005	0.0005	0.0005	0.0010	0.0011	0.0006	0.0002	4.1E-01
Total Metals											
Aluminum	6	0.0034	0.0036	0.0043	0.0046	0.0067	0.0285	0.0356	0.0100	0.0126	1.3E+00
Antimony	6	0.00017	0.00018	0.00019	0.00020	0.00020	0.00021	0.00021	0.00019	0.00001	7.1E-02
Arsenic	6	0.0048	0.0049	0.0050	0.0052	0.0055	0.0060	0.0061	0.0053	0.0005	8.8E-02
Barium	6	0.067	0.068	0.070	0.073	0.076	0.077	0.077	0.073	0.004	5.4E-02
Beryllium	6	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	0.0E+00
Bismuth	6	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00000	0.0E+00
Boron	6	0.099	0.099	0.101	0.107	0.119	0.127	0.129	0.111	0.012	1.1E-01
Cadmium	6	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000000	0.0E+00
Calcium	6	66	67	69	70	71	72	73	70	2	3.3E-02
Chromium	6	0.00042	0.00044	0.00050	0.00053	0.00059	0.00060	0.00060	0.00053	0.00007	1.3E-01
Cobalt	6	0.00005	0.00005	0.00005	0.00005	0.00005	0.00021	0.00026	0.00009	0.00009	1.0E+00
Copper	6	0.0055	0.0055	0.0055	0.0058	0.0064	0.0072	0.0074	0.0061	0.0008	1.2E-01
Iron	6	0.01	0.01	0.01	0.01	0.01	0.04	0.05	0.01	0.02	1.1E+00
Lead	6	0.000025	0.000025	0.000025	0.000025	0.000051	0.000105	0.000120	0.000047	0.000038	8.3E-01
Lithium	6	0.0119	0.0119	0.0120	0.0123	0.0130	0.0134	0.0135	0.0125	0.0007	5.5E-02
Magnesium	6	111	112	115	121	127	129	129	121	7	6.1E-02
Manganese	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.2E+00
Mercury	6	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Molybdenum	6	0.012	0.012	0.013	0.013	0.014	0.014	0.014	0.013	0.001	6.0E-02
Nickel	6	0.0015	0.0015	0.0015	0.0016	0.0017	0.0018	0.0018	0.0016	0.0001	8.7E-02
Phosphorus	6	0.09	0.10	0.12	0.13	0.14	0.19	0.20	0.14	0.04	2.7E-01
Potassium	6	21	21	21	22	22	22	23	22	1	3.0E-02
Selenium	6	0.00366	0.00392	0.00476	0.00517	0.00650	0.00816	0.00859	0.00569	0.00176	3.1E-01
Silicon	6	8.8	8.9	9.1	9.5	9.7	9.8	9.8	9.4	0.4	4.2E-02
Silver	6	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Sodium	6	94	94	95	96	99	100	100	97	2	2.6E-02
Strontium	6	1.11	1.12	1.16	1.20	1.23	1.25	1.25	1.19	0.06	4.6E-02
Sulphur	6	103	104	109	113	115	117	117	112	5	4.7E-02
Thallium	6	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Tin	6	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	0.0E+00
Titanium	6	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0000	0.0E+00
Uranium	6	0.0052	0.0052	0.0052	0.0053	0.0055	0.0059	0.0061	0.0054	0.0003	6.2E-02
Vanadium	6	0.0067	0.0067	0.0069	0.0073	0.0076	0.0078	0.0078	0.0073	0.0005	6.2E-02
Zinc	6	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0000	1.6E-16
Organics											
Carbon Organic (Dissolved)	6	11.6	11.8	12.4	13.2	14.1	16.7	17.5	13.7	2.1	1.5E-01
Carbon Organic (Total)	6	11.7	11.8	12.3	13.6	14.6	17.3	18.2	14.0	2.4	1.7E-01
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.22 - KC03
(PAGE 2 OF 2)

Seasonal Statistics - KC03

Parameter	Count				Average				Min				Median				Max			
	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall
In Situ Parameters																				
Conductivity µS/cm	1	4	1	0	829	932	993	-	829	828	993	-	829	951	993	-	829	997	993	-
Oxygen Dissolved %	1	4	1	0	52	67	36	-	52.3	58.5	36	-	52.3	66.15	36	-	52.3	78.4	36	-
Oxygen Dissolved	1	4	1	0	7	8	4	-	7.02	7.4	4	-	7.02	8.355	4	-	7.02	9.8	4	-
pH (unitless)	1	4	1	0	8	8	8	-	7.91	7.94	8	-	7.91	8.01	8	-	7.91	8.12	8	-
Redox Potential mV	1	4	1	0	75	101	214	-	75.2	-38	214	-	75.2	112.25	214	-	75.2	216	214	-
Salinity ppt	1	4	1	0	0.71	0.75	0.78	-	0.71	0.69	0.78	-	0.71	0.765	0.78	-	0.71	0.77	0.78	-
Specific Conductivity µS/cm	1	4	1	0	1434	1492	1542	-	1434	1386	1542	-	1434	1522.5	1542	-	1434	1537	1542	-
Temperature °C	1	4	1	0	3	5	6	-	2.93	3.92	6	-	2.93	5.34	6	-	2.93	6.68	6	-
Total Dissolved Solids	1	4	1	0	932	970	1003	-	932	901	1003	-	932	989.5	1003	-	932	1001	1003	-
Turbidity NTU	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	1	4	1	0	533	557	576	-	533	501	576	-	533	559	576	-	533	610	576	-
Bicarbonate Alkalinity	1	4	1	0	533	543	576	-	533	473	576	-	533	545	576	-	533	610	576	-
Carbonate Alkalinity	1	4	1	0	0.50	19	1	-	0.5	10	1	-	0.5	18.6	1	-	0.5	28	1	-
Color TCU	0	1	0	0	-	33	-	-	-	32.6	-	-	-	32.6	-	-	-	32.6	-	-
Hardness as CaCO3 (Dissolved)	1	4	1	0	684	685	739	-	684	628	739	-	684	700	739	-	684	713	739	-
Hydroxide Alkalinity	1	4	1	0	0.50	5.25	0.50	-	0.5	0.5	0.50	-	0.5	5.25	0.50	-	0.5	10	0.50	-
pH (unitless)	1	4	1	0	8	8	8	-	8.43	8.24	8	-	8.43	8.28	8	-	8.43	8.43	8	-
Specific Conductivity µS/cm	1	4	1	0	1460	1463	1480	-	1460	1370	1480	-	1460	1490	1480	-	1460	1500	1480	-
Total Dissolved Solids	1	4	1	0	979	1011	988	-	979	963	988	-	979	1010	988	-	979	1060	988	-
Total Suspended Solids	1	4	1	0	2	2	15	-	1.5	1.5	15	-	1.5	1.5	15	-	1.5	3.8	15	-
Turbidity NTU	1	4	1	0	1	0	4	-	0.6	0.37	4	-	0.6	0.425	4	-	0.6	0.44	4	-
Dissolved Anions																				
Bromide	1	4	1	0	0.25	0.25	0.25	-	0.25	0.25	0.25	-	0.25	0.25	0.25	-	0.25	0.25	0.25	-
Chloride	1	4	1	0	17	18	21	-	17.1	16.1	21	-	17.1	17.5	21	-	17.1	19.1	21	-
Fluoride	1	4	1	0	0.30	0.28	0.26	-	0.3	0.26	0.26	-	0.3	0.28	0.26	-	0.3	0.3	0.26	-
Sulphate	1	4	1	0	351	334	320	-	351	308	320	-	351	340	320	-	351	348	320	-
Nutrients								-												
Ammonia (Total)	1	4	1	0	0.010	0.008	0.007	-	0.01	0.0059	0.007	-	0.01	0.0085	0.007	-	0.01	0.0104	0.007	-
Nitrate (as N)	1	4	1	0	0.09	0.14	0.025	-	0.092	0.067	0.025	-	0.092	0.1375	0.025	-	0.092	0.198	0.025	-
Nitrite (as N)	1	4	1	0	0.005	0.0050	0.0100	-	0.005	0.005	0.0100	-	0.005	0.005	0.0100	-	0.005	0.005	0.0100	-
Nitrogen (Dissolved)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	1	4	1	0	0.73	0.73	0.59	-	0.726	0.678	0.59	-	0.726	0.69	0.59	-	0.726	0.874	0.59	-
Orthophosphate (Dissolved)	1	4	1	0	0.13	0.130	0.096	-	0.129	0.0912	0.096	-	0.129	0.12	0.096	-	0.129	0.19	0.096	-
Phosphorus - Dissolved	1	4	1	0	0.163	0.151	0.10	-	0.163	0.0963	0.10	-	0.163	0.142	0.10	-	0.163	0.223	0.10	-
Phosphorus - Total	1	4	1	0	0.18	0.15	0.15	-	0.18	0.0967	0.15	-	0.18	0.144	0.15	-	0.18	0.209	0.15	-
Cyanide																				
Cyanide (Free)	1	4	1	0	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-
Cyanide (Total)	1	4	1	0	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-
Cyanide (WAD)	1	4	1	0	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-
Dissolved Metals																				
Aluminum	1	4	1	0	0.0012	0.0012	0.0005	-	0.0012	0.0005	0.0005	-	0.0012	0.0012	0.0005	-	0.0012	0.0019	0.0005	-
Antimony	1	4	1	0	0.000170	0.00019	0.00018	-	0.00017	0.00016	0.00018	-	0.00017	0.000195	0.00018	-	0.00017	0.0002	0.00018	-
Arsenic	1	4	1	0	0.0068	0.0057	0.0054	-	0.00676	0.0054	0.0054	-	0.00676	0.0056	0.0054	-	0.00676	0.00618	0.0054	-
Barium	1	4	1	0	0.072	0.073	0.079	-	0.0724	0.0659	0.079	-	0.0724	0.0745	0.079	-	0.0724	0.0764	0.079	-
Beryllium	1	4	1	0	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-
Bismuth	1	4	1	0	0.00025	0.000	0.000	-	0.00025	0.00025	0.000	-	0.00025	0.00025	0.000	-	0.00025	0.00025	0.000	-
Boron	1	4	1	0	0.104	0.114	0.119	-	0.104	0.1	0.119	-	0.104	0.1105	0.119	-	0.104	0.133	0.119	-
Cadmium	1	4	1	0	0.00001	0.000007	0.000005	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-	0.000005	0.000011	0.000005	-
Calcium	1	4	1	0	71	71	74	-	70.8	65.9	74	-	70.8	72	74	-	70.8	74.3	74	-
Chromium	1	4	1	0	0.00052	0.0005	0.00041	-	0.00052	0.00044	0.00041	-	0.00052	0.00045	0.00041	-	0.00052	0.00049	0.00041	-
Cobalt	1	4	1	0	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-
Copper	1	4	1	0	0.0068	0.0057	0.0049	-	0.0068	0.00537	0.0049	-	0.0068	0.00572	0.0049	-	0.0068	0.00606	0.0049	-
Iron	1	4	1	0	0.005	0.005	0.005	-	0.005	0.005	0.005	-	0.005	0.005	0.005	-	0.005	0.005	0.005	-
Lead	1	4	1	0	0.00003	0.00003	0.00003	-	0.000025	0.000025	0.00003	-	0.000025	0.000025	0.00003	-	0.000025	0.000025	0.00003	-
Lithium	1	4	1	0	0.0125	0.0131	0.0132	-	0.0125	0.0121	0.0132	-	0.0125	0.01295	0.0132	-	0.0125	0.0143	0.0132	-
Magnesium	1	4	1	0	123.0	123.3	134.0	-	123.0	113.0	134.0	-	123.0	125.5	134.0	-	123.0	129.0	134.0	-
Manganese	1	4	1	0	0.000	0.000	0.000	-	0.000301	0.00017	0.000	-	0.000301	0.000198	0.000	-	0.000301	0.00059	0.000	-
Mercury	1	4	1	0	0.0000050	0.0000050	0.0000050	-	0.000005	0.000005	0.0000050	-	0.000005	0.000005	0.0000050	-	0.000005	0.000005	0.0000050	-
Molybdenum	1	4	1	0	0.0138	0.0129	0.0120	-	0.0138	0.0112	0.0120	-	0.0138	0.01335	0.0120	-	0.0138	0.0138	0.0120	-
Nickel	1	4	1	0	0.0017	0.0015	0.0015	-	0.00168	0.00145	0.0015	-	0.00168	0.00148	0.0015	-	0.00168	0.00171	0.0015	-
Phosphorus	1	4	1	0	0.14	0.14	0.11	-	0.142	0.1	0.11	-	0.142	0.127	0.11	-	0.142	0.188	0.11	-
Potassium	1	4	1	0	22	22	23	-	21.8	21.6	23	-	21.8	21.9	23	-	21.8	22.7	23	-
Selenium	1	4	1	0	0.00767	0.00656	0.00437	-	0.00767	0.00563	0.00437	-	0.00767	0.006145	0.00437	-	0.00767	0.00833	0.00437	-
Silicon	1	4	1	0	9.58	9.48	9.65	-	9.58	9.03	9.65	-	9.58	9.54	9.65	-	9.58	9.82	9.65	-
Silver	1	4	1	0	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-
Sodium	1	4	1	0	97	97	99	-	97.3	91.6	99	-	97.3	98.6	99	-	97.3	101	99	-
Strontium	1	4	1	0	1.18	1.21	1.26	-	1.18	1.13	1.26	-	1.18	1.22	1.26	-	1.18	1.26	1.26	-
Sulphur	1	4	1	0	109	110	110	-	109	99.1	110	-	109	112.5	110	-	109	116	110	-
Thallium	1	4	1	0	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-
Tin	1	4	1	0	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-
Titanium	1	4	1	0	0.0050	0.005	0.0050	-	0.005	0.005	0.0050	-	0.005	0.005	0.0050	-	0.005	0.005	0.0050	-
Uranium	1	4	1	0	0.0054	0.0054	0.0053	-	0.00544	0.00488	0.0053	-	0.00544	0.00539	0.0053	-	0.00544	0.00581	0.0053	-
Vanadium	1	4	1	0	0.0074	0.0071	0.0066	-	0.0074	0.0065	0.0066	-	0.0074	0.0072	0.0066	-	0.0074	0.0075	0.0066	-
Zinc	1	4	1	0	0.0005	0.0007	0.0005	-	0.0005	0.0005	0.0005	-	0.0005	0.0005	0.0005	-	0.0005	0.0011	0.0005	-
Total Metals																				
Aluminum	1	4	1	0	0.00	0.00	0.04	-	0.0044	0.0034	0.04	-	0.0044	0.0045	0.04	-	0.0044	0.0073	0.04	-
Antimony	1	4	1	0	0.0002	0.00019	0.00019	-	0.0002	0.00017	0.00019	-	0.0002	0.000195	0.00019	-	0.0002	0.00021	0.00019	-
Arsenic	1	4	1	0	0.0061	0.0053	0.0048	-	0.00612	0.00499	0.0048	-	0.00612	0.005225	0.0048	-	0.00612	0.00557	0.0048	-
Barium	1	4	1	0	0.071	0.072	0.076	-	0.0708	0.0673	0.076	-	0.0708	0.0719	0.076	-	0.0708	0.0772	0.076	-
Beryllium	1	4	1	0	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-
Bismuth	1	4	1	0	0.00025	0.00025	0.00025	-	0.00025	0.00025	0.00025	-	0.00025	0.00025	0.00025	-	0.00025	0.00025	0.00025	-
Boron	1	4	1	0	0.104	0.110	0.122	-	0.104	0.099	0.122	-	0.104	0.105	0.122	-	0.104	0.129	0.122	-
Cadmium	1	4	1	0	0.00001	0.000005	0.000005	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-
Calcium	1	4	1	0	70	70	71	-	69.8	65.8	71	-	69.8	70.1	71	-	69.8	72.8	71	-
Chromium	1	4	1	0	0.00060	0.0005	0.0006	-	0.0006	0.00042	0.0006	-	0.0006	0.0005	0.0006	-	0.0006	0.0006	0.0006	-
Cobalt	1	4	1	0	0.00005	0.00010	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.0001	0.0003	0.00005	-
Copper	1	4	1	0	0.0074	0.0059	0.0055	-	0.0074	0.00546	0.0055	-	0.0074	0.005785	0.0055	-	0.0074	0.00652	0.0055	-
Iron	1	4	1	0	0.01	0.01	0.05	-	0.012	0.005	0.05	-	0.012	0.005	0.05	-	0.012	0.01	0.05	-
Lead	1	4	1	0	0.00012	0.00003	0.00003	-	0.00012	0.000025	0.00003	-	0.00012	0.00003	0.00003	-	0.00012	0.0001	0.00003	-
Lithium	1	4	1	0	0.0119	0.0124	0.0135	-	0.0119	0.012	0.0135	-	0.0119	0.01225	0.0135	-	0.0119	0.0132	0.0135	-
Magnesium	1	4	1	0	118	119	129	-	118	111	129	-	118	118.5	129	-	118	128	129	-
Manganese	1	4	1	0	0.00	0.00	0.00	-	0.000509	0.00024	0.00	-	0.000509	0.0005255	0.00	-	0.000509	0.00101	0.00	-
Mercury	1	4	1	0	0.0000050	0.0000050	0.0000050	-	0.000005	0.000005	0.0000050	-	0.000005	0.000005	0.0000050	-	0.000005	0.000005	0.0000050	-
Molybdenum	1	4	1	0	0.014	0.013	0.012	-	0.0141	0.0127	0.012	-	0.0141	0.01335	0.012	-	0.0141	0.0143	0.012	-
Nickel	1	4	1	0	0.0018	0.0016	0.0016	-	0.0018	0.0015	0.0016	-	0.0018	0.0015	0.0016	-	0.0018	0.0018	0.0016	-
Phosphorus	1	4	1	0	0.15	0.14	0.13	-	0.147	0.092	0.13	-	0.147	0.125	0.13	-	0.147	0.201	0.13	-
Potassium	1	4	1	0	21.4	21.5	21.7	-	21.4	20.6	21.7	-	21.4	21.5	21.7	-	21.4	22.6	21.7	-
Selenium	1	4	1	0	0.00859	0.00547	0.00366	-	0.00859	0.00469	0.00366	-	0.00859	0.0052	0.00366	-	0.0086	0.0069	0.00366	-
Silicon	1	4	1	0	9.5	9.4	9.4	-	9.5	8.8	9.4	-	9.5	9.4	9.4	-	9.5	9.8	9.4	-
Silver	1	4	1	0	0.0000050	0.0000050	0.0000050	-	0.000005	0.000005	0.0000050	-	0.000005	0.000005	0.0000050	-	0.000005	0.000005	0.0000050	-
Sodium	1	4	1	0	99	96	95	-	99.4	94	95	-	99.4	95.6	95	-	99.4	100	95	-
Strontium	1	4	1	0	1.2	1.2	1.25	-	1.15	1.11	1.25	-	1.15	1.2	1.25	-	1.2	1.2	1.25	-
Sulphur	1	4	1	0	113	112	108	-	113	103	108	-	113	114.5	108	-	113	117	108	-
Thallium	1	4	1	0	0.00001	0.00001	0.00001	-	0.000005	0.000005	0.00001	-	0.000005	0.000005	0.00001	-	0.000005	0.000005	0.00001	-
Tin	1	4	1	0	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-
Titanium	1	4	1	0	0.005	0.005	0.005	-	0.005	0.005	0.005	-	0.005	0.005	0.005	-	0.005	0.005	0.005	-
Uranium	1	4	1	0	0.0056	0.0054	0.0053	-	0.0056	0.0052	0.0053	-	0.0056	0.0053	0.0053	-	0.0056	0.0061	0.0053	-
Vanadium	1	4	1	0	0.0077	0.0073	0.0067	-	0.0077	0.0068	0.0067	-	0.0077	0.00725	0.0067	-	0.0077	0.0078	0.0067	-
Zinc	1	4	1	0	0.0015	0.0015	0.0015	-	0.0015	0.0015	0.0015	-	0.0015	0.0015	0.0015	-	0.0015	0.0015	0.0015	-
Organics																				
Carbon Organic (Dissolved)	1	4	1	0	14.2	14.1	12	-	14.2	12.3	12	-	14.2	13.2	12	-	14	18	12	-
Carbon Organic (Total)	1	4	1	0	14.2	14	12	-	14.2	12.1	12	-	14.2	13.8	12	-	14	18	12	-
Nitrogen Organic (Dissolved)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.
2. SEASONS ARE SPECIFIED AS FOLLOWS: WIN (WINTER; DECEMBER THROUGH MARCH), SPR (SPRING; APRIL AND MAY), SUMMER(JUNE THROUGH AUGUST), FALL (SEPTEMBER THROUGH NOVEMBER).

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.23 - MAKAOO-01
(PAGE 1 OF 2)

Parameter	Total Count	Complete Dataset - MAKAOO-01									
		Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	6	1217	1252	1416	1677	1958	4451	5259	2202	1525	6.9E-01
Oxygen Dissolved %	2	85	86	91	96	102	107	108	96	16	1.7E-01
Oxygen Dissolved	2	6.9	7.1	7.6	8.2	8.9	9.4	9.5	8.2	1.8	2.2E-01
pH (unitless)	7	8.6	8.8	9.4	9.7	9.8	9.9	9.9	9.5	0.5	5.1E-02
Redox Potential mV	6	-64	-63	-49	24	66	116	132	20	79	3.8E+00
Salinity ppt	6	0.67	0.70	0.79	0.90	1.01	2.41	2.87	1.19	0.83	7.0E-01
Specific Conductivity µS/cm	6	1342	1389	1560	1774	1983	4457	5272	2284	1484	6.5E-01
Temperature °C	7	15.6	16.7	19.6	21.3	23.9	25.1	25.3	21.3	3.4	1.6E-01
Total Dissolved Solids	6	872	902	1014	1153	1290	2922	3459	1490	977	6.6E-01
Turbidity NTU	1	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	-	-
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	-	-
Alkalinity (Total as CaCO3)	7	160	166	180	197	205	207	208	191	18	9.3E-02
Bicarbonate Alkalinity	7	55	61	79	105	161	166	167	115	47	4.1E-01
Carbonate Alkalinity	7	1.0	4.5	29.2	99.4	121.5	125.4	126.0	75.4	54.4	7.2E-01
Color TCU	0	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	7	566	599	711	806	879	891	891	777	123	1.6E-01
Hydroxide Alkalinity	7	0.5	0.5	0.5	0.5	0.5	0.9	1.0	0.6	0.2	3.3E-01
pH (unitless)	7	8.2	8.3	8.8	9.5	9.7	9.8	9.8	9.2	0.6	6.8E-02
Specific Conductivity µS/cm	7	1330	1390	1610	1770	1955	2022	2040	1753	258	1.5E-01
Total Dissolved Solids	7	979	980	1066	1250	1600	1743	1770	1333	325	2.4E-01
Total Suspended Solids	7	3.1	3.2	4.4	6.0	8.9	12.7	14.0	7.1	3.9	5.5E-01
Turbidity NTU	7	1.1	1.2	1.5	1.5	1.9	2.2	2.3	1.7	0.4	2.3E-01
Dissolved Anions											
Bromide	7	0.25	0.25	0.25	0.50	0.50	0.50	0.50	0.39	0.13	3.4E-01
Chloride	7	8	9	11	12	14	15	15	12	2	1.9E-01
Fluoride	7	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.01	1.6E-01
Sulphate	7	616	653	779	917	1001	1079	1100	885	170	1.9E-01
Nutrients											
Ammonia (Total)	7	0.022	0.024	0.029	0.031	0.046	0.086	0.099	0.043	0.027	6.2E-01
Nitrate (as N)	7	0.025	0.03	0.03	0.05	0.05	0.05	0.05	0.04	0.013	3.4E-01
Nitrite (as N)	7	0.0050	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.0027	3.4E-01
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	7	1.63	1.67	1.76	1.79	1.93	2.13	2.21	1.86	0.19	1.0E-01
Orthophosphate (Dissolved)	7	0.199	0.217	0.326	0.447	1.345	1.473	1.500	0.784	0.582	7.4E-01
Phosphorus - Dissolved	7	0.306	0.325	0.404	0.567	1.500	1.695	1.770	0.922	0.637	6.9E-01
Phosphorus - Total	7	0.304	0.323	0.463	0.692	1.545	1.700	1.760	0.967	0.624	6.5E-01
Cyanide											
Cyanide (Free)	7	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Cyanide (Total)	7	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Cyanide (WAD)	7	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Dissolved Metals											
Aluminum	7	0.0005	0.0008	0.0015	0.0024	0.0042	0.0092	0.0108	0.0036	0.0036	9.9E-01
Antimony	7	0.00027	0.00027	0.00028	0.00028	0.00034	0.00036	0.00037	0.00031	0.00004	1.3E-01
Arsenic	7	0.0028	0.0028	0.0029	0.0030	0.0035	0.0037	0.0037	0.0032	0.0004	1.2E-01
Barium	7	0.003	0.004	0.013	0.018	0.020	0.022	0.022	0.016	0.007	4.7E-01
Beryllium	7	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	1.5E-16
Bismuth	7	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00000	0.0E+00
Boron	7	0.063	0.063	0.066	0.067	0.080	0.086	0.086	0.072	0.010	1.4E-01
Cadmium	7	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Calcium	7	77	81	97	106	114	118	120	103	15	1.5E-01
Chromium	7	0.00005	0.00005	0.00005	0.00005	0.00005	0.00009	0.00011	0.00006	0.00002	3.9E-01
Cobalt	7	0.00015	0.00016	0.00019	0.00020	0.00023	0.00024	0.00024	0.00020	0.00003	1.6E-01
Copper	7	0.0007	0.0008	0.0009	0.0010	0.0012	0.0016	0.0018	0.0011	0.0004	3.3E-01
Iron	7	0.005	0.005	0.008	0.014	0.055	0.079	0.080	0.032	0.033	1.0E+00
Lead	7	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000000	1.5E-16
Lithium	7	0.00099	0.00107	0.00137	0.00151	0.00213	0.00233	0.00241	0.00170	0.00053	3.1E-01
Magnesium	7	91	96	114	131	143	146	147	126	21	1.7E-01
Manganese	7	0.012	0.013	0.018	0.022	0.036	0.067	0.079	0.032	0.023	7.2E-01
Mercury	7	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Molybdenum	7	0.003	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.000	1.3E-01
Nickel	7	0.0012	0.0012	0.0013	0.0013	0.0014	0.0014	0.0014	0.0013	0.0001	5.8E-02
Phosphorus	7	0.32	0.32	0.43	0.54	1.45	1.64	1.69	0.90	0.60	6.7E-01
Potassium	7	29	30	37	41	48	51	51	42	8	2.0E-01
Selenium	7	0.00021	0.00021	0.00022	0.00023	0.00027	0.00027	0.00027	0.00024	0.00003	1.1E-01
Silicon	7	0.2	0.2	0.5	1.3	2.3	4.0	4.5	1.6	1.6	9.6E-01
Silver	7	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Sodium	7	89	93	109	116	148	162	162	126	28	2.2E-01
Strontium	7	1.02	1.03	1.18	1.40	1.56	1.63	1.65	1.36	0.25	1.9E-01
Sulphur	7	199	205	244	285	314	340	349	278	54	1.9E-01
Thallium	7	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Tin	7	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	1.5E-16
Titanium	7	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0000	0.0E+00
Uranium	7	0.0004	0.0004	0.0005	0.0005	0.0007	0.0007	0.0007	0.0006	0.0001	2.2E-01
Vanadium	7	0.0021	0.0022	0.0024	0.0025	0.0029	0.0032	0.0033	0.0026	0.0004	1.6E-01
Zinc	7	0.0005	0.0005	0.0005	0.0010	0.0012	0.0022	0.0026	0.0011	0.0007	7.0E-01
Total Metals											
Aluminum	7	0.0046	0.0059	0.0099	0.0148	0.0395	0.0613	0.0628	0.0258	0.0242	9.4E-01
Antimony	7	0.00028	0.00028	0.00030	0.00031	0.00035	0.00036	0.00037	0.00032	0.00003	1.0E-01
Arsenic	7	0.0030	0.0030	0.0030	0.0031	0.0034	0.0036	0.0036	0.0032	0.0003	8.4E-02
Barium	7	0.004	0.005	0.013	0.018	0.021	0.022	0.022	0.016	0.007	4.4E-01
Beryllium	7	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	1.5E-16
Bismuth	7	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00000	0.0E+00
Boron	7	0.067	0.067	0.068	0.074	0.085	0.095	0.098	0.078	0.012	1.5E-01
Cadmium	7	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000000	0.0E+00
Calcium	7	76	80	94	104	107	116	119	100	14	1.4E-01
Chromium	7	0.00013	0.00013	0.00013	0.00021	0.00024	0.00027	0.00028	0.00019	0.00006	3.3E-01
Cobalt	7	0.00019	0.00019	0.00020	0.00022	0.00024	0.00028	0.00029	0.00022	0.00004	1.6E-01
Copper	7	0.0010	0.0010	0.0011	0.0012	0.0014	0.0021	0.0024	0.0014	0.0005	3.6E-01
Iron	7	0.02	0.02	0.02	0.05	0.09	0.15	0.16	0.07	0.05	8.1E-01
Lead	7	0.000025	0.000025	0.000025	0.000025	0.000059	0.000084	0.000091	0.000044	0.000026	6.0E-01
Lithium	7	0.0012	0.0012	0.0014	0.0015	0.0020	0.0023	0.0024	0.0017	0.0005	2.7E-01
Magnesium	7	92	96	111	127	135	144	146	122	19	1.6E-01
Manganese	7	0.02	0.02	0.02	0.03	0.05	0.08	0.09	0.04	0.02	6.2E-01
Mercury	7	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Molybdenum	7	0.003	0.003	0.004	0.004	0.004	0.005	0.005	0.004	0.000	1.2E-01
Nickel	7	0.0013	0.0013	0.0014	0.0014	0.0015	0.0015	0.0015	0.0014	0.0001	4.8E-02
Phosphorus	7	0.36	0.38	0.48	0.65	1.53	1.65	1.69	0.96	0.59	6.2E-01
Potassium	7	29	30	35	39	45	48	49	40	7	1.8E-01
Selenium	7	0.00021	0.00022	0.00024	0.00025	0.00026	0.00028	0.00029	0.00025	0.00003	1.0E-01
Silicon	7	0.2	0.3	0.5	1.3	2.4	4.1	4.6	1.7	1.6	9.5E-01
Silver	7	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Sodium	7	92	96	109	116	143	161	163	125	26	2.1E-01
Strontium	7	1.08	1.09	1.21	1.39	1.53	1.63	1.64	1.37	0.22	1.6E-01
Sulphur	7	199	206	243	282	307	332	333	273	50	1.8E-01
Thallium	7	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Tin	7	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	1.5E-16
Titanium	7	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0000	0.0E+00
Uranium	7	0.0005	0.0005	0.0005	0.0006	0.0007	0.0008	0.0008	0.0006	0.0001	2.1E-01
Vanadium	7	0.0023	0.0024	0.0025	0.0026	0.0030	0.0033	0.0034	0.0028	0.0004	1.4E-01
Zinc	7	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0000	1.6E-16
Organics											
Carbon Organic (Dissolved)	7	14.8	15.3	17.4	20.8	21.6	22.2	22.3	19.4	2.9	1.5E-01
Carbon Organic (Total)	7	15.7	15.9	17.1	19.9	21.6	22.6	22.7	19.4	2.8	1.5E-01
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.23 - MAKAOO-01
(PAGE 2 OF 2)

Seasonal Statistics - MAKAOO-01

Parameter	Count				Average				Min				Median				Max			
	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall
In Situ Parameters																				
Conductivity µS/cm	0	0	6	0	-	-	2202	-	-	-	1217	-	-	-	1677	-	-	-	5259	-
Oxygen Dissolved %	0	0	2	0	-	-	96	-	-	-	85	-	-	-	96	-	-	-	108	-
Oxygen Dissolved	0	0	2	0	-	-	8	-	-	-	7	-	-	-	8	-	-	-	10	-
pH (unitless)	0	0	6	1	-	-	9	10	-	-	9	10	-	-	10	10	-	-	10	10
Redox Potential mV	0	0	6	0	-	-	20	-	-	-	-64	-	-	-	24	-	-	-	132	-
Salinity ppt	0	0	6	0	-	-	1.19	-	-	-	0.67	-	-	-	0.90	-	-	-	2.87	-
Specific Conductivity µS/cm	0	0	6	0	-	-	2284	-	-	-	1342	-	-	-	1774	-	-	-	5272	-
Temperature °C	0	0	6	1	-	-	22	16	-	-	19	16	-	-	22	16	-	-	25	16
Total Dissolved Solids	0	0	6	0	-	-	1490	-	-	-	872	-	-	-	1153	-	-	-	3459	-
Turbidity NTU	0	0	1	0	-	-	2	-	-	-	2	-	-	-	2	-	-	-	2	-
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	0	0	1	0	-	-	1.1	-	-	-	1.1	-	-	-	1.1	-	-	-	1.1	-
Alkalinity (Total as CaCO3)	0	0	6	1	-	-	190	197	-	-	160	197	-	-	193	197	-	-	208	197
Bicarbonate Alkalinity	0	0	6	1	-	-	122	74	-	-	55	74	-	-	133	74	-	-	167	74
Carbonate Alkalinity	0	0	6	1	-	-	67	124	-	-	1	124	-	-	73	124	-	-	126	124
Color TCU	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	0	0	6	1	-	-	758	891	-	-	566	891	-	-	776	891	-	-	891	891
Hydroxide Alkalinity	0	0	6	1	-	-	0.58	0.50	-	-	0.50	0.50	-	-	0.50	0.50	-	-	1.00	0.50
pH (unitless)	0	0	6	1	-	-	9	10	-	-	8	10	-	-	9	10	-	-	10	10
Specific Conductivity µS/cm	0	0	6	1	-	-	1705	2040	-	-	1330	2040	-	-	1730	2040	-	-	1980	2040
Total Dissolved Solids	0	0	6	1	-	-	1275	1680	-	-	979	1680	-	-	1200	1680	-	-	1770	1680
Total Suspended Solids	0	0	6	1	-	-	7	10	-	-	3	10	-	-	6	10	-	-	14	10
Turbidity NTU	0	0	6	1	-	-	2	2	-	-	1	2	-	-	2	2	-	-	2	2
Dissolved Anions																				
Bromide	0	0	6	1	-	-	0.38	0.50	-	-	0.25	0.50	-	-	0.38	0.50	-	-	0.50	0.50
Chloride	0	0	6	1	-	-	12	14	-	-	8	14	-	-	12	14	-	-	15	14
Fluoride	0	0	6	1	-	-	0.05	0.05	-	-	0.04	0.05	-	-	0.05	0.05	-	-	0.05	0.05
Sulphate	0	0	6	1	-	-	849	1100	-	-	616	1100	-	-	868	1100	-	-	1030	1100
Nutrients								-												
Ammonia (Total)	0	0	6	1	-	-	0.045	0.031	-	-	0.022	0.031	-	-	0.032	0.031	-	-	0.099	0.031
Nitrate (as N)	0	0	6	1	-	-	0.038	0.050	-	-	0.025	0.050	-	-	0.038	0.050	-	-	0.050	0.050
Nitrite (as N)	0	0	6	1	-	-	0.0075	0.0100	-	-	0.0050	0.0100	-	-	0.0075	0.0100	-	-	0.0100	0.0100
Nitrogen (Dissolved)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	0	0	6	1	-	-	1.85	1.92	-	-	1.63	1.92	-	-	1.78	1.92	-	-	2.21	1.92
Orthophosphate (Dissolved)	0	0	6	1	-	-	0.872	0.258	-	-	0.199	0.258	-	-	0.864	0.258	-	-	1.500	0.258
Phosphorus - Dissolved	0	0	6	1	-	-	1.01	0.37	-	-	0.31	0.37	-	-	1.02	0.37	-	-	1.77	0.37
Phosphorus - Total	0	0	6	1	-	-	1.07	0.37	-	-	0.30	0.37	-	-	1.11	0.37	-	-	1.76	0.37
Cyanide																				
Cyanide (Free)	0	0	6	1	-	-	0.0025	0.0025	-	-	0.0025	0.0025	-	-	0.0025	0.0025	-	-	0.0025	0.0025
Cyanide (Total)	0	0	6	1	-	-	0.0025	0.0025	-	-	0.0025	0.0025	-	-	0.0025	0.0025	-	-	0.0025	0.0025
Cyanide (WAD)	0	0	6	1	-	-	0.0025	0.0025	-	-	0.0025	0.0025	-	-	0.0025	0.0025	-	-	0.0025	0.0025
Dissolved Metals																				
Aluminum	0	0	6	1	-	-	0.0041	0.0005	-	-	0.0014	0.0005	-	-	0.0027	0.0005	-	-	0.0108	0.0005
Antimony	0	0	6	1	-	-	0.00030	0.00037	-	-	0.00027	0.00037	-	-	0.00028	0.00037	-	-	0.00034	0.00037
Arsenic	0	0	6	1	-	-	0.0031	0.0034	-	-	0.0028	0.0034	-	-	0.0029	0.0034	-	-	0.0037	0.0034
Barium	0	0	6	1	-	-	0.018	0.003	-	-	0.008	0.003	-	-	0.019	0.003	-	-	0.022	0.003
Beryllium	0	0	6	1	-	-	0.00005	0.00005	-	-	0.00005	0.00005	-	-	0.00005	0.00005	-	-	0.00005	0.00005
Bismuth	0	0	6	1	-	-	0.000	0.000	-	-	0.000	0.000	-	-	0.000	0.000	-	-	0.000	0.000
Boron	0	0	6	1	-	-	0.074	0.063	-	-	0.064	0.063	-	-	0.071	0.063	-	-	0.086	0.063
Cadmium	0	0	6	1	-	-	0.000005	0.000005	-	-	0.000005	0.000005	-	-	0.000005	0.000005	-	-	0.000005	0.000005
Calcium	0	0	6	1	-	-	102	114	-	-	77	114	-	-	105	114	-	-	120	114
Chromium	0	0	6	1	-	-	0.00006	0.00005	-	-	0.00005	0.00005	-	-	0.00005	0.00005	-	-	0.00011	0.00005
Cobalt	0	0	6	1	-	-	0.00021	0.00015	-	-	0.00018	0.00015	-	-	0.00021	0.00015	-	-	0.00024	0.00015
Copper	0	0	6	1	-	-	0.0012	0.0007	-	-	0.0009	0.0007	-	-	0.0011	0.0007	-	-	0.0018	0.0007
Iron	0	0	6	1	-	-	0.037	0.005	-	-	0.005	0.005	-	-	0.024	0.005	-	-	0.080	0.005
Lead	0	0	6	1	-	-	0.00003	0.00003	-	-	0.00003	0.00003	-	-	0.00003	0.00003	-	-	0.00003	0.00003
Lithium	0	0	6	1	-	-	0.0016	0.0021	-	-	0.0010	0.0021	-	-	0.0015	0.0021	-	-	0.0024	0.0021
Magnesium	0	0	6	1	-	-	122.3	147.0	-	-	90.9	147.0	-	-	124.5	147.0	-	-	144.0	147.0
Manganese	0	0	6	1	-	-	0.034	0.015	-	-	0.012	0.015	-	-	0.028	0.015	-	-	0.079	0.015
Mercury	0	0	6	1	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050
Molybdenum	0	0	6	1	-	-	0.0036	0.0044	-	-	0.0030	0.0044	-	-	0.0036	0.0044	-	-	0.0041	0.0044
Nickel	0	0	6	1	-	-	0.0013	0.0013	-	-	0.0012	0.0013	-	-	0.0013	0.0013	-	-	0.0014	0.0013
Phosphorus	0	0	6	1	-	-	1.00	0.33	-	-	0.32	0.33	-	-	0.97	0.33	-	-	1.69	0.33
Potassium	0	0	6	1	-	-	40	51	-	-	29	51	-	-	41	51	-	-	50	51
Selenium	0	0	6	1	-	-	0.00024	0.00027	-	-	0.00021	0.00027	-	-	0.00023	0.00027	-	-	0.00027	0.00027
Silicon	0	0	6	1	-	-	1.41	2.99	-	-	0.16	2.99	-	-	0.89	2.99	-	-	4.45	2.99
Silver	0	0	6	1	-	-	0.000005	0.000005	-	-	0.000005	0.000005	-	-	0.000005	0.000005	-	-	0.000005	0.000005
Sodium	0	0	6	1	-	-	119	162	-	-	89	162	-	-	116	162	-	-	161	162
Strontium	0	0	6	1	-	-	1.32	1.65	-	-	1.02	1.65	-	-	1.36	1.65	-	-	1.59	1.65
Sulphur	0	0	6	1	-	-	267	349	-	-	199	349	-	-	276	349	-	-	319	349
Thallium	0	0	6	1	-	-	0.000005	0.000005	-	-	0.000005	0.000005	-	-	0.000005	0.000005	-	-	0.000005	0.000005
Tin	0	0	6	1	-	-	0.00005	0.00005	-	-	0.00005	0.00005	-	-	0.00005	0.00005	-	-	0.00005	0.00005
Titanium	0	0	6	1	-	-	0.0050	0.0050	-	-	0.0050	0.0050	-	-	0.0050	0.0050	-	-	0.0050	0.0050
Uranium	0	0	6	1	-	-	0.0006	0.0007	-	-	0.0004	0.0007	-	-	0.0005	0.0007	-	-	0.0007	0.0007
Vanadium	0	0	6	1	-	-	0.0027	0.0024	-	-	0.0021	0.0024	-	-	0.0027	0.0024	-	-	0.0033	0.0024
Zinc	0	0	6	1	-	-	0.0010	0.0013	-	-	0.0005	0.0013	-	-	0.0008	0.0013	-	-	0.0026	0.0013
Total Metals																				
Aluminum	0	0	6	1	-	-	0.02	0.06	-	-	0.00	0.06	-	-	0.01	0.06	-	-	0.06	0.06
Antimony	0	0	6	1	-	-	0.00031	0.00037	-	-	0.00028	0.00037	-	-	0.00031	0.00037	-	-	0.00035	0.00037
Arsenic	0	0	6	1	-	-	0.0032	0.0033	-	-	0.0030	0.0033	-	-	0.0030	0.0033	-	-	0.0036	0.0033
Barium	0	0	6	1	-	-	0.018	0.004	-	-	0.009	0.004	-	-	0.019	0.004	-	-	0.022	0.004
Beryllium	0	0	6	1	-	-	0.00005	0.00005	-	-	0.00005	0.00005	-	-	0.00005	0.00005	-	-	0.00005	0.00005
Bismuth	0	0	6	1	-	-	0.00025	0.00025	-	-	0.00025	0.00025	-	-	0.00025	0.00025	-	-	0.00025	0.00025
Boron	0	0	6	1	-	-	0.080	0.067	-	-	0.067	0.067	-	-	0.079	0.067	-	-	0.098	0.067
Cadmium	0	0	6	1	-	-	0.000005	0.000005	-	-	0.000005	0.000005	-	-	0.000005	0.000005	-	-	0.000005	0.000005
Calcium	0	0	6	1	-	-	98	109	-	-	76	109	-	-	101	109	-	-	119	109
Chromium	0	0	6	1	-	-	0.0002	0.0002	-	-	0.0001	0.0002	-	-	0.0002	0.0002	-	-	0.0003	0.0002
Cobalt	0	0	6	1	-	-	0.00023	0.00019	-	-	0.00019	0.00019	-	-	0.00022	0.00019	-	-	0.00029	0.00019
Copper	0	0	6	1	-	-	0.0014	0.0012	-	-	0.0010	0.0012	-	-	0.0013	0.0012	-	-	0.0024	0.0012
Iron	0	0	6	1	-	-	0.06	0.08	-	-	0.02	0.08	-	-	0.04	0.08	-	-	0.16	0.08
Lead	0	0	6	1	-	-	0.00004	0.00005	-	-	0.00003	0.00005	-	-	0.00003	0.00005	-	-	0.00009	0.00005
Lithium	0	0	6	1	-	-	0.0016	0.0021	-	-	0.0012	0.0021	-	-	0.0015	0.0021	-	-	0.0024	0.0021
Magnesium	0	0	6	1	-	-	119	140	-	-	92	140	-	-	122	140	-	-	146	140
Manganese	0	0	6	1	-	-	0.04	0.02	-	-	0.02	0.02	-	-	0.04	0.02	-	-	0.09	0.02
Mercury	0	0	6	1	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050
Molybdenum	0	0	6	1	-	-	0.004	0.004	-	-	0.003	0.004	-	-	0.004	0.004	-	-	0.005	0.004
Nickel	0	0	6	1	-	-	0.0014	0.0014	-	-	0.0013	0.0014	-	-	0.0014	0.0014	-	-	0.0015	0.0014
Phosphorus	0	0	6	1	-	-	1.06	0.36	-	-	0.41	0.36	-	-	1.09	0.36	-	-	1.69	0.36
Potassium	0	0	6	1	-	-	38.0	48.6	-	-	29.1	48.6	-	-	38.8	48.6	-	-	45.9	48.6
Selenium	0	0	6	1	-	-	0.00025	0.00027	-	-	0.00021	0.00027	-	-	0.00025	0.00027	-	-	0.00029	0.00027
Silicon	0	0	6	1	-	-	1.5	3.1	-	-	0.2	3.1	-	-	0.9	3.1	-	-	4.6	3.1
Silver	0	0	6	1	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050
Sodium	0	0	6	1	-	-	120	156	-	-	92	156	-	-	115	156	-	-	163	156
Strontium	0	0	6	1	-	-	1.33	1.61	-	-	1.08	1.61	-	-	1.34	1.61	-	-	1.64	1.61
Sulphur	0	0	6	1	-	-	263	333	-	-	199	333	-	-	273	333	-	-	330	333
Thallium	0	0	6	1	-	-	0.00001	0.00001	-	-	0.00001	0.00001	-	-	0.00001	0.00001	-	-	0.00001	0.00001
Tin	0	0	6	1	-	-	0.00005	0.00005	-	-	0.00005	0.00005	-	-	0.00005	0.00005	-	-	0.00005	0.00005
Titanium	0	0	6	1	-	-	0.005	0.005	-	-	0.005	0.005	-	-	0.005	0.005	-	-	0.005	0.005
Uranium	0	0	6	1	-	-	0.0006	0.0007	-	-	0.0005	0.0007	-	-	0.0006	0.0007	-	-	0.0008	0.0007
Vanadium	0	0	6	1	-	-	0.0028	0.0025	-	-	0.0023	0.0025	-	-	0.0028	0.0025	-	-	0.0034	0.0025
Zinc	0	0	6	1	-	-	0.0015	0.0015	-	-	0.0015	0.0015	-	-	0.0015	0.0015	-	-	0.0015	0.0015
Organics																				
Carbon Organic (Dissolved)	0	0	6	1	-	-	19	22	-	-	15	22	-	-	20	22	-	-	22	22
Carbon Organic (Total)	0	0	6	1	-	-	19	22	-	-	16	22	-	-	19	22	-	-	23	22
Nitrogen Organic (Dissolved)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.
2. SEASONS ARE SPECIFIED AS FOLLOWS: WIN (WINTER; DECEMBER THROUGH MARCH), SPR (SPRING; APRIL AND MAY), SUMMER(JUNE THROUGH AUGUST), FALL (SEPTEMBER THROUGH NOVEMBER).

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.24 - NSP
(PAGE 1 OF 2)

Parameter	Total Count	Complete Dataset - NSP									
		Min	Percentiles 5th	25th	50th	75th	95th	Max	Average	Standard Deviation	Coefficient of Variation
In Situ Parameters											
Conductivity µS/cm	18	618	1842	3748	4352	4617	5531	5732	4007	1298	3.2E-01
Oxygen Dissolved %	13	8	9	28	73	95	130	165	68	45	6.6E-01
Oxygen Dissolved	13	1.1	2.0	7.4	8.1	8.8	13.2	18.4	7.7	4.3	5.5E-01
pH (unitless)	21	8.8	9.0	9.2	9.2	9.4	9.5	9.5	9.2	0.2	2.0E-02
Redox Potential mV	20	-276	-199	-53	57	102	142	146	14	117	8.3E+00
Salinity ppt	19	0.00	0.43	2.26	2.69	3.18	3.71	4.09	2.52	1.02	4.0E-01
Specific Conductivity µS/cm	20	400	945	4008	5043	5812	6940	7629	4719	1822	3.9E-01
Temperature °C	21	-0.4	-0.1	9.8	14.8	20.7	22.8	24.0	14.1	7.5	5.3E-01
Total Dissolved Solids	19	628	1747	2848	3292	3799	4529	4956	3270	964	2.9E-01
Turbidity NTU	12	0.0	0.2	2.2	3.6	7.2	16.0	23.5	5.6	6.4	1.2E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0E+00
Alkalinity (Total as CaCO3)	22	546	717	1088	1210	1308	1505	1520	1173	235	2.0E-01
Bicarbonate Alkalinity	21	322	353	603	714	775	1040	1210	693	207	3.0E-01
Carbonate Alkalinity	21	224.0	306.0	398.0	471.0	588.0	615.0	676.0	473.4	117.5	2.5E-01
Color TCU	14	29.1	29.4	34.1	35.4	36.6	48.5	50.1	37.0	6.6	1.8E-01
Hardness as CaCO3 (Dissolved)	22	1230	1606	2243	2545	2773	3458	3610	2522	547	2.2E-01
Hydroxide Alkalinity	21	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0E+00
pH (unitless)	22	8.9	8.9	9.0	9.2	9.3	9.3	9.3	9.1	0.2	1.7E-02
Specific Conductivity µS/cm	22	2830	3763	4993	5355	5770	7137	7400	5384	1033	1.9E-01
Total Dissolved Solids	22	2540	3418	4575	4925	5525	7145	7290	5032	1089	2.2E-01
Total Suspended Solids	22	1.5	3.5	7.0	9.1	14.6	24.2	91.0	14.0	18.1	1.3E+00
Turbidity NTU	21	0.7	0.7	1.2	2.8	4.2	21.7	24.8	4.8	6.6	1.4E+00
Dissolved Anions											
Bromide	22	0.50	0.50	1.21	1.25	1.25	1.49	1.60	1.13	0.32	2.8E-01
Chloride	22	30	34	47	50	58	88	95	54	16	2.9E-01
Fluoride	22	0.06	0.06	0.20	0.50	0.50	0.98	1.20	0.41	0.29	7.1E-01
Sulphate	22	1360	1885	2500	2705	3165	3947	4010	2814	617	2.2E-01
Nutrients											
Ammonia (Total)	22	0.038	0.050	0.084	0.100	0.306	2.693	3.680	0.546	0.991	1.8E+00
Nitrate (as N)	22	0.050	0.05	0.12	0.13	0.13	0.34	4.32	0.32	0.897	2.8E+00
Nitrite (as N)	22	0.0100	0.01	0.03	0.03	0.03	0.05	0.06	0.03	0.0125	4.9E-01
Nitrogen (Dissolved)	8	4.25	4.36	4.72	4.83	5.12	5.76	6.04	4.95	0.53	1.1E-01
Nitrogen (Total)	14	0.95	3.11	4.85	5.12	6.33	12.20	20.80	6.26	4.46	7.1E-01
Nitrogen Kjeldahl (Total)	22	0.95	1.12	4.29	5.21	6.01	12.32	15.30	5.75	3.29	5.7E-01
Orthophosphate (Dissolved)	18	0.015	0.034	0.211	0.303	0.463	0.774	0.904	0.352	0.245	6.9E-01
Phosphorus - Dissolved	22	0.130	0.148	0.331	0.477	0.670	0.968	1.000	0.512	0.249	4.9E-01
Phosphorus - Total	22	0.175	0.274	0.348	0.537	0.715	1.053	1.100	0.567	0.262	4.6E-01
Cyanide											
Cyanide (Free)	21	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0050	0.0026	0.0005	2.1E-01
Cyanide (Total)	22	0.0025	0.0025	0.0025	0.0025	0.0025	0.0139	0.0174	0.0042	0.0043	1.0E+00
Cyanide (WAD)	21	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0050	0.0026	0.0005	2.1E-01
Dissolved Metals											
Aluminum	22	0.0010	0.0010	0.0025	0.0025	0.0060	0.0246	0.0250	0.0057	0.0072	1.3E+00
Antimony	22	0.00025	0.00026	0.00073	0.00093	0.00125	0.00244	0.00250	0.00104	0.00058	5.5E-01
Arsenic	22	0.0070	0.0078	0.0104	0.0120	0.0159	0.0169	0.0186	0.0125	0.0034	2.7E-01
Barium	22	0.014	0.018	0.027	0.038	0.049	0.096	0.208	0.046	0.041	8.9E-01
Beryllium	22	0.000050	0.000100	0.000138	0.000250	0.000250	0.004763	0.005000	0.000639	0.001413	2.2E+00
Bismuth	21	0.00025	0.00050	0.00050	0.00125	0.00125	0.00125	0.10000	0.00573	0.02160	3.8E+00
Boron	22	0.021	0.021	0.025	0.025	0.025	0.050	0.050	0.028	0.009	3.1E-01
Cadmium	22	0.0000050	0.0000100	0.0000138	0.0000250	0.0000250	0.0000820	0.0003600	0.0000386	0.0000734	1.9E+00
Calcium	22	19	21	24	27	33	35	54	29	7	2.5E-01
Chromium	22	0.00005	0.00010	0.00014	0.00025	0.00025	0.00476	0.00500	0.00064	0.00141	2.2E+00
Cobalt	22	0.00010	0.00010	0.00025	0.00025	0.00025	0.00144	0.00150	0.00034	0.00038	1.1E+00
Copper	22	0.0005	0.0005	0.0005	0.0010	0.0015	0.0049	0.0050	0.0014	0.0013	9.5E-01
Iron	22	0.005	0.005	0.005	0.012	0.018	0.025	0.031	0.014	0.008	6.1E-01
Lead	22	0.000025	0.000050	0.000106	0.000125	0.000125	0.002381	0.002500	0.000322	0.000706	2.2E+00
Lithium	22	0.00125	0.00131	0.00273	0.00310	0.00395	0.02405	0.02500	0.00513	0.00651	1.3E+00
Magnesium	22	284	370	524	591	660	822	858	595	134	2.2E-01
Manganese	22	0.009	0.010	0.038	0.066	0.093	0.137	0.165	0.069	0.043	6.1E-01
Mercury	22	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Molybdenum	22	0.010	0.012	0.015	0.018	0.022	0.024	0.025	0.018	0.004	2.4E-01
Nickel	22	0.0005	0.0005	0.0011	0.0013	0.0013	0.0048	0.0050	0.0015	0.0012	7.8E-01
Phosphorus	21	0.15	0.15	0.34	0.45	0.63	0.79	0.84	0.47	0.20	4.2E-01
Potassium	22	52	69	93	108	122	143	147	107	24	2.2E-01
Selenium	22	0.00057	0.00077	0.00089	0.00103	0.00152	0.00485	0.00500	0.00149	0.00119	8.0E-01
Silicon	21	0.4	0.6	2.7	4.5	5.5	7.3	7.5	4.2	2.1	5.0E-01
Silver	22	0.0000050	0.0000100	0.0000138	0.0000250	0.0000250	0.0000963	0.0001000	0.0000275	0.0000245	8.9E-01
Sodium	22	295	398	556	622	732	841	876	622	139	2.2E-01
Strontium	21	1.82	2.36	3.07	3.54	3.93	4.86	5.10	3.54	0.75	2.1E-01
Sulphur	15	1	310	691	839	1006	1265	1370	815	331	4.1E-01
Thallium	22	0.0000050	0.0000100	0.0000138	0.0000250	0.0000250	0.0009512	0.0010000	0.0001093	0.0002884	2.6E+00
Tin	22	0.000050	0.000100	0.000138	0.000250	0.000250	0.002388	0.002500	0.000411	0.000680	1.7E+00
Titanium	22	0.0050	0.0050	0.0050	0.0100	0.0250	0.0250	0.0250	0.0143	0.0093	6.5E-01
Uranium	22	0.0026	0.0035	0.0045	0.0055	0.0058	0.0067	0.0068	0.0052	0.0011	2.1E-01
Vanadium	22	0.0010	0.0024	0.0025	0.0025	0.0030	0.0049	0.0050	0.0028	0.0009	3.1E-01
Zinc	22	0.0010	0.0010	0.0015	0.0025	0.0025	0.0073	0.0075	0.0026	0.0017	6.8E-01
Total Metals											
Aluminum	22	0.0075	0.0075	0.0172	0.0363	0.0733	0.1321	0.2180	0.0534	0.0515	9.6E-01
Antimony	22	0.00025	0.00026	0.00077	0.00108	0.00132	0.00245	0.00250	0.00109	0.00058	5.3E-01
Arsenic	22	0.0068	0.0080	0.0104	0.0121	0.0160	0.0175	0.0181	0.0126	0.0035	2.7E-01
Barium	22	0.015	0.019	0.027	0.039	0.049	0.087	0.184	0.045	0.035	7.8E-01
Beryllium	22	0.000050	0.000100	0.000138	0.000250	0.000250	0.004763	0.005000	0.000639	0.001413	2.2E+00
Bismuth	21	0.00025	0.00050	0.00050	0.00125	0.00125	0.00125	0.10000	0.00573	0.02160	3.8E+00
Boron	22	0.021	0.024	0.025	0.025	0.035	0.055	0.057	0.032	0.012	3.7E-01
Cadmium	22	0.000010	0.000010	0.000015	0.000025	0.000025	0.000082	0.000300	0.000036	0.000061	1.7E+00
Calcium	22	19	22	24	28	33	38	55	29	8	2.6E-01
Chromium	22	0.00010	0.00010	0.00024	0.00025	0.00025	0.00476	0.00500	0.00065	0.00141	2.2E+00
Cobalt	22	0.00010	0.00011	0.00025	0.00025	0.00025	0.00144	0.00150	0.00035	0.00037	1.1E+00
Copper	22	0.0005	0.0013	0.0013	0.0013	0.0025	0.0049	0.0050	0.0020	0.0013	6.5E-01
Iron	22	0.01	0.01	0.02	0.04	0.08	0.10	0.21	0.06	0.05	8.0E-01
Lead	22	0.000025	0.000050	0.000069	0.000125	0.000125	0.002381	0.002500	0.000319	0.000707	2.2E+00
Lithium	22	0.0013	0.0024	0.0027	0.0034	0.0044	0.0240	0.0250	0.0053	0.0064	1.2E+00
Magnesium	22	259	371	534	590	669	860	883	598	141	2.4E-01
Manganese	22	0.02	0.02	0.04	0.08	0.11	0.14	0.18	0.08	0.04	5.6E-01
Mercury	22	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Molybdenum	22	0.009	0.013	0.015	0.019	0.023	0.025	0.027	0.019	0.005	2.5E-01
Nickel	22	0.0005	0.0010	0.0012	0.0013	0.0013	0.0049	0.0050	0.0016	0.0012	7.3E-01
Phosphorus	21	0.15	0.21	0.34	0.48	0.65	0.86	0.90	0.49	0.20	4.1E-01
Potassium	22	50	68	93	107	120	147	155	107	25	2.3E-01
Selenium	22	0.00068	0.00077	0.00091	0.00099	0.00164	0.00484	0.00500	0.00148	0.00119	8.0E-01
Silicon	21	0.4	0.6	2.8	4.7	5.6	7.6	7.9	4.4	2.2	5.0E-01
Silver	22	0.0000050	0.0000100	0.0000138	0.0000250	0.0000250	0.0000963	0.0001000	0.0000275	0.0000245	8.9E-01
Sodium	22	285	397	545	621	742	853	905	629	147	2.3E-01
Strontium	21	1.73	2.40	3.19	3.75	4.07	4.75	5.51	3.64	0.81	2.2E-01
Sulphur	15	412	516	782	885	1050	1298	1340	905	251	2.8E-01
Thallium	22	0.0000050	0.0000100	0.0000138	0.0000250	0.0000250	0.0009512	0.0010000	0.0001093	0.0002884	2.6E+00
Tin	22	0.000050	0.000100	0.000138	0.000250	0.000250	0.002388	0.002500	0.000411	0.000680	1.7E+00
Titanium	22	0.0050	0.0050	0.0050	0.0100	0.0250	0.0250	0.0250	0.0143	0.0093	6.5E-01
Uranium	22	0.0021	0.0036	0.0046	0.0057	0.0061	0.0070	0.0071	0.0054	0.0012	2.2E-01
Vanadium	22	0.0010	0.0023	0.0025	0.0025	0.0033	0.0049	0.0050	0.0029	0.0009	3.2E-01
Zinc	22	0.0015	0.0025	0.0030	0.0075	0.0075	0.0075	0.0075	0.0059	0.0023	3.8E-01
Organics											
Carbon Organic (Dissolved)	22	12.2	27.4	47.8	54.8	63.7	74.1	85.4	53.6	15.9	3.0E-01
Carbon Organic (Total)	21	12.1	28.1	48.2	54.7	63.7	75.2	79.9	53.8	15.5	2.9E-01
Nitrogen Organic (Dissolved)	7	3.82	3.89	4.07	4.64	5.05	5.71	5.97	4.67	0.76	1.6E-01
Nitrogen Organic (Total)	7	4.19	4.23	4.51	4.74	5.15	5.84	6.13	4.91	0.65	1.3E-01

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.24 - NSP
(PAGE 2 OF 2)

Seasonal Statistics - NSP

Parameter	Count				Average				Min				Median				Max			
	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall
In Situ Parameters																				
Conductivity µS/cm	2	4	8	4	4227	3341	4854	2869	3969	2058	3693	618	4227	3423	4927	3249	4485	4458	5732	4360
Oxygen Dissolved %	2	4	4	3	13	90	75	68	8	27.6	9	60	13.2	84.1	91	66	18.4	165	107	78
Oxygen Dissolved	2	4	4	3	2	9	9	8	1.07	2.83	8	7	1.85	8.11	9	8	2.63	18.4	10	9
pH (unitless)	2	4	8	7	9	9	9	9	8.98	8.84	9	9	9.015	9.225	9	9	9.05	9.48	10	9
Redox Potential mV	2	4	8	6	-121	82	69	-60	-195	-42.2	-6	-276	-121.3	112.7	58	-81	-47.6	146	130	126
Salinity ppt	2	4	8	5	3.88	2.24	2.43	2.35	3.67	1.5	0.00	0.48	3.88	2.36	2.63	2.33	4.09	2.73	3.26	3.53
Specific Conductivity µS/cm	2	4	8	6	7267	4187	4811	4101	6904	2878	400	974	7266.5	4403	5415	4124	7629	5065	5989	6441
Temperature °C	2	4	8	7	0	14	20	11	-0.44	10.9	14	2	-0.27	13.3	22	10	-0.1	18.6	24	18
Total Dissolved Solids	2	4	8	5	4719	2721	3453	2839	4481	1871	2860	628	4718.5	2859.5	3520	2835	4956	3292	3893	4186
Turbidity NTU	1	2	4	5	4	14	1	6	3.7	3.5	0	2	3.7	13.5	1	7	3.7	23.5	3	10
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	0	0	0	4	-	-	-	0.5	-	-	-	0.5	-	-	-	0.5	-	-	-	0.5
Alkalinity (Total as CaCO3)	2	4	9	7	1515	861	1145	1289	1510	546	883	1120	1515	894	1210	1300	1520	1110	1310	1400
Bicarbonate Alkalinity	2	4	8	7	1125	545	598	761	1040	322	444	642	1125	540	610	723	1210	777	749	890
Carbonate Alkalinity	2	4	8	7	391.50	317	525	527	306	224	439	398	391.5	342.5	517	503	477	357	610	676
Color TCU	1	2	6	5	35	49	36	34	35.4	47.4	30	29	35.4	48.75	35	35	35.4	50.1	48	37
Hardness as CaCO3 (Dissolved)	2	4	9	7	3545	1870	2414	2741	3480	1230	1910	2210	3545	1950	2540	2790	3610	2350	2720	3030
Hydroxide Alkalinity	2	4	8	7	0.50	0.50	0.50	0.50	0.5	0.5	0.50	0.50	0.5	0.5	0.50	0.50	0.5	0.5	0.50	0.50
pH (unitless)	2	4	9	7	9	9	9	9	8.85	8.94	9	9	8.86	9.11	9	9	8.87	9.32	9	9
Specific Conductivity µS/cm	2	4	9	7	7285	4115	5159	5854	7170	2830	4190	5150	7285	4330	5160	5770	7400	4970	5770	6510
Total Dissolved Solids	2	4	9	7	7245	3810	4784	5416	7200	2540	3940	4460	7245	3980	4860	5590	7290	4740	5330	6090
Total Suspended Solids	2	4	9	7	5	13	11	21	1.5	7.7	3	5	5.1	13.05	9	11	8.7	19.3	25	91
Turbidity NTU	2	4	9	6	14	3	2	6	2.78	1.22	1	1	13.79	2.495	1	4	24.8	7.45	9	22
Dissolved Anions																				
Bromide	2	4	9	7	1.25	0.50	1.27	1.29	1.25	0.5	1.10	1.25	1.25	0.5	1.25	1.25	1.25	0.5	1.60	1.50
Chloride	2	4	9	7	92	41	48	57	89	30	38	47	92	41.5	49	55	95	50	59	72
Fluoride	2	4	9	7	0.50	0.20	0.43	0.47	0.5	0.2	0.06	0.07	0.5	0.2	0.50	0.50	0.5	0.2	1.20	1.00
Sulphate	2	4	9	7	3990	2045	2686	3081	3970	1360	2160	2700	3990	2165	2680	3060	4010	2490	3200	3500
Nutrients								-												
Ammonia (Total)	2	4	9	7	3.200	0.307	0.092	0.508	2.72	0.0382	0.073	0.049	3.2	0.21965	0.088	0.136	3.68	0.75	0.120	2.170
Nitrate (as N)	2	4	9	7	0.23	0.07	0.574	0.154	0.125	0.05	0.050	0.120	0.2325	0.05	0.125	0.125	0.34	0.12	4.320	0.330
Nitrite (as N)	2	4	9	7	0.025	0.0160	0.0219	0.0354	0.025	0.01	0.0100	0.0250	0.025	0.01	0.0250	0.0250	0.025	0.034	0.0270	0.0600
Nitrogen (Dissolved)	0	2	3	3	-	4.70	5.30	4.77	-	4.55	4.78	4.25	-	4.695	5.07	4.82	-	4.84	6.04	5.25
Nitrogen (Total)	0	2	6	6	-	5.55	4.06	8.69	-	5.47	0.95	4.92	-	5.55	4.61	6.81	-	5.63	4.97	20.80
Nitrogen Kjeldahl (Total)	2	4	9	7	10.73	7.37	3.62	6.14	8.95	3.25	0.95	4.92	10.725	5.47	4.28	5.36	12.5	15.3	5.27	8.98
Orthophosphate (Dissolved)	2	3	6	7	0.73	0.329	0.356	0.252	0.701	0.24	0.183	0.015	0.726	0.257	0.260	0.305	0.751	0.49	0.904	0.551
Phosphorus - Dissolved	2	4	9	7	0.914	0.508	0.50	0.41	0.827	0.331	0.28	0.13	0.9135	0.506	0.41	0.44	1	0.689	0.98	0.72
Phosphorus - Total	2	4	9	7	0.97	0.65	0.53	0.45	0.883	0.43	0.30	0.18	0.9715	0.6375	0.42	0.44	1.06	0.911	1.10	0.73
Cyanide																				
Cyanide (Free)	2	4	8	7	0.0025	0.0025	0.0025	0.00285714	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.005
Cyanide (Total)	2	4	9	7	0.0025	0.0049	0.00377778	0.00498571	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.012	0.014	0.0174
Cyanide (WAD)	2	4	8	7	0.0025	0.0025	0.0025	0.00285714	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.005
Dissolved Metals																				
Aluminum	2	4	9	7	0.0025	0.0083	0.0051	0.0058	0.0025	0.001	0.0010	0.0025	0.0025	0.0075	0.0025	0.0025	0.0025	0.0172	0.0250	0.0250
Antimony	2	4	9	7	0.001085	0.00041	0.00110	0.00132	0.001	0.00025	0.00057	0.00073	0.001085	0.000365	0.00085	0.00133	0.00117	0.00064	0.00250	0.00250
Arsenic	2	4	9	7	0.0169	0.0081	0.0122	0.0143	0.0168	0.00697	0.0087	0.0106	0.01685	0.007865	0.0115	0.0151	0.0169	0.00966	0.0164	0.0186
Barium	2	4	9	7	0.041	0.043	0.053	0.039	0.0399	0.0271	0.018	0.014	0.04105	0.04365	0.040	0.033	0.0422	0.0574	0.208	0.098
Beryllium	2	4	9	7	0.00025	0.00016	0.00073	0.00091	0.00025	0.00005	0.00010	0.00010	0.00025	0.000175	0.00025	0.00025	0.00025	0.00025	0.00500	0.00500
Bismuth	2	4	8	7	0.00125	0.001	0.001	0.015	0.00125	0.00025	0.001	0.001	0.00125	0.000875	0.001	0.001	0.00125	0.00125	0.001	0.100
Boron	2	4	9	7	0.025	0.028	0.026	0.032	0.025	0.025	0.021	0.025	0.025	0.027	0.025	0.025	0.025	0.032	0.050	0.050
Cadmium	2	4	9	7	0.00003	0.000016	0.000027	0.000071	0.000025	0.000005	0.000010	0.000010	0.000025	0.0000175	0.000025	0.000025	0.000025	0.000025	0.000085	0.000360
Calcium	2	4	9	7	30	25	33	25	29.8	22.2	24	19	30.45	23.5	33	25	31.1	32.5	54	35
Chromium	2	4	9	7	0.00025	0.0002	0.00073	0.00091	0.00025	0.00005	0.00010	0.00010	0.00025	0.000175	0.00025	0.00025	0.00025	0.00025	0.00500	0.00500
Cobalt	2	4	9	7	0.00025	0.00022	0.00037	0.00041	0.00025	0.00016	0.00010	0.00010	0.00025	0.00023	0.00025	0.00025	0.00025	0.00025	0.00150	0.00150
Copper	2	4	9	7	0.0005	0.0019	0.0016	0.0012	0.0005	0.00125	0.0005	0.0005	0.0005	0.001755	0.0011	0.0005	0.0005	0.00278	0.0050	0.0050
Iron	2	4	9	7	0.010	0.014	0.012	0.016	0.01	0.005	0.005	0.005	0.01	0.01	0.010	0.015	0.01	0.031	0.025	0.025
Lead	2	4	9	7	0.00013	0.00008	0.00036	0.00046	0.000125	0.000025	0.00005	0.00010	0.000125	0.0000875	0.00013	0.00013	0.000125	0.000125	0.00250	0.00250
Lithium	2	4	9	7	0.0050	0.0023	0.0053	0.0065	0.0041	0.00125	0.0013	0.0027	0.005	0.00243	0.0029	0.0038	0.0059	0.003	0.0250	0.0250
Magnesium	2	4	9	7	842.5	438.3	566.1	650.4	827.0	284.0	442.0	514.0	842.5	456.0	586.0	664.0	858.0	557.0	646.0	719.0
Manganese	2	4	9	7	0.113	0.096	0.036	0.085	0.112	0.0365	0.009	0.063	0.1125	0.0916	0.030	0.088	0.113	0.165	0.087	0.106
Mercury	2	4	9	7	0.0000050	0.0000050	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050
Molybdenum	2	4	9	7	0.0167	0.0166	0.0179	0.0200	0.0156	0.00973	0.0131	0.0122	0.01665	0.0173	0.0175	0.0209	0.0177	0.022	0.0239	0.0250
Nickel	2	4	9	7	0.0013	0.0010	0.0016	0.0017	0.00125	0.0005	0.0010	0.0005	0.00125	0.001075	0.0013	0.0013	0.00125	0.00125	0.0050	0.0050
Phosphorus	2	4	8	7	0.82	0.53	0.44	0.37	0.79	0.337	0.30	0.15	0.815	0.541	0.39	0.40	0.84	0.69	0.71	0.68
Potassium	2	4	9	7	145	76	103	120	143	52.4	80	97	145	78.8	105	122	147	92.1	117	137
Selenium	2	4	9	7	0.00120	0.00128	0.00162	0.00153	0.00077	0.00088	0.00083	0.00057	0.0012	0.001165	0.00106	0.00099	0.00163	0.0019	0.00500	0.00500
Silicon	2	4	8	7	7.38	3.55	3.62	4.37	7.25	2.3	0.56	0.38	7.375	3.61	4.26	4.94	7.5	4.66	5.53	7.01
Silver	2	4	9	7	0.000025	0.000016	0.000028	0.000034	0.000025	0.000005	0.000010	0.000010	0.000025	0.0000175	0.000025	0.000025	0.000025	0.000025	0.000100	0.000100
Sodium	2	4	9	7	861	442	595	692	846	295	445	586	861	462.5	588	696	876	549	754	752
Strontium	2	4	8	7	4.98	2.58	3.41	3.83	4.86	1.82	2.72	3.29	4.98	2.71	3.44	3.93	5.1	3.07	3.92	4.23
Sulphur	2	2	6	5	1295	498	800	768	1220	443	658	1	1295	498	795	961	1370	553	982	1050
Thallium	2	4	9	7	0.000025	0.000016	0.000128	0.000162	0.000025	0.000005	0.000010	0.000010	0.000025	0.0000175	0.000025	0.000025	0.000025	0.000025	0.001000	0.001000
Tin	2	4	9	7	0.00025	0.00016	0.00045	0.00055	0.00025	0.00005	0.00010	0.00010	0.00025	0.000175	0.00025	0.00025	0.00025	0.00025	0.00250	0.00250
Titanium	2	4	9	7	0.0250	0.00625	0.0133	0.0171	0.025	0.005	0.0050	0.0050	0.025	0.005	0.0100	0.0250	0.025	0.01	0.0250	0.0250
Uranium	2	4	9	7	0.0065	0.0044	0.0052	0.0054	0.00629	0.00264	0.0040	0.0038	0.006455	0.004645	0.0051	0.0056	0.00662	0.00582	0.0068	0.0067
Vanadium	2	4	9	7	0.0025	0.0029	0.0030	0.0026	0.0025	0.0025	0.0024	0.0010	0.0025	0.0028	0.0025	0.0025	0.0025	0.0036	0.0050	0.0050
Zinc	2	4	9	7	0.0025	0.0043	0.0020	0.0023	0.0025	0.001	0.0010	0.0010	0.0025	0.00435	0.0025	0.0025	0.0025	0.0075	0.0025	0.0025
Total Metals																				
Aluminum	2	4	9	7	0.01	0.06	0.05	0.07	0.0075	0.0247	0.01	0.01	0.0075	0.0597	0.02	0.07	0.0075	0.078	0.13	0.22
Antimony	2	4	9	7	0.0012	0.00041	0.00117	0.00135	0.00109	0.00025	0.00058	0.00076	0.0012	0.00036	0.00107	0.00135	0.00131	0.00066	0.00250	0.00250
Arsenic	2	4	9	7	0.0177	0.0079	0.0122	0.0143	0.0172	0.00684	0.0087	0.0103	0.01765	0.007985	0.0118	0.0159	0.0181	0.00889	0.0160	0.0175
Barium	2	4	9	7	0.041	0.045	0.051	0.040	0.0402	0.0273	0.019	0.015	0.0408	0.0452	0.042	0.035	0.0414	0.0617	0.184	0.088
Beryllium	2	4	9	7	0.00025	0.00016	0.00073	0.00091	0.00025	0.00005	0.00010	0.00010	0.00025	0.000175	0.00025	0.00025	0.00025	0.00025	0.00500	0.00500
Bismuth	2	4	8	7	0.00125	0.0008125	0.00096875	0.01525	0.00125	0.00025	0.0005	0.0005	0.00125	0.000875	0.00125	0.00125	0.00125	0.00125	0.00125	0.1
Boron	2	4	9	7	0.040	0.038	0.027	0.032	0.025	0.025	0.021	0.025	0.04	0.034	0.025	0.025	0.055	0.057	0.050	0.050
Cadmium	2	4	9	7	0.00003	0.000018	0.000027	0.000062	0.000025	0.00001	0.000010	0.000010	0.000025	0.0000185	0.000025	0.000025	0.000025	0.000025	0.000085	0.000300
Calcium	2	4	9	7	32	25	34	26	30.8	22.5	24	19	31.6	22.9	34	25	32.4	32.5	55	38
Chromium	2	4	9	7	0.00025	0.0002	0.0007	0.0009	0.00025	0.0001	0.0001	0.0001	0.00025	0.00024	0.0003	0.0003	0.0003	0.00025	0.0050	0.0050
Cobalt	2	4	9	7	0.00025	0.00025	0.00037	0.00041	0.00025	0.00024	0.00010	0.00010	0.00025	0.00025	0.00025	0.00025	0.0003	0.0003	0.00150	0.00150
Copper	2	4	9	7	0.0013	0.0022	0.0019	0.0020	0.00125	0.00125	0.0013	0.0005	0.00125	0.002125	0.0013	0.0013	0.00125	0.0034	0.0050	0.0050
Iron	2	4	9	7	0.04	0.06	0.05	0.07	0.031	0.023	0.01	0.01	0.036	0.072	0.04	0.08	0.041	0.089	0.10	0.21
Lead	2	4	9	7	0.00013	0.00008	0.00036	0.00045	0.000125	0.000025	0.00005	0.00005	0.000125	0.00009	0.00013	0.00013	0.00013	0.0001	0.00250	0.00250
Lithium	2	4	9	7	0.0047	0.0023	0.0056	0.0068	0.0045	0.00125	0.0027	0.0028	0.00465	0.00248	0.0028	0.0041	0.0048	0.0029	0.0250	0.0250
Magnesium	2	4	9	7	875	429	570	651	866	259	445	553	874.5	447.5	590	668	883	561	675	741
Manganese	2	4	9	7	0.12	0.11	0.04	0.09	0.114	0.0408	0.02	0.07	0.1165	0.1091	0.04	0.10	0.119	0.179	0.10	0.12
Mercury	2	4	9	7	0.0000050	0.0000050	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050
Molybdenum	2	4	9	7	0.018	0.017	0.018	0.021	0.0178	0.00915	0.014	0.013	0.0182	0.018	0.018	0.021	0.0186	0.0232	0.023	0.027
Nickel	2	4	9	7	0.0013	0.0012	0.0016	0.0019	0.0013	0.0010	0.0011	0.0005	0.0013	0.0012	0.0013	0.0013	0.0013	0.0013	0.0050	0.0050
Phosphorus	2	4	8	7	0.88	0.57	0.44	0.40	0.86	0.417	0.33	0.15	0.88	0.576	0.39	0.41	0.9	0.72	0.70	0.67
Potassium	2	4	9	7	151.5	75.2	102.1	118.7	148.0	49.5	79.8	103.0	151.5	79.3	105.0	120.0	155.0	92.9	126.0	135.0
Selenium	2	4	9	7	0.00084	0.00129	0.00162	0.00160	0.00077	0.00092	0.00080	0.00068	0.00084	0.0013	0.00100	0.00098	0.0009	0.0017	0.00500	0.00500
Silicon	2	4	8	7	7.7	3.6	3.8	4.6	7.5	2.6	0.6	0.4	7.7	3.6	4.4	5.2	7.9	4.7	5.6	7.6
Silver	2	4	9	7	0.0000250	0.0000163	0.0000283	0.0000336	0.000025	0.000005	0.0000100	0.0000100	0.000025	0.0000175	0.0000250	0.0000250	0.000025	0.000025	0.0001000	0.0001000
Sodium	2	4	9	7	881	443	602	698	857	285	473	586	881	466.5	583	689	905	555	761	782
Strontium	2	4	8	7	5.1	2.6	3.50	3.96	4.75	1.73	2.86	3.59	5.13	2.8	3.47	4.05	5.5	3.2	4.16	4.37
Sulphur	2	2	6	5	1310	486	839	990	1280	412	665	858	1310	486	835	982	1340	560	1050	1120
Thallium	2	4	9	7	0.00003	0.00002	0.00013	0.00016	0.000025	0.000005	0.00001	0.00001	0.000025	0.0000175	0.00003	0.00003	0.000025	0.000025	0.00100	0.00100
Tin	2	4	9	7	0.00025	0.00016	0.00045	0.00055	0.00025	0.00005	0.00010	0.00010	0.00025	0.000175	0.00025	0.00025	0.00025	0.00025	0.00250	0.00250
Titanium	2	4	9	7	0.025	0.006	0.013	0.017	0.025	0.005	0.005	0.005	0.025	0.005	0.010	0.025	0.025	0.01	0.025	0.025
Uranium	2	4	9	7	0.0067	0.0045	0.0053	0.0057	0.0065	0.0021	0.0043	0.0042	0.0067	0.0048	0.0053	0.0059	0.0070	0.0061	0.0071	0.0067
Vanadium	2	4	9	7	0.0025	0.0031	0.0030	0.0026	0.0025	0.0025	0.0023	0.0010	0.0025	0.003	0.0025	0.0025	0.0025	0.0037	0.0050	0.0050
Zinc	2	4	9	7	0.0075	0.0049	0.0054	0.0067	0.0075	0.0015	0.0025	0.0030	0.0075	0.00525	0.0075	0.0075	0.0075	0.0075	0.0075	0.0075
Organics																				
Carbon Organic (Dissolved)	2	4	9	7	80.0	44.6	52	53	74.5	31.8	27	12	80.0	46.0	55	60	85	54	65	66
Carbon Organic (Total)	2	4	8	7	77.6	46	52	54	75.2	32.8	28	12	77.6	48.0	54	60	80	55	65	68
Nitrogen Organic (Dissolved)	0	2	2	3	-	4.07	5.48	4.52	-	4.06	4.99	3.82	-	4.07	5.48	4.64	-	4.08	5.97	5.11
Nitrogen Organic (Total)	0	2	2	3	-	4.93	4.26	5.33	-	4.69	4.19	4.74	-	4.93	4.26	5.13	-	5.2	4.32	6.13

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.
2. SEASONS ARE SPECIFIED AS FOLLOWS: WIN (WINTER; DECEMBER THROUGH MARCH), SPR (SPRING; APRIL AND MAY), SUMMER(JUNE THROUGH AUGUST), FALL (SEPTEMBER THROUGH NOVEMBER).

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.25 - PC02
(PAGE 1 OF 2)

Parameter	Complete Dataset - PC02										
	Total Count	Min	5th	25th	Percentiles 50th	75th	95th	Max	Average	Standard Deviation	Coefficient of Variation
In Situ Parameters											
Conductivity µS/cm	58	356	682	860	972	1123	1237	1376	972	197	2.0E-01
Oxygen Dissolved %	58	49	63	71	78	85	91	107	77	10	1.3E-01
Oxygen Dissolved	58	1.2	6.8	7.9	8.9	9.9	11.1	12.4	8.8	1.7	1.9E-01
pH (unitless)	60	7.1	7.3	7.6	7.8	8.1	8.3	8.5	7.9	0.3	4.0E-02
Redox Potential mV	59	-243	-62	28	78	126	196	326	77	88	1.1E+00
Salinity ppt	53	0.08	0.44	0.53	0.74	0.85	1.01	1.15	0.70	0.21	3.0E-01
Specific Conductivity µS/cm	60	658	908	1111	1529	1688	1997	2276	1447	365	2.5E-01
Temperature °C	61	0.4	1.1	4.5	8.5	12.9	17.2	22.1	8.9	5.2	5.8E-01
Total Dissolved Solids	55	428	589	704	996	1094	1299	1476	935	237	2.5E-01
Turbidity NTU	31	0.0	0.3	1.5	4.0	7.5	41.5	73.7	9.0	15.7	1.7E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	5	0.5	1.0	3.0	4.0	4.5	6.7	7.2	3.8	2.4	6.3E-01
Alkalinity (Total as CaCO3)	61	160	286	367	413	447	468	481	397	65	1.6E-01
Bicarbonate Alkalinity	48	160	274	360	409	448	468	481	393	71	1.8E-01
Carbonate Alkalinity	48	0.5	0.5	1.0	1.0	4.2	19.2	28.1	4.2	6.8	1.6E+00
Color TCU	44	6.1	6.3	7.7	9.7	24.0	36.7	63.6	16.4	12.9	7.9E-01
Hardness as CaCO3 (Dissolved)	61	282	423	537	711	762	914	1040	672	161	2.4E-01
Hydroxide Alkalinity	48	0.5	0.5	0.5	1.0	1.0	1.0	1.0	0.8	0.3	3.3E-01
pH (unitless)	60	7.9	8.1	8.1	8.2	8.4	8.5	8.5	8.3	0.1	1.7E-02
Specific Conductivity µS/cm	61	625	937	1130	1570	1680	1920	2230	1472	350	2.4E-01
Total Dissolved Solids	61	421	603	781	1100	1230	1410	1710	1020	280	2.7E-01
Total Suspended Solids	61	1.5	1.5	3.2	7.0	14.4	61.4	245.0	16.5	34.6	2.1E+00
Turbidity NTU	59	0.4	0.6	1.1	2.3	5.6	15.9	75.7	5.5	10.8	1.9E+00
Dissolved Anions											
Bromide	61	0.05	0.25	0.25	0.25	0.50	0.50	1.25	0.38	0.20	5.2E-01
Chloride	61	28	57	65	106	123	133	142	96	29	3.0E-01
Fluoride	61	0.10	0.10	0.20	0.21	0.26	0.44	0.67	0.25	0.10	4.2E-01
Sulphate	61	121	133	218	359	422	535	775	342	141	4.1E-01
Nutrients											
Ammonia (Total)	61	0.009	0.012	0.016	0.020	0.025	0.041	0.268	0.027	0.034	1.3E+00
Nitrate (as N)	61	0.025	0.03	0.06	0.16	0.44	0.96	1.18	0.32	0.318	1.0E+00
Nitrite (as N)	61	0.0011	0.01	0.01	0.01	0.01	0.03	0.04	0.01	0.0074	7.2E-01
Nitrogen (Dissolved)	30	0.34	0.44	0.68	0.83	1.08	1.28	1.34	0.86	0.28	3.2E-01
Nitrogen (Total)	39	0.43	0.46	0.70	0.85	0.98	1.40	1.81	0.88	0.32	3.6E-01
Nitrogen Kjeldahl (Total)	61	0.05	0.35	0.42	0.51	0.80	1.18	1.67	0.63	0.31	4.9E-01
Orthophosphate (Dissolved)	28	0.021	0.027	0.043	0.071	0.094	0.169	0.432	0.085	0.078	9.1E-01
Phosphorus - Dissolved	57	0.025	0.029	0.037	0.065	0.098	0.179	0.502	0.085	0.078	9.2E-01
Phosphorus - Total	58	0.029	0.032	0.048	0.080	0.136	0.280	0.671	0.116	0.126	1.1E+00
Cyanide											
Cyanide (Free)	59	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	5.2E-16
Cyanide (Total)	58	0.0025	0.0025	0.0025	0.0025	0.0025	0.0081	0.0150	0.0031	0.0021	6.9E-01
Cyanide (WAD)	59	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0078	0.0027	0.0009	3.5E-01
Dissolved Metals											
Aluminum	61	0.0005	0.0005	0.0011	0.0016	0.0032	0.0125	0.0153	0.0028	0.0032	1.1E+00
Antimony	61	0.00005	0.00005	0.00005	0.00010	0.00015	0.00050	0.00125	0.00019	0.00025	1.3E+00
Arsenic	61	0.0010	0.0012	0.0015	0.0018	0.0024	0.0030	0.0032	0.0019	0.0006	3.0E-01
Barium	61	0.026	0.043	0.050	0.054	0.057	0.064	0.074	0.053	0.007	1.4E-01
Beryllium	61	0.000050	0.000050	0.000050	0.000050	0.000100	0.001000	0.002500	0.000294	0.000534	1.8E+00
Bismuth	58	0.00025	0.00025	0.00025	0.00025	0.00025	0.10000	0.10000	0.01918	0.03944	2.1E+00
Boron	61	0.029	0.035	0.045	0.050	0.073	0.090	0.098	0.057	0.018	3.1E-01
Cadmium	61	0.0000050	0.0000050	0.0000050	0.0000050	0.0000140	0.0000450	0.0002010	0.0000155	0.0000277	1.8E+00
Calcium	61	45	70	87	111	120	147	149	106	24	2.3E-01
Chromium	61	0.00005	0.00005	0.00011	0.00013	0.00022	0.00150	0.00900	0.00050	0.00123	2.4E+00
Cobalt	61	0.00010	0.00011	0.00015	0.00019	0.00027	0.00030	0.00075	0.00022	0.00012	5.3E-01
Copper	61	0.0010	0.0012	0.0018	0.0022	0.0026	0.0030	0.0049	0.0022	0.0007	3.2E-01
Iron	61	0.015	0.015	0.019	0.029	0.037	0.061	0.107	0.030	0.016	5.3E-01
Lead	61	0.000025	0.000025	0.000025	0.000025	0.000050	0.000500	0.001250	0.000147	0.000267	1.8E+00
Lithium	61	0.00307	0.00500	0.00649	0.00830	0.00900	0.01080	0.01250	0.00790	0.00203	2.6E-01
Magnesium	61	41	62	77	105	114	133	163	99	25	2.6E-01
Manganese	61	0.021	0.028	0.043	0.084	0.112	0.195	0.251	0.091	0.055	6.1E-01
Mercury	60	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000052	0.0000100	0.0000053	0.0000011	2.1E-01
Molybdenum	61	0.007	0.008	0.009	0.011	0.012	0.015	0.015	0.011	0.002	2.0E-01
Nickel	61	0.0017	0.0021	0.0025	0.0030	0.0040	0.0044	0.0058	0.0033	0.0009	2.8E-01
Phosphorus	58	0.03	0.03	0.06	0.15	0.15	0.18	0.53	0.12	0.08	6.9E-01
Potassium	61	13	15	17	19	21	23	27	19	3	1.5E-01
Selenium	61	0.00020	0.00022	0.00029	0.00058	0.00113	0.00250	0.00300	0.00090	0.00077	8.5E-01
Silicon	58	4.1	5.4	7.4	8.3	9.3	10.4	10.8	8.2	1.6	2.0E-01
Silver	61	0.0000050	0.0000050	0.0000050	0.0000050	0.0000100	0.0000200	0.0000500	0.0000091	0.0000093	1.0E+00
Sodium	61	29	46	62	93	104	117	154	86	25	2.9E-01
Strontium	58	0.37	0.58	0.75	1.01	1.10	1.31	1.47	0.95	0.24	2.5E-01
Sulphur	31	39	42	59	106	116	130	236	95	40	4.2E-01
Thallium	61	0.0000050	0.0000050	0.0000050	0.0000050	0.0000110	0.0002000	0.0005000	0.0000553	0.0001085	2.0E+00
Tin	61	0.000050	0.000050	0.000050	0.000050	0.000100	0.000500	0.001250	0.000167	0.000258	1.5E+00
Titanium	61	0.0050	0.0050	0.0050	0.0050	0.0050	0.0100	0.0130	0.0054	0.0016	2.9E-01
Uranium	61	0.0008	0.0011	0.0018	0.0025	0.0030	0.0035	0.0044	0.0024	0.0008	3.4E-01
Vanadium	61	0.0021	0.0022	0.0026	0.0029	0.0034	0.0039	0.0047	0.0030	0.0006	1.9E-01
Zinc	61	0.0005	0.0005	0.0010	0.0015	0.0025	0.0033	0.0050	0.0018	0.0010	5.7E-01
Total Metals											
Aluminum	61	0.0015	0.0139	0.0430	0.0810	0.2890	1.3600	3.4500	0.3121	0.5677	1.8E+00
Antimony	61	0.00005	0.00005	0.00010	0.00013	0.00020	0.00050	0.00125	0.00021	0.00024	1.1E+00
Arsenic	61	0.0009	0.0013	0.0015	0.0019	0.0025	0.0031	0.0040	0.0020	0.0006	3.2E-01
Barium	61	0.039	0.046	0.052	0.055	0.060	0.075	0.106	0.057	0.010	1.8E-01
Beryllium	61	0.000050	0.000050	0.000050	0.000050	0.000100	0.001000	0.002500	0.000294	0.000534	1.8E+00
Bismuth	58	0.00025	0.00025	0.00025	0.00025	0.00025	0.10000	0.10000	0.01918	0.03944	2.1E+00
Boron	61	0.031	0.039	0.050	0.051	0.081	0.095	0.105	0.062	0.020	3.2E-01
Cadmium	61	0.000005	0.000005	0.000005	0.000012	0.000020	0.000059	0.000183	0.000021	0.000027	1.3E+00
Calcium	61	44	68	85	110	120	144	150	105	24	2.3E-01
Chromium	61	0.00018	0.00024	0.00035	0.00083	0.00150	0.00367	0.01100	0.00125	0.00165	1.3E+00
Cobalt	61	0.00010	0.00016	0.00025	0.00030	0.00046	0.00137	0.00335	0.00047	0.00050	1.1E+00
Copper	61	0.0021	0.0023	0.0027	0.0033	0.0042	0.0099	0.0204	0.0042	0.0029	6.9E-01
Iron	61	0.02	0.07	0.10	0.18	0.41	1.87	4.88	0.46	0.77	1.7E+00
Lead	61	0.000025	0.000025	0.000025	0.000087	0.000250	0.000611	0.001280	0.000221	0.000296	1.3E+00
Lithium	61	0.0036	0.0050	0.0067	0.0082	0.0096	0.0107	0.0125	0.0080	0.0021	2.6E-01
Magnesium	61	41	59	78	105	114	137	160	99	26	2.7E-01
Manganese	61	0.04	0.05	0.08	0.11	0.14	0.28	0.62	0.13	0.09	7.2E-01
Mercury	60	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000100	0.0000250	0.0000056	0.0000028	5.0E-01
Molybdenum	61	0.007	0.009	0.009	0.011	0.013	0.015	0.016	0.011	0.002	1.9E-01
Nickel	61	0.0025	0.0028	0.0037	0.0042	0.0047	0.0082	0.0197	0.0047	0.0024	5.2E-01
Phosphorus	58	0.03	0.03	0.09	0.15	0.15	0.27	0.66	0.14	0.10	7.5E-01
Potassium	61	13	14	17	20	21	24	28	19	3	1.7E-01
Selenium	61	0.00020	0.00022	0.00030	0.00059	0.00109	0.00250	0.00300	0.00087	0.00073	8.4E-01
Silicon	58	4.7	6.2	7.9	8.9	10.1	12.0	16.1	9.0	1.9	2.1E-01
Silver	61	0.0000050	0.0000050	0.0000050	0.0000050	0.0000140	0.0000330	0.0000500	0.0000110	0.0000110	1.0E+00
Sodium	61	29	48	63	95	106	118	152	87	26	2.9E-01
Strontium	58	0.38	0.58	0.78	1.02	1.14	1.34	1.46	0.97	0.25	2.6E-01
Sulphur	31	38	42	61	111	120	134	242	97	42	4.3E-01
Thallium	61	0.0000050	0.0000050	0.0000050	0.0000050	0.0000100	0.0002000	0.0005000	0.0000551	0.0001085	2.0E+00
Tin	61	0.000050	0.000050	0.000050	0.000050	0.000100	0.000500	0.001250	0.000167	0.000258	1.5E+00
Titanium	61	0.0050	0.0050	0.0050	0.0050	0.0150	0.0550	0.1400	0.0165	0.0233	1.4E+00
Uranium	61	0.0008	0.0011	0.0018	0.0026	0.0031	0.0037	0.0046	0.0025	0.0008	3.3E-01
Vanadium	61	0.0021	0.0025	0.0031	0.0036	0.0042	0.0061	0.0134	0.0040	0.0017	4.2E-01
Zinc	61	0.0015	0.0015	0.0015	0.0025	0.0030	0.0074	0.0182	0.0028	0.0026	9.1E-01
Organics											
Carbon Organic (Dissolved)	61	5.9	6.5	7.3	8.7	12.7	16.5	18.1	10.2	3.4	3.4E-01
Carbon Organic (Total)	57	5.9	6.6	7.4	9.0	14.3	17.9	24.7	10.9	4.2	3.9E-01
Nitrogen Organic (Dissolved)	27	0.12	0.16	0.29	0.42	0.75	0.94	1.13	0.51	0.29	5.7E-01
Nitrogen Organic (Total)	31	0.13	0.23	0.36	0.46	0.71	1.12	1.65	0.55	0.32	5.9E-01

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.25 - PC02
(PAGE 2 OF 2)

Seasonal Statistics - PC02

Parameter	Count				Average				Min				Median				Max			
	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall
In Situ Parameters																				
Conductivity µS/cm	15	20	15	8	840	1071	888	1132	356	704	725	969	916	1078	873	1159	1124	1376	1118	1225
Oxygen Dissolved %	15	19	14	10	73	81	81	69	60.5	63.6	69	49	73.5	82.1	83	68	88	107	91	86
Oxygen Dissolved	15	19	14	10	9	10	8	8	1.15	6.77	7	6	9.43	9.83	8	7	12.4	12.3	10	9
pH (unitless)	15	19	15	11	8	8	8	8	7.3	7.14	8	7	7.79	7.78	8	8	8.21	8.35	9	8
Redox Potential mV	15	19	15	10	31	115	116	17	-61.3	-1.1	-102	-243	17.4	115	104	39	122	326	286	177
Salinity ppt	14	18	13	8	0.72	0.80	0.52	0.75	0.32	0.51	0.45	0.08	0.78	0.8	0.52	0.83	0.97	1.15	0.65	0.91
Specific Conductivity µS/cm	15	20	15	10	1446	1625	1118	1589	658	1025	902	1120	1592	1627.5	1049	1634	1925	2276	1666	1913
Temperature °C	15	20	15	11	3	8	16	10	0.39	1.07	13	6	3.05	7.505	16	11	5.5	15	22	13
Total Dissolved Solids	15	19	13	8	940	1043	683	1074	428	666	586	1013	1035	1050	679	1065	1251	1476	835	1163
Turbidity NTU	10	8	7	6	2	17	14	3	0	0.4	6	1	1.85	6.4	8	3	4.8	73.7	45	5
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	0	0	1	4	-	-	4	3.8	-	-	4	0.5	-	-	4	3.75	-	-	4	7.2
Alkalinity (Total as CaCO3)	15	20	15	11	405	398	352	449	160	286	283	396	447	411.5	346	449	481	448	428	475
Bicarbonate Alkalinity	13	14	11	10	401	390	336	448	160	286	272	390	447	398	336	454	481	448	408	475
Carbonate Alkalinity	13	14	11	10	0.96	3	12	1	0.5	0.5	1	1	1	1	11	1	1	18.9	28	6
Color TCU	11	15	9	9	13	14	31	9	6.1	6.3	22	8	7.3	8.7	32	10	63.6	43.7	37	10
Hardness as CaCO3 (Dissolved)	15	20	15	11	683	764	497	729	282	433	393	580	740	761	486	715	816	1040	654	821
Hydroxide Alkalinity	13	14	11	10	0.96	0.71	0.55	0.85	0.5	0.5	0.50	0.50	1	0.5	0.50	1.00	1	1	1.00	1.00
pH (unitless)	15	19	15	11	8	8	8	8	7.93	8.1	8	8	8.14	8.22	8	8	8.32	8.49	9	8
Specific Conductivity µS/cm	15	20	15	11	1505	1634	1089	1655	625	963	877	1320	1600	1655	1070	1610	1820	2230	1450	1900
Total Dissolved Solids	15	20	15	11	1039	1171	708	1147	421	628	553	876	1110	1155	699	1130	1320	1710	999	1320
Total Suspended Solids	15	20	15	11	8	24	22	6	1.5	1.5	8	2	4.5	4.25	14	7	61.4	245	63	17
Turbidity NTU	15	19	15	10	4	7	7	3	0.45	0.43	1	1	1.35	1.2	6	2	29	75.7	15	9
Dissolved Anions																				
Bromide	15	20	15	11	0.46	0.43	0.24	0.39	0.051	0.25	0.07	0.08	0.5	0.5	0.25	0.50	1.05	1.25	0.25	0.50
Chloride	15	20	15	11	105	104	65	112	27.8	63.3	56	83	118	108.5	63	113	137	142	84	129
Fluoride	15	20	15	11	0.18	0.22	0.30	0.31	0.1	0.1	0.23	0.20	0.2	0.2	0.27	0.24	0.4	0.45	0.42	0.67
Sulphate	15	20	15	11	349	438	184	374	141	157	121	255	362	424	183	361	438	775	324	476
Nutrients								-												
Ammonia (Total)	15	20	15	11	0.047	0.018	0.020	0.024	0.0159	0.0087	0.010	0.013	0.0244	0.01705	0.019	0.025	0.268	0.0344	0.036	0.041
Nitrate (as N)	15	20	15	11	0.64	0.39	0.060	0.098	0.18	0.025	0.025	0.050	0.6	0.375	0.060	0.104	1.18	0.96	0.149	0.167
Nitrite (as N)	15	20	15	11	0.011	0.0098	0.0054	0.0167	0.005	0.005	0.0011	0.0036	0.01	0.01	0.0050	0.0120	0.028	0.031	0.0150	0.0350
Nitrogen (Dissolved)	7	11	6	6	1.05	0.90	0.88	0.53	0.678	0.58	0.75	0.34	1.13	0.83	0.83	0.48	1.34	1.3	1.15	0.92
Nitrogen (Total)	9	15	8	7	1.03	0.96	0.91	0.52	0.49	0.46	0.82	0.43	0.956	0.87	0.87	0.50	1.52	1.81	1.14	0.60
Nitrogen Kjeldahl (Total)	15	20	15	11	0.59	0.61	0.85	0.45	0.35	0.05	0.62	0.37	0.475	0.4785	0.82	0.42	1.64	1.67	1.32	0.57
Orthophosphate (Dissolved)	7	7	9	5	0.10	0.072	0.101	0.049	0.0212	0.0277	0.073	0.033	0.0646	0.0553	0.093	0.043	0.432	0.178	0.152	0.084
Phosphorus - Dissolved	14	19	14	10	0.099	0.070	0.11	0.05	0.0246	0.03	0.06	0.03	0.0375	0.0646	0.11	0.05	0.502	0.198	0.17	0.09
Phosphorus - Total	14	20	15	9	0.13	0.12	0.14	0.06	0.0292	0.0318	0.08	0.04	0.05025	0.07775	0.14	0.06	0.671	0.648	0.22	0.08
Cyanide																				
Cyanide (Free)	15	19	14	11	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Cyanide (Total)	15	19	14	10	0.0033	0.0028	0.00362857	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.015	0.0086	0.0081	0.0025
Cyanide (WAD)	15	19	14	11	0.00282	0.0025	0.0025	0.00298182	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0073	0.0025	0.0025	0.0078
Dissolved Metals																				
Aluminum	15	20	15	11	0.0016	0.0044	0.0023	0.0024	0.0005	0.0005	0.0013	0.0005	0.0011	0.003	0.0019	0.0012	0.005	0.0153	0.0050	0.0125
Antimony	15	20	15	11	0.000087	0.00029	0.00015	0.00020	0.00005	0.00005	0.00005	0.00005	0.00005	0.000135	0.00012	0.00005	0.0005	0.00125	0.00050	0.00125
Arsenic	15	20	15	11	0.0014	0.0019	0.0026	0.0017	0.00115	0.001	0.0017	0.0013	0.00124	0.001875	0.0026	0.0016	0.0019	0.00303	0.0032	0.0024
Barium	15	20	15	11	0.050	0.057	0.049	0.058	0.0256	0.0437	0.042	0.051	0.053	0.05575	0.048	0.057	0.0625	0.074	0.056	0.064
Beryllium	15	20	15	11	0.00011	0.00046	0.00020	0.00036	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.001	0.0025	0.00100	0.00250
Bismuth	15	19	14	10	0.0069	0.032	0.022	0.010	0.00025	0.00025	0.000	0.000	0.00025	0.00025	0.000	0.000	0.1	0.1	0.100	0.100
Boron	15	20	15	11	0.063	0.050	0.045	0.079	0.029	0.035	0.032	0.050	0.073	0.05	0.046	0.085	0.079	0.072	0.057	0.098
Cadmium	15	20	15	11	0.00002	0.000019	0.000010	0.000010	0.000005	0.000005	0.000005	0.000005	0.000005	0.000013	0.000005	0.000005	0.000201	0.000064	0.000052	0.000043
Calcium	15	20	15	11	107	118	81	117	44.9	71.3	68	93	114	119	79	115	129	149	102	134
Chromium	15	20	15	11	0.00016	0.0010	0.00032	0.00041	0.00005	0.0001	0.00005	0.00005	0.00012	0.00021	0.00013	0.00012	0.001	0.009	0.00150	0.00250
Cobalt	15	20	15	11	0.00024	0.00022	0.00016	0.00027	0.00016	0.0001	0.00011	0.00017	0.00024	0.000165	0.00015	0.00023	0.0003	0.00075	0.00030	0.00075
Copper	15	20	15	11	0.0020	0.0025	0.0025	0.0016	0.001	0.002	0.0017	0.0010	0.00173	0.00246	0.0023	0.0017	0.00397	0.003	0.0049	0.0025
Iron	15	20	15	11	0.043	0.023	0.027	0.032	0.015	0.015	0.015	0.015	0.039	0.017	0.024	0.031	0.107	0.061	0.039	0.061
Lead	15	20	15	11	0.00006	0.00023	0.00010	0.00018	0.000025	0.000025	0.00003	0.00003	0.000025	0.000025	0.00003	0.00003	0.0005	0.00125	0.00050	0.00125
Lithium	15	20	15	11	0.0077	0.0075	0.0071	0.0100	0.00307	0.005	0.0050	0.0085	0.00853	0.00756	0.0072	0.0100	0.0108	0.0125	0.0087	0.0125
Magnesium	15	20	15	11	101.1	114.1	71.6	106.1	41.2	62.0	54.0	84.6	109.0	113.5	70.2	108.0	120.0	163.0	96.7	118.0
Manganese	15	20	15	11	0.103	0.075	0.046	0.163	0.0444	0.021	0.027	0.103	0.0932	0.07355	0.039	0.165	0.229	0.189	0.108	0.251
Mercury	15	19	15	11	0.0000050	0.0000053	0.0000053	0.0000055	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.00001	0.0000100	0.0000100
Molybdenum	15	20	15	11	0.0096	0.0116	0.0112	0.0106	0.00791	0.0081	0.0070	0.0082	0.00881	0.01215	0.0110	0.0104	0.0152	0.0147	0.0152	0.0121
Nickel	15	20	15	11	0.0036	0.0029	0.0025	0.0044	0.00218	0.0018	0.0017	0.0033	0.0039	0.00273	0.0027	0.0043	0.00424	0.0044	0.0032	0.0058
Phosphorus	15	19	14	10	0.12	0.13	0.13	0.09	0.025	0.025	0.06	0.03	0.079	0.15	0.14	0.08	0.528	0.19	0.18	0.15
Potassium	15	20	15	11	19	19	16	22	13.1	15	14	19	19.8	19.45	16	22	25.3	26.6	20	23
Selenium	15	20	15	11	0.00079	0.00155	0.00043	0.00052	0.00022	0.00039	0.00023	0.00020	0.00073	0.001535	0.00030	0.00026	0.0015	0.003	0.00110	0.00250
Silicon	15	19	14	10	8.38	7.57	7.29	10.17	4.5	5.04	4.06	9.79	8.93	7.84	7.37	10.20	9.76	8.71	10.80	10.50
Silver	15	20	15	11	0.000006	0.000012	0.000007	0.000010	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.00002	0.00005	0.000020	0.000050
Sodium	15	20	15	11	89	96	60	102	29.3	49.7	42	80	96.9	96.15	59	103	122	154	84	114
Strontium	15	19	14	10	0.98	1.06	0.68	1.06	0.372	0.641	0.51	0.81	1.03	1.07	0.69	1.06	1.35	1.47	0.85	1.20
Sulphur	10	7	9	5	105	121	56	108	46.9	50.6	39	83	112	117	57	114	123	236	90	122
Thallium	15	20	15	11	0.000019	0.000089	0.000037	0.000068	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.0002	0.0005	0.000200	0.000500
Tin	15	20	15	11	0.00008	0.00025	0.00012	0.00020	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.0005	0.00125	0.00050	0.00125
Titanium	15	20	15	11	0.0059	0.0053	0.0050	0.0055	0.005	0.005	0.0050	0.0050	0.005	0.005	0.0050	0.0050	0.013	0.011	0.0050	0.0100
Uranium	15	20	15	11	0.0025	0.0029	0.0014	0.0027	0.000916	0.00154	0.0008	0.0019	0.00271	0.003095	0.0014	0.0026	0.00311	0.00439	0.0023	0.0035
Vanadium	15	20	15	11	0.0026	0.0035	0.0028	0.0028	0.0021	0.0025	0.0022	0.0021	0.0026	0.00345	0.0028	0.0027	0.0035	0.0047	0.0037	0.0036
Zinc	15	20	15	11	0.0017	0.0022	0.0018	0.0012	0.0005	0.0011	0.0005	0.0005	0.0015	0.0025	0.0014	0.0005	0.005	0.0037	0.0037	0.0025
Total Metals																				
Aluminum	15	20	15	11	0.16	0.46	0.37	0.16	0.0139	0.0015	0.10	0.02	0.0562	0.0753	0.29	0.07	1.36	3.45	1.05	0.61
Antimony	15	20	15	11	0.0001	0.00031	0.00017	0.00023	0.00005	0.0001	0.00005	0.00005	0.00005	0.00018	0.00014	0.00011	0.0005	0.00125	0.00050	0.00125
Arsenic	15	20	15	11	0.0015	0.0020	0.0026	0.0017	0.00123	0.0009	0.0018	0.0013	0.00133	0.00185	0.0025	0.0017	0.0022	0.004	0.0036	0.0024
Barium	15	20	15	11	0.052	0.063	0.053	0.059	0.039	0.0506	0.045	0.053	0.0528	0.0591	0.053	0.058	0.0606	0.106	0.065	0.067
Beryllium	15	20	15	11	0.00011	0.00046	0.00020	0.00036	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.001	0.0025	0.00100	0.00250
Bismuth	15	19	14	10	0.0069	0.03177632	0.021625	0.010225	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.1	0.1	0.1	0.1
Boron	15	20	15	11	0.069	0.054	0.048	0.089	0.031	0.037	0.033	0.050	0.08	0.05	0.050	0.093	0.085	0.079	0.060	0.105
Cadmium	15	20	15	11	0.00002	0.000028	0.000013	0.000017	0.000005	0.000005	0.000005	0.000005	0.000011	0.000017	0.000010	0.000012	0.000183	0.000072	0.000058	0.000046
Calcium	15	20	15	11	107	117	79	117	44.3	69.4	64	92	114	116	80	114	127	150	100	139
Chromium	15	20	15	11	0.00065	0.0018	0.0013	0.0009	0.00021	0.00022	0.0005	0.0002	0.00034	0.001	0.0011	0.0006	0.0037	0.011	0.0030	0.0025
Cobalt	15	20	15	11	0.00035	0.00060	0.00047	0.00039	0.00019	0.0001	0.00024	0.00021	0.00029	0.0003	0.00040	0.00030	0.0014	0.0034	0.00093	0.00075
Copper	15	20	15	11	0.0036	0.0050	0.0044	0.0034	0.00207	0.00221	0.0029	0.0022	0.00278	0.003245	0.0041	0.0031	0.0111	0.0204	0.0072	0.0070
Iron	15	20	15	11	0.27	0.66	0.52	0.28	0.078	0.02	0.16	0.09	0.126	0.1275	0.41	0.16	1.87	4.88	1.32	0.90
Lead	15	20	15	11	0.00010	0.00035	0.00018	0.00022	0.000025	0.000025	0.00003	0.00003	0.000025	0.00021	0.00013	0.00007	0.00050	0.0013	0.00050	0.00125
Lithium	15	20	15	11	0.0080	0.0077	0.0069	0.0102	0.0036	0.005	0.0050	0.0082	0.00884	0.00769	0.0069	0.0102	0.0106	0.0125	0.0087	0.0125
Magnesium	15	20	15	11	101	114	71	106	40.5	59.1	52	84	109	115.5	71	105	125	160	94	122
Manganese	15	20	15	11	0.12	0.14	0.10	0.18	0.0488	0.0353	0.07	0.12	0.102	0.09245	0.09	0.18	0.237	0.62	0.21	0.28
Mercury	15	19	15	11	0.0000063	0.0000053	0.0000053	0.0000055	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000025	0.00001	0.0000100	0.0000100
Molybdenum	15	20	15	11	0.010	0.012	0.012	0.011	0.00833	0.0086	0.007	0.009	0.00934	0.01255	0.011	0.011	0.0162	0.0144	0.016	0.013
Nickel	15	20	15	11	0.0043	0.0051	0.0042	0.0050	0.0028	0.0025	0.0031	0.0040	0.0043	0.0040	0.0041	0.0047	0.0082	0.0197	0.0066	0.0069
Phosphorus	15	19	14	10	0.14	0.15	0.14	0.10	0.025	0.025	0.09	0.03	0.083	0.15	0.15	0.10	0.661	0.38	0.25	0.15
Potassium	15	20	15	11	19.4	19.4	16.2	21.6	12.7	14.5	13.4	18.6	19.7	19.5	16.2	22.0	24.4	27.7	20.3	23.9
Selenium	15	20	15	11	0.00077	0.00149	0.00039	0.00053	0.00021	0.00038	0.00024	0.00020	0.00068	0.0015	0.00033	0.00026	0.0015	0.0030	0.00100	0.00250
Silicon	15	19	14	10	8.9	8.8	8.3	10.8	6.7	6.1	4.7	9.8	9.2	8.4	8.0	10.4	10.3	16.1	12.4	13.3
Silver	15	20	15	11	0.0000069	0.0000161	0.0000070	0.0000125	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000012	0.0000050	0.0000050	0.00002	0.00005	0.0000200	0.0000500
Sodium	15	20	15	11	90	96	60	103	28.7	48.6	42	81	100	98.4	60	104	118	152	83	117
Strontium	15	19	14	10	1.0	1.1	0.69	1.09	0.38	0.63	0.49	0.83	1.07	1.1	0.68	1.11	1.3	1.5	0.88	1.23
Sulphur	10	7	9	5	109	121	57	113	45.5	50.1	38	84	117	117	56	121	127	242	92	127
Thallium	15	20	15	11	0.00002	0.00009	0.00004	0.00007	0.000005	0.000005	0.00001	0.00001	0.000005	0.0000075	0.00001	0.00001	0.0002	0.0005	0.00020	0.00050
Tin	15	20	15	11	0.00008	0.00025	0.00012	0.00020	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.0005	0.00125	0.00050	0.00125
Titanium	15	20	15	11	0.01	0.024	0.018	0.010	0.005	0.005	0.005	0.005	0.005	0.0105	0.015	0.005	0.051	0.14	0.055	0.029
Uranium	15	20	15	11	0.0026	0.0031	0.0015	0.0028	0.0010	0.0016	0.0008	0.0020	0.0028	0.0033	0.0015	0.0027	0.0032	0.0046	0.0024	0.0036
Vanadium	15	20	15	11	0.0032	0.0048	0.0040	0.0034	0.0023	0.0025	0.0031	0.0021	0.003	0.004	0.0036	0.0033	0.0061	0.0134	0.0061	0.0051
Zinc	15	20	15	11	0.0023	0.0038	0.0027	0.0020	0.0015	0.0015	0.0015	0.0015	0.0015	0.0025	0.0025	0.0015	0.0074	0.0182	0.0051	0.0035
Organics																				
Carbon Organic (Dissolved)	15	20	15	11	8.6	9.6	14	9	7	5.9	7	6	7.6	8.0	14	8	17	17	18	12
Carbon Organic (Total)	14	19	14	10	8.9	10	15	9	6.9	5.9	12	8	7.5	8.3	15	9	20	25	19	11
Nitrogen Organic (Dissolved)	5	11	5	6	0.39	0.46	0.83	0.43	0.12	0.19	0.61	0.15	0.31	0.42	0.74	0.38	0.86	0.93	1.13	0.87
Nitrogen Organic (Total)	8	12	5	6	0.45	0.56	0.87	0.39	0.13	0.30	0.71	0.17	0.40	0.42	0.81	0.39	1.12	1.7	1.12	0.54

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.
2. SEASONS ARE SPECIFIED AS FOLLOWS: WIN (WINTER; DECEMBER THROUGH MARCH), SPR (SPRING; APRIL AND MAY), SUMMER(JUNE THROUGH AUGUST), FALL (SEPTEMBER THROUGH NOVEMBER).

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.26 - PC02.3
(PAGE 1 OF 2)

Parameter	Total Count	Complete Dataset - PC02.3									
		Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	7	695	699	724	751	779	888	933	769	79	1.0E-01
Oxygen Dissolved %	7	80	82	88	89	93	97	98	90	6	6.7E-02
Oxygen Dissolved	7	7.7	7.9	8.2	8.6	9.1	10.4	10.9	8.8	1.0	1.2E-01
pH (unitless)	8	8.2	8.3	8.4	8.4	8.5	8.7	8.7	8.5	0.2	1.9E-02
Redox Potential mV	7	45	57	86	96	128	148	154	103	36	3.5E-01
Salinity ppt	7	0.41	0.41	0.43	0.43	0.49	0.54	0.55	0.46	0.05	1.2E-01
Specific Conductivity µS/cm	7	827	833	862	875	989	1080	1096	928	103	1.1E-01
Temperature °C	8	10.3	11.0	14.4	16.7	17.5	18.8	19.0	15.7	3.0	1.9E-01
Total Dissolved Solids	7	537	541	560	569	643	703	713	603	67	1.1E-01
Turbidity NTU	0	-	-	-	-	-	-	-	-	-	-
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	0	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	8	279	280	296	393	404	433	449	363	65	1.8E-01
Bicarbonate Alkalinity	8	265	267	282	366	375	410	428	342	60	1.8E-01
Carbonate Alkalinity	8	8.3	10.9	16.2	23.0	27.1	29.1	30.1	21.3	7.5	3.5E-01
Color TCU	0	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	8	369	371	395	452	473	517	527	442	57	1.3E-01
Hydroxide Alkalinity	8	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0E+00
pH (unitless)	8	8.4	8.4	8.5	8.5	8.5	8.5	8.6	8.5	0.1	5.9E-03
Specific Conductivity µS/cm	8	799	815	853	983	1030	1073	1080	953	108	1.1E-01
Total Dissolved Solids	8	498	517	573	629	682	848	911	650	127	2.0E-01
Total Suspended Solids	8	3.0	3.4	5.2	8.2	11.7	15.7	17.8	8.8	4.9	5.5E-01
Turbidity NTU	8	0.8	0.9	1.4	2.9	3.6	5.2	5.5	2.8	1.7	5.9E-01
Dissolved Anions											
Bromide	8	0.13	0.17	0.25	0.25	0.25	0.25	0.25	0.23	0.04	1.9E-01
Chloride	8	49	50	52	55	57	59	60	55	3	6.4E-02
Fluoride	8	0.22	0.23	0.25	0.27	0.27	0.38	0.44	0.28	0.07	2.4E-01
Sulphate	8	81	83	103	114	128	150	160	115	25	2.2E-01
Nutrients											
Ammonia (Total)	8	0.010	0.011	0.017	0.020	0.021	0.026	0.028	0.019	0.005	2.8E-01
Nitrate (as N)	8	0.013	0.02	0.03	0.03	0.14	0.16	0.18	0.07	0.067	9.6E-01
Nitrite (as N)	8	0.0025	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.0024	4.4E-01
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	8	0.62	0.67	0.78	0.91	1.05	1.14	1.16	0.91	0.18	2.0E-01
Orthophosphate (Dissolved)	8	0.032	0.034	0.071	0.092	0.104	0.107	0.108	0.082	0.030	3.7E-01
Phosphorus - Dissolved	8	0.043	0.046	0.086	0.112	0.123	0.140	0.148	0.101	0.037	3.6E-01
Phosphorus - Total	8	0.057	0.063	0.089	0.129	0.138	0.154	0.161	0.115	0.036	3.1E-01
Cyanide											
Cyanide (Free)	8	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Cyanide (Total)	8	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Cyanide (WAD)	8	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Dissolved Metals											
Aluminum	8	0.0015	0.0015	0.0017	0.0019	0.0027	0.0055	0.0069	0.0026	0.0018	6.8E-01
Antimony	8	0.00005	0.00005	0.00005	0.00008	0.00013	0.00014	0.00014	0.00009	0.00004	4.8E-01
Arsenic	8	0.0016	0.0016	0.0020	0.0021	0.0022	0.0024	0.0025	0.0021	0.0003	1.4E-01
Barium	8	0.049	0.050	0.051	0.052	0.053	0.057	0.060	0.053	0.003	6.0E-02
Beryllium	8	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	1.4E-16
Bismuth	8	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00000	0.0E+00
Boron	8	0.029	0.029	0.032	0.033	0.035	0.039	0.040	0.034	0.004	1.0E-01
Cadmium	8	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Calcium	8	65	66	69	73	79	83	84	74	7	9.1E-02
Chromium	8	0.00005	0.00007	0.00012	0.00012	0.00013	0.00013	0.00013	0.00011	0.00003	2.3E-01
Cobalt	8	0.00005	0.00007	0.00010	0.00013	0.00014	0.00014	0.00014	0.00012	0.00003	2.7E-01
Copper	8	0.0021	0.0021	0.0022	0.0024	0.0025	0.0030	0.0033	0.0024	0.0004	1.6E-01
Iron	8	0.012	0.013	0.017	0.020	0.025	0.026	0.026	0.020	0.005	2.6E-01
Lead	8	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000000	1.4E-16
Lithium	8	0.00532	0.00542	0.00638	0.00673	0.00739	0.00819	0.00845	0.00681	0.00103	1.5E-01
Magnesium	8	50	50	54	65	67	75	77	62	10	1.6E-01
Manganese	8	0.008	0.008	0.009	0.010	0.021	0.032	0.034	0.016	0.010	6.5E-01
Mercury	8	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Molybdenum	8	0.009	0.009	0.010	0.014	0.016	0.019	0.019	0.014	0.004	2.9E-01
Nickel	8	0.0017	0.0017	0.0018	0.0021	0.0022	0.0024	0.0025	0.0021	0.0003	1.4E-01
Phosphorus	8	0.03	0.03	0.09	0.11	0.12	0.12	0.13	0.09	0.04	3.8E-01
Potassium	8	12	12	13	16	17	18	19	15	2	1.6E-01
Selenium	8	0.00018	0.00018	0.00020	0.00021	0.00028	0.00036	0.00038	0.00024	0.00007	3.0E-01
Silicon	8	4.3	4.5	6.6	8.1	9.0	10.4	10.8	7.7	2.2	2.9E-01
Silver	8	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Sodium	8	39	40	44	52	54	56	57	49	7	1.3E-01
Strontium	8	0.47	0.48	0.52	0.60	0.64	0.70	0.71	0.59	0.08	1.4E-01
Sulphur	8	27	28	34	37	42	49	52	38	8	2.0E-01
Thallium	8	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Tin	8	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	1.4E-16
Titanium	8	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0000	0.0E+00
Uranium	8	0.0011	0.0011	0.0011	0.0012	0.0013	0.0016	0.0018	0.0012	0.0002	1.8E-01
Vanadium	8	0.0020	0.0021	0.0025	0.0027	0.0028	0.0030	0.0030	0.0026	0.0003	1.2E-01
Zinc	8	0.0005	0.0005	0.0005	0.0005	0.0005	0.0010	0.0013	0.0006	0.0003	4.7E-01
Total Metals											
Aluminum	8	0.0410	0.0481	0.0770	0.1620	0.2455	0.3213	0.3290	0.1712	0.1104	6.4E-01
Antimony	8	0.00005	0.00007	0.00011	0.00013	0.00014	0.00016	0.00017	0.00012	0.00004	3.0E-01
Arsenic	8	0.0017	0.0017	0.0020	0.0022	0.0022	0.0023	0.0023	0.0021	0.0003	1.2E-01
Barium	8	0.049	0.050	0.051	0.053	0.055	0.060	0.062	0.054	0.004	7.4E-02
Beryllium	8	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	1.4E-16
Bismuth	8	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00000	0.0E+00
Boron	8	0.031	0.032	0.035	0.036	0.039	0.045	0.047	0.037	0.005	1.3E-01
Cadmium	8	0.000005	0.000005	0.000005	0.000005	0.000005	0.000010	0.000012	0.000006	0.000002	4.2E-01
Calcium	8	62	63	67	72	79	82	83	72	7	1.0E-01
Chromium	8	0.00030	0.00030	0.00038	0.00048	0.00062	0.00077	0.00080	0.00051	0.00018	3.6E-01
Cobalt	8	0.00013	0.00015	0.00021	0.00027	0.00032	0.00038	0.00040	0.00027	0.00009	3.2E-01
Copper	8	0.0027	0.0028	0.0032	0.0039	0.0044	0.0055	0.0059	0.0040	0.0010	2.5E-01
Iron	8	0.07	0.09	0.13	0.25	0.38	0.45	0.48	0.26	0.15	5.8E-01
Lead	8	0.000025	0.000025	0.000025	0.000055	0.000074	0.000100	0.000102	0.000056	0.000031	5.5E-01
Lithium	8	0.0054	0.0055	0.0063	0.0068	0.0073	0.0077	0.0079	0.0067	0.0008	1.2E-01
Magnesium	8	48	48	51	64	67	74	75	61	10	1.7E-01
Manganese	8	0.02	0.02	0.03	0.04	0.05	0.06	0.07	0.04	0.01	3.5E-01
Mercury	8	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Molybdenum	8	0.010	0.010	0.010	0.014	0.017	0.020	0.020	0.014	0.004	3.0E-01
Nickel	8	0.0022	0.0023	0.0025	0.0027	0.0027	0.0028	0.0028	0.0026	0.0002	7.4E-02
Phosphorus	8	0.07	0.07	0.10	0.12	0.13	0.14	0.14	0.11	0.03	2.3E-01
Potassium	8	12	12	12	15	17	18	18	15	2	1.7E-01
Selenium	8	0.00018	0.00018	0.00021	0.00024	0.00025	0.00033	0.00037	0.00024	0.00006	2.5E-01
Silicon	8	4.6	4.9	6.8	8.3	9.6	10.5	10.9	8.0	2.2	2.7E-01
Silver	8	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Sodium	8	39	40	43	51	55	59	60	50	8	1.5E-01
Strontium	8	0.45	0.46	0.51	0.61	0.64	0.71	0.74	0.59	0.10	1.6E-01
Sulphur	8	27	28	33	37	43	50	54	38	9	2.2E-01
Thallium	8	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Tin	8	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	1.4E-16
Titanium	8	0.0050	0.0050	0.0050	0.0050	0.0115	0.0130	0.0130	0.0078	0.0038	5.0E-01
Uranium	8	0.0011	0.0011	0.0012	0.0012	0.0014	0.0016	0.0017	0.0013	0.0002	1.6E-01
Vanadium	8	0.0026	0.0027	0.0031	0.0033	0.0034	0.0038	0.0040	0.0033	0.0004	1.3E-01
Zinc	8	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0000	1.5E-16
Organics											
Carbon Organic (Dissolved)	8	11.9	12.3	13.1	15.0	17.0	17.2	17.2	14.9	2.1	1.4E-01
Carbon Organic (Total)	8	12.1	12.5	13.5	15.1	16.8	17.1	17.1	15.0	1.9	1.3E-01
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.26 - PC02.3
(PAGE 2 OF 2)

Seasonal Statistics - PC02.3

Parameter	Count				Average				Min				Median				Max			
	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall
In Situ Parameters																				
Conductivity µS/cm	0	0	6	1	-	-	772	751	-	-	695	751	-	-	757	751	-	-	933	751
Oxygen Dissolved %	0	0	6	1	-	-	88	98	-	-	80	98	-	-	89	98	-	-	96	98
Oxygen Dissolved	0	0	6	1	-	-	9	11	-	-	8	11	-	-	8	11	-	-	9	11
pH (unitless)	0	0	6	2	-	-	8	8	-	-	8	8	-	-	8	8	-	-	9	9
Redox Potential mV	0	0	6	1	-	-	106	85	-	-	45	85	-	-	109	85	-	-	154	85
Salinity ppt	0	0	6	1	-	-	0.45	0.52	-	-	0.41	0.52	-	-	0.43	0.52	-	-	0.55	0.52
Specific Conductivity µS/cm	0	0	6	1	-	-	909	1044	-	-	827	1044	-	-	875	1044	-	-	1096	1044
Temperature °C	0	0	6	2	-	-	17	11	-	-	15	10	-	-	17	11	-	-	19	12
Total Dissolved Solids	0	0	6	1	-	-	591	678	-	-	537	678	-	-	569	678	-	-	713	678
Turbidity NTU	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	0	0	6	2	-	-	352	397	-	-	279	390	-	-	348	397	-	-	449	404
Bicarbonate Alkalinity	0	0	6	2	-	-	332	369	-	-	265	364	-	-	327	369	-	-	428	374
Carbonate Alkalinity	0	0	6	2	-	-	19	28	-	-	8	25	-	-	18	28	-	-	27	30
Color TCU	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	0	0	6	2	-	-	430	481	-	-	369	465	-	-	424	481	-	-	527	497
Hydroxide Alkalinity	0	0	6	2	-	-	0.50	0.50	-	-	0.50	0.50	-	-	0.50	0.50	-	-	0.50	0.50
pH (unitless)	0	0	6	2	-	-	8	9	-	-	8	9	-	-	8	9	-	-	9	9
Specific Conductivity µS/cm	0	0	6	2	-	-	921	1050	-	-	799	1020	-	-	900	1050	-	-	1060	1080
Total Dissolved Solids	0	0	6	2	-	-	633	699	-	-	498	665	-	-	599	699	-	-	911	732
Total Suspended Solids	0	0	6	2	-	-	11	4	-	-	6	3	-	-	10	4	-	-	18	4
Turbidity NTU	0	0	6	2	-	-	3	1	-	-	1	1	-	-	3	1	-	-	6	1
Dissolved Anions																				
Bromide	0	0	6	2	-	-	0.23	0.25	-	-	0.13	0.25	-	-	0.25	0.25	-	-	0.25	0.25
Chloride	0	0	6	2	-	-	54	57	-	-	49	57	-	-	53	57	-	-	60	58
Fluoride	0	0	6	2	-	-	0.29	0.26	-	-	0.22	0.25	-	-	0.27	0.26	-	-	0.44	0.27
Sulphate	0	0	6	2	-	-	106	144	-	-	81	127	-	-	109	144	-	-	130	160
Nutrients								-												
Ammonia (Total)	0	0	6	2	-	-	0.020	0.017	-	-	0.010	0.014	-	-	0.020	0.017	-	-	0.028	0.020
Nitrate (as N)	0	0	6	2	-	-	0.042	0.157	-	-	0.013	0.137	-	-	0.025	0.157	-	-	0.137	0.177
Nitrite (as N)	0	0	6	2	-	-	0.0046	0.0080	-	-	0.0025	0.0050	-	-	0.0050	0.0080	-	-	0.0050	0.0110
Nitrogen (Dissolved)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	0	0	6	2	-	-	0.98	0.70	-	-	0.78	0.62	-	-	1.00	0.70	-	-	1.16	0.78
Orthophosphate (Dissolved)	0	0	6	2	-	-	0.074	0.105	-	-	0.032	0.104	-	-	0.083	0.105	-	-	0.108	0.105
Phosphorus - Dissolved	0	0	6	2	-	-	0.09	0.14	-	-	0.04	0.12	-	-	0.10	0.14	-	-	0.12	0.15
Phosphorus - Total	0	0	6	2	-	-	0.11	0.13	-	-	0.06	0.09	-	-	0.13	0.13	-	-	0.14	0.16
Cyanide																				
Cyanide (Free)	0	0	6	2	-	-	0.0025	0.0025	-	-	0.0025	0.0025	-	-	0.0025	0.0025	-	-	0.0025	0.0025
Cyanide (Total)	0	0	6	2	-	-	0.0025	0.0025	-	-	0.0025	0.0025	-	-	0.0025	0.0025	-	-	0.0025	0.0025
Cyanide (WAD)	0	0	6	2	-	-	0.0025	0.0025	-	-	0.0025	0.0025	-	-	0.0025	0.0025	-	-	0.0025	0.0025
Dissolved Metals																				
Aluminum	0	0	6	2	-	-	0.0029	0.0018	-	-	0.0016	0.0015	-	-	0.0022	0.0018	-	-	0.0069	0.0020
Antimony	0	0	6	2	-	-	0.00010	0.00005	-	-	0.00005	0.00005	-	-	0.00012	0.00005	-	-	0.00014	0.00005
Arsenic	0	0	6	2	-	-	0.0021	0.0021	-	-	0.0016	0.0020	-	-	0.0022	0.0021	-	-	0.0025	0.0021
Barium	0	0	6	2	-	-	0.053	0.052	-	-	0.049	0.052	-	-	0.052	0.052	-	-	0.060	0.053
Beryllium	0	0	6	2	-	-	0.00005	0.00005	-	-	0.00005	0.00005	-	-	0.00005	0.00005	-	-	0.00005	0.00005
Bismuth	0	0	6	2	-	-	0.000	0.000	-	-	0.000	0.000	-	-	0.000	0.000	-	-	0.000	0.000
Boron	0	0	6	2	-	-	0.034	0.034	-	-	0.029	0.032	-	-	0.033	0.034	-	-	0.040	0.035
Cadmium	0	0	6	2	-	-	0.000005	0.000005	-	-	0.000005	0.000005	-	-	0.000005	0.000005	-	-	0.000005	0.000005
Calcium	0	0	6	2	-	-	72	80	-	-	65	78	-	-	71	80	-	-	84	82
Chromium	0	0	6	2	-	-	0.00011	0.00013	-	-	0.00005	0.00012	-	-	0.00012	0.00013	-	-	0.00013	0.00013
Cobalt	0	0	6	2	-	-	0.00012	0.00010	-	-	0.00010	0.00005	-	-	0.00013	0.00010	-	-	0.00014	0.00014
Copper	0	0	6	2	-	-	0.0025	0.0023	-	-	0.0022	0.0021	-	-	0.0024	0.0023	-	-	0.0033	0.0025
Iron	0	0	6	2	-	-	0.021	0.020	-	-	0.012	0.017	-	-	0.022	0.020	-	-	0.026	0.022
Lead	0	0	6	2	-	-	0.00003	0.00003	-	-	0.00003	0.00003	-	-	0.00003	0.00003	-	-	0.00003	0.00003
Lithium	0	0	6	2	-	-	0.0067	0.0072	-	-	0.0053	0.0066	-	-	0.0067	0.0072	-	-	0.0085	0.0077
Magnesium	0	0	6	2	-	-	60.5	68.2	-	-	49.8	65.6	-	-	59.9	68.2	-	-	77.2	70.8
Manganese	0	0	6	2	-	-	0.011	0.031	-	-	0.008	0.029	-	-	0.009	0.031	-	-	0.018	0.034
Mercury	0	0	6	2	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050
Molybdenum	0	0	6	2	-	-	0.0125	0.0167	-	-	0.0092	0.0149	-	-	0.0111	0.0167	-	-	0.0192	0.0184
Nickel	0	0	6	2	-	-	0.0020	0.0022	-	-	0.0017	0.0022	-	-	0.0020	0.0022	-	-	0.0025	0.0023
Phosphorus	0	0	6	2	-	-	0.09	0.11	-	-	0.03	0.11	-	-	0.10	0.11	-	-	0.13	0.12
Potassium	0	0	6	2	-	-	15	16	-	-	12	16	-	-	14	16	-	-	19	16
Selenium	0	0	6	2	-	-	0.00026	0.00018	-	-	0.00020	0.00018	-	-	0.00025	0.00018	-	-	0.00038	0.00018
Silicon	0	0	6	2	-	-	6.90	10.22	-	-	4.33	9.64	-	-	7.58	10.22	-	-	8.79	10.80
Silver	0	0	6	2	-	-	0.000005	0.000005	-	-	0.000005	0.000005	-	-	0.000005	0.000005	-	-	0.000005	0.000005
Sodium	0	0	6	2	-	-	47	55	-	-	39	54	-	-	47	55	-	-	55	57
Strontium	0	0	6	2	-	-	0.56	0.66	-	-	0.47	0.61	-	-	0.56	0.66	-	-	0.67	0.71
Sulphur	0	0	6	2	-	-	35	47	-	-	27	41	-	-	35	47	-	-	43	52
Thallium	0	0	6	2	-	-	0.000005	0.000005	-	-	0.000005	0.000005	-	-	0.000005	0.000005	-	-	0.000005	0.000005
Tin	0	0	6	2	-	-	0.00005	0.00005	-	-	0.00005	0.00005	-	-	0.00005	0.00005	-	-	0.00005	0.00005
Titanium	0	0	6	2	-	-	0.0050	0.0050	-	-	0.0050	0.0050	-	-	0.0050	0.0050	-	-	0.0050	0.0050
Uranium	0	0	6	2	-	-	0.0013	0.0012	-	-	0.0011	0.0011	-	-	0.0012	0.0012	-	-	0.0018	0.0013
Vanadium	0	0	6	2	-	-	0.0027	0.0025	-	-	0.0020	0.0024	-	-	0.0028	0.0025	-	-	0.0030	0.0026
Zinc	0	0	6	2	-	-	0.0006	0.0005	-	-	0.0005	0.0005	-	-	0.0005	0.0005	-	-	0.0013	0.0005
Total Metals																				
Aluminum	0	0	6	2	-	-	0.21	0.05	-	-	0.08	0.04	-	-	0.21	0.05	-	-	0.33	0.06
Antimony	0	0	6	2	-	-	0.00014	0.00008	-	-	0.00011	0.00005	-	-	0.00014	0.00008	-	-	0.00017	0.00010
Arsenic	0	0	6	2	-	-	0.0021	0.0021	-	-	0.0017	0.0020	-	-	0.0022	0.0021	-	-	0.0023	0.0022
Barium	0	0	6	2	-	-	0.054	0.054	-	-	0.049	0.053	-	-	0.053	0.054	-	-	0.062	0.055
Beryllium	0	0	6	2	-	-	0.00005	0.00005	-	-	0.00005	0.00005	-	-	0.00005	0.00005	-	-	0.00005	0.00005
Bismuth	0	0	6	2	-	-	0.00025	0.00025	-	-	0.00025	0.00025	-	-	0.00025	0.00025	-	-	0.00025	0.00025
Boron	0	0	6	2	-	-	0.037	0.038	-	-	0.031	0.036	-	-	0.036	0.038	-	-	0.047	0.040
Cadmium	0	0	6	2	-	-	0.000006	0.000005	-	-	0.000005	0.000005	-	-	0.000005	0.000005	-	-	0.000012	0.000005
Calcium	0	0	6	2	-	-	70	80	-	-	62	78	-	-	69	80	-	-	80	83
Chromium	0	0	6	2	-	-	0.0006	0.0004	-	-	0.0003	0.0003	-	-	0.0006	0.0004	-	-	0.0008	0.0004
Cobalt	0	0	6	2	-	-	0.00030	0.00017	-	-	0.00021	0.00013	-	-	0.00030	0.00017	-	-	0.00040	0.00020
Copper	0	0	6	2	-	-	0.0043	0.0029	-	-	0.0033	0.0027	-	-	0.0042	0.0029	-	-	0.0059	0.0031
Iron	0	0	6	2	-	-	0.31	0.09	-	-	0.13	0.07	-	-	0.32	0.09	-	-	0.48	0.11
Lead	0	0	6	2	-	-	0.00007	0.00003	-	-	0.00003	0.00003	-	-	0.00006	0.00003	-	-	0.00010	0.00003
Lithium	0	0	6	2	-	-	0.0066	0.0072	-	-	0.0054	0.0065	-	-	0.0068	0.0072	-	-	0.0074	0.0079
Magnesium	0	0	6	2	-	-	59	69	-	-	48	66	-	-	57	69	-	-	75	72
Manganese	0	0	6	2	-	-	0.04	0.04	-	-	0.02	0.04	-	-	0.04	0.04	-	-	0.07	0.05
Mercury	0	0	6	2	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050
Molybdenum	0	0	6	2	-	-	0.013	0.018	-	-	0.010	0.016	-	-	0.011	0.018	-	-	0.019	0.020
Nickel	0	0	6	2	-	-	0.0026	0.0026	-	-	0.0022	0.0025	-	-	0.0027	0.0026	-	-	0.0028	0.0027
Phosphorus	0	0	6	2	-	-	0.11	0.12	-	-	0.07	0.11	-	-	0.11	0.12	-	-	0.14	0.13
Potassium	0	0	6	2	-	-	14.3	16.1	-	-	11.5	15.9	-	-	13.7	16.1	-	-	17.7	16.3
Selenium	0	0	6	2	-	-	0.00026	0.00018	-	-	0.00022	0.00018	-	-	0.00024	0.00018	-	-	0.00037	0.00018
Silicon	0	0	6	2	-	-	7.2	10.3	-	-	4.6	9.7	-	-	7.7	10.3	-	-	9.5	10.9
Silver	0	0	6	2	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050
Sodium	0	0	6	2	-	-	47	57	-	-	39	54	-	-	46	57	-	-	57	60
Strontium	0	0	6	2	-	-	0.56	0.69	-	-	0.45	0.64	-	-	0.55	0.69	-	-	0.66	0.74
Sulphur	0	0	6	2	-	-	35	48	-	-	27	42	-	-	34	48	-	-	44	54
Thallium	0	0	6	2	-	-	0.00001	0.00001	-	-	0.00001	0.00001	-	-	0.00001	0.00001	-	-	0.00001	0.00001
Tin	0	0	6	2	-	-	0.00005	0.00005	-	-	0.00005	0.00005	-	-	0.00005	0.00005	-	-	0.00005	0.00005
Titanium	0	0	6	2	-	-	0.009	0.005	-	-	0.005	0.005	-	-	0.008	0.005	-	-	0.013	0.005
Uranium	0	0	6	2	-	-	0.0013	0.0013	-	-	0.0011	0.0012	-	-	0.0012	0.0013	-	-	0.0017	0.0014
Vanadium	0	0	6	2	-	-	0.0034	0.0030	-	-	0.0026	0.0028	-	-	0.0034	0.0030	-	-	0.0040	0.0032
Zinc	0	0	6	2	-	-	0.0015	0.0015	-	-	0.0015	0.0015	-	-	0.0015	0.0015	-	-	0.0015	0.0015
Organics																				
Carbon Organic (Dissolved)	0	0	6	2	-	-	15	13	-	-	13	12	-	-	16	13	-	-	17	14
Carbon Organic (Total)	0	0	6	2	-	-	16	13	-	-	13	12	-	-	16	13	-	-	17	14
Nitrogen Organic (Dissolved)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.
2. SEASONS ARE SPECIFIED AS FOLLOWS: WIN (WINTER; DECEMBER THROUGH MARCH), SPR (SPRING; APRIL AND MAY), SUMMER(JUNE THROUGH AUGUST), FALL (SEPTEMBER THROUGH NOVEMBER).

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.27 - PC02.5
(PAGE 1 OF 2)

Parameter	Total Count	Complete Dataset - PC02.5									
		Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	43	205	459	647	698	790	949	1111	702	169	2.4E-01
Oxygen Dissolved %	44	46	58	66	69	77	99	110	73	13	1.8E-01
Oxygen Dissolved	44	4.5	6.0	7.0	8.3	9.7	11.4	12.3	8.4	1.8	2.1E-01
pH (unitless)	46	7.6	7.7	7.8	7.9	8.1	8.3	8.3	7.9	0.2	2.4E-02
Redox Potential mV	45	-32	30	62	101	136	195	287	102	57	5.6E-01
Salinity ppt	41	0.19	0.32	0.40	0.53	0.61	0.78	0.85	0.53	0.15	2.8E-01
Specific Conductivity µS/cm	45	316	430	821	1033	1194	1435	1573	996	282	2.8E-01
Temperature °C	46	0.0	0.1	1.8	10.0	15.6	19.9	24.6	9.5	7.3	7.6E-01
Total Dissolved Solids	41	256	424	529	698	802	857	961	661	168	2.5E-01
Turbidity NTU	27	-0.7	0.3	1.8	3.2	5.9	11.9	13.6	4.2	3.7	8.8E-01
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	4	0.5	0.5	0.5	1.0	1.6	2.1	2.2	1.2	0.8	7.1E-01
Alkalinity (Total as CaCO3)	46	130	254	306	393	442	520	606	378	98	2.6E-01
Bicarbonate Alkalinity	42	130	252	311	389	436	489	606	374	96	2.6E-01
Carbonate Alkalinity	42	0.5	0.5	0.5	1.0	8.3	20.1	22.8	4.8	6.9	1.4E+00
Color TCU	30	19.6	20.2	26.1	34.1	40.4	46.7	100.0	35.0	14.8	4.2E-01
Hardness as CaCO3 (Dissolved)	46	157	326	371	507	577	643	775	485	127	2.6E-01
Hydroxide Alkalinity	42	0.5	0.5	0.5	0.5	1.0	1.0	10.0	1.1	2.0	1.9E+00
pH (unitless)	46	7.9	8.1	8.2	8.3	8.4	8.4	8.5	8.3	0.1	1.4E-02
Specific Conductivity µS/cm	46	393	736	828	1075	1208	1368	1530	1035	242	2.3E-01
Total Dissolved Solids	46	272	336	531	699	788	890	1080	667	182	2.7E-01
Total Suspended Solids	46	1.5	1.5	3.7	5.2	7.7	25.6	49.7	8.5	9.4	1.1E+00
Turbidity NTU	45	0.7	0.8	1.6	2.3	4.2	12.2	13.1	3.8	3.6	9.4E-01
Dissolved Anions											
Bromide	46	0.03	0.13	0.25	0.25	0.25	0.25	0.60	0.24	0.07	2.9E-01
Chloride	46	16	41	52	55	60	72	77	55	12	2.1E-01
Fluoride	46	0.05	0.10	0.22	0.24	0.28	0.37	0.42	0.24	0.08	3.5E-01
Sulphate	46	52	64	92	133	178	302	442	150	85	5.7E-01
Nutrients											
Ammonia (Total)	46	0.009	0.014	0.021	0.045	0.119	0.200	0.298	0.076	0.071	9.4E-01
Nitrate (as N)	46	0.013	0.03	0.03	0.06	0.10	0.14	0.21	0.06	0.048	7.5E-01
Nitrite (as N)	46	0.0025	0.01	0.01	0.01	0.01	0.02	0.06	0.01	0.0107	1.2E+00
Nitrogen (Dissolved)	22	0.64	0.65	0.76	0.89	1.02	1.56	2.39	0.97	0.38	3.9E-01
Nitrogen (Total)	29	0.71	0.76	0.83	0.93	1.09	1.53	1.99	1.01	0.28	2.8E-01
Nitrogen Kjeldahl (Total)	46	0.73	0.75	0.83	0.93	1.10	1.58	1.84	1.00	0.25	2.5E-01
Orthophosphate (Dissolved)	20	0.027	0.028	0.039	0.081	0.120	0.184	0.418	0.094	0.087	9.2E-01
Phosphorus - Dissolved	46	0.033	0.042	0.072	0.111	0.160	0.247	0.770	0.136	0.126	9.2E-01
Phosphorus - Total	44	0.039	0.050	0.084	0.126	0.186	0.318	0.965	0.167	0.161	9.7E-01
Cyanide											
Cyanide (Free)	44	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	5.3E-16
Cyanide (Total)	44	0.0025	0.0025	0.0025	0.0025	0.0025	0.0107	0.0190	0.0039	0.0035	9.0E-01
Cyanide (WAD)	44	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	5.3E-16
Dissolved Metals											
Aluminum	46	0.0005	0.0011	0.0015	0.0017	0.0022	0.0039	0.0119	0.0022	0.0019	8.8E-01
Antimony	46	0.00005	0.00005	0.00005	0.00010	0.00013	0.00025	0.00025	0.00010	0.00006	5.9E-01
Arsenic	46	0.0011	0.0012	0.0014	0.0016	0.0020	0.0025	0.0028	0.0017	0.0004	2.4E-01
Barium	46	0.023	0.044	0.051	0.061	0.067	0.072	0.076	0.058	0.011	1.9E-01
Beryllium	46	0.000050	0.000050	0.000050	0.000050	0.000050	0.000500	0.000500	0.000089	0.000128	1.4E+00
Bismuth	46	0.00025	0.00025	0.00025	0.00025	0.00025	0.10000	0.10000	0.00892	0.02842	3.2E+00
Boron	46	0.023	0.025	0.027	0.031	0.034	0.050	0.050	0.032	0.007	2.2E-01
Cadmium	45	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000162	0.0000330	0.0000069	0.0000055	7.9E-01
Calcium	46	26	58	65	81	93	102	123	79	18	2.3E-01
Chromium	46	0.00005	0.00005	0.00011	0.00013	0.00016	0.00050	0.00100	0.00017	0.00018	1.0E+00
Cobalt	46	0.00005	0.00005	0.00014	0.00017	0.00020	0.00031	0.00037	0.00017	0.00007	3.9E-01
Copper	46	0.0007	0.0008	0.0012	0.0016	0.0020	0.0030	0.0054	0.0017	0.0009	5.3E-01
Iron	46	0.017	0.022	0.034	0.046	0.080	0.116	0.137	0.057	0.031	5.4E-01
Lead	46	0.000025	0.000025	0.000025	0.000025	0.000025	0.000250	0.000250	0.000045	0.000064	1.4E+00
Lithium	46	0.00173	0.00306	0.00560	0.00626	0.00698	0.00753	0.00828	0.00612	0.00135	2.2E-01
Magnesium	46	22	43	51	74	83	95	113	70	20	2.9E-01
Manganese	46	0.010	0.016	0.042	0.125	0.252	0.568	0.826	0.182	0.188	1.0E+00
Mercury	45	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	1.0E-15
Molybdenum	46	0.004	0.005	0.006	0.009	0.012	0.030	0.047	0.012	0.009	7.5E-01
Nickel	46	0.0012	0.0014	0.0017	0.0021	0.0023	0.0025	0.0030	0.0020	0.0004	1.9E-01
Phosphorus	46	0.03	0.03	0.08	0.15	0.15	0.18	0.83	0.14	0.13	9.1E-01
Potassium	46	12	12	13	16	17	20	21	16	2	1.5E-01
Selenium	46	0.00012	0.00013	0.00017	0.00020	0.00030	0.00050	0.00054	0.00025	0.00011	4.6E-01
Silicon	46	2.7	3.7	6.0	7.7	11.5	13.7	14.5	8.3	3.3	4.0E-01
Silver	46	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000100	0.0000100	0.0000054	0.0000014	2.6E-01
Sodium	46	15	37	43	55	61	75	81	53	13	2.5E-01
Strontium	46	0.21	0.38	0.49	0.67	0.75	0.90	0.96	0.63	0.17	2.7E-01
Sulphur	29	19	23	32	40	58	96	144	50	29	5.7E-01
Thallium	46	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0001000	0.0001000	0.0000134	0.0000270	2.0E+00
Tin	46	0.000050	0.000050	0.000050	0.000050	0.000050	0.000250	0.000250	0.000067	0.000057	8.5E-01
Titanium	46	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0120	0.0053	0.0013	2.5E-01
Uranium	46	0.0003	0.0004	0.0008	0.0011	0.0013	0.0031	0.0035	0.0013	0.0008	6.2E-01
Vanadium	46	0.0005	0.0012	0.0017	0.0024	0.0027	0.0034	0.0038	0.0023	0.0007	3.2E-01
Zinc	46	0.0005	0.0005	0.0010	0.0015	0.0024	0.0057	0.0095	0.0019	0.0018	9.2E-01
Total Metals											
Aluminum	46	0.0195	0.0401	0.0662	0.0901	0.1505	0.4915	0.5120	0.1484	0.1406	9.5E-01
Antimony	46	0.00005	0.00005	0.00005	0.00012	0.00015	0.00025	0.00025	0.00012	0.00006	5.1E-01
Arsenic	46	0.0012	0.0013	0.0014	0.0016	0.0021	0.0025	0.0030	0.0018	0.0004	2.4E-01
Barium	46	0.028	0.044	0.053	0.061	0.069	0.076	0.082	0.060	0.012	1.9E-01
Beryllium	46	0.000050	0.000050	0.000050	0.000050	0.000050	0.000500	0.000500	0.000089	0.000128	1.4E+00
Bismuth	46	0.00025	0.00025	0.00025	0.00025	0.00025	0.10000	0.10000	0.00892	0.02842	3.2E+00
Boron	46	0.026	0.028	0.031	0.034	0.037	0.050	0.050	0.035	0.006	1.8E-01
Cadmium	45	0.000005	0.000005	0.000005	0.000005	0.000005	0.000014	0.000026	0.000007	0.000004	6.3E-01
Calcium	46	26	58	64	81	90	100	117	78	18	2.3E-01
Chromium	46	0.00019	0.00024	0.00031	0.00039	0.00056	0.00121	0.00140	0.00052	0.00031	6.0E-01
Cobalt	46	0.00011	0.00015	0.00018	0.00024	0.00033	0.00062	0.00073	0.00029	0.00015	5.2E-01
Copper	46	0.0017	0.0019	0.0022	0.0027	0.0035	0.0047	0.0106	0.0031	0.0016	5.1E-01
Iron	46	0.06	0.11	0.15	0.19	0.33	0.77	0.86	0.28	0.21	7.5E-01
Lead	46	0.000025	0.000025	0.000025	0.000025	0.000073	0.000250	0.000250	0.000064	0.000069	1.1E+00
Lithium	46	0.0018	0.0046	0.0058	0.0063	0.0071	0.0078	0.0082	0.0062	0.0012	2.0E-01
Magnesium	46	23	42	50	72	84	93	107	69	19	2.8E-01
Manganese	46	0.02	0.03	0.07	0.14	0.28	0.68	0.85	0.22	0.21	9.5E-01
Mercury	45	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	1.0E-15
Molybdenum	46	0.004	0.005	0.007	0.010	0.014	0.032	0.048	0.012	0.009	7.4E-01
Nickel	46	0.0014	0.0016	0.0020	0.0023	0.0028	0.0037	0.0041	0.0025	0.0007	2.7E-01
Phosphorus	46	0.03	0.05	0.11	0.15	0.16	0.35	0.91	0.17	0.15	8.6E-01
Potassium	46	11	12	14	16	17	20	20	15	2	1.5E-01
Selenium	46	0.00013	0.00014	0.00018	0.00022	0.00028	0.00050	0.00052	0.00025	0.00011	4.4E-01
Silicon	46	2.8	3.8	6.2	7.9	11.4	15.2	15.8	8.6	3.5	4.0E-01
Silver	46	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000145	0.0000940	0.0000089	0.0000150	1.7E+00
Sodium	46	15	37	43	54	62	74	81	53	13	2.5E-01
Strontium	46	0.21	0.41	0.50	0.67	0.77	0.87	0.95	0.64	0.17	2.6E-01
Sulphur	29	20	23	32	42	63	98	142	51	29	5.6E-01
Thallium	46	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0001000	0.0001000	0.0000133	0.0000271	2.0E+00
Tin	46	0.000050	0.000050	0.000050	0.000050	0.000050	0.000250	0.000250	0.000067	0.000057	8.5E-01
Titanium	46	0.0050	0.0050	0.0050	0.0050	0.0115	0.0225	0.0270	0.0088	0.0062	7.0E-01
Uranium	46	0.0003	0.0005	0.0008	0.0011	0.0015	0.0031	0.0035	0.0013	0.0008	6.0E-01
Vanadium	46	0.0013	0.0016	0.0021	0.0029	0.0035	0.0040	0.0045	0.0028	0.0009	3.0E-01
Zinc	46	0.0015	0.0015	0.0015	0.0015	0.0023	0.0054	0.0065	0.0021	0.0013	6.0E-01
Organics											
Carbon Organic (Dissolved)	46	7.5	10.6	12.1	14.5	16.8	18.1	25.4	14.5	3.1	2.1E-01
Carbon Organic (Total)	46	7.9	10.8	12.6	14.9	17.2	19.0	28.8	15.1	3.5	2.3E-01
Nitrogen Organic (Dissolved)	19	0.50	0.50	0.65	0.78	1.02	1.41	2.17	0.88	0.39	4.5E-01
Nitrogen Organic (Total)	23	0.58	0.59	0.69	0.82	1.00	1.30	1.73	0.88	0.27	3.1E-01

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.27 - PC02.5
(PAGE 2 OF 2)

Seasonal Statistics - PC02.5

Parameter	Count				Average				Min				Median				Max			
	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall
In Situ Parameters																				
Conductivity µS/cm	11	14	13	5	561	784	726	716	205	456	566	662	643	791.5	702	740	783	1111	958	756
Oxygen Dissolved %	11	13	13	7	70	78	75	61	63	65.4	48	46	68.6	75.4	71	62	79.9	110	100	73
Oxygen Dissolved	11	13	13	7	10	9	7	7	9.1	7.07	5	6	9.72	8.97	7	7	11.7	12.3	9	10
pH (unitless)	11	14	13	8	8	8	8	8	7.71	7.57	8	8	7.84	8.055	8	8	8.25	8.25	8	8
Redox Potential mV	11	14	13	7	66	98	139	97	10.2	-31.6	75	30	59.9	106	138	77	180	203	287	199
Salinity ppt	11	13	11	6	0.52	0.59	0.46	0.52	0.19	0.32	0.38	0.33	0.58	0.6	0.40	0.55	0.73	0.85	0.78	0.62
Specific Conductivity µS/cm	11	14	13	7	968	1134	855	1029	316	653	764	415	1080	1173.5	835	1166	1472	1573	1107	1247
Temperature °C	11	14	13	8	0	9	18	9	0	1.99	13	2	0.4	8.77	18	10	0.99	17.2	25	15
Total Dissolved Solids	11	13	11	6	679	725	556	682	256	424	430	437	772	776	529	721	957	961	720	811
Turbidity NTU	8	7	7	5	4	4	1	8	1.3	1.1	-1	4	2.65	3.2	2	6	13.6	9.5	3	13
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	0	0	0	4	-	-	-	1.15	-	-	-	0.5	-	-	-	0.95	-	-	-	2.2
Alkalinity (Total as CaCO3)	11	14	13	8	406	377	318	442	130	263	251	389	434	387	301	443	606	444	458	489
Bicarbonate Alkalinity	10	13	11	8	391	371	316	438	130	263	251	389	432	386	305	442	606	444	436	489
Carbonate Alkalinity	10	13	11	8	2.60	4	8	4	0.5	0.5	1	1	1	0.5	7	1	10	20.2	23	17
Color TCU	8	9	7	6	34	32	39	37	19.6	19.8	28	26	24.2	32.9	39	40	100	48.5	45	43
Hardness as CaCO3 (Dissolved)	11	14	13	8	508	550	382	508	157	358	323	422	554	564	360	508	644	775	524	574
Hydroxide Alkalinity	10	13	11	8	2.60	0.62	0.59	0.63	0.5	0.5	0.50	0.50	1	0.5	0.50	0.50	10	1	1.00	1.00
pH (unitless)	11	14	13	8	8	8	8	8	7.93	8.18	8	8	8.21	8.325	8	8	8.39	8.41	8	8
Specific Conductivity µS/cm	11	14	13	8	1073	1140	839	1118	393	781	736	945	1140	1145	813	1135	1370	1530	1070	1280
Total Dissolved Solids	11	14	13	8	683	759	525	715	272	295	427	597	717	782.5	516	731	868	1080	692	788
Total Suspended Solids	11	14	13	8	8	8	5	16	1.5	1.5	2	5	5.1	4.55	5	15	20.3	49.7	7	34
Turbidity NTU	11	14	13	7	5	3	1	7	1.16	0.89	1	3	2.62	2.485	2	6	12.7	12.1	2	13
Dissolved Anions																				
Bromide	11	14	13	8	0.22	0.28	0.23	0.25	0.025	0.25	0.13	0.25	0.25	0.25	0.25	0.25	0.25	0.6	0.25	0.25
Chloride	11	14	13	8	55	53	53	63	15.6	40.4	48	55	65.4	54.5	53	63	77.2	61.4	60	73
Fluoride	11	14	13	8	0.19	0.21	0.27	0.30	0.05	0.1	0.22	0.26	0.23	0.22	0.27	0.28	0.37	0.31	0.42	0.37
Sulphate	11	14	13	8	152	227	83	122	51.8	90.7	56	65	150	198	78	124	274	442	127	166
Nutrients								-												
Ammonia (Total)	11	14	13	8	0.169	0.040	0.028	0.091	0.0846	0.0094	0.010	0.024	0.155	0.0351	0.021	0.075	0.298	0.142	0.086	0.189
Nitrate (as N)	11	14	13	8	0.11	0.05	0.028	0.098	0.025	0.025	0.013	0.025	0.1	0.038	0.025	0.079	0.186	0.108	0.092	0.211
Nitrite (as N)	11	14	13	8	0.010	0.0059	0.0052	0.0198	0.005	0.005	0.0025	0.0050	0.0102	0.005	0.0050	0.0095	0.025	0.012	0.0120	0.0630
Nitrogen (Dissolved)	6	7	5	4	0.93	0.80	1.03	1.25	0.66	0.64	0.89	0.70	0.863	0.82	1.03	0.96	1.58	1.11	1.21	2.39
Nitrogen (Total)	7	10	7	5	1.05	0.89	0.96	1.27	0.805	0.713	0.73	1.02	0.93	0.841	0.95	1.19	1.99	1.21	1.24	1.61
Nitrogen Kjeldahl (Total)	11	14	13	8	1.07	0.86	0.99	1.18	0.807	0.743	0.73	1.02	0.875	0.8045	1.00	1.10	1.84	1.1	1.23	1.64
Orthophosphate (Dissolved)	4	5	7	4	0.17	0.039	0.068	0.135	0.0545	0.0265	0.028	0.119	0.09875	0.0399	0.078	0.124	0.418	0.0495	0.131	0.172
Phosphorus - Dissolved	11	14	13	8	0.227	0.081	0.08	0.20	0.0739	0.0401	0.03	0.11	0.134	0.07345	0.08	0.19	0.77	0.135	0.15	0.24
Phosphorus - Total	10	14	13	7	0.29	0.11	0.10	0.24	0.0926	0.0493	0.04	0.13	0.1645	0.08955	0.10	0.25	0.965	0.22	0.17	0.32
Cyanide																				
Cyanide (Free)	11	13	12	8	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Cyanide (Total)	11	13	12	8	0.0048	0.0032	0.003	0.0050625	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.019	0.0082	0.0085	0.0144
Cyanide (WAD)	11	13	12	8	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Dissolved Metals																				
Aluminum	11	14	13	8	0.0034	0.0016	0.0018	0.0021	0.0011	0.001	0.0005	0.0015	0.0017	0.0015	0.0018	0.0023	0.0119	0.0025	0.0026	0.0026
Antimony	11	14	13	8	0.000067	0.00011	0.00011	0.00010	0.00005	0.00005	0.00005	0.00005	0.00005	0.00011	0.00011	0.00008	0.00013	0.00025	0.00025	0.00025
Arsenic	11	14	13	8	0.0015	0.0016	0.0018	0.0023	0.00115	0.00113	0.0013	0.0019	0.00139	0.001515	0.0017	0.0022	0.00203	0.00228	0.0025	0.0028
Barium	11	14	13	8	0.059	0.062	0.051	0.064	0.0233	0.048	0.043	0.046	0.0626	0.0626	0.051	0.065	0.0751	0.0756	0.057	0.072
Beryllium	11	14	13	8	0.00005	0.00008	0.00012	0.00011	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.0005	0.00050	0.00050
Bismuth	11	14	13	8	0.00025	0.007	0.016	0.013	0.00025	0.00025	0.000	0.000	0.00025	0.00025	0.000	0.000	0.00025	0.1	0.100	0.100
Boron	11	14	13	8	0.027	0.032	0.035	0.031	0.023	0.023	0.026	0.025	0.026	0.031	0.034	0.030	0.031	0.05	0.050	0.050
Cadmium	11	13	13	8	0.00001	0.000010	0.000007	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000033	0.000025	0.000009
Calcium	11	14	13	8	81	88	65	82	25.9	61	58	68	87.8	91.9	64	81	101	123	82	95
Chromium	11	14	13	8	0.00014	0.0002	0.00021	0.00020	0.00005	0.00005	0.00005	0.00014	0.00014	0.00012	0.00012	0.00017	0.00019	0.00075	0.00100	0.00050
Cobalt	11	14	13	8	0.00023	0.00015	0.00012	0.00021	0.00015	0.00005	0.00005	0.00015	0.0002	0.000165	0.00012	0.00020	0.00037	0.00022	0.00021	0.00033
Copper	11	14	13	8	0.0020	0.0018	0.0019	0.0011	0.00082	0.00091	0.0010	0.0007	0.00131	0.001855	0.0019	0.0011	0.00539	0.00266	0.0032	0.0013
Iron	11	14	13	8	0.090	0.049	0.031	0.070	0.046	0.017	0.021	0.035	0.095	0.042	0.030	0.069	0.137	0.105	0.043	0.119
Lead	11	14	13	8	0.00003	0.00004	0.00006	0.00005	0.000025	0.000025	0.00003	0.00003	0.000025	0.000025	0.00003	0.00003	0.000025	0.00025	0.00025	0.00025
Lithium	11	14	13	8	0.0057	0.0059	0.0061	0.0070	0.00173	0.0025	0.0052	0.0062	0.00637	0.00623	0.0061	0.0072	0.00828	0.00821	0.0072	0.0076
Magnesium	11	14	13	8	74.4	79.9	53.1	73.9	22.4	47.5	41.9	61.5	81.8	80.9	48.9	73.9	94.9	113.0	77.9	84.0
Manganese	11	14	13	8	0.316	0.113	0.055	0.323	0.0809	0.0134	0.010	0.142	0.228	0.07715	0.034	0.315	0.826	0.423	0.241	0.616
Mercury	11	13	13	8	0.0000050	0.0000050	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050
Molybdenum	11	14	13	8	0.0117	0.0168	0.0084	0.0081	0.00372	0.0069	0.0042	0.0046	0.00648	0.0114	0.0085	0.0075	0.0305	0.0468	0.0185	0.0148
Nickel	11	14	13	8	0.0021	0.0020	0.0017	0.0023	0.00172	0.00124	0.0013	0.0019	0.00209	0.002175	0.0016	0.0023	0.00253	0.00248	0.0025	0.0030
Phosphorus	11	14	13	8	0.23	0.10	0.10	0.16	0.071	0.025	0.03	0.13	0.148	0.112	0.12	0.16	0.83	0.15	0.17	0.18
Potassium	11	14	13	8	16	16	14	17	12.2	11.8	12	16	16.2	15.8	13	17	20.8	20.9	19	19
Selenium	11	14	13	8	0.00021	0.00025	0.00028	0.00024	0.00013	0.00012	0.00017	0.00018	0.00017	0.000195	0.00023	0.00020	0.00039	0.00054	0.00050	0.00050
Silicon	11	14	13	8	9.71	6.87	5.91	12.49	4.34	3.6	2.69	8.15	11.4	7.375	5.82	12.95	12.8	8.97	9.00	14.50
Silver	11	14	13	8	0.000005	0.000005	0.000006	0.000006	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.00001	0.000010	0.000010
Sodium	11	14	13	8	54	58	44	59	15.2	41.3	36	52	59.6	56.75	42	61	81.2	78.2	58	63
Strontium	11	14	13	8	0.67	0.70	0.50	0.69	0.208	0.375	0.40	0.55	0.737	0.725	0.48	0.72	0.955	0.925	0.68	0.77
Sulphur	8	7	9	5	53	79	29	43	31.2	32.3	19	32	46.75	85.8	29	46	86.6	144	42	54
Thallium	11	14	13	8	0.000005	0.000012	0.000020	0.000017	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.0001	0.000100	0.000100
Tin	11	14	13	8	0.00005	0.00006	0.00008	0.00008	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00025	0.00025	0.00025
Titanium	11	14	13	8	0.0062	0.005	0.0050	0.0050	0.005	0.005	0.0050	0.0050	0.005	0.005	0.0050	0.0050	0.012	0.005	0.0050	0.0050
Uranium	11	14	13	8	0.0012	0.0018	0.0009	0.0010	0.000405	0.00103	0.0003	0.0005	0.000821	0.00137	0.0008	0.0010	0.00316	0.00349	0.0018	0.0013
Vanadium	11	14	13	8	0.0021	0.0028	0.0019	0.0024	0.0013	0.002	0.0005	0.0014	0.0019	0.0028	0.0018	0.0024	0.0035	0.0038	0.0027	0.0030
Zinc	11	14	13	8	0.0019	0.0017	0.0021	0.0020	0.0005	0.0005	0.0005	0.0005	0.0015	0.0015	0.0017	0.0011	0.0063	0.0037	0.0095	0.0073
Total Metals																				
Aluminum	11	14	13	8	0.15	0.13	0.07	0.31	0.0308	0.0497	0.02	0.10	0.0665	0.108	0.07	0.34	0.512	0.303	0.11	0.51
Antimony	11	14	13	8	0.00007	0.00014	0.00013	0.00012	0.00005	0.00005	0.00005	0.00005	0.00005	0.00013	0.00013	0.00012	0.00015	0.00025	0.00025	0.00025
Arsenic	11	14	13	8	0.0015	0.0016	0.0018	0.0023	0.00122	0.00119	0.0013	0.0018	0.00144	0.001515	0.0017	0.0024	0.00188	0.00221	0.0022	0.0030
Barium	11	14	13	8	0.061	0.062	0.052	0.068	0.0276	0.0475	0.043	0.049	0.0631	0.0625	0.052	0.068	0.0788	0.0741	0.058	0.082
Beryllium	11	14	13	8	0.00005	0.00008	0.00012	0.00011	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.0005	0.00050	0.00050
Bismuth	11	14	13	8	0.00025	0.007375	0.01559615	0.01271875	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.1	0.1	0.1
Boron	11	14	13	8	0.030	0.036	0.038	0.034	0.026	0.027	0.028	0.029	0.031	0.0355	0.037	0.032	0.034	0.05	0.050	0.050
Cadmium	11	13	13	8	0.00001	0.000008	0.000007	0.000006	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000014	0.000021	0.000026	0.000012
Calcium	11	14	13	8	80	86	64	82	25.9	59.3	58	66	87.3	87.55	63	83	101	117	80	97
Chromium	11	14	13	8	0.00049	0.0005	0.0003	0.0009	0.0002	0.00023	0.0002	0.0004	0.00033	0.000475	0.0003	0.0009	0.0012	0.00087	0.0005	0.0014
Cobalt	11	14	13	8	0.00034	0.00026	0.00018	0.00046	0.00019	0.00015	0.00011	0.00025	0.00025	0.000255	0.00017	0.00046	0.0007	0.0004	0.00030	0.00073
Copper	11	14	13	8	0.0037	0.0030	0.0026	0.0034	0.00183	0.00209	0.0017	0.0020	0.00201	0.00305	0.0026	0.0037	0.0106	0.00411	0.0035	0.0047
Iron	11	14	13	8	0.31	0.25	0.13	0.55	0.138	0.115	0.06	0.19	0.235	0.208	0.13	0.60	0.736	0.527	0.19	0.86
Lead	11	14	13	8	0.00005	0.00005	0.00006	0.00011	0.000025	0.000025	0.00003	0.00003	0.000025	0.00003	0.00003	0.00010	0.00015	0.0003	0.00025	0.00025
Lithium	11	14	13	8	0.0058	0.0061	0.0062	0.0071	0.00183	0.00449	0.0050	0.0057	0.00642	0.006235	0.0061	0.0072	0.00771	0.00782	0.0076	0.0082
Magnesium	11	14	13	8	73	77	52	74	22.7	45.6	41	60	81.5	76.85	49	74	93.4	107	77	84
Manganese	11	14	13	8	0.34	0.14	0.08	0.42	0.107	0.0231	0.02	0.22	0.252	0.09305	0.06	0.41	0.849	0.445	0.27	0.80
Mercury	11	13	13	8	0.0000050	0.0000050	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050
Molybdenum	11	14	13	8	0.013	0.018	0.009	0.009	0.00403	0.0068	0.005	0.005	0.00713	0.01345	0.009	0.008	0.0339	0.0484	0.020	0.017
Nickel	11	14	13	8	0.0026	0.0024	0.0020	0.0032	0.0019	0.0015	0.0014	0.0023	0.0024	0.0024	0.0019	0.0034	0.0041	0.0030	0.0029	0.0040
Phosphorus	11	14	13	8	0.27	0.11	0.12	0.22	0.082	0.054	0.03	0.15	0.15	0.13	0.13	0.22	0.91	0.15	0.17	0.37
Potassium	11	14	13	8	16.1	15.4	13.8	17.0	11.8	11.7	11.3	15.7	15.5	15.5	13.3	17.0	20.1	20.2	17.9	19.4
Selenium	11	14	13	8	0.00022	0.00025	0.00028	0.00025	0.00013	0.00014	0.00018	0.00017	0.00017	0.0002	0.00023	0.00022	0.0004	0.0005	0.00050	0.00050
Silicon	11	14	13	8	10.0	7.0	6.0	13.5	5.4	3.7	2.8	8.3	11.1	7.4	6.0	13.9	12.8	9.1	9.6	15.8
Silver	11	14	13	8	0.0000059	0.0000054	0.0000126	0.0000131	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000015	0.00001	0.0000940	0.0000570
Sodium	11	14	13	8	54	57	44	61	15	41.2	36	51	59.2	55.75	43	61	80.5	78.3	54	65
Strontium	11	14	13	8	0.7	0.7	0.51	0.70	0.21	0.48	0.39	0.50	0.771	0.7	0.50	0.74	0.9	0.9	0.69	0.80
Sulphur	8	7	9	5	55	79	29	46	31.2	31.7	20	32	49.45	88.9	28	49	90.9	142	44	59
Thallium	11	14	13	8	0.00001	0.00001	0.00002	0.00002	0.000005	0.000005	0.00001	0.00001	0.000005	0.000005	0.00001	0.00001	0.000005	0.0001	0.00010	0.00010
Tin	11	14	13	8	0.00005	0.00006	0.00008	0.00008	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00025	0.00025	0.00025
Titanium	11	14	13	8	0.01027273	0.008	0.006	0.014	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.014	0.027	0.016	0.010	0.025
Uranium	11	14	13	8	0.0013	0.0019	0.0010	0.0010	0.0004	0.0011	0.0003	0.0005	0.0009	0.0015	0.0009	0.0010	0.0034	0.0035	0.0019	0.0015
Vanadium	11	14	13	8	0.0026	0.0033	0.0022	0.0034	0.0016	0.0024	0.0013	0.0021	0.0023	0.0033	0.0021	0.0035	0.004	0.0044	0.0032	0.0045
Zinc	11	14	13	8	0.0023	0.0022	0.0019	0.0021	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0065	0.0039	0.0056	0.0055
Organics																				
Carbon Organic (Dissolved)	11	14	13	8	13.4	13.1	16	15	11.1	10.3	13	7	11.9	12.9	17	16	25	18	18	18
Carbon Organic (Total)	11	14	13	8	14.3	14	17	16	10.8	10.8	14	8	12.8	12.8	17	17	29	21	19	19
Nitrogen Organic (Dissolved)	4	7	4	4	0.76	0.71	1.03	1.13	0.50	0.498	0.87	0.61	0.608	0.712	1.04	0.87	1.32	1.03	1.18	2.17
Nitrogen Organic (Total)	7	8	4	4	0.82	0.82	1.01	0.96	0.588	0.69	0.88	0.58	0.67	0.76	0.98	0.98	1.73	1.1	1.21	1.31

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.
2. SEASONS ARE SPECIFIED AS FOLLOWS: WIN (WINTER; DECEMBER THROUGH MARCH), SPR (SPRING; APRIL AND MAY), SUMMER(JUNE THROUGH AUGUST), FALL (SEPTEMBER THROUGH NOVEMBER).

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.28 - PC03
(PAGE 1 OF 2)

Parameter	Total Count	Complete Dataset - PC03									
		Min	Percentiles 5th	25th	50th	75th	95th	Max	Average	Standard Deviation	Coefficient of Variation
In Situ Parameters											
Conductivity µS/cm	52	132	363	604	668	782	961	1295	686	206	3.0E-01
Oxygen Dissolved %	37	7	22	55	80	89	98	128	72	25	3.5E-01
Oxygen Dissolved	40	1.0	3.2	6.2	8.4	10.3	12.2	13.0	8.2	2.8	3.5E-01
pH (unitless)	54	7.6	7.6	7.8	8.1	8.3	8.7	9.2	8.1	0.3	4.3E-02
Redox Potential mV	50	-112	-73	21	80	118	181	407	72	94	1.3E+00
Salinity ppt	42	0.10	0.32	0.37	0.43	0.62	0.74	0.96	0.49	0.18	3.7E-01
Specific Conductivity µS/cm	53	202	667	756	872	1183	1563	1926	971	338	3.5E-01
Temperature °C	54	-0.1	0.0	4.6	12.2	17.1	25.3	28.7	11.5	8.1	7.0E-01
Total Dissolved Solids	43	131	426	484	563	785	975	1252	636	230	3.6E-01
Turbidity NTU	24	0.0	0.1	0.9	1.3	2.5	45.3	65.7	7.9	16.4	2.1E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	4	0.5	0.5	0.5	1.3	2.7	4.2	4.6	1.9	1.9	1.0E+00
Alkalinity (Total as CaCO3)	54	226	238	257	324	385	496	700	342	103	3.0E-01
Bicarbonate Alkalinity	39	208	230	246	314	377	507	700	335	114	3.4E-01
Carbonate Alkalinity	39	0.5	0.5	1.0	8.1	15.6	28.7	49.8	10.2	11.7	1.1E+00
Color TCU	39	2.5	19.2	23.4	28.2	33.9	38.1	57.7	28.9	8.6	3.0E-01
Hardness as CaCO3 (Dissolved)	54	276	302	331	422	579	790	976	483	174	3.6E-01
Hydroxide Alkalinity	39	0.5	0.5	0.5	0.5	1.0	1.9	10.0	1.1	2.1	1.9E+00
pH (unitless)	53	7.9	8.0	8.2	8.3	8.4	8.6	8.8	8.3	0.2	2.1E-02
Specific Conductivity µS/cm	54	643	687	754	939	1213	1598	1940	1028	317	3.1E-01
Total Dissolved Solids	54	384	428	462	600	812	1122	1420	678	248	3.7E-01
Total Suspended Solids	54	1.5	1.5	1.5	3.3	5.6	10.5	105.0	5.9	14.1	2.4E+00
Turbidity NTU	50	0.6	0.7	0.9	1.5	2.9	6.0	15.3	2.5	2.8	1.2E+00
Dissolved Anions											
Bromide	54	0.03	0.03	0.13	0.25	0.25	0.52	1.25	0.24	0.19	7.8E-01
Chloride	54	26	36	48	53	58	63	79	52	9	1.8E-01
Fluoride	53	0.10	0.10	0.10	0.21	0.23	0.34	1.10	0.22	0.15	6.7E-01
Sulphate	54	48	56	72	154	259	437	568	189	136	7.2E-01
Nutrients											
Ammonia (Total)	54	0.009	0.012	0.021	0.042	0.174	1.074	2.260	0.196	0.414	2.1E+00
Nitrate (as N)	54	0.003	0.00	0.03	0.03	0.05	0.14	0.76	0.05	0.105	2.0E+00
Nitrite (as N)	54	0.0005	0.00	0.00	0.01	0.01	0.03	0.16	0.01	0.0215	2.2E+00
Nitrogen (Dissolved)	24	0.60	0.68	0.83	1.01	1.14	2.07	3.27	1.16	0.59	5.1E-01
Nitrogen (Total)	35	0.37	0.67	0.85	0.93	1.19	2.22	3.37	1.12	0.57	5.1E-01
Nitrogen Kjeldahl (Total)	54	0.37	0.74	0.86	0.99	1.15	2.09	3.37	1.10	0.48	4.4E-01
Orthophosphate (Dissolved)	27	0.005	0.007	0.011	0.021	0.035	0.143	0.171	0.035	0.044	1.2E+00
Phosphorus - Dissolved	47	0.018	0.024	0.030	0.043	0.070	0.304	0.561	0.080	0.103	1.3E+00
Phosphorus - Total	53	0.026	0.029	0.042	0.058	0.094	0.247	0.647	0.091	0.104	1.1E+00
Cyanide											
Cyanide (Free)	50	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	3.5E-16
Cyanide (Total)	51	0.0025	0.0025	0.0025	0.0025	0.0070	0.0101	0.0110	0.0044	0.0029	6.5E-01
Cyanide (WAD)	50	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	3.5E-16
Dissolved Metals											
Aluminum	54	0.0005	0.0012	0.0015	0.0019	0.0025	0.0050	0.0125	0.0024	0.0017	7.2E-01
Antimony	54	0.00005	0.00005	0.00006	0.00012	0.00025	0.00050	0.00125	0.00018	0.00019	1.0E+00
Arsenic	54	0.0009	0.0009	0.0013	0.0014	0.0017	0.0022	0.0034	0.0015	0.0004	2.9E-01
Barium	54	0.028	0.042	0.050	0.061	0.073	0.111	0.139	0.065	0.021	3.3E-01
Beryllium	54	0.000050	0.000050	0.000050	0.000050	0.000500	0.001000	0.002500	0.000256	0.000413	1.6E+00
Bismuth	48	0.00025	0.00025	0.00025	0.00025	0.00025	0.10000	0.10000	0.02311	0.04237	1.8E+00
Boron	54	0.024	0.026	0.031	0.037	0.050	0.050	0.051	0.039	0.010	2.4E-01
Cadmium	54	0.0000050	0.0000050	0.0000050	0.0000068	0.0000150	0.0000364	0.0001430	0.0000136	0.0000202	1.5E+00
Calcium	54	50	52	59	66	88	115	143	76	23	3.0E-01
Chromium	54	0.00005	0.00005	0.00010	0.00016	0.00050	0.00100	0.00250	0.00035	0.00045	1.3E+00
Cobalt	54	0.00005	0.00005	0.00013	0.00015	0.00023	0.00037	0.00075	0.00019	0.00012	6.3E-01
Copper	54	0.0001	0.0003	0.0008	0.0012	0.0016	0.0023	0.0044	0.0013	0.0007	5.8E-01
Iron	54	0.015	0.015	0.025	0.035	0.058	0.154	0.243	0.052	0.048	9.2E-01
Lead	54	0.000025	0.000025	0.000025	0.000025	0.000250	0.000500	0.001250	0.000128	0.000207	1.6E+00
Lithium	54	0.00250	0.00250	0.00500	0.00556	0.00633	0.00789	0.01250	0.00559	0.00181	3.2E-01
Magnesium	54	36	40	45	62	87	123	150	71	29	4.0E-01
Manganese	54	0.008	0.010	0.039	0.079	0.179	1.229	1.980	0.228	0.415	1.8E+00
Mercury	54	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000100	0.0000100	0.0000055	0.0000015	2.7E-01
Molybdenum	54	0.001	0.004	0.007	0.012	0.023	0.073	0.103	0.020	0.023	1.1E+00
Nickel	54	0.0005	0.0009	0.0011	0.0014	0.0017	0.0021	0.0025	0.0014	0.0004	3.0E-01
Phosphorus	48	0.03	0.03	0.03	0.15	0.15	0.28	0.60	0.12	0.11	8.9E-01
Potassium	54	10	11	12	15	17	20	28	15	3	2.3E-01
Selenium	54	0.00014	0.00015	0.00020	0.00029	0.00050	0.00100	0.00250	0.00043	0.00038	8.7E-01
Silicon	48	1.0	1.9	3.9	5.6	8.1	12.8	13.6	6.3	3.4	5.4E-01
Silver	54	0.0000050	0.0000050	0.0000050	0.0000050	0.0000100	0.0000200	0.0000500	0.0000079	0.0000070	8.9E-01
Sodium	54	33	35	39	51	64	77	100	53	16	3.0E-01
Strontium	48	0.36	0.38	0.43	0.58	0.80	0.96	1.19	0.63	0.22	3.5E-01
Sulphur	26	16	17	25	46	98	140	171	64	48	7.5E-01
Thallium	54	0.0000050	0.0000050	0.0000050	0.0000050	0.0001000	0.0002000	0.0005000	0.0000479	0.0000844	1.8E+00
Tin	54	0.000050	0.000050	0.000050	0.000050	0.000250	0.000500	0.001250	0.000145	0.000198	1.4E+00
Titanium	54	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0000	5.3E-16
Uranium	54	0.0003	0.0004	0.0009	0.0012	0.0016	0.0046	0.0056	0.0016	0.0013	7.9E-01
Vanadium	54	0.0005	0.0011	0.0018	0.0026	0.0036	0.0066	0.0150	0.0031	0.0027	8.6E-01
Zinc	54	0.0005	0.0005	0.0006	0.0024	0.0025	0.0050	0.0083	0.0022	0.0017	7.6E-01
Total Metals											
Aluminum	54	0.0035	0.0091	0.0164	0.0349	0.0673	0.1778	0.5150	0.0588	0.0809	1.4E+00
Antimony	54	0.00005	0.00005	0.00011	0.00014	0.00025	0.00050	0.00125	0.00019	0.00018	9.4E-01
Arsenic	54	0.0009	0.0009	0.0013	0.0014	0.0016	0.0021	0.0031	0.0015	0.0004	2.8E-01
Barium	54	0.028	0.041	0.051	0.062	0.074	0.112	0.143	0.066	0.022	3.4E-01
Beryllium	54	0.000050	0.000050	0.000050	0.000050	0.000500	0.001000	0.002500	0.000256	0.000413	1.6E+00
Bismuth	48	0.00025	0.00025	0.00025	0.00025	0.00025	0.10000	0.10000	0.02311	0.04237	1.8E+00
Boron	54	0.026	0.027	0.035	0.044	0.050	0.051	0.053	0.042	0.009	2.1E-01
Cadmium	54	0.000005	0.000005	0.000005	0.000009	0.000015	0.000041	0.000137	0.000015	0.000021	1.4E+00
Calcium	54	50	52	58	65	87	116	146	75	23	3.1E-01
Chromium	54	0.00015	0.00018	0.00027	0.00041	0.00050	0.00100	0.00250	0.00047	0.00038	8.1E-01
Cobalt	54	0.00005	0.00012	0.00015	0.00017	0.00030	0.00058	0.00075	0.00024	0.00014	6.0E-01
Copper	54	0.0008	0.0010	0.0015	0.0020	0.0025	0.0035	0.0087	0.0022	0.0012	5.5E-01
Iron	54	0.02	0.04	0.06	0.11	0.19	0.37	0.80	0.15	0.13	8.9E-01
Lead	54	0.000025	0.000025	0.000025	0.000025	0.000250	0.000500	0.001250	0.000133	0.000205	1.5E+00
Lithium	54	0.0025	0.0025	0.0050	0.0057	0.0065	0.0081	0.0125	0.0058	0.0016	2.8E-01
Magnesium	54	37	40	45	61	87	119	151	70	28	4.1E-01
Manganese	54	0.01	0.01	0.05	0.09	0.19	1.24	2.04	0.24	0.44	1.8E+00
Mercury	54	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000100	0.0000100	0.0000055	0.0000015	2.7E-01
Molybdenum	54	0.001	0.004	0.007	0.013	0.024	0.075	0.111	0.021	0.024	1.1E+00
Nickel	54	0.0005	0.0010	0.0013	0.0017	0.0021	0.0031	0.0039	0.0018	0.0007	3.6E-01
Phosphorus	48	0.03	0.03	0.06	0.15	0.15	0.33	0.67	0.14	0.11	8.3E-01
Potassium	54	10	11	12	14	17	20	28	15	3	2.2E-01
Selenium	54	0.00015	0.00016	0.00020	0.00031	0.00050	0.00100	0.00250	0.00043	0.00037	8.7E-01
Silicon	48	1.1	2.0	3.8	5.7	8.4	13.1	14.2	6.4	3.5	5.4E-01
Silver	54	0.0000050	0.0000050	0.0000050	0.0000050	0.0000100	0.0000200	0.0000500	0.0000086	0.0000078	9.1E-01
Sodium	54	34	35	40	49	65	76	99	53	16	3.0E-01
Strontium	48	0.38	0.39	0.42	0.59	0.81	0.99	1.22	0.63	0.22	3.5E-01
Sulphur	26	17	18	24	47	104	146	177	65	50	7.6E-01
Thallium	54	0.0000050	0.0000050	0.0000050	0.0000050	0.0001000	0.0002000	0.0005000	0.0000489	0.0000841	1.7E+00
Tin	54	0.000050	0.000050	0.000050	0.000050	0.000250	0.000500	0.002980	0.000200	0.000433	2.2E+00
Titanium	54	0.0050	0.0050	0.0050	0.0050	0.0050	0.0117	0.0220	0.0059	0.0031	5.2E-01
Uranium	54	0.0003	0.0005	0.0010	0.0013	0.0017	0.0047	0.0061	0.0017	0.0013	7.7E-01
Vanadium	54	0.0005	0.0013	0.0021	0.0028	0.0040	0.0068	0.0150	0.0035	0.0027	7.7E-01
Zinc	54	0.0015	0.0015	0.0015	0.0015	0.0025	0.0040	0.0222	0.0024	0.0029	1.2E+00
Organics											
Carbon Organic (Dissolved)	53	9.5	10.2	12.6	14.4	15.8	17.9	24.5	14.5	2.7	1.9E-01
Carbon Organic (Total)	48	9.9	10.4	13.1	14.6	16.4	18.9	25.4	14.8	2.9	2.0E-01
Nitrogen Organic (Dissolved)	21	0.57	0.58	0.76	0.87	1.01	1.09	3.47	0.97	0.60	6.1E-01
Nitrogen Organic (Total)	25	0.53	0.57	0.77	0.88	1.02	1.13	1.19	0.88	0.18	2.0E-01

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.28 - PC03
(PAGE 2 OF 2)

Seasonal Statistics - PC03

Parameter	Count				Average				Min				Median				Max			
	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall
In Situ Parameters																				
Conductivity µS/cm	10	21	17	4	677	703	715	490	438	135	564	132	674	673	669	501	1007	1295	923	826
Oxygen Dissolved %	10	15	9	3	50	81	79	76	6.9	48.1	41	61	48.95	87.5	80	80	95.7	108	128	86
Oxygen Dissolved	10	17	10	3	7	9	7	9	1	5.43	4	6	6.955	9.27	8	10	12.9	13	10	11
pH (unitless)	10	21	17	6	8	8	8	8	7.56	7.77	8	8	7.695	8.13	8	8	7.94	8.7	9	9
Redox Potential mV	9	20	16	5	40	84	96	4	-73.6	-60.8	-106	-112	58.3	87.5	105	-22	112	407	281	135
Salinity ppt	9	18	12	3	0.63	0.48	0.37	0.57	0.37	0.1	0.33	0.32	0.66	0.46	0.36	0.66	0.96	0.84	0.49	0.73
Specific Conductivity µS/cm	10	21	17	5	1268	988	789	919	757	202	677	653	1282.5	929	775	798	1926	1780	992	1467
Temperature °C	10	21	17	6	1	10	20	9	-0.08	0.33	12	2	0.36	9.82	20	9	2.89	18.7	29	18
Total Dissolved Solids	10	18	12	3	825	605	498	748	492	131	440	424	833.5	579	491	865	1252	1175	645	954
Turbidity NTU	6	8	7	3	28	1	1	1	2.2	0.6	0	0	19.35	1.1	1	1	65.7	2.8	2	2
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	0	0	1	3	-	-	4.6	1	-	-	4.6	0.5	-	-	4.6	0.5	-	-	4.6	2
Alkalinity (Total as CaCO3)	10	21	17	6	476	331	264	372	230	232	226	323	463.5	325	255	366	700	471	343	447
Bicarbonate Alkalinity	8	14	12	5	485	314	246	370	230	225	208	323	463.5	319.5	244	360	700	410	299	447
Carbonate Alkalinity	8	14	12	5	3.13	10	14	11	0.5	0.5	1	1	1	6.5	13	11	10	49.8	44	27
Color TCU	7	16	11	5	31	26	31	33	23.1	19	3	23	27.7	26.75	33	35	57.7	35.1	44	37
Hardness as CaCO3 (Dissolved)	10	21	17	6	652	521	330	498	395	313	276	361	629	494	312	446	976	880	414	725
Hydroxide Alkalinity	8	14	12	5	3.13	0.61	0.54	0.70	0.5	0.5	0.50	0.50	1	0.5	0.50	0.50	10	1	1.00	1.00
pH (unitless)	10	20	17	6	8	8	8	8	7.94	8.2	8	8	8.055	8.325	8	8	8.26	8.54	9	9
Specific Conductivity µS/cm	10	21	17	6	1328	1093	749	1089	832	704	643	867	1320	1060	711	1004	1940	1790	930	1480
Total Dissolved Solids	10	21	17	6	883	741	467	718	547	427	384	528	826.5	707	444	626	1420	1320	598	1080
Total Suspended Solids	10	21	17	6	5	9	3	5	1.5	1.5	2	2	4.25	3.3	2	3	12.3	105	9	9
Turbidity NTU	10	19	16	5	6	2	1	2	1.74	0.56	1	1	4.515	1.34	1	2	15.3	5.74	4	4
Dissolved Anions																				
Bromide	10	21	17	6	0.32	0.30	0.13	0.21	0.25	0.025	0.03	0.03	0.25	0.25	0.13	0.25	0.65	1.25	0.25	0.25
Chloride	10	21	17	6	55	47	53	60	25.9	30.2	49	55	60.75	46	52	60	79	60.3	62	63
Fluoride	10	21	16	6	0.20	0.20	0.24	0.24	0.1	0.1	0.10	0.22	0.2	0.17	0.23	0.23	0.34	1.1	0.39	0.33
Sulphate	10	21	17	6	268	246	76	182	92	67.8	48	68	237.5	237	68	124	441	568	138	399
Nutrients								-												
Ammonia (Total)	10	21	17	6	0.789	0.083	0.034	0.064	0.179	0.0093	0.012	0.035	0.434	0.031	0.022	0.065	2.26	0.326	0.194	0.093
Nitrate (as N)	10	21	17	6	0.06	0.07	0.018	0.079	0.025	0.0025	0.003	0.025	0.0375	0.025	0.013	0.066	0.153	0.76	0.064	0.139
Nitrite (as N)	10	21	17	6	0.008	0.0123	0.0048	0.0181	0.005	0.0005	0.0005	0.0050	0.0075	0.005	0.0025	0.0180	0.013	0.157	0.0210	0.0330
Nitrogen (Dissolved)	5	11	6	2	2.06	0.85	1.00	1.06	1.15	0.597	0.89	0.93	1.91	0.81	1.01	1.06	3.27	1.12	1.13	1.18
Nitrogen (Total)	7	15	9	4	1.95	0.82	0.97	1.13	0.877	0.37	0.82	0.92	1.98	0.806	0.95	1.17	3.37	1.21	1.19	1.25
Nitrogen Kjeldahl (Total)	10	21	17	6	1.78	0.87	1.02	1.01	0.877	0.37	0.80	0.75	1.62	0.88	1.00	1.06	3.37	1.29	1.62	1.19
Orthophosphate (Dissolved)	4	8	11	4	0.07	0.011	0.033	0.050	0.0214	0.0052	0.007	0.018	0.0454	0.01135	0.023	0.031	0.171	0.0213	0.153	0.121
Phosphorus - Dissolved	9	19	14	5	0.209	0.049	0.05	0.05	0.0399	0.0179	0.02	0.03	0.148	0.0337	0.04	0.05	0.561	0.154	0.19	0.07
Phosphorus - Total	9	21	17	6	0.23	0.06	0.06	0.07	0.0917	0.0259	0.03	0.04	0.15	0.0528	0.05	0.06	0.647	0.186	0.21	0.13
Cyanide																				
Cyanide (Free)	10	19	15	6	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Cyanide (Total)	10	20	16	5	0.0041	0.0044	0.00455	0.00462	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.011	0.0083	0.0109	0.0087
Cyanide (WAD)	10	19	15	6	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Dissolved Metals																				
Aluminum	10	21	17	6	0.0019	0.0023	0.0026	0.0029	0.001	0.0005	0.0013	0.0012	0.00165	0.0016	0.0025	0.0027	0.0036	0.0125	0.0050	0.0050
Antimony	10	21	17	6	0.000100	0.00021	0.00018	0.00022	0.00005	0.00005	0.00005	0.00005	0.00008	0.00015	0.00012	0.00018	0.00025	0.00125	0.00050	0.00050
Arsenic	10	21	17	6	0.0014	0.0013	0.0017	0.0018	0.00091	0.00093	0.0012	0.0012	0.00133	0.0013	0.0017	0.0018	0.00265	0.00203	0.0034	0.0023
Barium	10	21	17	6	0.090	0.064	0.049	0.069	0.0508	0.045	0.028	0.049	0.0901	0.0633	0.049	0.064	0.139	0.096	0.061	0.093
Beryllium	10	21	17	6	0.00010	0.00032	0.00027	0.00028	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.0005	0.0025	0.00100	0.00100
Bismuth	10	19	14	5	0.010225	0.032	0.022	0.020	0.00025	0.00025	0.000	0.000	0.00025	0.00025	0.000	0.000	0.1	0.1	0.100	0.100
Boron	10	21	17	6	0.039	0.041	0.036	0.041	0.027	0.025	0.024	0.028	0.0345	0.041	0.034	0.043	0.051	0.05	0.050	0.050
Cadmium	10	21	17	6	0.00001	0.000020	0.000011	0.000010	0.000005	0.000005	0.000005	0.000005	0.000005	0.000011	0.000005	0.000009	0.00002	0.000143	0.000040	0.000017
Calcium	10	21	17	6	98	80	57	80	64.4	56.2	50	57	97	74.3	57	72	143	126	66	110
Chromium	10	21	17	6	0.00021	0.0005	0.00029	0.00039	0.00012	0.00005	0.00005	0.00016	0.000175	0.00013	0.00011	0.00024	0.0005	0.0025	0.00100	0.00100
Cobalt	10	21	17	6	0.00026	0.00019	0.00015	0.00018	0.00013	0.00005	0.00005	0.00005	0.000225	0.00015	0.00014	0.00018	0.0005	0.00075	0.00030	0.00030
Copper	10	21	17	6	0.0011	0.0013	0.0012	0.0014	0.0001	0.0005	0.0005	0.0005	0.000565	0.00123	0.0014	0.0013	0.00437	0.0025	0.0018	0.0031
Iron	10	21	17	6	0.115	0.045	0.032	0.031	0.043	0.015	0.015	0.015	0.1045	0.037	0.030	0.029	0.243	0.168	0.068	0.051
Lead	10	21	17	6	0.00005	0.00016	0.00013	0.00014	0.000025	0.000025	0.00003	0.00003	0.000025	0.000025	0.00003	0.00003	0.00025	0.00125	0.00050	0.00050
Lithium	10	21	17	6	0.0062	0.0053	0.0052	0.0065	0.0025	0.0025	0.0025	0.0050	0.006275	0.00542	0.0053	0.0063	0.00887	0.0125	0.0067	0.0080
Magnesium	10	21	17	6	99.0	77.9	45.7	72.6	56.8	42.0	36.0	52.7	94.0	74.9	43.4	64.8	150.0	137.0	60.8	110.0
Manganese	10	21	17	6	0.835	0.125	0.052	0.075	0.18	0.0075	0.008	0.047	0.592	0.106	0.044	0.085	1.98	0.518	0.282	0.099
Mercury	10	21	17	6	0.0000050	0.0000055	0.0000056	0.0000058	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.00001	0.0000100	0.0000100
Molybdenum	10	21	17	6	0.0243	0.0256	0.0078	0.0299	0.00102	0.0058	0.0042	0.0088	0.01017	0.0184	0.0062	0.0128	0.0805	0.0705	0.0133	0.1030
Nickel	10	21	17	6	0.0017	0.0015	0.0011	0.0016	0.0013	0.0005	0.0005	0.0010	0.00157	0.00153	0.0011	0.0017	0.00252	0.0025	0.0021	0.0021
Phosphorus	10	19	14	5	0.22	0.10	0.09	0.08	0.025	0.025	0.03	0.03	0.1615	0.15	0.06	0.06	0.6	0.15	0.19	0.15
Potassium	10	21	17	6	18	15	12	17	14.3	10.9	10	14	17.55	14.5	12	15	27.5	19.8	16	22
Selenium	10	21	17	6	0.00040	0.00047	0.00039	0.00045	0.00015	0.00014	0.00018	0.00017	0.00026	0.0005	0.00025	0.00039	0.00106	0.0025	0.00100	0.00100
Silicon	10	19	14	5	10.51	4.39	5.19	8.28	5.88	0.998	1.79	5.24	10.8	4.55	4.40	9.01	13.6	7.54	12.90	12.30
Silver	10	21	17	6	0.000006	0.000009	0.000008	0.000008	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.00001	0.00005	0.000020	0.000020
Sodium	10	21	17	6	66	56	40	57	36	37.8	33	48	67.65	52.4	38	53	100	97.4	52	72
Strontium	10	19	14	5	0.85	0.65	0.41	0.69	0.53	0.408	0.36	0.49	0.895	0.636	0.41	0.65	1.19	1	0.53	0.93
Sulphur	7	7	9	3	81	87	23	94	30.2	26.5	16	54	67.2	77.2	21	97	132	171	39	132
Thallium	10	21	17	6	0.000015	0.000060	0.000050	0.000053	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.0001	0.0005	0.000200	0.000200
Tin	10	21	17	6	0.00007	0.00017	0.00015	0.00016	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00025	0.00125	0.00050	0.00050
Titanium	10	21	17	6	0.0050	0.005	0.0050	0.0050	0.005	0.005	0.0050	0.0050	0.005	0.005	0.0050	0.0050	0.005	0.005	0.0050	0.0050
Uranium	10	21	17	6	0.0017	0.0019	0.0009	0.0023	0.000286	0.00105	0.0004	0.0010	0.00112	0.00152	0.0009	0.0012	0.00494	0.00445	0.0013	0.0056
Vanadium	10	21	17	6	0.0020	0.0033	0.0033	0.0039	0.0005	0.0017	0.0010	0.0026	0.00145	0.0026	0.0021	0.0030	0.0044	0.015	0.0150	0.0066
Zinc	10	21	17	6	0.0025	0.0022	0.0018	0.0029	0.0005	0.0005	0.0005	0.0005	0.0018	0.0025	0.0022	0.0025	0.0067	0.0049	0.0050	0.0083
Total Metals																				
Aluminum	10	21	17	6	0.11	0.05	0.04	0.06	0.0216	0.0035	0.01	0.01	0.04465	0.0278	0.03	0.05	0.515	0.209	0.11	0.16
Antimony	10	21	17	6	0.000104	0.00022	0.00020	0.00024	0.00005	0.00005	0.00005	0.00010	0.00008	0.00016	0.00014	0.00020	0.00025	0.00125	0.00050	0.00050
Arsenic	10	21	17	6	0.0015	0.0013	0.0017	0.0017	0.00091	0.0009	0.0010	0.0012	0.00143	0.0013	0.0016	0.0018	0.00262	0.00158	0.0031	0.0021
Barium	10	21	17	6	0.092	0.065	0.050	0.071	0.0535	0.042	0.028	0.056	0.09005	0.0658	0.051	0.063	0.143	0.095	0.064	0.099
Beryllium	10	21	17	6	0.00010	0.00032	0.00027	0.00028	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.0005	0.0025	0.00100	0.00100
Bismuth	10	19	14	5	0.010225	0.03175	0.021625	0.0202	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.1	0.1	0.1	0.1
Boron	10	21	17	6	0.041	0.044	0.039	0.044	0.027	0.027	0.026	0.031	0.038	0.046	0.037	0.046	0.053	0.05	0.050	0.053
Cadmium	10	21	17	6	0.00001	0.000020	0.000011	0.000016	0.000005	0.000005	0.000005	0.000005	0.000011	0.0000085	0.000005	0.000009	0.000021	0.000137	0.000035	0.000053
Calcium	10	21	17	6	97	79	56	78	64.8	55.7	50	55	96.7	72.1	57	72	146	128	63	110
Chromium	10	21	17	6	0.00055	0.0004	0.0004	0.0005	0.00022	0.00015	0.0002	0.0003	0.00044	0.00029	0.0003	0.0005	0.0016	0.0025	0.0010	0.0010
Cobalt	10	21	17	6	0.00037	0.00023	0.00019	0.00023	0.00015	0.00005	0.00012	0.00015	0.000305	0.00015	0.00015	0.00021	0.0006	0.0008	0.00036	0.00032
Copper	10	21	17	6	0.0031	0.0020	0.0019	0.0022	0.00079	0.00085	0.0010	0.0013	0.002505	0.002	0.0020	0.0021	0.0087	0.003	0.0027	0.0034
Iron	10	21	17	6	0.32	0.13	0.09	0.11	0.146	0.015	0.04	0.04	0.265	0.099	0.08	0.10	0.797	0.399	0.20	0.24
Lead	10	21	17	6	0.00007	0.00016	0.00014	0.00015	0.000025	0.000025	0.00003	0.00003	0.000025	0.00003	0.00003	0.00004	0.00025	0.0013	0.00050	0.00050
Lithium	10	21	17	6	0.0062	0.0058	0.0053	0.0066	0.0025	0.0025	0.0025	0.0050	0.00652	0.00557	0.0052	0.0065	0.00876	0.0125	0.0065	0.0086
Magnesium	10	21	17	6	97	77	45	72	57.1	40.5	37	50	91.85	73.5	42	65	151	137	58	108
Manganese	10	21	17	6	0.88	0.13	0.06	0.08	0.181	0.0103	0.01	0.05	0.611	0.108	0.05	0.09	2.04	0.531	0.33	0.11
Mercury	10	21	17	6	0.0000050	0.0000055	0.0000056	0.0000058	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.00001	0.0000100	0.0000100
Molybdenum	10	21	17	6	0.025	0.027	0.008	0.031	0.00127	0.0069	0.004	0.010	0.01235	0.0197	0.007	0.014	0.0823	0.0747	0.014	0.111
Nickel	10	21	17	6	0.0024	0.0018	0.0013	0.0021	0.0015	0.0010	0.0005	0.0018	0.0022	0.0017	0.0013	0.0021	0.0039	0.0030	0.0024	0.0026
Phosphorus	10	19	14	5	0.25	0.12	0.09	0.09	0.071	0.025	0.03	0.03	0.188	0.15	0.08	0.07	0.67	0.15	0.19	0.15
Potassium	10	21	17	6	18.1	14.7	12.3	16.6	14.2	10.6	10.2	14.0	17.1	14.4	12.0	15.2	27.5	19.9	15.8	21.1
Selenium	10	21	17	6	0.00038	0.00047	0.00039	0.00045	0.00015	0.00015	0.00018	0.00018	0.00026	0.0005	0.00027	0.00038	0.0009	0.0025	0.00100	0.00100
Silicon	10	19	14	5	10.7	4.5	5.3	8.4	6.6	1.1	1.8	5.4	11.0	4.5	4.4	9.0	14.2	7.7	12.4	12.8
Silver	10	21	17	6	0.0000055	0.0000088	0.0000085	0.0000130	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000075	0.00001	0.00005	0.0000200	0.0000330
Sodium	10	21	17	6	66	56	40	58	36.8	37.5	34	47	68.95	52	38	54	99.4	96.6	50	75
Strontium	10	19	14	5	0.9	0.7	0.42	0.67	0.53	0.41	0.38	0.48	0.923	0.6	0.40	0.67	1.2	1.0	0.51	0.92
Sulphur	7	7	9	3	83	88	23	98	29.5	25.9	17	55	69.1	76	22	101	136	177	37	138
Thallium	10	21	17	6	0.00002	0.00006	0.00005	0.00005	0.000005	0.000005	0.00001	0.00001	0.000005	0.000005	0.00001	0.00001	0.0001	0.0005	0.00020	0.00020
Tin	10	21	17	6	0.00036	0.00017	0.00015	0.00016	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00298	0.00125	0.00050	0.00050
Titanium	10	21	17	6	0.0072	0.006	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.022	0.016	0.005	0.005
Uranium	10	21	17	6	0.0018	0.0020	0.0009	0.0024	0.0003	0.0011	0.0005	0.0010	0.0012	0.0016	0.0009	0.0013	0.0052	0.0046	0.0014	0.0061
Vanadium	10	21	17	6	0.0025	0.0036	0.0035	0.0044	0.0005	0.0018	0.0010	0.0027	0.0021	0.0026	0.0025	0.0036	0.0047	0.015	0.0150	0.0071
Zinc	10	21	17	6	0.0043	0.0020	0.0020	0.0022	0.0015	0.0015	0.0015	0.0015	0.002	0.0015	0.0015	0.0020	0.0222	0.0034	0.0050	0.0036
Organics																				
Carbon Organic (Dissolved)	10	20	17	6	14.5	12.6	16	17	11.4	9.5	13	14	13.2	13.0	15	18	25	16	20	18
Carbon Organic (Total)	9	20	14	5	15.7	13	16	17	12.9	9.9	13	15	14.1	13.5	16	18	25	16	21	19
Nitrogen Organic (Dissolved)	3	11	5	2	1.78	0.76	0.98	0.93	0.85	0.566	0.87	0.77	1.01	0.759	0.99	0.93	3.47	1.04	1.08	1.09
Nitrogen Organic (Total)	6	12	5	2	1.00	0.76	0.99	0.95	0.77	0.53	0.88	0.80	1.06	0.77	0.97	0.95	1.19	0.9	1.14	1.10

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.
2. SEASONS ARE SPECIFIED AS FOLLOWS: WIN (WINTER; DECEMBER THROUGH MARCH), SPR (SPRING; APRIL AND MAY), SUMMER(JUNE THROUGH AUGUST), FALL (SEPTEMBER THROUGH NOVEMBER).

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.29 - PC08
(PAGE 1 OF 2)

Parameter	Total Count	Complete Dataset - PC08									
		Min	5th	25th	Percentiles 50th	75th	95th	Max	Average	Standard Deviation	Coefficient of Variation
In Situ Parameters											
Conductivity µS/cm	55	290	377	514	563	606	694	907	554	104	1.9E-01
Oxygen Dissolved %	51	11	41	69	89	106	145	169	87	32	3.7E-01
Oxygen Dissolved	57	1.6	4.7	8.1	9.1	11.3	14.1	17.6	9.5	3.0	3.1E-01
pH (unitless)	58	6.8	7.1	7.7	8.0	8.5	8.9	9.0	8.0	0.5	6.8E-02
Redox Potential mV	55	-354	-79	42	97	132	208	427	85	110	1.3E+00
Salinity ppt	46	0.21	0.29	0.32	0.36	0.39	0.43	0.45	0.36	0.05	1.4E-01
Specific Conductivity µS/cm	58	415	566	673	747	812	877	969	735	111	1.5E-01
Temperature °C	58	0.2	1.7	6.6	12.5	17.0	22.9	24.1	12.0	6.9	5.8E-01
Total Dissolved Solids	49	277	381	432	492	527	572	603	480	69	1.4E-01
Turbidity NTU	25	1.0	1.4	2.9	9.1	13.1	27.8	47.1	10.9	10.5	9.6E-01
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	3	0.5	0.7	1.5	2.4	4.7	6.5	7.0	3.3	3.3	1.0E+00
Alkalinity (Total as CaCO3)	57	212	221	238	296	314	333	357	281	41	1.5E-01
Bicarbonate Alkalinity	40	191	213	224	302	312	330	351	275	48	1.7E-01
Carbonate Alkalinity	40	0.5	0.5	1.0	1.0	10.7	20.6	31.0	6.8	8.0	1.2E+00
Color TCU	42	14.0	14.5	17.1	19.3	21.4	23.7	25.9	19.3	3.0	1.6E-01
Hardness as CaCO3 (Dissolved)	58	263	268	292	335	357	380	393	327	36	1.1E-01
Hydroxide Alkalinity	40	0.5	0.5	0.5	0.5	1.0	1.0	1.0	0.7	0.3	3.5E-01
pH (unitless)	57	7.7	7.9	8.1	8.3	8.5	8.6	8.8	8.3	0.2	2.8E-02
Specific Conductivity µS/cm	58	601	612	665	755	797	845	866	734	75	1.0E-01
Total Dissolved Solids	58	290	371	409	458	479	507	531	444	49	1.1E-01
Total Suspended Solids	58	1.5	1.5	4.4	6.8	12.2	26.7	42.4	10.0	9.0	9.0E-01
Turbidity NTU	53	1.0	1.4	3.3	7.6	10.8	22.1	29.6	8.5	6.6	7.8E-01
Dissolved Anions											
Bromide	58	0.03	0.03	0.03	0.13	0.25	0.25	0.25	0.14	0.10	7.5E-01
Chloride	58	46	49	53	56	59	61	65	56	4	7.1E-02
Fluoride	57	0.10	0.10	0.21	0.24	0.27	0.38	0.43	0.24	0.07	2.8E-01
Sulphate	58	23	30	42	48	57	74	85	50	13	2.7E-01
Nutrients											
Ammonia (Total)	58	0.003	0.009	0.022	0.040	0.164	0.385	0.516	0.109	0.131	1.2E+00
Nitrate (as N)	58	0.003	0.00	0.01	0.02	0.03	0.06	0.12	0.02	0.022	9.8E-01
Nitrite (as N)	58	0.0005	0.00	0.00	0.01	0.01	0.02	0.02	0.01	0.0058	1.0E+00
Nitrogen (Dissolved)	24	0.48	0.50	0.70	0.82	1.00	1.37	1.75	0.88	0.31	3.6E-01
Nitrogen (Total)	37	0.33	0.45	0.83	0.90	1.06	1.73	3.68	1.03	0.55	5.4E-01
Nitrogen Kjeldahl (Total)	58	0.33	0.46	0.82	0.93	1.05	1.58	3.55	0.99	0.45	4.6E-01
Orthophosphate (Dissolved)	31	0.001	0.001	0.002	0.003	0.006	0.010	0.022	0.004	0.004	9.8E-01
Phosphorus - Dissolved	50	0.006	0.007	0.011	0.015	0.024	0.052	0.136	0.022	0.022	9.8E-01
Phosphorus - Total	57	0.007	0.019	0.035	0.050	0.070	0.123	0.266	0.061	0.046	7.6E-01
Cyanide											
Cyanide (Free)	52	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	5.3E-16
Cyanide (Total)	55	0.0025	0.0025	0.0025	0.0025	0.0060	0.0075	0.0078	0.0040	0.0020	4.9E-01
Cyanide (WAD)	52	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	5.3E-16
Dissolved Metals											
Aluminum	58	0.0005	0.0005	0.0015	0.0021	0.0025	0.0025	0.0069	0.0021	0.0010	4.7E-01
Antimony	58	0.00005	0.00005	0.00005	0.00005	0.00025	0.00025	0.00050	0.00013	0.00010	8.1E-01
Arsenic	58	0.0007	0.0007	0.0009	0.0012	0.0013	0.0015	0.0018	0.0011	0.0002	2.2E-01
Barium	58	0.010	0.025	0.046	0.054	0.066	0.077	0.084	0.055	0.015	2.8E-01
Beryllium	58	0.000050	0.000050	0.000050	0.000050	0.000500	0.000500	0.001000	0.000214	0.000237	1.1E+00
Bismuth	49	0.00025	0.00025	0.00025	0.00025	0.00025	0.10000	0.10000	0.02264	0.04205	1.9E+00
Boron	58	0.016	0.018	0.021	0.026	0.050	0.050	0.050	0.032	0.013	4.1E-01
Cadmium	57	0.0000050	0.0000050	0.0000050	0.0000050	0.0000085	0.0000085	0.0000170	0.0000063	0.0000022	3.4E-01
Calcium	58	46	49	56	66	69	74	77	63	8	1.3E-01
Chromium	58	0.00005	0.00005	0.00013	0.00043	0.00050	0.00100	0.00150	0.00040	0.00031	7.6E-01
Cobalt	58	0.00005	0.00005	0.00010	0.00015	0.00017	0.00028	0.00052	0.00015	0.00009	5.8E-01
Copper	58	0.0003	0.0004	0.0005	0.0009	0.0011	0.0013	0.0016	0.0008	0.0003	3.9E-01
Iron	58	0.005	0.014	0.015	0.069	0.148	0.345	0.751	0.107	0.142	1.3E+00
Lead	58	0.000025	0.000025	0.000025	0.000025	0.000250	0.000250	0.000500	0.000107	0.000118	1.1E+00
Lithium	58	0.00250	0.00250	0.00446	0.00494	0.00542	0.00602	0.00760	0.00471	0.00116	2.5E-01
Magnesium	58	34	35	38	42	45	48	49	41	4	1.0E-01
Manganese	58	0.003	0.004	0.008	0.114	0.170	0.233	0.284	0.102	0.086	8.4E-01
Mercury	58	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000100	0.0000100	0.0000055	0.0000015	2.8E-01
Molybdenum	58	0.002	0.002	0.002	0.002	0.003	0.003	0.004	0.002	0.000	1.7E-01
Nickel	58	0.0005	0.0005	0.0007	0.0016	0.0019	0.0023	0.0025	0.0014	0.0006	4.6E-01
Phosphorus	49	0.03	0.03	0.03	0.03	0.15	0.15	0.15	0.08	0.06	7.5E-01
Potassium	58	10	10	10	11	11	12	14	11	1	7.3E-02
Selenium	58	0.00005	0.00010	0.00013	0.00016	0.00050	0.00050	0.00100	0.00027	0.00020	7.5E-01
Silicon	49	1.3	1.7	5.2	8.1	9.1	10.1	10.5	7.1	2.7	3.8E-01
Silver	58	0.0000050	0.0000050	0.0000050	0.0000050	0.0000100	0.0000100	0.0000200	0.0000069	0.0000029	4.3E-01
Sodium	58	28	31	34	36	39	44	46	36	4	1.1E-01
Strontium	49	0.31	0.32	0.35	0.43	0.45	0.49	0.52	0.41	0.06	1.4E-01
Sulphur	27	8	9	13	15	16	18	19	14	3	1.9E-01
Thallium	58	0.0000050	0.0000050	0.0000050	0.0000050	0.0001000	0.0001000	0.0002000	0.0000395	0.0000497	1.3E+00
Tin	58	0.000050	0.000050	0.000050	0.000050	0.000250	0.000250	0.000500	0.000123	0.000107	8.7E-01
Titanium	58	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0110	0.0051	0.0008	1.5E-01
Uranium	58	0.0003	0.0004	0.0005	0.0006	0.0010	0.0012	0.0014	0.0007	0.0003	3.8E-01
Vanadium	58	0.0005	0.0005	0.0012	0.0015	0.0024	0.0048	0.0150	0.0023	0.0031	1.3E+00
Zinc	58	0.0005	0.0005	0.0005	0.0015	0.0025	0.0040	0.0098	0.0018	0.0016	8.8E-01
Total Metals											
Aluminum	58	0.0087	0.0155	0.0397	0.0903	0.1938	0.5659	1.2800	0.1666	0.2166	1.3E+00
Antimony	58	0.00005	0.00005	0.00005	0.00011	0.00025	0.00025	0.00050	0.00014	0.00010	6.8E-01
Arsenic	58	0.0008	0.0010	0.0012	0.0013	0.0014	0.0019	0.0020	0.0013	0.0002	1.9E-01
Barium	58	0.010	0.037	0.049	0.058	0.070	0.089	0.103	0.059	0.017	2.9E-01
Beryllium	58	0.000050	0.000050	0.000050	0.000050	0.000500	0.000500	0.001000	0.000214	0.000237	1.1E+00
Bismuth	49	0.00025	0.00025	0.00025	0.00025	0.00025	0.10000	0.10000	0.02264	0.04205	1.9E+00
Boron	58	0.018	0.020	0.024	0.030	0.050	0.050	0.050	0.034	0.012	3.6E-01
Cadmium	58	0.000005	0.000005	0.000005	0.000005	0.000009	0.000020	0.000035	0.000008	0.000006	7.5E-01
Calcium	58	44	48	55	65	68	73	75	62	8	1.3E-01
Chromium	58	0.00015	0.00020	0.00043	0.00050	0.00100	0.00168	0.00310	0.00077	0.00056	7.3E-01
Cobalt	58	0.00005	0.00011	0.00015	0.00020	0.00039	0.00074	0.00115	0.00029	0.00023	7.8E-01
Copper	58	0.0005	0.0010	0.0015	0.0019	0.0029	0.0055	0.0093	0.0025	0.0016	6.5E-01
Iron	58	0.04	0.04	0.12	0.92	1.36	2.46	3.38	0.92	0.80	8.7E-01
Lead	58	0.000025	0.000025	0.000025	0.000056	0.000250	0.000250	0.000500	0.000118	0.000113	9.6E-01
Lithium	58	0.0025	0.0025	0.0047	0.0049	0.0055	0.0065	0.0071	0.0050	0.0011	2.1E-01
Magnesium	58	33	34	37	42	44	46	48	41	4	1.0E-01
Manganese	58	0.00	0.01	0.01	0.13	0.18	0.27	0.28	0.11	0.09	8.2E-01
Mercury	58	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000100	0.0000100	0.0000055	0.0000015	2.8E-01
Molybdenum	58	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.003	0.001	1.9E-01
Nickel	58	0.0005	0.0005	0.0010	0.0019	0.0026	0.0034	0.0044	0.0019	0.0010	5.1E-01
Phosphorus	49	0.03	0.03	0.05	0.11	0.15	0.15	0.19	0.10	0.06	5.8E-01
Potassium	58	9	10	10	11	11	12	13	11	1	8.2E-02
Selenium	58	0.00010	0.00011	0.00013	0.00016	0.00050	0.00050	0.00100	0.00027	0.00020	7.2E-01
Silicon	49	1.1	1.9	5.3	8.5	9.8	10.9	11.7	7.5	2.9	3.9E-01
Silver	58	0.0000050	0.0000050	0.0000050	0.0000050	0.0000100	0.0000141	0.0000320	0.0000079	0.0000054	6.9E-01
Sodium	58	29	31	34	36	39	42	46	36	4	9.9E-02
Strontium	49	0.30	0.33	0.36	0.42	0.45	0.48	0.51	0.41	0.05	1.3E-01
Sulphur	27	9	9	13	15	16	18	19	14	3	1.8E-01
Thallium	58	0.0000050	0.0000050	0.0000050	0.0000050	0.0001000	0.0001000	0.0002000	0.0000395	0.0000497	1.3E+00
Tin	58	0.000050	0.000050	0.000050	0.000050	0.000250	0.000250	0.000500	0.000123	0.000107	8.7E-01
Titanium	58	0.0050	0.0050	0.0050	0.0050	0.0118	0.0262	0.0610	0.0099	0.0097	9.7E-01
Uranium	58	0.0004	0.0004	0.0005	0.0006	0.0011	0.0013	0.0016	0.0008	0.0003	4.0E-01
Vanadium	58	0.0015	0.0019	0.0024	0.0030	0.0034	0.0085	0.0150	0.0037	0.0029	7.8E-01
Zinc	58	0.0015	0.0015	0.0015	0.0015	0.0025	0.0039	0.0085	0.0021	0.0012	5.5E-01
Organics											
Carbon Organic (Dissolved)	57	9.7	10.8	12.2	12.8	14.0	16.0	17.4	13.1	1.6	1.2E-01
Carbon Organic (Total)	49	9.7	11.0	12.8	13.6	14.4	17.6	19.4	13.7	1.9	1.4E-01
Nitrogen Organic (Dissolved)	21	0.46	0.46	0.50	0.69	0.86	1.19	1.66	0.75	0.30	4.0E-01
Nitrogen Organic (Total)	25	0.39	0.45	0.63	0.79	0.93	1.24	1.82	0.82	0.29	3.6E-01

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.29 - PC08
(PAGE 2 OF 2)

Seasonal Statistics - PC08

Parameter	Count				Average				Min				Median				Max			
	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall
In Situ Parameters																				
Conductivity µS/cm	11	21	16	7	439	550	598	643	290	313	530	509	449	549	595	610	598	686	712	907
Oxygen Dissolved %	11	16	16	8	60	88	101	96	11.3	36.5	54	49	60.7	90.2	99	87	95.7	134	163	169
Oxygen Dissolved	11	20	17	9	8	10	9	10	1.6	4.76	5	5	8.13	10.45	9	9	12.9	15.9	14	18
pH (unitless)	11	21	17	9	8	8	8	8	7.36	7.14	7	7	7.49	7.96	9	8	8.01	8.71	9	8
Redox Potential mV	11	20	16	8	51	101	92	81	-48	-88.4	-354	-75	71.4	105.5	121	91	101	427	265	300
Salinity ppt	10	18	13	5	0.36	0.36	0.32	0.41	0.26	0.21	0.28	0.38	0.375	0.375	0.32	0.41	0.43	0.43	0.39	0.45
Specific Conductivity µS/cm	11	21	17	9	763	762	669	762	535	426	572	415	767	780	673	812	928	969	803	850
Temperature °C	11	21	17	9	3	11	20	10	0.22	4.1	16	4	2.82	11.5	22	11	6.38	17.6	24	18
Total Dissolved Solids	11	19	13	6	496	486	428	540	347	277	372	500	500	497	422	547	603	570	522	590
Turbidity NTU	6	8	7	4	17	8	8	12	8.4	1.3	1	2	11.1	7.05	4	9	47.1	23.3	21	29
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	0	0	1	2	-	-	7	1.45	-	-	7	0.5	-	-	7	1.45	-	-	7	2.4
Alkalinity (Total as CaCO3)	11	21	16	9	315	282	235	319	259	230	212	301	312	295	235	314	357	320	295	351
Bicarbonate Alkalinity	9	14	11	6	310	278	219	320	259	215	191	301	311	297	220	318	349	320	244	351
Carbonate Alkalinity	9	14	11	6	0.94	7	13	2	0.5	0.5	3	1	1	1	15	1	1	31	20	9
Color TCU	7	16	11	8	20	17	20	22	15.9	14	16	19	20.4	16.45	20	22	22.5	23	26	25
Hardness as CaCO3 (Dissolved)	11	21	17	9	351	340	287	346	295	288	263	318	353	350	289	344	393	388	325	380
Hydroxide Alkalinity	9	14	11	6	0.94	0.68	0.50	0.83	0.5	0.5	0.50	0.50	1	0.5	0.50	1.00	1	1	0.50	1.00
pH (unitless)	11	20	17	9	8	8	8	8	7.86	8.08	8	8	8	8.27	9	8	8.34	8.56	9	8
Specific Conductivity µS/cm	11	21	17	9	777	749	656	794	632	654	601	716	780	777	647	802	866	845	770	845
Total Dissolved Solids	11	21	17	9	469	459	398	469	371	392	290	406	474	470	409	466	531	515	460	506
Total Suspended Solids	11	21	17	9	10	13	6	10	1.5	3.2	2	3	10.1	10	5	8	22	42.4	26	22
Turbidity NTU	11	19	16	7	12	10	5	8	4.84	1.35	1	3	10.3	7.59	2	8	27.3	29.6	23	12
Dissolved Anions																				
Bromide	11	21	17	9	0.23	0.15	0.05	0.16	0.025	0.025	0.03	0.03	0.25	0.125	0.03	0.13	0.25	0.25	0.25	0.25
Chloride	11	21	17	9	58	57	52	56	45.8	52.4	47	52	56.9	57.3	53	56	65.1	60.8	61	61
Fluoride	11	21	16	9	0.25	0.22	0.23	0.29	0.1	0.1	0.17	0.22	0.26	0.229	0.22	0.28	0.37	0.4	0.43	0.43
Sulphate	11	21	17	9	41	57	51	40	30.8	42.6	41	23	39.8	55.4	46	35	68.2	85	83	58
Nutrients								-												
Ammonia (Total)	11	21	17	9	0.225	0.022	0.086	0.210	0.0102	0.0025	0.020	0.024	0.23	0.0193	0.056	0.194	0.516	0.06	0.347	0.488
Nitrate (as N)	11	21	17	9	0.03	0.02	0.017	0.037	0.0168	0.0025	0.003	0.003	0.025	0.0125	0.013	0.025	0.05	0.062	0.065	0.122
Nitrite (as N)	11	21	17	9	0.008	0.0036	0.0058	0.0078	0.0016	0.0005	0.0005	0.0005	0.005	0.0025	0.0024	0.0050	0.016	0.018	0.0242	0.0150
Nitrogen (Dissolved)	4	11	6	3	0.90	0.65	1.14	1.16	0.73	0.48	0.92	0.78	0.853	0.65	1.18	0.96	1.17	0.88	1.39	1.75
Nitrogen (Total)	6	15	9	7	1.00	0.77	1.21	1.36	0.825	0.33	0.76	0.87	0.9185	0.8	1.20	0.91	1.45	1.07	1.87	3.68
Nitrogen Kjeldahl (Total)	11	21	17	9	0.97	0.76	1.11	1.31	0.609	0.33	0.76	0.82	0.926	0.83	1.03	0.94	1.45	1.07	1.87	3.55
Orthophosphate (Dissolved)	6	8	11	6	0.01	0.004	0.002	0.006	0.0005	0.0017	0.001	0.004	0.00375	0.0031	0.002	0.006	0.022	0.0096	0.010	0.010
Phosphorus - Dissolved	10	19	14	7	0.015	0.025	0.02	0.03	0.0068	0.0059	0.01	0.01	0.0107	0.0182	0.02	0.01	0.0377	0.136	0.05	0.07
Phosphorus - Total	11	21	17	8	0.10	0.06	0.03	0.06	0.0501	0.0069	0.01	0.03	0.0759	0.0462	0.03	0.06	0.266	0.219	0.06	0.09
Cyanide																				
Cyanide (Free)	11	19	15	7	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Cyanide (Total)	11	20	16	8	0.0034	0.0039	0.0038375	0.0051875	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.00605	0.0064	0.0074	0.0077	0.0078
Cyanide (WAD)	11	19	15	7	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Dissolved Metals																				
Aluminum	11	21	17	9	0.0015	0.0022	0.0022	0.0024	0.0005	0.0005	0.0013	0.0005	0.0015	0.002	0.0023	0.0025	0.0025	0.0069	0.0027	0.0050
Antimony	11	21	17	9	0.000068	0.00013	0.00014	0.00019	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00011	0.00025	0.00025	0.00025	0.00025	0.00050
Arsenic	11	21	17	9	0.0009	0.0010	0.0013	0.0013	0.00069	0.00068	0.0012	0.0009	0.00089	0.00106	0.0013	0.0013	0.00107	0.00137	0.0017	0.0018
Barium	11	21	17	9	0.058	0.053	0.050	0.063	0.0351	0.0222	0.010	0.044	0.0549	0.0535	0.053	0.063	0.079	0.084	0.078	0.074
Beryllium	11	21	17	9	0.00009	0.00022	0.00021	0.00036	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00050	0.0005	0.0005	0.00050	0.00100
Bismuth	11	19	14	5	0.00931818	0.032	0.022	0.020	0.00025	0.00025	0.000	0.000	0.00025	0.00025	0.000	0.000	0.1	0.1	0.100	0.100
Boron	11	21	17	9	0.028	0.032	0.031	0.041	0.023	0.016	0.017	0.028	0.025	0.024	0.021	0.050	0.05	0.05	0.050	0.050
Cadmium	11	21	16	9	0.00001	0.000006	0.000006	0.000008	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000009	0.0000085	0.0000085	0.000009	0.000017
Calcium	11	21	17	9	69	66	54	67	58.6	52.4	46	60	67.6	66.7	54	67	76.8	76.8	65	74
Chromium	11	21	17	9	0.00046	0.0004	0.00025	0.00062	0.00032	0.00005	0.00005	0.00033	0.00045	0.00033	0.00005	0.00050	0.00056	0.0012	0.00100	0.00150
Cobalt	11	21	17	9	0.00025	0.00013	0.00010	0.00019	0.00012	0.00005	0.00005	0.00015	0.00022	0.00015	0.00010	0.00016	0.00052	0.00025	0.00015	0.00030
Copper	11	21	17	9	0.0007	0.0009	0.0009	0.0006	0.00025	0.0005	0.0005	0.0004	0.00071	0.00099	0.0009	0.0005	0.00164	0.0013	0.0013	0.0010
Iron	11	21	17	9	0.241	0.077	0.030	0.157	0.066	0.011	0.005	0.015	0.19	0.045	0.016	0.082	0.632	0.241	0.130	0.751
Lead	11	21	17	9	0.00005	0.00011	0.00010	0.00018	0.000025	0.000025	0.00003	0.00003	0.000025	0.000025	0.00003	0.00025	0.00025	0.00025	0.00025	0.00050
Lithium	11	21	17	9	0.0047	0.0043	0.0050	0.0053	0.0025	0.0025	0.0025	0.0025	0.00476	0.00479	0.0051	0.0055	0.00591	0.0059	0.0076	0.0063
Magnesium	11	21	17	9	43.6	42.5	37.2	43.3	36.1	33.8	33.8	41.0	44.0	43.7	36.3	42.7	48.9	47.7	45.3	47.6
Manganese	11	21	17	9	0.192	0.115	0.019	0.119	0.117	0.00374	0.003	0.074	0.193	0.127	0.008	0.124	0.263	0.284	0.172	0.183
Mercury	11	21	17	9	0.0000050	0.0000055	0.0000056	0.0000061	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.00001	0.0000100	0.0000100
Molybdenum	11	21	17	9	0.0023	0.0022	0.0024	0.0032	0.0019	0.00187	0.0019	0.0028	0.00246	0.00217	0.0024	0.0031	0.00261	0.00277	0.0032	0.0036
Nickel	11	21	17	9	0.0018	0.0014	0.0007	0.0021	0.00147	0.0005	0.0005	0.0017	0.00179	0.0016	0.0007	0.0022	0.00237	0.00194	0.0013	0.0025
Phosphorus	11	19	14	5	0.07	0.10	0.07	0.08	0.025	0.025	0.03	0.03	0.025	0.15	0.03	0.03	0.15	0.15	0.15	0.15
Potassium	11	21	17	9	11	10	11	12	9.82	9.63	10	11	10.9	10.3	11	12	11.4	11.6	12	14
Selenium	11	21	17	9	0.00015	0.00027	0.00028	0.00039	0.0001	0.00005	0.00013	0.00010	0.00011	0.00016	0.00016	0.00050	0.0005	0.0005	0.00050	0.00100
Silicon	11	19	14	5	9.11	6.74	4.98	9.88	7.52	1.33	1.31	9.42	9.08	8.13	5.39	9.93	10.5	9.49	8.37	10.10
Silver	11	21	17	9	0.000005	0.000007	0.000007	0.000009	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000010	0.00001	0.00001	0.000010	0.000020
Sodium	11	21	17	9	36	37	34	41	27.9	33.5	30	35	36	36.1	33	40	43.5	43.5	40	46
Strontium	11	19	14	5	0.44	0.42	0.35	0.44	0.378	0.305	0.32	0.42	0.447	0.436	0.35	0.44	0.516	0.503	0.43	0.46
Sulphur	8	7	9	3	13	17	15	9	11	15	14	8	13.35	16.2	15	8	15.6	18.7	16	9
Thallium	11	21	17	9	0.000014	0.000041	0.000039	0.000069	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000100	0.0001	0.0001	0.000100	0.000200
Tin	11	21	17	9	0.00007	0.00013	0.00012	0.00019	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00025	0.00025	0.00025	0.00025	0.00050
Titanium	11	21	17	9	0.0050	0.005	0.0050	0.0057	0.005	0.005	0.0050	0.0050	0.005	0.005	0.0050	0.0050	0.005	0.005	0.0050	0.0110
Uranium	11	21	17	9	0.0005	0.0007	0.0010	0.0005	0.000346	0.000488	0.0005	0.0004	0.000474	0.00059	0.0010	0.0005	0.0007	0.00122	0.0014	0.0006
Vanadium	11	21	17	9	0.0012	0.0020	0.0031	0.0030	0.0005	0.0005	0.0005	0.0010	0.0013	0.0013	0.0024	0.0014	0.0015	0.015	0.0150	0.0150
Zinc	11	21	17	9	0.0010	0.0019	0.0019	0.0026	0.0005	0.0005	0.0005	0.0005	0.0005	0.0017	0.0016	0.0025	0.0025	0.0042	0.0073	0.0098
Total Metals																				
Aluminum	11	21	17	9	0.25	0.21	0.05	0.18	0.0087	0.0158	0.02	0.01	0.177	0.111	0.04	0.19	0.715	1.28	0.15	0.35
Antimony	11	21	17	9	7.4545E-05	0.00015	0.00016	0.00019	0.00005	0.00005	0.00005	0.00005	0.00005	0.00012	0.00012	0.00025	0.00025	0.00025	0.00025	0.00050
Arsenic	11	21	17	9	0.0012	0.0012	0.0014	0.0014	0.00097	0.00077	0.0012	0.0010	0.00118	0.00119	0.0014	0.0014	0.00171	0.00194	0.0016	0.0020
Barium	11	21	17	9	0.067	0.058	0.052	0.067	0.0416	0.0245	0.010	0.057	0.0642	0.0529	0.054	0.067	0.0962	0.103	0.089	0.074
Beryllium	11	21	17	9	0.00009	0.00022	0.00021	0.00036	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00050	0.0005	0.0005	0.00050	0.00100
Bismuth	11	19	14	5	0.00931818	0.03175	0.021625	0.0202	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.1	0.1	0.1	0.1
Boron	11	21	17	9	0.030	0.034	0.033	0.042	0.024	0.018	0.020	0.030	0.028	0.028	0.025	0.050	0.05	0.05	0.050	0.050
Cadmium	11	21	17	9	0.00001	0.000007	0.000008	0.000009	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000009	0.000035	0.000023	0.000025	0.000018
Calcium	11	21	17	9	68	65	53	66	59.6	53.5	44	58	67.1	67.7	52	66	75.2	73.8	68	73
Chromium	11	21	17	9	0.00115	0.0008	0.0003	0.0009	0.0005	0.00018	0.0002	0.0005	0.00104	0.00058	0.0003	0.0010	0.0022	0.0031	0.0005	0.0015
Cobalt	11	21	17	9	0.00047	0.00030	0.00016	0.00033	0.00015	0.00005	0.00005	0.00015	0.0004	0.00021	0.00015	0.00035	0.0010	0.0012	0.00044	0.00048
Copper	11	21	17	9	0.0033	0.0029	0.0014	0.0024	0.00141	0.00112	0.0005	0.0005	0.00285	0.00223	0.0015	0.0028	0.00704	0.0093	0.0021	0.0048
Iron	11	21	17	9	1.71	1.06	0.19	1.01	0.837	0.043	0.04	0.51	1.76	1.09	0.08	1.04	2.71	3.38	1.27	1.37
Lead	11	21	17	9	0.00007	0.00012	0.00010	0.00019	0.000025	0.000025	0.00003	0.00003	0.000025	0.00007	0.00003	0.00025	0.00025	0.0003	0.00025	0.00050
Lithium	11	21	17	9	0.0050	0.0044	0.0053	0.0057	0.0044	0.0025	0.0025	0.0050	0.00477	0.00477	0.0051	0.0059	0.00582	0.0062	0.0071	0.0063
Magnesium	11	21	17	9	43	42	37	42	37	33.6	33	40	43.3	43.5	36	42	48.2	46.1	47	47
Manganese	11	21	17	9	0.21	0.12	0.03	0.13	0.129	0.00535	0.00	0.06	0.214	0.13	0.01	0.13	0.283	0.281	0.25	0.22
Mercury	11	21	17	9	0.0000050	0.0000055	0.0000056	0.0000061	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.00001	0.0000100	0.0000100
Molybdenum	11	21	17	9	0.002	0.002	0.003	0.003	0.00209	0.00176	0.002	0.003	0.00254	0.0024	0.003	0.003	0.0031	0.00394	0.003	0.004
Nickel	11	21	17	9	0.0026	0.0020	0.0009	0.0027	0.0020	0.0008	0.0005	0.0018	0.0024	0.0019	0.0009	0.0027	0.0042	0.0044	0.0015	0.0034
Phosphorus	11	19	14	5	0.11	0.11	0.08	0.09	0.025	0.025	0.03	0.03	0.111	0.15	0.06	0.07	0.192	0.15	0.15	0.15
Potassium	11	21	17	9	10.6	10.3	10.9	11.9	10.0	9.4	9.9	11.1	10.5	10.1	10.7	11.6	11.2	11.6	12.8	13.3
Selenium	11	21	17	9	0.00015	0.00028	0.00028	0.00040	0.00010	0.00012	0.00013	0.00012	0.00011	0.0002	0.00016	0.00050	0.0005	0.0005	0.00050	0.00100
Silicon	11	19	14	5	9.7	7.3	5.1	10.4	8.0	1.4	1.1	9.8	9.3	8.4	5.5	10.5	11.7	11.3	9.0	11.0
Silver	11	21	17	9	0.0000078	0.0000080	0.0000068	0.0000098	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000100	0.000031	0.000032	0.0000100	0.0000200
Sodium	11	21	17	9	37	36	34	40	29.2	32.9	30	33	36.7	36.1	34	39	42.5	42	40	46
Strontium	11	19	14	5	0.5	0.4	0.36	0.44	0.41	0.30	0.30	0.40	0.442	0.4	0.35	0.44	0.5	0.5	0.46	0.48
Sulphur	8	7	9	3	14	17	15	9	11.2	15.1	14	9	13.45	16	15	9	15.6	18.6	16	9
Thallium	11	21	17	9	0.00001	0.00004	0.00004	0.00007	0.000005	0.000005	0.00001	0.00001	0.000005	0.000005	0.00001	0.00010	0.0001	0.0001	0.00010	0.00020
Tin	11	21	17	9	0.00007	0.00013	0.00012	0.00019	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00025	0.00025	0.00025	0.00025	0.00050
Titanium	11	21	17	9	0.01172727	0.012	0.005	0.011	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.011	0.033	0.061	0.013	0.018
Uranium	11	21	17	9	0.0005	0.0008	0.0011	0.0005	0.0004	0.0005	0.0006	0.0004	0.0005	0.0007	0.0011	0.0005	0.0008	0.0014	0.0016	0.0006
Vanadium	11	21	17	9	0.0034	0.0036	0.0035	0.0043	0.0015	0.0018	0.0021	0.0019	0.0033	0.0026	0.0027	0.0032	0.0056	0.015	0.0150	0.0150
Zinc	11	21	17	9	0.0020	0.0022	0.0019	0.0027	0.0015	0.0015	0.0015	0.0015	0.0015	0.0025	0.0015	0.0025	0.0057	0.0042	0.0025	0.0085
Organics																				
Carbon Organic (Dissolved)	11	20	17	9	12.2	12.4	15	13	10.7	9.7	13	12	12.3	12.4	14	13	13	15	17	15
Carbon Organic (Total)	10	20	14	5	12.8	13	15	13	10.7	9.7	13	12	12.9	13.6	14	13	15	16	19	14
Nitrogen Organic (Dissolved)	2	11	5	3	0.57	0.62	1.00	0.94	0.49	0.461	0.85	0.46	0.5715	0.641	0.91	0.69	0.65	0.86	1.19	1.66
Nitrogen Organic (Total)	5	12	5	3	0.73	0.77	1.12	0.69	0.63	0.39	0.79	0.59	0.69	0.82	0.92	0.63	0.932	1.1	1.82	0.85

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.
2. SEASONS ARE SPECIFIED AS FOLLOWS: WIN (WINTER; DECEMBER THROUGH MARCH), SPR (SPRING; APRIL AND MAY), SUMMER(JUNE THROUGH AUGUST), FALL (SEPTEMBER THROUGH NOVEMBER).

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.30 - PC10
(PAGE 1 OF 2)

Parameter	Total Count	Complete Dataset - PC10									
		Min	Percentiles 5th	25th	50th	75th	95th	Max	Average	Standard Deviation	Coefficient of Variation
In Situ Parameters											
Conductivity µS/cm	13	310	372	446	491	524	547	557	475	65	1.4E-01
Oxygen Dissolved %	13	60	60	63	76	80	96	104	75	14	1.8E-01
Oxygen Dissolved	13	6.2	7.0	8.2	8.5	9.4	11.6	11.8	8.8	1.5	1.7E-01
pH (unitless)	13	7.7	7.8	7.8	8.1	8.2	8.3	8.4	8.0	0.2	2.6E-02
Redox Potential mV	13	-49	-30	30	72	105	155	171	68	64	9.4E-01
Salinity ppt	13	0.21	0.26	0.29	0.32	0.40	0.46	0.48	0.35	0.08	2.3E-01
Specific Conductivity µS/cm	13	427	517	596	657	880	927	971	711	166	2.3E-01
Temperature °C	13	0.4	1.2	3.4	10.2	12.5	15.1	15.8	8.6	5.4	6.3E-01
Total Dissolved Solids	13	278	336	387	427	572	602	631	463	108	2.3E-01
Turbidity NTU	0	-	-	-	-	-	-	-	-	-	-
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	0	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	13	206	211	254	286	287	343	344	279	44	1.6E-01
Bicarbonate Alkalinity	13	206	210	250	278	287	343	344	277	45	1.6E-01
Carbonate Alkalinity	13	0.5	0.5	1.0	1.0	6.2	9.1	9.5	3.2	3.5	1.1E+00
Color TCU	1	30.7	30.7	30.7	30.7	30.7	30.7	30.7	30.7	-	-
Hardness as CaCO3 (Dissolved)	13	231	250	293	310	401	429	429	334	68	2.0E-01
Hydroxide Alkalinity	13	0.5	0.5	0.5	0.5	1.0	1.0	1.0	0.7	0.3	3.6E-01
pH (unitless)	13	8.0	8.1	8.3	8.3	8.4	8.4	8.4	8.3	0.1	1.4E-02
Specific Conductivity µS/cm	13	556	563	609	659	833	903	906	718	133	1.9E-01
Total Dissolved Solids	13	331	351	381	413	538	581	587	453	93	2.1E-01
Total Suspended Solids	13	1.5	1.5	3.4	5.4	13.9	18.3	19.1	8.6	6.7	7.8E-01
Turbidity NTU	13	0.7	0.9	1.3	3.0	6.8	7.9	8.6	3.8	2.9	7.6E-01
Dissolved Anions											
Bromide	13	0.03	0.03	0.03	0.05	0.25	0.25	0.25	0.12	0.11	9.0E-01
Chloride	13	33	35	38	47	69	81	85	53	18	3.4E-01
Fluoride	13	0.10	0.10	0.10	0.22	0.24	0.28	0.31	0.19	0.07	3.9E-01
Sulphate	13	20	24	27	30	75	82	85	48	26	5.3E-01
Nutrients											
Ammonia (Total)	13	0.007	0.010	0.013	0.021	0.033	0.234	0.440	0.059	0.117	2.0E+00
Nitrate (as N)	13	0.030	0.03	0.04	0.07	0.17	0.26	0.26	0.11	0.086	7.9E-01
Nitrite (as N)	13	0.0005	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.0036	1.0E+00
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	13	0.42	0.44	0.50	0.57	0.63	1.18	1.77	0.66	0.35	5.3E-01
Orthophosphate (Dissolved)	13	0.034	0.040	0.061	0.090	0.104	0.217	0.309	0.102	0.071	6.9E-01
Phosphorus - Dissolved	13	0.046	0.064	0.083	0.099	0.119	0.264	0.413	0.127	0.092	7.2E-01
Phosphorus - Total	13	0.052	0.061	0.070	0.127	0.146	0.308	0.451	0.143	0.104	7.3E-01
Cyanide											
Cyanide (Free)	13	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	1.8E-16
Cyanide (Total)	13	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	1.8E-16
Cyanide (WAD)	13	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	1.8E-16
Dissolved Metals											
Aluminum	13	0.0005	0.0005	0.0016	0.0018	0.0029	0.0060	0.0095	0.0025	0.0023	9.1E-01
Antimony	13	0.00005	0.00005	0.00005	0.00005	0.00005	0.00013	0.00015	0.00007	0.00003	4.9E-01
Arsenic	13	0.0010	0.0010	0.0013	0.0017	0.0017	0.0019	0.0020	0.0015	0.0003	2.2E-01
Barium	13	0.058	0.060	0.063	0.064	0.077	0.080	0.081	0.068	0.008	1.2E-01
Beryllium	13	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	2.8E-16
Bismuth	13	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00000	4.5E-16
Boron	13	0.005	0.005	0.012	0.013	0.015	0.019	0.022	0.013	0.005	3.6E-01
Cadmium	13	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Calcium	13	59	60	65	71	96	99	99	77	16	2.0E-01
Chromium	12	0.00005	0.00005	0.00009	0.00011	0.00012	0.00014	0.00015	0.00010	0.00003	3.4E-01
Cobalt	13	0.00005	0.00008	0.00011	0.00014	0.00017	0.00023	0.00027	0.00014	0.00006	3.9E-01
Copper	13	0.0018	0.0020	0.0022	0.0024	0.0029	0.0045	0.0059	0.0028	0.0010	3.7E-01
Iron	13	0.017	0.019	0.026	0.036	0.044	0.062	0.070	0.036	0.015	4.1E-01
Lead	13	0.000025	0.000025	0.000025	0.000025	0.000025	0.000051	0.000090	0.000030	0.000018	6.0E-01
Lithium	13	0.00303	0.00308	0.00343	0.00421	0.00449	0.00478	0.00480	0.00407	0.00064	1.6E-01
Magnesium	13	21	24	30	32	43	45	45	34	8	2.3E-01
Manganese	13	0.011	0.011	0.017	0.023	0.028	0.046	0.055	0.025	0.012	5.0E-01
Mercury	13	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000130	0.0000250	0.0000065	0.0000055	8.5E-01
Molybdenum	13	0.002	0.002	0.002	0.003	0.003	0.003	0.004	0.003	0.000	1.6E-01
Nickel	13	0.0008	0.0009	0.0011	0.0012	0.0013	0.0018	0.0022	0.0013	0.0003	2.7E-01
Phosphorus	13	0.03	0.03	0.08	0.10	0.13	0.25	0.36	0.12	0.09	7.4E-01
Potassium	13	6	7	8	9	10	13	17	10	3	2.7E-01
Selenium	13	0.00016	0.00016	0.00018	0.00028	0.00035	0.00082	0.00142	0.00035	0.00033	9.4E-01
Silicon	13	7.3	7.5	8.4	9.5	10.1	10.6	11.0	9.3	1.1	1.2E-01
Silver	13	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Sodium	13	24	24	27	30	36	37	38	31	5	1.7E-01
Strontium	13	0.27	0.29	0.32	0.36	0.47	0.48	0.49	0.39	0.08	2.0E-01
Sulphur	13	7	8	9	11	24	28	29	16	8	5.2E-01
Thallium	13	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Tin	13	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	2.8E-16
Titanium	13	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0000	1.8E-16
Uranium	13	0.0008	0.0008	0.0008	0.0009	0.0019	0.0020	0.0020	0.0013	0.0005	4.1E-01
Vanadium	13	0.0024	0.0025	0.0026	0.0029	0.0030	0.0036	0.0039	0.0029	0.0004	1.4E-01
Zinc	13	0.0005	0.0005	0.0005	0.0005	0.0012	0.0020	0.0021	0.0009	0.0006	6.2E-01
Total Metals											
Aluminum	13	0.0065	0.0079	0.0651	0.1290	0.3520	0.5190	0.6990	0.2141	0.2025	9.5E-01
Antimony	13	0.00005	0.00005	0.00005	0.00005	0.00011	0.00014	0.00015	0.00007	0.00004	5.2E-01
Arsenic	13	0.0010	0.0010	0.0013	0.0017	0.0018	0.0019	0.0020	0.0015	0.0003	2.2E-01
Barium	13	0.057	0.060	0.064	0.065	0.077	0.080	0.081	0.070	0.008	1.2E-01
Beryllium	13	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	2.8E-16
Bismuth	13	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00000	4.5E-16
Boron	13	0.005	0.005	0.013	0.015	0.016	0.020	0.022	0.014	0.005	3.4E-01
Cadmium	13	0.000005	0.000005	0.000005	0.000005	0.000005	0.000007	0.000011	0.000005	0.000002	3.0E-01
Calcium	13	58	58	63	68	94	96	96	74	15	2.1E-01
Chromium	13	0.00013	0.00015	0.00032	0.00049	0.00096	0.00145	0.00186	0.00066	0.00050	7.6E-01
Cobalt	13	0.00014	0.00015	0.00017	0.00025	0.00037	0.00057	0.00077	0.00031	0.00018	5.7E-01
Copper	13	0.0026	0.0027	0.0029	0.0040	0.0049	0.0072	0.0077	0.0043	0.0016	3.8E-01
Iron	13	0.04	0.04	0.14	0.23	0.57	0.85	1.14	0.37	0.32	8.6E-01
Lead	13	0.000025	0.000025	0.000025	0.000025	0.000087	0.000310	0.000543	0.000093	0.000141	1.5E+00
Lithium	13	0.0029	0.0030	0.0036	0.0041	0.0045	0.0048	0.0049	0.0040	0.0006	1.5E-01
Magnesium	13	21	24	28	31	38	43	44	33	7	2.2E-01
Manganese	13	0.02	0.02	0.03	0.03	0.04	0.08	0.11	0.04	0.02	6.1E-01
Mercury	13	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000130	0.0000250	0.0000065	0.0000055	8.5E-01
Molybdenum	13	0.002	0.002	0.002	0.003	0.003	0.003	0.004	0.003	0.000	1.9E-01
Nickel	13	0.0012	0.0012	0.0013	0.0015	0.0018	0.0026	0.0033	0.0017	0.0006	3.3E-01
Phosphorus	13	0.06	0.07	0.08	0.11	0.15	0.30	0.39	0.14	0.09	6.3E-01
Potassium	13	6	7	8	9	10	13	16	9	2	2.6E-01
Selenium	13	0.00016	0.00017	0.00021	0.00030	0.00037	0.00075	0.00128	0.00035	0.00029	8.3E-01
Silicon	13	7.8	7.8	8.7	9.3	10.1	11.5	11.5	9.5	1.3	1.3E-01
Silver	13	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Sodium	13	23	23	27	29	36	38	39	31	6	1.8E-01
Strontium	13	0.24	0.28	0.32	0.35	0.46	0.49	0.51	0.38	0.08	2.2E-01
Sulphur	13	7	8	9	11	25	27	28	16	8	5.2E-01
Thallium	13	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Tin	13	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	2.8E-16
Titanium	13	0.0050	0.0050	0.0050	0.0050	0.0140	0.0190	0.0250	0.0088	0.0064	7.3E-01
Uranium	13	0.0007	0.0008	0.0009	0.0009	0.0020	0.0020	0.0020	0.0013	0.0006	4.2E-01
Vanadium	13	0.0027	0.0027	0.0031	0.0037	0.0044	0.0046	0.0049	0.0037	0.0007	1.9E-01
Zinc	13	0.0015	0.0015	0.0015	0.0015	0.0015	0.0025	0.0041	0.0017	0.0007	4.2E-01
Organics											
Carbon Organic (Dissolved)	13	8.0	8.6	10.0	10.8	11.4	14.5	16.4	11.1	2.2	2.0E-01
Carbon Organic (Total)	13	8.0	8.5	10.1	10.8	12.2	15.2	17.1	11.4	2.5	2.2E-01
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.30 - PC10
(PAGE 2 OF 2)

Seasonal Statistics - PC10

Parameter	Count				Average				Min				Median				Max			
	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall
In Situ Parameters																				
Conductivity µS/cm	3	5	5	0	487	489	454	-	439	413	310	-	499	491	486	-	524	557	527	-
Oxygen Dissolved %	3	5	5	0	61	85	74	-	59.6	61.6	63	-	60.1	88.2	76	-	63.4	104	80	-
Oxygen Dissolved	3	5	5	0	8	10	8	-	7.91	8.33	6	-	8.66	9.52	8	-	8.8	11.8	8	-
pH (unitless)	3	5	5	0	8	8	8	-	7.73	7.85	8	-	7.77	8.14	8	-	7.83	8.27	8	-
Redox Potential mV	3	5	5	0	34	32	123	-	1.2	-48.7	88	-	30.3	59.9	118	-	71.5	105	171	-
Salinity ppt	3	5	5	0	0.41	0.37	0.28	-	0.4	0.29	0.21	-	0.4	0.36	0.29	-	0.44	0.48	0.32	-
Specific Conductivity µS/cm	3	5	5	0	871	749	577	-	827	577	427	-	890	733	601	-	897	971	657	-
Temperature °C	3	5	5	0	2	8	14	-	0.42	2.7	11	-	1.75	7.72	15	-	3.44	12.5	16	-
Total Dissolved Solids	3	5	5	0	566	487	375	-	537	375	278	-	579	479	391	-	583	631	427	-
Turbidity NTU	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	3	5	5	0	323	259	274	-	286	206	254	-	338	243	285	-	344	342	286	-
Bicarbonate Alkalinity	3	5	5	0	323	258	267	-	286	206	250	-	338	243	277	-	344	342	278	-
Carbonate Alkalinity	3	5	5	0	0.83	1	7	-	0.5	1	1	-	1	1	8	-	1	1.9	10	-
Color TCU	0	1	0	0	-	31	-	-	-	30.7	-	-	-	30.7	-	-	-	30.7	-	-
Hardness as CaCO3 (Dissolved)	3	5	5	0	405	327	297	-	359	231	274	-	426	314	302	-	429	429	310	-
Hydroxide Alkalinity	3	5	5	0	0.83	0.90	0.50	-	0.5	0.5	0.50	-	1	1	0.50	-	1	1	0.50	-
pH (unitless)	3	5	5	0	8	8	8	-	8	8.19	8	-	8.14	8.26	8	-	8.34	8.35	8	-
Specific Conductivity µS/cm	3	5	5	0	872	713	629	-	809	556	587	-	901	720	640	-	906	890	659	-
Total Dissolved Solids	3	5	5	0	545	476	375	-	519	372	331	-	538	470	381	-	577	587	413	-
Total Suspended Solids	3	5	5	0	3	12	9	-	1.5	3.4	2	-	1.5	13.3	8	-	4.5	19.1	18	-
Turbidity NTU	3	5	5	0	1	5	4	-	0.98	0.66	1	-	1	6.83	4	-	1.54	7.42	9	-
Dissolved Anions																				
Bromide	3	5	5	0	0.25	0.14	0.03	-	0.25	0.025	0.03	-	0.25	0.125	0.03	-	0.25	0.25	0.05	-
Chloride	3	5	5	0	62	63	37	-	51.6	36.9	33	-	64	69	38	-	70.9	84.5	41	-
Fluoride	3	5	5	0	0.17	0.15	0.24	-	0.1	0.1	0.22	-	0.1	0.14	0.24	-	0.31	0.235	0.27	-
Sulphate	3	5	5	0	80	51	26	-	75	27.2	20	-	80	48.5	27	-	84.7	80.5	28	-
Nutrients								-												
Ammonia (Total)	3	5	5	0	0.193	0.021	0.017	-	0.0436	0.0073	0.012	-	0.0963	0.0186	0.017	-	0.44	0.033	0.024	-
Nitrate (as N)	3	5	5	0	0.23	0.09	0.053	-	0.174	0.03	0.033	-	0.254	0.051	0.059	-	0.258	0.184	0.067	-
Nitrite (as N)	3	5	5	0	0.008	0.0027	0.0017	-	0.005	0.0005	0.0011	-	0.005	0.0025	0.0014	-	0.014	0.005	0.0028	-
Nitrogen (Dissolved)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	3	5	5	0	0.96	0.55	0.59	-	0.504	0.417	0.45	-	0.603	0.508	0.61	-	1.77	0.792	0.77	-
Orthophosphate (Dissolved)	3	5	5	0	0.15	0.067	0.108	-	0.0666	0.0342	0.090	-	0.0779	0.0592	0.097	-	0.309	0.135	0.155	-
Phosphorus - Dissolved	3	5	5	0	0.198	0.091	0.12	-	0.0804	0.0455	0.10	-	0.0991	0.0829	0.12	-	0.413	0.161	0.17	-
Phosphorus - Total	3	5	5	0	0.23	0.09	0.15	-	0.086	0.0519	0.11	-	0.138	0.0691	0.15	-	0.451	0.178	0.21	-
Cyanide																				
Cyanide (Free)	3	5	5	0	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-
Cyanide (Total)	3	5	5	0	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-
Cyanide (WAD)	3	5	5	0	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-
Dissolved Metals																				
Aluminum	3	5	5	0	0.0011	0.0022	0.0036	-	0.0005	0.0015	0.0017	-	0.0005	0.0016	0.0023	-	0.0023	0.0036	0.0095	-
Antimony	3	5	5	0	0.000083	0.00006	0.00006	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00015	0.00011	0.00010	-
Arsenic	3	5	5	0	0.0016	0.0012	0.0017	-	0.00135	0.00097	0.0017	-	0.00149	0.0011	0.0017	-	0.00203	0.00179	0.0018	-
Barium	3	5	5	0	0.075	0.069	0.064	-	0.064	0.058	0.061	-	0.0781	0.0711	0.064	-	0.0814	0.0791	0.066	-
Beryllium	3	5	5	0	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-
Bismuth	3	5	5	0	0.00025	0.000	0.000	-	0.00025	0.00025	0.000	-	0.00025	0.00025	0.000	-	0.00025	0.00025	0.000	-
Boron	3	5	5	0	0.016	0.009	0.015	-	0.012	0.005	0.012	-	0.013	0.01	0.015	-	0.022	0.015	0.017	-
Cadmium	3	5	5	0	0.00001	0.000005	0.000005	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-
Calcium	3	5	5	0	90	79	67	-	73.5	58.6	61	-	96.3	81.2	68	-	99.2	98.7	71	-
Chromium	3	5	4	0	0.00009	0.0001	0.00011	-	0.00005	0.00005	0.00005	-	0.00011	0.00011	0.00011	-	0.00012	0.00014	0.00015	-
Cobalt	3	5	5	0	0.00020	0.00012	0.00014	-	0.00015	0.00005	0.00011	-	0.00017	0.00011	0.00012	-	0.00027	0.00017	0.00021	-
Copper	3	5	5	0	0.0038	0.0026	0.0025	-	0.0027	0.0018	0.0022	-	0.00274	0.00244	0.0023	-	0.00591	0.00358	0.0032	-
Iron	3	5	5	0	0.041	0.027	0.044	-	0.026	0.017	0.036	-	0.027	0.022	0.044	-	0.07	0.042	0.056	-
Lead	3	5	5	0	0.00005	0.00003	0.00003	-	0.000025	0.000025	0.00003	-	0.000025	0.000025	0.00003	-	0.00009	0.000025	0.00003	-
Lithium	3	5	5	0	0.0045	0.0040	0.0039	-	0.00445	0.00303	0.0033	-	0.00449	0.00421	0.0041	-	0.00469	0.0048	0.0045	-
Magnesium	3	5	5	0	43.9	31.4	31.5	-	42.6	20.7	29.6	-	44.0	27.0	31.8	-	45.1	44.3	32.7	-
Manganese	3	5	5	0	0.033	0.019	0.026	-	0.0263	0.0107	0.011	-	0.0322	0.0212	0.020	-	0.0403	0.0249	0.055	-
Mercury	3	5	5	0	0.0000117	0.0000050	0.0000050	-	0.000005	0.000005	0.0000050	-	0.000005	0.000005	0.0000050	-	0.000025	0.000005	0.0000050	-
Molybdenum	3	5	5	0	0.0030	0.0025	0.0024	-	0.00261	0.00201	0.0022	-	0.0027	0.00233	0.0024	-	0.00358	0.00302	0.0027	-
Nickel	3	5	5	0	0.0013	0.0011	0.0014	-	0.00123	0.00081	0.0011	-	0.00129	0.00108	0.0013	-	0.0015	0.00133	0.0022	-
Phosphorus	3	5	5	0	0.18	0.07	0.13	-	0.075	0.025	0.10	-	0.093	0.069	0.13	-	0.364	0.15	0.18	-
Potassium	3	5	5	0	13	8	9	-	10.7	6.06	7	-	11	8.01	9	-	16.8	10.1	10	-
Selenium	3	5	5	0	0.00071	0.00032	0.00017	-	0.00028	0.00025	0.00016	-	0.00042	0.00032	0.00017	-	0.00142	0.00038	0.00020	-
Silicon	3	5	5	0	9.04	8.56	10.18	-	8.2	7.29	9.49	-	9.43	8.38	10.10	-	9.5	10.4	11.00	-
Silver	3	5	5	0	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-
Sodium	3	5	5	0	36	31	28	-	34.6	24.1	24	-	36.1	33.1	29	-	36.5	38.2	30	-
Strontium	3	5	5	0	0.48	0.38	0.34	-	0.471	0.273	0.30	-	0.477	0.357	0.34	-	0.482	0.486	0.38	-
Sulphur	3	5	5	0	27	17	9	-	24.2	9.72	7	-	26.9	17	9	-	28.5	26.9	10	-
Thallium	3	5	5	0	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-
Tin	3	5	5	0	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-
Titanium	3	5	5	0	0.0050	0.005	0.0050	-	0.005	0.005	0.0050	-	0.005	0.005	0.0050	-	0.005	0.005	0.0050	-
Uranium	3	5	5	0	0.0019	0.0014	0.0008	-	0.00188	0.000884	0.0008	-	0.0019	0.00138	0.0008	-	0.00201	0.00195	0.0009	-
Vanadium	3	5	5	0	0.0031	0.0028	0.0030	-	0.0026	0.0024	0.0028	-	0.0027	0.0026	0.0029	-	0.0039	0.0034	0.0033	-
Zinc	3	5	5	0	0.0015	0.0007	0.0008	-	0.0005	0.0005	0.0005	-	0.002	0.0005	0.0005	-	0.0021	0.0011	0.0014	-
Total Metals																				
Aluminum	3	5	5	0	0.06	0.22	0.30	-	0.0065	0.0088	0.03	-	0.0651	0.256	0.25	-	0.103	0.379	0.70	-
Antimony	3	5	5	0	8.3333E-05	0.00008	0.00006	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00015	0.00013	0.00012	-
Arsenic	3	5	5	0	0.0016	0.0013	0.0017	-	0.00135	0.00101	0.0017	-	0.00142	0.00114	0.0017	-	0.00197	0.00188	0.0018	-
Barium	3	5	5	0	0.074	0.071	0.067	-	0.0645	0.0565	0.062	-	0.0771	0.0754	0.065	-	0.0804	0.0806	0.077	-
Beryllium	3	5	5	0	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-
Bismuth	3	5	5	0	0.00025	0.00025	0.00025	-	0.00025	0.00025	0.00025	-	0.00025	0.00025	0.00025	-	0.00025	0.00025	0.00025	-
Boron	3	5	5	0	0.017	0.010	0.016	-	0.013	0.005	0.014	-	0.015	0.012	0.016	-	0.022	0.016	0.019	-
Cadmium	3	5	5	0	0.00001	0.000005	0.000005	-	0.000005	0.000005	0.000005	-	0.000005	0.000005	0.000005	-	0.000011	0.000005	0.000005	-
Calcium	3	5	5	0	87	77	64	-	71	58.1	59	-	94.6	78.6	65	-	95.6	95.9	68	-
Chromium	3	5	5	0	0.00027	0.0007	0.0009	-	0.00013	0.00016	0.0002	-	0.00032	0.00071	0.0007	-	0.0004	0.00102	0.0019	-
Cobalt	3	5	5	0	0.00025	0.00029	0.00036	-	0.00015	0.00016	0.00014	-	0.00022	0.00025	0.00030	-	0.0004	0.0004	0.00077	-
Copper	3	5	5	0	0.0045	0.0041	0.0044	-	0.00308	0.00277	0.0026	-	0.0036	0.00434	0.0040	-	0.00691	0.00572	0.0077	-
Iron	3	5	5	0	0.14	0.36	0.51	-	0.042	0.045	0.08	-	0.139	0.393	0.45	-	0.226	0.59	1.14	-
Lead	3	5	5	0	0.00020	0.00005	0.00007	-	0.000025	0.000025	0.00003	-	0.000025	0.00003	0.00007	-	0.00054	0.0001	0.00016	-
Lithium	3	5	5	0	0.0044	0.0039	0.0038	-	0.00424	0.00293	0.0034	-	0.0045	0.00397	0.0037	-	0.0046	0.00486	0.0042	-
Magnesium	3	5	5	0	41	31	30	-	38.4	20.9	28	-	41.8	26.7	30	-	43.2	43.6	32	-
Manganese	3	5	5	0	0.04	0.03	0.05	-	0.0263	0.0226	0.02	-	0.0397	0.0311	0.03	-	0.0465	0.0444	0.11	-
Mercury	3	5	5	0	0.0000117	0.0000050	0.0000050	-	0.000005	0.000005	0.0000050	-	0.000005	0.000005	0.0000050	-	0.000025	0.000005	0.0000050	-
Molybdenum	3	5	5	0	0.003	0.003	0.002	-	0.00287	0.0019	0.002	-	0.0029	0.00249	0.002	-	0.0038	0.00306	0.003	-
Nickel	3	5	5	0	0.0015	0.0015	0.0020	-	0.0013	0.0012	0.0012	-	0.0015	0.0014	0.0018	-	0.0018	0.0020	0.0033	-
Phosphorus	3	5	5	0	0.19	0.10	0.15	-	0.077	0.058	0.11	-	0.108	0.082	0.14	-	0.387	0.174	0.24	-
Potassium	3	5	5	0	12.4	8.0	8.6	-	10.3	6.1	7.0	-	10.9	7.9	8.9	-	15.9	9.6	9.5	-
Selenium	3	5	5	0	0.00066	0.00033	0.00019	-	0.00031	0.00026	0.00016	-	0.00038	0.0003	0.00017	-	0.0013	0.0004	0.00024	-
Silicon	3	5	5	0	8.8	8.9	10.6	-	7.9	7.8	9.8	-	9.2	8.7	10.1	-	9.3	11.0	11.5	-
Silver	3	5	5	0	0.0000050	0.0000050	0.0000050	-	0.000005	0.000005	0.0000050	-	0.000005	0.000005	0.0000050	-	0.000005	0.000005	0.0000050	-
Sodium	3	5	5	0	36	31	27	-	34.5	23	24	-	35.9	33.7	27	-	36.9	39	29	-
Strontium	3	5	5	0	0.5	0.4	0.34	-	0.45	0.24	0.30	-	0.465	0.3	0.34	-	0.5	0.5	0.39	-
Sulphur	3	5	5	0	26	17	9	-	24.5	9.48	7	-	27.4	16.9	9	-	27.5	27.3	10	-
Thallium	3	5	5	0	0.00001	0.00001	0.00001	-	0.000005	0.000005	0.00001	-	0.000005	0.000005	0.00001	-	0.000005	0.000005	0.00001	-
Tin	3	5	5	0	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-
Titanium	3	5	5	0	0.005	0.009	0.011	-	0.005	0.005	0.005	-	0.005	0.005	0.005	-	0.005	0.015	0.025	-
Uranium	3	5	5	0	0.0020	0.0014	0.0008	-	0.0020	0.0008	0.0007	-	0.0020	0.0015	0.0009	-	0.0020	0.0020	0.0009	-
Vanadium	3	5	5	0	0.0034	0.0035	0.0040	-	0.0027	0.0027	0.0031	-	0.003	0.0037	0.0038	-	0.0044	0.0044	0.0049	-
Zinc	3	5	5	0	0.0015	0.0015	0.0020	-	0.0015	0.0015	0.0015	-	0.0015	0.0015	0.0015	-	0.0015	0.0015	0.0041	-
Organics																				
Carbon Organic (Dissolved)	3	5	5	0	11.5	10.7	11	-	9.01	8.0	10	-	9.0	10.5	11	-	16	13	13	-
Carbon Organic (Total)	3	5	5	0	11.7	11	12	-	8.9	8.0	10	-	9.1	10.8	12	-	17	14	14	-
Nitrogen Organic (Dissolved)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.
2. SEASONS ARE SPECIFIED AS FOLLOWS: WIN (WINTER; DECEMBER THROUGH MARCH), SPR (SPRING; APRIL AND MAY), SUMMER(JUNE THROUGH AUGUST), FALL (SEPTEMBER THROUGH NOVEMBER).

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.31 - PCEF-04
(PAGE 1 OF 2)

Parameter	Total Count	Complete Dataset - PC-EF-04									
		Min	Percentiles 5th	25th	50th	75th	95th	Max	Average	Standard Deviation	Coefficient of Variation
In Situ Parameters											
Conductivity µS/cm	3	987	1015	1128	1268	1593	1852	1917	1391	477	3.4E-01
Oxygen Dissolved %	1	67	67	67	67	67	67	67	67	-	-
Oxygen Dissolved	1	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	-	-
pH (unitless)	3	8.1	8.1	8.2	8.3	8.3	8.4	8.4	8.3	0.2	1.9E-02
Redox Potential mV	3	8	13	32	57	87	111	117	61	55	9.0E-01
Salinity ppt	2	0.98	0.98	0.99	1.00	1.00	1.01	1.01	1.00	0.02	2.1E-02
Specific Conductivity µS/cm	3	1309	1318	1354	1399	1696	1933	1992	1567	371	2.4E-01
Temperature °C	3	6.0	6.5	8.5	10.9	11.5	12.0	12.1	9.7	3.2	3.3E-01
Total Dissolved Solids	1	1295	1295	1295	1295	1295	1295	1295	1295	-	-
Turbidity NTU	0	-	-	-	-	-	-	-	-	-	-
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0E+00
Alkalinity (Total as CaCO3)	4	1	55	272	381	401	407	409	293	196	6.7E-01
Bicarbonate Alkalinity	2	1	20	100	199	298	377	397	199	280	1.4E+00
Carbonate Alkalinity	2	0.5	1.1	3.3	6.2	9.0	11.2	11.8	6.2	8.0	1.3E+00
Color TCU	4	12.9	13.3	14.8	24.0	33.2	34.6	34.9	24.0	11.4	4.8E-01
Hardness as CaCO3 (Dissolved)	4	567	581	635	742	836	862	868	730	141	1.9E-01
Hydroxide Alkalinity	2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0E+00
pH (unitless)	4	8.3	8.3	8.4	8.5	8.5	8.6	8.6	8.4	0.1	1.5E-02
Specific Conductivity µS/cm	4	1310	1324	1378	1630	1888	1954	1970	1635	328	2.0E-01
Total Dissolved Solids	4	837	861	959	1135	1290	1338	1350	1114	238	2.1E-01
Total Suspended Solids	4	2.5	2.8	3.9	8.0	18.6	35.7	40.0	14.6	17.4	1.2E+00
Turbidity NTU	4	0.4	0.5	0.8	1.8	6.7	16.3	18.7	5.7	8.7	1.5E+00
Dissolved Anions											
Bromide	4	0.25	0.25	0.25	0.25	0.31	0.46	0.50	0.31	0.13	4.0E-01
Chloride	4	88	90	95	120	146	155	157	121	34	2.8E-01
Fluoride	4	0.10	0.10	0.10	0.15	0.21	0.23	0.24	0.16	0.07	4.4E-01
Sulphate	4	247	261	315	397	469	500	508	387	117	3.0E-01
Nutrients											
Ammonia (Total)	4	0.003	0.004	0.009	0.013	0.014	0.015	0.015	0.011	0.006	5.3E-01
Nitrate (as N)	4	0.141	0.16	0.23	0.35	0.53	0.79	0.85	0.42	0.309	7.3E-01
Nitrite (as N)	4	0.0050	0.01	0.01	0.01	0.01	0.02	0.03	0.01	0.0115	1.1E+00
Nitrogen (Dissolved)	2	1.06	1.07	1.13	1.21	1.28	1.34	1.35	1.21	0.21	1.7E-01
Nitrogen (Total)	4	0.80	0.85	1.04	1.25	1.45	1.65	1.70	1.25	0.38	3.1E-01
Nitrogen Kjeldahl (Total)	4	0.50	0.52	0.62	0.67	0.72	0.78	0.80	0.66	0.12	1.9E-01
Orthophosphate (Dissolved)	2	0.055	0.056	0.058	0.061	0.064	0.067	0.067	0.061	0.008	1.4E-01
Phosphorus - Dissolved	4	0.069	0.069	0.069	0.077	0.089	0.102	0.105	0.082	0.017	2.1E-01
Phosphorus - Total	3	0.070	0.070	0.072	0.074	0.124	0.164	0.174	0.106	0.059	5.6E-01
Cyanide											
Cyanide (Free)	3	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Cyanide (Total)	3	0.0025	0.0028	0.0039	0.0053	0.0133	0.0197	0.0213	0.0097	0.0101	1.0E+00
Cyanide (WAD)	3	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Dissolved Metals											
Aluminum	4	0.0015	0.0017	0.0023	0.0038	0.0050	0.0050	0.0050	0.0035	0.0018	5.1E-01
Antimony	4	0.00014	0.00016	0.00022	0.00038	0.00050	0.00050	0.00050	0.00035	0.00018	5.2E-01
Arsenic	4	0.0020	0.0020	0.0022	0.0026	0.0030	0.0032	0.0032	0.0026	0.0006	2.3E-01
Barium	4	0.048	0.049	0.051	0.061	0.071	0.075	0.076	0.061	0.013	2.2E-01
Beryllium	4	0.000050	0.000118	0.000388	0.000750	0.001000	0.001000	0.001000	0.000638	0.000457	7.2E-01
Bismuth	2	0.00025	0.00524	0.02519	0.05013	0.07506	0.09501	0.10000	0.05013	0.07053	1.4E+00
Boron	4	0.050	0.050	0.050	0.050	0.054	0.064	0.066	0.054	0.008	1.5E-01
Cadmium	4	0.0000050	0.0000055	0.0000076	0.0000268	0.0000460	0.0000484	0.0000490	0.0000269	0.0000233	8.7E-01
Calcium	4	91	93	98	110	123	130	132	111	19	1.7E-01
Chromium	4	0.00023	0.00027	0.00043	0.00075	0.00150	0.00270	0.00300	0.00118	0.00125	1.1E+00
Cobalt	4	0.00010	0.00011	0.00014	0.00023	0.00030	0.00030	0.00030	0.00021	0.00010	4.9E-01
Copper	4	0.0023	0.0023	0.0023	0.0028	0.0033	0.0036	0.0037	0.0029	0.0007	2.5E-01
Iron	4	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.000	0.0E+00
Lead	4	0.000025	0.000059	0.000194	0.000375	0.000500	0.000500	0.000500	0.000319	0.000229	7.2E-01
Lithium	4	0.00500	0.00559	0.00793	0.00975	0.01120	0.01264	0.01300	0.00938	0.00337	3.6E-01
Magnesium	4	82	85	95	114	129	131	131	110	23	2.1E-01
Manganese	4	0.005	0.006	0.010	0.018	0.028	0.037	0.039	0.020	0.015	7.4E-01
Mercury	4	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Molybdenum	4	0.012	0.012	0.013	0.014	0.016	0.018	0.018	0.015	0.003	1.9E-01
Nickel	4	0.0026	0.0027	0.0029	0.0031	0.0033	0.0034	0.0034	0.0031	0.0003	1.1E-01
Phosphorus	2	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.00	0.0E+00
Potassium	4	20	20	21	22	22	23	23	22	1	4.8E-02
Selenium	4	0.00050	0.00058	0.00088	0.00159	0.00226	0.00245	0.00250	0.00155	0.00095	6.1E-01
Silicon	2	8.4	8.4	8.5	8.6	8.6	8.7	8.7	8.6	0.2	2.9E-02
Silver	4	0.0000050	0.0000058	0.0000088	0.0000150	0.0000200	0.0000200	0.0000200	0.0000138	0.0000075	5.5E-01
Sodium	4	78	79	84	99	111	112	112	97	17	1.8E-01
Strontium	2	0.88	0.90	1.00	1.13	1.25	1.35	1.37	1.13	0.35	3.1E-01
Sulphur	0	-	-	-	-	-	-	-	-	-	-
Thallium	4	0.0000050	0.0000193	0.0000763	0.0001500	0.0002000	0.0002000	0.0002000	0.0001263	0.0000936	7.4E-01
Tin	4	0.000050	0.000080	0.000200	0.000375	0.000500	0.000500	0.000500	0.000325	0.000218	6.7E-01
Titanium	4	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0000	0.0E+00
Uranium	4	0.0021	0.0022	0.0025	0.0030	0.0035	0.0038	0.0039	0.0030	0.0008	2.6E-01
Vanadium	4	0.0031	0.0032	0.0036	0.0040	0.0043	0.0045	0.0046	0.0039	0.0006	1.6E-01
Zinc	4	0.0025	0.0025	0.0025	0.0031	0.0041	0.0049	0.0051	0.0035	0.0012	3.6E-01
Total Metals											
Aluminum	4	0.0140	0.0142	0.0151	0.1032	0.3690	0.7962	0.9030	0.2809	0.4230	1.5E+00
Antimony	4	0.00013	0.00015	0.00022	0.00038	0.00050	0.00050	0.00050	0.00035	0.00019	5.4E-01
Arsenic	4	0.0020	0.0020	0.0022	0.0025	0.0029	0.0033	0.0034	0.0026	0.0006	2.4E-01
Barium	4	0.054	0.055	0.059	0.064	0.068	0.068	0.068	0.063	0.007	1.1E-01
Beryllium	4	0.000050	0.000118	0.000388	0.000750	0.001000	0.001000	0.001000	0.000638	0.000457	7.2E-01
Bismuth	2	0.00025	0.00524	0.02519	0.05013	0.07506	0.09501	0.10000	0.05013	0.07053	1.4E+00
Boron	4	0.050	0.050	0.050	0.050	0.056	0.071	0.075	0.056	0.013	2.2E-01
Cadmium	4	0.000005	0.000007	0.000016	0.000032	0.000048	0.000054	0.000056	0.000031	0.000023	7.5E-01
Calcium	4	90	91	97	111	125	131	132	111	20	1.8E-01
Chromium	4	0.00057	0.00063	0.00089	0.00100	0.00158	0.00296	0.00330	0.00147	0.00124	8.4E-01
Cobalt	4	0.00012	0.00015	0.00026	0.00030	0.00048	0.00090	0.00100	0.00043	0.00039	9.1E-01
Copper	4	0.0023	0.0023	0.0024	0.0034	0.0051	0.0069	0.0074	0.0041	0.0024	5.8E-01
Iron	4	0.04	0.04	0.04	0.15	0.53	1.16	1.32	0.42	0.61	1.5E+00
Lead	4	0.000025	0.000059	0.000194	0.000375	0.000500	0.000500	0.000500	0.000319	0.000229	7.2E-01
Lithium	4	0.0050	0.0056	0.0082	0.0106	0.0125	0.0137	0.0140	0.0101	0.0039	3.9E-01
Magnesium	4	82	84	94	114	130	130	130	110	24	2.2E-01
Manganese	4	0.02	0.02	0.02	0.04	0.06	0.08	0.09	0.05	0.03	7.0E-01
Mercury	4	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Molybdenum	4	0.013	0.013	0.013	0.015	0.017	0.019	0.019	0.015	0.003	1.8E-01
Nickel	4	0.0027	0.0028	0.0032	0.0040	0.0052	0.0069	0.0073	0.0045	0.0020	4.6E-01
Phosphorus	2	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.00	0.0E+00
Potassium	4	21	21	21	21	22	23	23	22	1	6.2E-02
Selenium	4	0.00050	0.00058	0.00088	0.00147	0.00208	0.00242	0.00250	0.00149	0.00090	6.1E-01
Silicon	2	8.4	8.5	9.1	9.8	10.6	11.2	11.3	9.8	2.1	2.1E-01
Silver	4	0.0000050	0.0000058	0.0000088	0.0000150	0.0000200	0.0000200	0.0000200	0.0000138	0.0000075	5.5E-01
Sodium	4	77	78	81	98	114	114	114	97	20	2.0E-01
Strontium	2	0.89	0.91	1.01	1.14	1.26	1.36	1.39	1.14	0.36	3.1E-01
Sulphur	0	-	-	-	-	-	-	-	-	-	-
Thallium	4	0.0000050	0.0000193	0.0000763	0.0001500	0.0002000	0.0002000	0.0002000	0.0001263	0.0000936	7.4E-01
Tin	4	0.000050	0.000080	0.000200	0.000375	0.000500	0.000500	0.000500	0.000325	0.000218	6.7E-01
Titanium	4	0.0050	0.0050	0.0050	0.0050	0.0170	0.0458	0.0530	0.0170	0.0240	1.4E+00
Uranium	4	0.0022	0.0023	0.0026	0.0032	0.0038	0.0040	0.0041	0.0032	0.0009	2.7E-01
Vanadium	4	0.0032	0.0033	0.0038	0.0045	0.0056	0.0071	0.0075	0.0049	0.0019	3.8E-01
Zinc	4	0.0015	0.0017	0.0023	0.0025	0.0034	0.0056	0.0061	0.0032	0.0020	6.4E-01
Organics											
Carbon Organic (Dissolved)	4	7.8	7.9	8.4	10.5	13.4	16.0	16.6	11.3	4.0	3.5E-01
Carbon Organic (Total)	2	8.7	9.1	10.7	12.7	14.7	16.3	16.7	12.7	5.7	4.5E-01
Nitrogen Organic (Dissolved)	2	0.11	0.15	0.35	0.59	0.83	1.02	1.07	0.59	0.68	1.2E+00
Nitrogen Organic (Total)	2	0.11	0.17	0.43	0.76	1.09	1.35	1.42	0.76	0.93	1.2E+00

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.31 - PCEF-04
(PAGE 2 OF 2)

Parameter	Seasonal Statistics - PC-EF-04																			
	Count				Average				Min				Median				Max			
	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall
In Situ Parameters																				
Conductivity µS/cm	0	0	1	2	-	-	987	1593	-	-	987	1268	-	-	987	1593	-	-	987	1917
Oxygen Dissolved %	0	0	0	1	-	-	-	67	-	-	-	67	-	-	-	67	-	-	-	67
Oxygen Dissolved	0	0	0	1	-	-	-	7	-	-	-	7	-	-	-	7	-	-	-	7
pH (unitless)	0	0	1	2	-	-	8	8	-	-	8	8	-	-	8	8	-	-	8	8
Redox Potential mV	0	0	1	2	-	-	117	32	-	-	117	8	-	-	117	32	-	-	117	57
Salinity ppt	0	0	0	2	-	-	-	1.00	-	-	-	0.98	-	-	-	1.00	-	-	-	1.01
Specific Conductivity µS/cm	0	0	1	2	-	-	1309	1696	-	-	1309	1399	-	-	1309	1696	-	-	1309	1992
Temperature °C	0	0	1	2	-	-	12	8	-	-	12	6	-	-	12	8	-	-	12	11
Total Dissolved Solids	0	0	0	1	-	-	-	1295	-	-	-	1295	-	-	-	1295	-	-	-	1295
Turbidity NTU	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	0	0	1	1	-	-	0.5	0.5	-	-	0.5	0.5	-	-	0.5	0.5	-	-	0.5	0.5
Alkalinity (Total as CaCO3)	0	0	2	2	-	-	182	404	-	-	1	398	-	-	182	404	-	-	363	409
Bicarbonate Alkalinity	0	0	1	1	-	-	1	397	-	-	1	397	-	-	1	397	-	-	1	397
Carbonate Alkalinity	0	0	1	1	-	-	1	12	-	-	1	12	-	-	1	12	-	-	1	12
Color TCU	0	0	2	2	-	-	34	14	-	-	33	13	-	-	34	14	-	-	35	15
Hardness as CaCO3 (Dissolved)	0	0	2	2	-	-	613	847	-	-	567	825	-	-	613	847	-	-	658	868
Hydroxide Alkalinity	0	0	1	1	-	-	0.50	0.50	-	-	0.50	0.50	-	-	0.50	0.50	-	-	0.50	0.50
pH (unitless)	0	0	2	2	-	-	9	8	-	-	9	8	-	-	9	8	-	-	9	8
Specific Conductivity µS/cm	0	0	2	2	-	-	1355	1915	-	-	1310	1860	-	-	1355	1915	-	-	1400	1970
Total Dissolved Solids	0	0	2	2	-	-	919	1310	-	-	837	1270	-	-	919	1310	-	-	1000	1350
Total Suspended Solids	0	0	2	2	-	-	26	3	-	-	12	3	-	-	26	3	-	-	40	4
Turbidity NTU	0	0	2	2	-	-	11	1	-	-	3	0	-	-	11	1	-	-	19	1
Dissolved Anions																				
Bromide	0	0	2	2	-	-	0.25	0.38	-	-	0.25	0.25	-	-	0.25	0.38	-	-	0.25	0.50
Chloride	0	0	2	2	-	-	93	150	-	-	88	142	-	-	93	150	-	-	97	157
Fluoride	0	0	2	2	-	-	0.17	0.15	-	-	0.10	0.10	-	-	0.17	0.15	-	-	0.24	0.20
Sulphate	0	0	2	2	-	-	293	482	-	-	247	456	-	-	293	482	-	-	338	508
Nutrients								-												
Ammonia (Total)	0	0	2	2	-	-	0.014	0.007	-	-	0.014	0.003	-	-	0.014	0.007	-	-	0.015	0.011
Nitrate (as N)	0	0	2	2	-	-	0.204	0.638	-	-	0.141	0.425	-	-	0.204	0.638	-	-	0.266	0.850
Nitrite (as N)	0	0	2	2	-	-	0.0050	0.0165	-	-	0.0050	0.0050	-	-	0.0050	0.0165	-	-	0.0050	0.0280
Nitrogen (Dissolved)	0	0	1	1	-	-	1.35	1.06	-	-	1.35	1.06	-	-	1.35	1.06	-	-	1.35	1.06
Nitrogen (Total)	0	0	2	2	-	-	1.25	1.25	-	-	0.80	1.12	-	-	1.25	1.25	-	-	1.70	1.37
Nitrogen Kjeldahl (Total)	0	0	2	2	-	-	0.73	0.59	-	-	0.66	0.50	-	-	0.73	0.59	-	-	0.80	0.69
Orthophosphate (Dissolved)	0	0	1	1	-	-	0.055	0.067	-	-	0.055	0.067	-	-	0.055	0.067	-	-	0.055	0.067
Phosphorus - Dissolved	0	0	2	2	-	-	0.09	0.07	-	-	0.08	0.07	-	-	0.09	0.07	-	-	0.11	0.07
Phosphorus - Total	0	0	1	2	-	-	0.17	0.07	-	-	0.17	0.07	-	-	0.17	0.07	-	-	0.17	0.07
Cyanide																				
Cyanide (Free)	0	0	1	2	-	-	0.0025	0.0025	-	-	0.0025	0.0025	-	-	0.0025	0.0025	-	-	0.0025	0.0025
Cyanide (Total)	0	0	1	2	-	-	0.0213	0.0039	-	-	0.0213	0.0025	-	-	0.0213	0.0039	-	-	0.0213	0.0053
Cyanide (WAD)	0	0	1	2	-	-	0.0025	0.0025	-	-	0.0025	0.0025	-	-	0.0025	0.0025	-	-	0.0025	0.0025
Dissolved Metals																				
Aluminum	0	0	2	2	-	-	0.0038	0.0033	-	-	0.0025	0.0015	-	-	0.0038	0.0033	-	-	0.0050	0.0050
Antimony	0	0	2	2	-	-	0.00038	0.00032	-	-	0.00025	0.00014	-	-	0.00038	0.00032	-	-	0.00050	0.00050
Arsenic	0	0	2	2	-	-	0.0027	0.0025	-	-	0.0022	0.0020	-	-	0.0027	0.0025	-	-	0.0032	0.0030
Barium	0	0	2	2	-	-	0.050	0.073	-	-	0.048	0.069	-	-	0.050	0.073	-	-	0.052	0.076
Beryllium	0	0	2	2	-	-	0.00075	0.00053	-	-	0.00050	0.00005	-	-	0.00075	0.00053	-	-	0.00100	0.00100
Bismuth	0	0	1	1	-	-	0.100	0.000	-	-	0.100	0.000	-	-	0.100	0.000	-	-	0.100	0.000
Boron	0	0	2	2	-	-	0.050	0.058	-	-	0.050	0.050	-	-	0.050	0.058	-	-	0.050	0.066
Cadmium	0	0	2	2	-	-	0.000029	0.000025	-	-	0.000009	0.000005	-	-	0.000029	0.000025	-	-	0.000049	0.000045
Calcium	0	0	2	2	-	-	96	126	-	-	91	120	-	-	96	126	-	-	100	132
Chromium	0	0	2	2	-	-	0.00075	0.00162	-	-	0.00050	0.00023	-	-	0.00075	0.00162	-	-	0.00100	0.00300
Cobalt	0	0	2	2	-	-	0.00023	0.00020	-	-	0.00015	0.00010	-	-	0.00023	0.00020	-	-	0.00030	0.00030
Copper	0	0	2	2	-	-	0.0035	0.0023	-	-	0.0032	0.0023	-	-	0.0035	0.0023	-	-	0.0037	0.0023
Iron	0	0	2	2	-	-	0.015	0.015	-	-	0.015	0.015	-	-	0.015	0.015	-	-	0.015	0.015
Lead	0	0	2	2	-	-	0.00038	0.00026	-	-	0.00025	0.00003	-	-	0.00038	0.00026	-	-	0.00050	0.00050
Lithium	0	0	2	2	-	-	0.0070	0.0118	-	-	0.0050	0.0106	-	-	0.0070	0.0118	-	-	0.0089	0.0130
Magnesium	0	0	2	2	-	-	90.7	129.5	-	-	82.4	128.0	-	-	90.7	129.5	-	-	99.0	131.0
Manganese	0	0	2	2	-	-	0.009	0.032	-	-	0.005	0.025	-	-	0.009	0.032	-	-	0.012	0.039
Mercury	0	0	2	2	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050
Molybdenum	0	0	2	2	-	-	0.0166	0.0124	-	-	0.0149	0.0122	-	-	0.0166	0.0124	-	-	0.0183	0.0126
Nickel	0	0	2	2	-	-	0.0033	0.0028	-	-	0.0032	0.0026	-	-	0.0033	0.0028	-	-	0.0034	0.0030
Phosphorus	0	0	1	1	-	-	0.15	0.15	-	-	0.15	0.15	-	-	0.15	0.15	-	-	0.15	0.15
Potassium	0	0	2	2	-	-	21	22	-	-	20	22	-	-	21	22	-	-	22	23
Selenium	0	0	2	2	-	-	0.00075	0.00234	-	-	0.00050	0.00218	-	-	0.00075	0.00234	-	-	0.00100	0.00250
Silicon	0	0	1	1	-	-	8.73	8.38	-	-	8.73	8.38	-	-	8.73	8.38	-	-	8.73	8.38
Silver	0	0	2	2	-	-	0.000015	0.000013	-	-	0.000010	0.000005	-	-	0.000015	0.000013	-	-	0.000020	0.000020
Sodium	0	0	2	2	-	-	82	112	-	-	78	111	-	-	82	112	-	-	86	112
Strontium	0	0	1	1	-	-	0.88	1.37	-	-	0.88	1.37	-	-	0.88	1.37	-	-	0.88	1.37
Sulphur	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	0	0	2	2	-	-	0.000150	0.000103	-	-	0.000100	0.000005	-	-	0.000150	0.000103	-	-	0.000200	0.000200
Tin	0	0	2	2	-	-	0.00038	0.00028	-	-	0.00025	0.00005	-	-	0.00038	0.00028	-	-	0.00050	0.00050
Titanium	0	0	2	2	-	-	0.0050	0.0050	-	-	0.0050	0.0050	-	-	0.0050	0.0050	-	-	0.0050	0.0050
Uranium	0	0	2	2	-	-	0.0024	0.0036	-	-	0.0021	0.0034	-	-	0.0024	0.0036	-	-	0.0026	0.0039
Vanadium	0	0	2	2	-	-	0.0044	0.0035	-	-	0.0042	0.0031	-	-	0.0044	0.0035	-	-	0.0046	0.0038
Zinc	0	0	2	2	-	-	0.0038	0.0031	-	-	0.0025	0.0025	-	-	0.0038	0.0031	-	-	0.0051	0.0037
Total Metals																				
Aluminum	0	0	2	2	-	-	0.55	0.01	-	-	0.19	0.01	-	-	0.55	0.01	-	-	0.90	0.02
Antimony	0	0	2	2	-	-	0.00038	0.00032	-	-	0.00025	0.00013	-	-	0.00038	0.00032	-	-	0.00050	0.00050
Arsenic	0	0	2	2	-	-	0.0029	0.0024	-	-	0.0023	0.0020	-	-	0.0029	0.0024	-	-	0.0034	0.0027
Barium	0	0	2	2	-	-	0.057	0.068	-	-	0.054	0.068	-	-	0.057	0.068	-	-	0.060	0.068
Beryllium	0	0	2	2	-	-	0.00075	0.00053	-	-	0.00050	0.00005	-	-	0.00075	0.00053	-	-	0.00100	0.00100
Bismuth	0	0	1	1	-	-	0.1	0.00025	-	-	0.1	0.00025	-	-	0.1	0.00025	-	-	0.1	0.00025
Boron	0	0	2	2	-	-	0.050	0.063	-	-	0.050	0.050	-	-	0.050	0.063	-	-	0.050	0.075
Cadmium	0	0	2	2	-	-	0.000038	0.000025	-	-	0.000019	0.000005	-	-	0.000038	0.000025	-	-	0.000056	0.000045
Calcium	0	0	2	2	-	-	95	128	-	-	90	123	-	-	95	128	-	-	99	132
Chromium	0	0	2	2	-	-	0.0022	0.0008	-	-	0.0010	0.0006	-	-	0.0022	0.0008	-	-	0.0033	0.0010
Cobalt	0	0	2	2	-	-	0.00065	0.00021	-	-	0.00030	0.00012	-	-	0.00065	0.00021	-	-	0.00100	0.00030
Copper	0	0	2	2	-	-	0.0059	0.0024	-	-	0.0043	0.0023	-	-	0.0059	0.0024	-	-	0.0074	0.0024
Iron	0	0	2	2	-	-	0.80	0.04	-	-	0.27	0.04	-	-	0.80	0.04	-	-	1.32	0.04
Lead	0	0	2	2	-	-	0.00038	0.00026	-	-	0.00025	0.00003	-	-	0.00038	0.00026	-	-	0.00050	0.00050
Lithium	0	0	2	2	-	-	0.0071	0.0130	-	-	0.0050	0.0120	-	-	0.0071	0.0130	-	-	0.0092	0.0140
Magnesium	0	0	2	2	-	-	90	130	-	-	82	130	-	-	90	130	-	-	98	130
Manganese	0	0	2	2	-	-	0.05	0.04	-	-	0.02	0.03	-	-	0.05	0.04	-	-	0.09	0.05
Mercury	0	0	2	2	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050	-	-	0.0000050	0.0000050
Molybdenum	0	0	2	2	-	-	0.017	0.013	-	-	0.016	0.013	-	-	0.017	0.013	-	-	0.019	0.014
Nickel	0	0	2	2	-	-	0.0059	0.0030	-	-	0.0045	0.0027	-	-	0.0059	0.0030	-	-	0.0073	0.0034
Phosphorus	0	0	1	1	-	-	0.15	0.15	-	-	0.15	0.15	-	-	0.15	0.15	-	-	0.15	0.15
Potassium	0	0	2	2	-	-	20.6	22.7	-	-	20.5	22.1	-	-	20.6	22.7	-	-	20.6	23.3
Selenium	0	0	2	2	-	-	0.00075	0.00222	-	-	0.00050	0.00194	-	-	0.00075	0.00222	-	-	0.00100	0.00250
Silicon	0	0	1	1	-	-	11.3	8.4	-	-	11.3	8.4	-	-	11.3	8.4	-	-	11.3	8.4
Silver	0	0	2	2	-	-	0.0000150	0.0000125	-	-	0.0000100	0.0000050	-	-	0.0000150	0.0000125	-	-	0.0000200	0.0000200
Sodium	0	0	2	2	-	-	80	114	-	-	77	114	-	-	80	114	-	-	83	114
Strontium	0	0	1	1	-	-	0.89	1.39	-	-	0.89	1.39	-	-	0.89	1.39	-	-	0.89	1.39
Sulphur	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	0	0	2	2	-	-	0.00015	0.00010	-	-	0.00010	0.00001	-	-	0.00015	0.00010	-	-	0.00020	0.00020
Tin	0	0	2	2	-	-	0.00038	0.00028	-	-	0.00025	0.00005	-	-	0.00038	0.00028	-	-	0.00050	0.00050
Titanium	0	0	2	2	-	-	0.029	0.005	-	-	0.005	0.005	-	-	0.029	0.005	-	-	0.053	0.005
Uranium	0	0	2	2	-	-	0.0025	0.0039	-	-	0.0022	0.0037	-	-	0.0025	0.0039	-	-	0.0028	0.0041
Vanadium	0	0	2	2	-	-	0.0062	0.0036	-	-	0.0049	0.0032	-	-	0.0062	0.0036	-	-	0.0075	0.0040
Zinc	0	0	2	2	-	-	0.0043	0.0020	-	-	0.0025	0.0015	-	-	0.0043	0.0020	-	-	0.0061	0.0025
Organics																				
Carbon Organic (Dissolved)	0	0	2	2	-	-	14	8	-	-	12	8	-	-	14	8	-	-	17	9
Carbon Organic (Total)	0	0	1	1	-	-	17	9	-	-	17	9	-	-	17	9	-	-	17	9
Nitrogen Organic (Dissolved)	0	0	1	1	-	-	1.07	0.11	-	-	1.07	0.11	-	-	1.07	0.11	-	-	1.07	0.11
Nitrogen Organic (Total)	0	0	1	1	-	-	1.42	0.11	-	-	1.42	0.11	-	-	1.42	0.11	-	-	1.42	0.11

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.
2. SEASONS ARE SPECIFIED AS FOLLOWS: WIN (WINTER; DECEMBER THROUGH MARCH), SPR (SPRING; APRIL AND MAY), SUMMER(JUNE THROUGH AUGUST), FALL (SEPTEMBER THROUGH NOVEMBER).

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.32 - PP01
(PAGE 1 OF 2)

Parameter	Total Count	Complete Dataset - PP01									
		Min	Percentiles 5th	25th	50th	75th	95th	Max	Average	Standard Deviation	Coefficient of Variation
In Situ Parameters											
Conductivity µS/cm	4	14466	14777	16019	19820	24138	26620	27240	20337	5894	2.9E-01
Oxygen Dissolved %	2	94	95	98	101	104	106	107	101	9	8.8E-02
Oxygen Dissolved	4	6.9	7.2	8.2	9.0	9.3	9.4	9.5	8.6	1.2	1.4E-01
pH (unitless)	5	7.8	7.9	8.4	8.4	8.6	8.6	8.6	8.4	0.3	3.9E-02
Redox Potential mV	2	-133	-132	-129	-124	-120	-116	-115	-124	13	-1.0E-01
Salinity ppt	0	-	-	-	-	-	-	-	-	-	-
Specific Conductivity µS/cm	5	17411	17732	19018	24329	27261	31523	32588	24121	6178	2.6E-01
Temperature °C	5	11.0	11.3	12.4	16.4	17.1	21.3	22.4	15.9	4.5	2.8E-01
Total Dissolved Solids	0	-	-	-	-	-	-	-	-	-	-
Turbidity NTU	0	-	-	-	-	-	-	-	-	-	-
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	1	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	-	-
Alkalinity (Total as CaCO3)	6	274	276	286	343	409	460	475	356	83	2.3E-01
Bicarbonate Alkalinity	1	415	415	415	415	415	415	415	415	-	-
Carbonate Alkalinity	1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	-	-
Color TCU	6	8.4	8.7	9.6	10.2	11.0	14.9	16.1	10.9	2.7	2.5E-01
Hardness as CaCO3 (Dissolved)	6	9510	10658	14200	15650	17175	18875	19400	15268	3425	2.2E-01
Hydroxide Alkalinity	1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	-	-
pH (unitless)	6	8.2	8.2	8.3	8.4	8.5	8.6	8.7	8.4	0.2	2.1E-02
Specific Conductivity µS/cm	6	17800	19625	25325	27000	28975	32075	33000	26533	5104	1.9E-01
Total Dissolved Solids	6	23300	25050	31050	35200	39950	42025	42400	34550	7136	2.1E-01
Total Suspended Solids	6	10.8	13.0	20.2	27.4	39.2	49.0	51.6	29.7	15.1	5.1E-01
Turbidity NTU	3	1.4	1.6	2.3	3.1	3.5	3.7	3.8	2.8	1.2	4.4E-01
Dissolved Anions											
Bromide	6	2.50	2.50	2.50	7.50	12.50	12.50	12.50	7.50	5.48	7.3E-01
Chloride	6	1500	1618	1988	2170	2413	2750	2850	2185	461	2.1E-01
Fluoride	5	1.00	1.22	2.10	5.00	6.50	13.30	15.00	5.92	5.53	9.3E-01
Sulphate	6	13000	14225	18050	20150	22475	26075	27200	20183	4854	2.4E-01
Nutrients											
Ammonia (Total)	6	0.009	0.009	0.014	0.026	0.054	0.063	0.063	0.033	0.025	7.5E-01
Nitrate (as N)	6	0.250	0.25	0.50	1.25	1.67	2.70	3.00	1.30	1.035	8.0E-01
Nitrite (as N)	6	0.0500	0.05	0.10	0.33	0.98	1.29	1.33	0.54	0.5665	1.0E+00
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	6	0.90	1.07	1.65	2.29	2.78	2.82	2.83	2.11	0.80	3.8E-01
Orthophosphate (Dissolved)	5	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.000	5.9E-01
Phosphorus - Dissolved	0	-	-	-	-	-	-	-	-	-	-
Phosphorus - Total	5	0.052	0.052	0.055	0.065	0.065	0.070	0.071	0.062	0.008	1.3E-01
Cyanide											
Cyanide (Free)	3	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Cyanide (Total)	5	0.0055	0.0059	0.0077	0.0088	0.0102	0.0119	0.0123	0.0089	0.0026	2.9E-01
Cyanide (WAD)	3	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Dissolved Metals											
Aluminum	6	0.1250	0.1250	0.1563	0.2500	0.2500	0.2500	0.2500	0.2083	0.0645	3.1E-01
Antimony	6	0.01250	0.01250	0.01563	0.02500	0.02500	0.02500	0.02500	0.02083	0.00645	3.1E-01
Arsenic	6	0.0125	0.0125	0.0156	0.0250	0.0250	0.0250	0.0250	0.0208	0.0065	3.1E-01
Barium	6	0.050	0.063	0.100	0.100	0.100	0.100	0.100	0.092	0.020	2.2E-01
Beryllium	6	0.025000	0.025000	0.031250	0.050000	0.050000	0.050000	0.050000	0.041667	0.012910	3.1E-01
Bismuth	0	-	-	-	-	-	-	-	-	-	-
Boron	6	1.430	1.598	2.125	2.350	2.650	2.925	3.000	2.322	0.547	2.4E-01
Cadmium	6	0.0004250	0.0004250	0.0005313	0.0008500	0.0008500	0.0008500	0.0008500	0.0007083	0.0002195	3.1E-01
Calcium	6	469	480	527	576	606	632	638	564	63	1.1E-01
Chromium	6	0.02500	0.02500	0.03125	0.05000	0.05000	0.05000	0.05000	0.04167	0.01291	3.1E-01
Cobalt	6	0.00750	0.00750	0.00938	0.01500	0.01500	0.01500	0.01500	0.01250	0.00387	3.1E-01
Copper	6	0.0250	0.0250	0.0313	0.0500	0.0500	0.0500	0.0500	0.0417	0.0129	3.1E-01
Iron	6	0.075	0.094	0.150	0.150	0.150	0.150	0.150	0.138	0.031	2.2E-01
Lead	6	0.012500	0.012500	0.015625	0.025000	0.025000	0.025000	0.025000	0.020833	0.006455	3.1E-01
Lithium	6	0.12500	0.12500	0.15625	0.25000	0.25000	0.25000	0.25000	0.20833	0.06455	3.1E-01
Magnesium	6	2020	2293	3125	3440	3800	4190	4310	3358	792	2.4E-01
Manganese	6	0.015	0.015	0.015	0.030	0.050	0.080	0.089	0.038	0.030	7.7E-01
Mercury	6	0.0000100	0.0000100	0.0000100	0.0000100	0.0000100	0.0000100	0.0000100	0.0000100	0.0000000	0.0E+00
Molybdenum	6	0.025	0.025	0.031	0.050	0.050	0.050	0.050	0.042	0.013	3.1E-01
Nickel	6	0.0250	0.0250	0.0313	0.0500	0.0500	0.0500	0.0500	0.0417	0.0129	3.1E-01
Phosphorus	0	-	-	-	-	-	-	-	-	-	-
Potassium	6	196	218	290	325	342	381	394	311	67	2.2E-01
Selenium	6	0.02500	0.02500	0.03125	0.05000	0.05000	0.05000	0.05000	0.04167	0.01291	3.1E-01
Silicon	0	-	-	-	-	-	-	-	-	-	-
Silver	6	0.0005000	0.0005000	0.0006250	0.0010000	0.0010000	0.0010000	0.0010000	0.0008333	0.0002582	3.1E-01
Sodium	6	2700	3075	4220	4580	4970	5638	5850	4485	1058	2.4E-01
Strontium	0	-	-	-	-	-	-	-	-	-	-
Sulphur	0	-	-	-	-	-	-	-	-	-	-
Thallium	6	0.0050000	0.0050000	0.0062500	0.0100000	0.0100000	0.0100000	0.0100000	0.0083333	0.0025820	3.1E-01
Tin	6	0.012500	0.012500	0.015625	0.025000	0.025000	0.025000	0.025000	0.020833	0.006455	3.1E-01
Titanium	6	0.0250	0.0313	0.0500	0.0500	0.0500	0.0500	0.0500	0.0458	0.0102	2.2E-01
Uranium	6	0.0100	0.0100	0.0100	0.0100	0.0100	0.0115	0.0120	0.0103	0.0008	7.9E-02
Vanadium	6	0.0500	0.0500	0.0500	0.0625	0.1313	0.1500	0.1500	0.0875	0.0494	5.6E-01
Zinc	6	0.0250	0.0250	0.0313	0.0875	0.1250	0.2188	0.2500	0.1000	0.0866	8.7E-01
Total Metals											
Aluminum	6	0.1250	0.1250	0.1563	0.2500	0.2500	0.5875	0.7000	0.2833	0.2131	7.5E-01
Antimony	6	0.01250	0.01250	0.01563	0.02500	0.02500	0.02500	0.02500	0.02083	0.00645	3.1E-01
Arsenic	6	0.0125	0.0125	0.0156	0.0250	0.0250	0.0250	0.0250	0.0208	0.0065	3.1E-01
Barium	6	0.050	0.063	0.100	0.100	0.100	0.100	0.100	0.092	0.020	2.2E-01
Beryllium	6	0.025000	0.025000	0.031250	0.050000	0.050000	0.050000	0.050000	0.041667	0.012910	3.1E-01
Bismuth	0	-	-	-	-	-	-	-	-	-	-
Boron	6	1.460	1.620	2.100	2.300	2.650	2.850	2.900	2.293	0.519	2.3E-01
Cadmium	6	0.000425	0.000425	0.000531	0.000850	0.000850	0.000850	0.000850	0.000708	0.000219	3.1E-01
Calcium	6	464	472	514	592	622	628	628	566	71	1.2E-01
Chromium	6	0.02500	0.02500	0.03125	0.05000	0.05000	0.05000	0.05000	0.04167	0.01291	3.1E-01
Cobalt	6	0.00750	0.00750	0.00938	0.01500	0.01500	0.01500	0.01500	0.01250	0.00387	3.1E-01
Copper	6	0.0250	0.0250	0.0313	0.0500	0.0500	0.0500	0.0500	0.0417	0.0129	3.1E-01
Iron	6	0.08	0.09	0.15	0.15	0.15	0.15	0.15	0.14	0.03	2.2E-01
Lead	6	0.012500	0.012500	0.015625	0.025000	0.025000	0.025000	0.025000	0.020833	0.006455	3.1E-01
Lithium	6	0.1250	0.1250	0.1563	0.2500	0.2500	0.2500	0.2500	0.2083	0.0645	3.1E-01
Magnesium	6	1970	2228	3055	3440	3840	4103	4170	3320	789	2.4E-01
Manganese	6	0.02	0.02	0.05	0.07	0.09	0.09	0.09	0.06	0.03	4.9E-01
Mercury	6	0.0000100	0.0000100	0.0000100	0.0000100	0.0000100	0.0000100	0.0000100	0.0000100	0.0000000	0.0E+00
Molybdenum	6	0.025	0.025	0.031	0.050	0.050	0.050	0.050	0.042	0.013	3.1E-01
Nickel	6	0.0250	0.0250	0.0313	0.0500	0.0500	0.0500	0.0500	0.0417	0.0129	3.1E-01
Phosphorus	0	-	-	-	-	-	-	-	-	-	-
Potassium	6	191	212	283	325	343	373	383	307	68	2.2E-01
Selenium	6	0.02500	0.02500	0.03125	0.05000	0.05000	0.05000	0.05000	0.04167	0.01291	3.1E-01
Silicon	0	-	-	-	-	-	-	-	-	-	-
Silver	6	0.0005000	0.0005000	0.0006250	0.0010000	0.0010000	0.0010000	0.0010000	0.0008333	0.0002582	3.1E-01
Sodium	6	2620	2960	4050	4585	4948	5500	5680	4402	1056	2.4E-01
Strontium	0	-	-	-	-	-	-	-	-	-	-
Sulphur	0	-	-	-	-	-	-	-	-	-	-
Thallium	6	0.0050000	0.0050000	0.0062500	0.0100000	0.0100000	0.0100000	0.0100000	0.0083333	0.0025820	3.1E-01
Tin	6	0.012500	0.012500	0.015625	0.025000	0.025000	0.025000	0.025000	0.020833	0.006455	3.1E-01
Titanium	6	0.0250	0.0313	0.0500	0.0500	0.0500	0.0500	0.0500	0.0458	0.0102	2.2E-01
Uranium	6	0.0100	0.0100	0.0100	0.0100	0.0100	0.0115	0.0120	0.0103	0.0008	7.9E-02
Vanadium	6	0.0500	0.0500	0.0500	0.0625	0.1313	0.1500	0.1500	0.0875	0.0494	5.6E-01
Zinc	6	0.0250	0.0250	0.0313	0.0875	0.1250	0.2188	0.2500	0.1000	0.0866	8.7E-01
Organics											
Carbon Organic (Dissolved)	5	26.0	26.8	30.1	30.3	33.2	35.3	35.8	31.1	3.7	1.2E-01
Carbon Organic (Total)	1	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	-	-
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.32 - PP01
(PAGE 2 OF 2)

Seasonal Statistics - PP01

Parameter	Count				Average				Min				Median				Max			
	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall
In Situ Parameters																				
Conductivity µS/cm	0	1	1	2	-	14466	16536	25172	-	14466	16536	23104	-	14466	16536	25172	-	14466	16536	27240
Oxygen Dissolved %	0	1	0	1	-	94	-	107	-	94.4	-	107	-	94.4	-	107	-	94.4	-	107
Oxygen Dissolved	0	2	0	2	-	9	-	8	-	8.68	-	7	-	9.075	-	8	-	9.47	-	9
pH (unitless)	0	2	1	2	-	8	9	9	-	7.82	9	8	-	8.12	9	9	-	8.42	9	9
Redox Potential mV	0	0	1	1	-	-	-133	-115	-	-	-133	-115	-	-	-133	-115	-	-	-133	-115
Salinity ppt	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Specific Conductivity µS/cm	0	2	1	2	-	21674	17411	29925	-	19018	17411	27261	-	21673.5	17411	29925	-	24329	17411	32588
Temperature °C	0	2	1	2	-	12	22	17	-	11	22	16	-	11.7	22	17	-	12.4	22	17
Total Dissolved Solids	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Turbidity NTU	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	0	1	0	0	-	7.7	-	-	-	7.7	-	-	-	7.7	-	-	-	7.7	-	-
Alkalinity (Total as CaCO3)	0	2	2	2	-	345	385	337	-	274	295	283	-	344.5	385	337	-	415	475	391
Bicarbonate Alkalinity	0	1	0	0	-	415	-	-	-	415	-	-	-	415	-	-	-	415	-	-
Carbonate Alkalinity	0	1	0	0	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-
Color TCU	0	2	2	2	-	9	10	14	-	8.4	10	11	-	8.95	10	14	-	9.5	10	16
Hardness as CaCO3 (Dissolved)	0	2	2	2	-	11805	15650	18350	-	9510	14500	17300	-	11805	15650	18350	-	14100	16800	19400
Hydroxide Alkalinity	0	1	0	0	-	1.00	-	-	-	1	-	-	-	1	-	-	-	1	-	-
pH (unitless)	0	2	2	2	-	8	9	8	-	8.2	8	8	-	8.215	9	8	-	8.23	9	9
Specific Conductivity µS/cm	0	2	2	2	-	21450	27650	30500	-	17800	26000	28000	-	21450	27650	30500	-	25100	29300	33000
Total Dissolved Solids	0	2	2	2	-	28300	35600	39750	-	23300	30300	37100	-	28300	35600	39750	-	33300	40900	42400
Total Suspended Solids	0	2	2	2	-	37	22	30	-	22	11	20	-	36.8	22	30	-	51.6	33	41
Turbidity NTU	0	1	1	1	-	4	1	3	-	3.81	1	3	-	3.81	1	3	-	3.81	1	3
Dissolved Anions																				
Bromide	0	2	2	2	-	2.50	7.50	12.50	-	2.5	2.50	12.50	-	2.5	7.50	12.50	-	2.5	12.50	12.50
Chloride	0	2	2	2	-	1735	2245	2575	-	1500	2040	2300	-	1735	2245	2575	-	1970	2450	2850
Fluoride	0	2	1	2	-	4.30	1.00	10.00	-	2.1	1.00	5.00	-	4.3	1.00	10.00	-	6.5	1.00	15.00
Sulphate	0	2	2	2	-	15450	20600	24500	-	13000	18500	21800	-	15450	20600	24500	-	17900	22700	27200
Nutrients								-												
Ammonia (Total)	0	2	2	2	-	0.063	0.018	0.017	-	0.063	0.010	0.009	-	0.063	0.018	0.017	-	0.063	0.026	0.025
Nitrate (as N)	0	2	2	2	-	1.03	1.625	1.250	-	0.25	0.250	1.250	-	1.03	1.625	1.250	-	1.81	3.000	1.250
Nitrite (as N)	0	2	2	2	-	0.2250	0.6900	0.7100	-	0.05	0.0500	0.2500	-	0.225	0.6900	0.7100	-	0.4	1.3300	1.1700
Nitrogen (Dissolved)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	0	2	2	2	-	1.24	2.34	2.77	-	0.902	1.84	2.73	-	1.241	2.34	2.77	-	1.58	2.83	2.80
Orthophosphate (Dissolved)	0	2	2	1	-	0.001	0.001	0.001	-	0.0005	0.001	0.001	-	0.0005	0.001	0.001	-	0.0005	0.001	0.001
Phosphorus - Dissolved	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus - Total	0	2	2	1	-	0.06	0.06	0.07	-	0.0553	0.05	0.07	-	0.063	0.06	0.07	-	0.0707	0.07	0.07
Cyanide																				
Cyanide (Free)	0	1	1	1	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025
Cyanide (Total)	0	2	2	1	-	0.0072	0.00895	0.0123	-	0.0055	0.0077	0.0123	-	0.00715	0.00895	0.0123	-	0.0088	0.0102	0.0123
Cyanide (WAD)	0	1	1	1	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025
Dissolved Metals																				
Aluminum	0	2	2	2	-	0.1875	0.1875	0.2500	-	0.125	0.1250	0.2500	-	0.1875	0.1875	0.2500	-	0.25	0.2500	0.2500
Antimony	0	2	2	2	-	0.01875	0.01875	0.02500	-	0.0125	0.01250	0.02500	-	0.01875	0.01875	0.02500	-	0.025	0.02500	0.02500
Arsenic	0	2	2	2	-	0.0188	0.0188	0.0250	-	0.0125	0.0125	0.0250	-	0.01875	0.0188	0.0250	-	0.025	0.0250	0.0250
Barium	0	2	2	2	-	0.075	0.100	0.100	-	0.05	0.100	0.100	-	0.075	0.100	0.100	-	0.1	0.100	0.100
Beryllium	0	2	2	2	-	0.03750	0.03750	0.05000	-	0.025	0.02500	0.05000	-	0.0375	0.03750	0.05000	-	0.05	0.05000	0.05000
Bismuth	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron	0	2	2	2	-	1.765	2.450	2.750	-	1.43	2.200	2.500	-	1.765	2.450	2.750	-	2.1	2.700	3.000
Cadmium	0	2	2	2	-	0.000638	0.000638	0.000850	-	0.000425	0.000425	0.000850	-	0.0006375	0.000638	0.000850	-	0.00085	0.000850	0.000850
Calcium	0	2	2	2	-	491	576	626	-	469	568	613	-	491	576	626	-	513	583	638
Chromium	0	2	2	2	-	0.0375	0.03750	0.05000	-	0.025	0.02500	0.05000	-	0.0375	0.03750	0.05000	-	0.05	0.05000	0.05000
Cobalt	0	2	2	2	-	0.01125	0.01125	0.01500	-	0.0075	0.00750	0.01500	-	0.01125	0.01125	0.01500	-	0.015	0.01500	0.01500
Copper	0	2	2	2	-	0.0375	0.0375	0.0500	-	0.025	0.0250	0.0500	-	0.0375	0.0375	0.0500	-	0.05	0.0500	0.0500
Iron	0	2	2	2	-	0.113	0.150	0.150	-	0.075	0.150	0.150	-	0.1125	0.150	0.150	-	0.15	0.150	0.150
Lead	0	2	2	2	-	0.01875	0.01875	0.02500	-	0.0125	0.01250	0.02500	-	0.01875	0.01875	0.02500	-	0.025	0.02500	0.02500
Lithium	0	2	2	2	-	0.1875	0.1875	0.2500	-	0.125	0.1250	0.2500	-	0.1875	0.1875	0.2500	-	0.25	0.2500	0.2500
Magnesium	0	2	2	2	-	2565.0	3440.0	4070.0	-	2020.0	3170.0	3830.0	-	2565.0	3440.0	4070.0	-	3110.0	3710.0	4310.0
Manganese	0	2	2	2	-	0.070	0.015	0.030	-	0.051	0.015	0.015	-	0.07	0.015	0.030	-	0.089	0.015	0.045
Mercury	0	2	2	2	-	0.0000100	0.0000100	0.0000100	-	0.00001	0.0000100	0.0000100	-	0.00001	0.0000100	0.0000100	-	0.00001	0.0000100	0.0000100
Molybdenum	0	2	2	2	-	0.0375	0.0375	0.0500	-	0.025	0.0250	0.0500	-	0.0375	0.0375	0.0500	-	0.05	0.0500	0.0500
Nickel	0	2	2	2	-	0.0375	0.0375	0.0500	-	0.025	0.0250	0.0500	-	0.0375	0.0375	0.0500	-	0.05	0.0500	0.0500
Phosphorus	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	0	2	2	2	-	240	326	367	-	196	310	340	-	239.5	326	367	-	283	342	394
Selenium	0	2	2	2	-	0.03750	0.03750	0.05000	-	0.025	0.02500	0.05000	-	0.0375	0.03750	0.05000	-	0.05	0.05000	0.05000
Silicon	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	0	2	2	2	-	0.000750	0.000750	0.001000	-	0.0005	0.000500	0.001000	-	0.00075	0.000750	0.001000	-	0.001	0.001000	0.001000
Sodium	0	2	2	2	-	3450	4640	5365	-	2700	4280	4880	-	3450	4640	5365	-	4200	5000	5850
Strontium	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulphur	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	0	2	2	2	-	0.007500	0.007500	0.010000	-	0.005	0.005000	0.010000	-	0.0075	0.007500	0.010000	-	0.01	0.010000	0.010000
Tin	0	2	2	2	-	0.01875	0.01875	0.02500	-	0.0125	0.01250	0.02500	-	0.01875	0.01875	0.02500	-	0.025	0.02500	0.02500
Titanium	0	2	2	2	-	0.0375	0.0500	0.0500	-	0.025	0.0500	0.0500	-	0.0375	0.0500	0.0500	-	0.05	0.0500	0.0500
Uranium	0	2	2	2	-	0.0100	0.0110	0.0100	-	0.01	0.0100	0.0100	-	0.01	0.0110	0.0100	-	0.01	0.0120	0.0100
Vanadium	0	2	2	2	-	0.0625	0.1000	0.1000	-	0.05	0.0500	0.0500	-	0.0625	0.1000	0.1000	-	0.075	0.1500	0.1500
Zinc	0	2	2	2	-	0.0750	0.0750	0.1500	-	0.025	0.0250	0.0500	-	0.075	0.0750	0.1500	-	0.125	0.1250	0.2500
Total Metals																				
Aluminum	0	2	2	2	-	0.19	0.41	0.25	-	0.125	0.13	0.25	-	0.1875	0.41	0.25	-	0.25	0.70	0.25
Antimony	0	2	2	2	-	0.01875	0.01875	0.02500	-	0.0125	0.01250	0.02500	-	0.01875	0.01875	0.02500	-	0.025	0.02500	0.02500
Arsenic	0	2	2	2	-	0.0188	0.0188	0.0250	-	0.0125	0.0125	0.0250	-	0.01875	0.0188	0.0250	-	0.025	0.0250	0.0250
Barium	0	2	2	2	-	0.075	0.100	0.100	-	0.05	0.100	0.100	-	0.075	0.100	0.100	-	0.1	0.100	0.100
Beryllium	0	2	2	2	-	0.03750	0.03750	0.05000	-	0.025	0.02500	0.05000	-	0.0375	0.03750	0.05000	-	0.05	0.05000	0.05000
Bismuth	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron	0	2	2	2	-	1.780	2.400	2.700	-	1.46	2.100	2.500	-	1.78	2.400	2.700	-	2.1	2.700	2.900
Cadmium	0	2	2	2	-	0.000638	0.000638	0.000850	-	0.000425	0.000425	0.000850	-	0.0006375	0.000638	0.000850	-	0.00085	0.000850	0.000850
Calcium	0	2	2	2	-	479	592	627	-	464	574	626	-	479	592	627	-	494	609	628
Chromium	0	2	2	2	-	0.0375	0.0375	0.0500	-	0.025	0.0250	0.0500	-	0.0375	0.0375	0.0500	-	0.05	0.0500	0.0500
Cobalt	0	2	2	2	-	0.01125	0.01125	0.01500	-	0.0075	0.00750	0.01500	-	0.01125	0.01125	0.01500	-	0.0150	0.01500	0.01500
Copper	0	2	2	2	-	0.0375	0.0375	0.0500	-	0.025	0.0250	0.0500	-	0.0375	0.0375	0.0500	-	0.05	0.0500	0.0500
Iron	0	2	2	2	-	0.11	0.15	0.15	-	0.075	0.15	0.15	-	0.1125	0.15	0.15	-	0.15	0.15	0.15
Lead	0	2	2	2	-	0.01875	0.01875	0.02500	-	0.0125	0.01250	0.02500	-	0.01875	0.01875	0.02500	-	0.0250	0.02500	0.02500
Lithium	0	2	2	2	-	0.1875	0.1875	0.2500	-	0.125	0.1250	0.2500	-	0.1875	0.1875	0.2500	-	0.25	0.2500	0.2500
Magnesium	0	2	2	2	-	2485	3440	4035	-	1970	3220	3900	-	2485	3440	4035	-	3000	3660	4170
Manganese	0	2	2	2	-	0.09	0.03	0.06	-	0.087	0.02	0.04	-	0.0905	0.03	0.06	-	0.094	0.05	0.08
Mercury	0	2	2	2	-	0.0000100	0.0000100	0.0000100	-	0.00001	0.0000100	0.0000100	-	0.00001	0.0000100	0.0000100	-	0.00001	0.0000100	0.0000100
Molybdenum	0	2	2	2	-	0.038	0.038	0.050	-	0.025	0.025	0.050	-	0.0375	0.038	0.050	-	0.05	0.050	0.050
Nickel	0	2	2	2	-	0.0375	0.0375	0.0500	-	0.0250	0.0250	0.0500	-	0.0375	0.0375	0.0500	-	0.0500	0.0500	0.0500
Phosphorus	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	0	2	2	2	-	232.5	325.0	363.5	-	191.0	309.0	344.0	-	232.5	325.0	363.5	-	274.0	341.0	383.0
Selenium	0	2	2	2	-	0.03750	0.03750	0.05000	-	0.02500	0.02500	0.05000	-	0.0375	0.03750	0.05000	-	0.0500	0.05000	0.05000
Silicon	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	0	2	2	2	-	0.0007500	0.0007500	0.0010000	-	0.0005	0.0005000	0.0010000	-	0.00075	0.0007500	0.0010000	-	0.001	0.0010000	0.0010000
Sodium	0	2	2	2	-	3300	4610	5295	-	2620	4260	4910	-	3300	4610	5295	-	3980	4960	5680
Strontium	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulphur	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	0	2	2	2	-	0.00750	0.00750	0.01000	-	0.005	0.00500	0.01000	-	0.0075	0.00750	0.01000	-	0.01	0.01000	0.01000
Tin	0	2	2	2	-	0.01875	0.01875	0.02500	-	0.0125	0.01250	0.02500	-	0.01875	0.01875	0.02500	-	0.025	0.02500	0.02500
Titanium	0	2	2	2	-	0.038	0.050	0.050	-	0.025	0.050	0.050	-	0.0375	0.050	0.050	-	0.05	0.050	0.050
Uranium	0	2	2	2	-	0.0100	0.0110	0.0100	-	0.0100	0.0100	0.0100	-	0.0100	0.0110	0.0100	-	0.0100	0.0120	0.0100
Vanadium	0	2	2	2	-	0.0625	0.1000	0.1000	-	0.05	0.0500	0.0500	-	0.0625	0.1000	0.1000	-	0.075	0.1500	0.1500
Zinc	0	2	2	2	-	0.0750	0.0750	0.1500	-	0.025	0.0250	0.0500	-	0.075	0.0750	0.1500	-	0.125	0.1250	0.2500
Organics																				
Carbon Organic (Dissolved)	0	1	2	2	-	26.0	32	33	-	26.0	30	30	-	26.0	32	33	-	26	33	36
Carbon Organic (Total)	0	1	0	0	-	22	-	-	-	21.5	-	-	-	21.5	-	-	-	22	-	-
Nitrogen Organic (Dissolved)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.
2. SEASONS ARE SPECIFIED AS FOLLOWS: WIN (WINTER; DECEMBER THROUGH MARCH), SPR (SPRING; APRIL AND MAY), SUMMER(JUNE THROUGH AUGUST), FALL (SEPTEMBER THROUGH NOVEMBER).

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.33 - S.CATCHMENT
(PAGE 1 OF 2)

Parameter	Total Count	Complete Dataset - S. CATCHMENT									
		Min	Percentiles 5th	25th	50th	75th	95th	Max	Average	Standard Deviation	Coefficient of Variation
In Situ Parameters											
Conductivity µS/cm	2	1756	1824	2096	2435	2775	3046	3114	2435	960	3.9E-01
Oxygen Dissolved %	0	-	-	-	-	-	-	-	-	-	-
Oxygen Dissolved	0	-	-	-	-	-	-	-	-	-	-
pH (unitless)	3	8.9	8.9	9.0	9.1	9.4	9.6	9.7	9.2	0.4	4.5E-02
Redox Potential mV	2	12	14	22	32	43	51	53	32	28	8.8E-01
Salinity ppt	2	1.33	1.35	1.43	1.53	1.62	1.70	1.72	1.53	0.28	1.8E-01
Specific Conductivity µS/cm	2	2559	2595	2740	2921	3101	3246	3282	2921	511	1.8E-01
Temperature °C	3	8.6	9.5	13.0	17.5	20.0	21.9	22.4	16.2	7.0	4.3E-01
Total Dissolved Solids	2	1662	1686	1781	1899	2018	2112	2136	1899	335	1.8E-01
Turbidity NTU	1	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	-	-
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	0	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	4	812	852	1013	1080	1105	1165	1180	1038	158	1.5E-01
Bicarbonate Alkalinity	4	536	537	541	608	710	800	823	644	135	2.1E-01
Carbonate Alkalinity	4	268.0	280.9	332.5	379.0	439.5	524.7	546.0	393.0	116.4	3.0E-01
Color TCU	1	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	-	-
Hardness as CaCO3 (Dissolved)	4	1350	1409	1643	1745	1778	1844	1860	1675	223	1.3E-01
Hydroxide Alkalinity	4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0E+00
pH (unitless)	4	9.0	9.0	9.0	9.0	9.1	9.3	9.3	9.1	0.2	1.7E-02
Specific Conductivity µS/cm	4	2490	2586	2970	3210	3335	3443	3470	3095	427	1.4E-01
Total Dissolved Solids	4	2150	2242	2608	2785	2888	3074	3120	2710	406	1.5E-01
Total Suspended Solids	4	8.0	8.7	11.4	18.2	29.4	42.4	45.7	22.5	16.8	7.5E-01
Turbidity NTU	4	2.1	2.2	2.7	4.9	17.0	41.1	47.1	14.8	21.7	1.5E+00
Dissolved Anions											
Bromide	4	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.00	0.0E+00
Chloride	4	25	25	26	27	29	33	34	28	4	1.5E-01
Fluoride	4	0.09	0.09	0.09	0.14	0.20	0.20	0.20	0.14	0.06	4.5E-01
Sulphate	4	1010	1057	1243	1350	1385	1397	1400	1278	182	1.4E-01
Nutrients											
Ammonia (Total)	4	0.024	0.027	0.038	0.079	0.152	0.240	0.262	0.111	0.108	9.7E-01
Nitrate (as N)	4	0.050	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.000	0.0E+00
Nitrite (as N)	4	0.0100	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.0000	0.0E+00
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	1	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	-	-
Nitrogen Kjeldahl (Total)	4	2.42	2.47	2.65	2.92	3.17	3.34	3.38	2.91	0.42	1.4E-01
Orthophosphate (Dissolved)	4	0.001	0.001	0.001	0.002	0.004	0.009	0.010	0.003	0.004	1.3E+00
Phosphorus - Dissolved	4	0.033	0.034	0.036	0.043	0.063	0.096	0.104	0.056	0.033	5.8E-01
Phosphorus - Total	4	0.038	0.042	0.058	0.069	0.087	0.119	0.127	0.076	0.037	4.9E-01
Cyanide											
Cyanide (Free)	4	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Cyanide (Total)	4	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Cyanide (WAD)	4	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Dissolved Metals											
Aluminum	4	0.0010	0.0010	0.0010	0.0017	0.0026	0.0029	0.0030	0.0019	0.0010	5.5E-01
Antimony	4	0.00048	0.00051	0.00062	0.00073	0.00083	0.00093	0.00095	0.00072	0.00020	2.8E-01
Arsenic	4	0.0095	0.0099	0.0112	0.0133	0.0148	0.0149	0.0149	0.0128	0.0026	2.0E-01
Barium	4	0.004	0.005	0.008	0.010	0.011	0.012	0.012	0.009	0.004	3.9E-01
Beryllium	4	0.000100	0.000100	0.000100	0.000100	0.000100	0.000100	0.000100	0.000100	0.000000	0.0E+00
Bismuth	4	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00000	0.0E+00
Boron	4	0.368	0.385	0.454	0.520	0.566	0.588	0.594	0.500	0.100	2.0E-01
Cadmium	4	0.0000100	0.0000100	0.0000100	0.0000125	0.0000175	0.0000235	0.0000250	0.0000150	0.0000071	4.7E-01
Calcium	4	10	10	11	12	13	15	16	12	3	2.1E-01
Chromium	4	0.00010	0.00010	0.00010	0.00010	0.00010	0.00010	0.00010	0.00010	0.00000	0.0E+00
Cobalt	4	0.00010	0.00010	0.00010	0.00010	0.00010	0.00010	0.00010	0.00010	0.00000	0.0E+00
Copper	4	0.0002	0.0002	0.0002	0.0004	0.0006	0.0009	0.0010	0.0005	0.0004	7.9E-01
Iron	4	0.005	0.007	0.013	0.017	0.019	0.021	0.021	0.015	0.007	4.7E-01
Lead	4	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000000	0.0E+00
Lithium	4	0.00690	0.00723	0.00855	0.00930	0.00955	0.00967	0.00970	0.00880	0.00129	1.5E-01
Magnesium	4	319	334	393	418	425	441	445	400	55	1.4E-01
Manganese	4	0.003	0.004	0.008	0.011	0.013	0.015	0.015	0.010	0.005	5.1E-01
Mercury	4	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Molybdenum	4	0.052	0.053	0.057	0.060	0.064	0.075	0.078	0.062	0.011	1.8E-01
Nickel	4	0.0011	0.0011	0.0012	0.0013	0.0014	0.0014	0.0014	0.0013	0.0002	1.2E-01
Phosphorus	4	0.03	0.03	0.03	0.03	0.03	0.05	0.05	0.03	0.01	4.4E-01
Potassium	4	56	59	70	77	79	81	81	73	11	1.5E-01
Selenium	4	0.00059	0.00060	0.00064	0.00073	0.00082	0.00086	0.00087	0.00073	0.00013	1.8E-01
Silicon	4	2.4	2.7	4.0	4.6	5.0	5.7	5.9	4.4	1.5	3.3E-01
Silver	4	0.0000100	0.0000100	0.0000100	0.0000100	0.0000100	0.0000100	0.0000100	0.0000100	0.0000000	0.0E+00
Sodium	4	189	202	253	275	281	296	300	260	49	1.9E-01
Strontium	4	0.11	0.11	0.12	0.14	0.18	0.24	0.25	0.16	0.06	3.9E-01
Sulphur	4	302	318	383	419	429	434	435	394	62	1.6E-01
Thallium	4	0.0000100	0.0000100	0.0000100	0.0000100	0.0000100	0.0000100	0.0000100	0.0000100	0.0000000	0.0E+00
Tin	4	0.000100	0.000100	0.000100	0.000100	0.000100	0.000100	0.000100	0.000100	0.000000	0.0E+00
Titanium	4	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0000	0.0E+00
Uranium	4	0.0027	0.0028	0.0032	0.0034	0.0037	0.0042	0.0044	0.0035	0.0007	2.0E-01
Vanadium	4	0.0033	0.0034	0.0039	0.0045	0.0049	0.0050	0.0050	0.0043	0.0008	1.8E-01
Zinc	4	0.0010	0.0010	0.0010	0.0010	0.0015	0.0027	0.0030	0.0015	0.0010	6.7E-01
Total Metals											
Aluminum	4	0.0315	0.0387	0.0677	0.2144	0.5643	1.0809	1.2100	0.4176	0.5465	1.3E+00
Antimony	4	0.00046	0.00051	0.00072	0.00081	0.00086	0.00098	0.00101	0.00077	0.00023	3.0E-01
Arsenic	4	0.0087	0.0094	0.0123	0.0143	0.0179	0.0247	0.0264	0.0159	0.0075	4.7E-01
Barium	4	0.012	0.012	0.012	0.013	0.022	0.041	0.046	0.021	0.017	8.0E-01
Beryllium	4	0.000100	0.000100	0.000100	0.000100	0.000100	0.000100	0.000100	0.000100	0.000000	0.0E+00
Bismuth	4	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00000	0.0E+00
Boron	4	0.354	0.377	0.467	0.531	0.568	0.594	0.600	0.504	0.107	2.1E-01
Cadmium	4	0.000010	0.000010	0.000010	0.000013	0.000018	0.000024	0.000025	0.000015	0.000007	4.7E-01
Calcium	4	10	10	11	14	17	22	23	15	6	3.7E-01
Chromium	4	0.00026	0.00027	0.00030	0.00053	0.00120	0.00228	0.00255	0.00097	0.00108	1.1E+00
Cobalt	4	0.00010	0.00010	0.00010	0.00018	0.00041	0.00078	0.00087	0.00033	0.00037	1.1E+00
Copper	4	0.0005	0.0006	0.0011	0.0014	0.0025	0.0047	0.0053	0.0022	0.0021	1.0E+00
Iron	4	0.05	0.06	0.09	0.21	0.57	1.17	1.32	0.45	0.59	1.3E+00
Lead	4	0.000050	0.000050	0.000050	0.000050	0.000135	0.000339	0.000390	0.000135	0.000170	1.3E+00
Lithium	4	0.0065	0.0069	0.0084	0.0097	0.0104	0.0106	0.0107	0.0091	0.0019	2.1E-01
Magnesium	4	296	313	379	410	419	434	438	388	63	1.6E-01
Manganese	4	0.01	0.02	0.02	0.02	0.04	0.08	0.09	0.04	0.03	9.2E-01
Mercury	4	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Molybdenum	4	0.053	0.054	0.059	0.071	0.082	0.084	0.084	0.070	0.015	2.2E-01
Nickel	4	0.0015	0.0015	0.0016	0.0017	0.0023	0.0037	0.0040	0.0022	0.0012	5.5E-01
Phosphorus	4	0.05	0.06	0.06	0.08	0.18	0.38	0.43	0.16	0.18	1.1E+00
Potassium	4	54	57	68	75	77	77	77	70	11	1.6E-01
Selenium	4	0.00058	0.00059	0.00063	0.00074	0.00090	0.00106	0.00110	0.00079	0.00023	2.9E-01
Silicon	4	4.7	4.7	5.1	5.7	6.1	6.1	6.2	5.5	0.7	1.3E-01
Silver	4	0.0000100	0.0000100	0.0000100	0.0000100	0.0000100	0.0000100	0.0000100	0.0000100	0.0000000	0.0E+00
Sodium	4	187	195	225	250	274	304	312	250	52	2.1E-01
Strontium	4	0.13	0.13	0.16	0.22	0.31	0.45	0.49	0.26	0.16	6.1E-01
Sulphur	4	304	322	395	426	432	445	448	401	65	1.6E-01
Thallium	4	0.0000100	0.0000100	0.0000100	0.0000100	0.0000100	0.0000100	0.0000100	0.0000100	0.0000000	0.0E+00
Tin	4	0.000100	0.000100	0.000100	0.000100	0.000100	0.000100	0.000100	0.000100	0.000000	0.0E+00
Titanium	4	0.0100	0.0100	0.0100	0.0100	0.0185	0.0389	0.0440	0.0185	0.0170	9.2E-01
Uranium	4	0.0029	0.0030	0.0034	0.0039	0.0043	0.0046	0.0047	0.0038	0.0008	2.0E-01
Vanadium	4	0.0041	0.0042	0.0045	0.0051	0.0058	0.0064	0.0065	0.0052	0.0011	2.0E-01
Zinc	4	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0000	0.0E+00
Organics											
Carbon Organic (Dissolved)	4	25.2	26.3	30.8	32.8	33.0	33.2	33.3	31.0	3.9	1.3E-01
Carbon Organic (Total)	4	26.9	27.7	30.9	33.1	34.5	35.8	36.1	32.3	3.9	1.2E-01
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.33 - S.CATCHMENT
(PAGE 2 OF 2)

Seasonal Statistics - S. CATCHMENT

Parameter	Count				Average				Min				Median				Max			
	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall
In Situ Parameters																				
Conductivity µS/cm	0	1	1	0	-	1756	3114	-	-	1756	3114	-	-	1756	3114	-	-	1756	3114	-
Oxygen Dissolved %	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oxygen Dissolved	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH (unitless)	0	1	1	1	-	9	10	9	-	9.12	10	9	-	9.12	10	9	-	9.12	10	9
Redox Potential mV	0	1	1	0	-	12	53	-	-	12.3	53	-	-	12.3	53	-	-	12.3	53	-
Salinity ppt	0	1	1	0	-	1.33	1.72	-	-	1.33	1.72	-	-	1.33	1.72	-	-	1.33	1.72	-
Specific Conductivity µS/cm	0	1	1	0	-	2559	3282	-	-	2559	3282	-	-	2559	3282	-	-	2559	3282	-
Temperature °C	0	1	1	1	-	9	22	18	-	8.56	22	18	-	8.56	22	18	-	8.56	22	18
Total Dissolved Solids	0	1	1	0	-	1662	2136	-	-	1662	2136	-	-	1662	2136	-	-	1662	2136	-
Turbidity NTU	0	1	0	0	-	5	-	-	-	4.9	-	-	-	4.9	-	-	-	4.9	-	-
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	0	1	1	2	-	812	1080	1130	-	812	1080	1080	-	812	1080	1130	-	812	1080	1180
Bicarbonate Alkalinity	0	1	1	2	-	543	536	748	-	543	536	672	-	543	536	748	-	543	536	823
Carbonate Alkalinity	0	1	1	2	-	268	546	379	-	268	546	354	-	268	546	379	-	268	546	404
Color TCU	0	0	0	1	-	-	-	17	-	-	-	17	-	-	-	17	-	-	-	17
Hardness as CaCO3 (Dissolved)	0	1	1	2	-	1350	1750	1800	-	1350	1750	1740	-	1350	1750	1800	-	1350	1750	1860
Hydroxide Alkalinity	0	1	1	2	-	0.50	0.50	0.50	-	0.5	0.50	0.50	-	0.5	0.50	0.50	-	0.5	0.50	0.50
pH (unitless)	0	1	1	2	-	9	9	9	-	9.02	9	9	-	9.02	9	9	-	9.02	9	9
Specific Conductivity µS/cm	0	1	1	2	-	2490	3130	3380	-	2490	3130	3290	-	2490	3130	3380	-	2490	3130	3470
Total Dissolved Solids	0	1	1	2	-	2150	2760	2965	-	2150	2760	2810	-	2150	2760	2965	-	2150	2760	3120
Total Suspended Solids	0	1	1	2	-	13	46	16	-	12.5	46	8	-	12.5	46	16	-	12.5	46	24
Turbidity NTU	0	1	1	2	-	3	47	5	-	2.83	47	2	-	2.83	47	5	-	2.83	47	7
Dissolved Anions																				
Bromide	0	1	1	2	-	0.50	0.50	0.50	-	0.5	0.50	0.50	-	0.5	0.50	0.50	-	0.5	0.50	0.50
Chloride	0	1	1	2	-	25	34	27	-	25	34	26	-	25	34	27	-	25	34	27
Fluoride	0	1	1	2	-	0.20	0.09	0.14	-	0.2	0.09	0.09	-	0.2	0.09	0.14	-	0.2	0.09	0.20
Sulphate	0	1	1	2	-	1010	1320	1390	-	1010	1320	1380	-	1010	1320	1390	-	1010	1320	1400
Nutrients								-												
Ammonia (Total)	0	1	1	2	-	0.024	0.043	0.189	-	0.0244	0.043	0.115	-	0.0244	0.043	0.189	-	0.0244	0.043	0.262
Nitrate (as N)	0	1	1	2	-	0.05	0.050	0.050	-	0.05	0.050	0.050	-	0.05	0.050	0.050	-	0.05	0.050	0.050
Nitrite (as N)	0	1	1	2	-	0.0100	0.0100	0.0100	-	0.01	0.0100	0.0100	-	0.01	0.0100	0.0100	-	0.01	0.0100	0.0100
Nitrogen (Dissolved)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	0	0	1	-	-	-	3.10	-	-	-	3.10	-	-	-	3.10	-	-	-	3.10
Nitrogen Kjeldahl (Total)	0	1	1	2	-	2.73	3.38	2.76	-	2.73	3.38	2.42	-	2.73	3.38	2.76	-	2.73	3.38	3.10
Orthophosphate (Dissolved)	0	1	1	2	-	0.001	0.001	0.006	-	0.0005	0.001	0.002	-	0.0005	0.001	0.006	-	0.0005	0.001	0.010
Phosphorus - Dissolved	0	1	1	2	-	0.104	0.04	0.04	-	0.104	0.04	0.03	-	0.104	0.04	0.04	-	0.104	0.04	0.05
Phosphorus - Total	0	1	1	2	-	0.04	0.13	0.07	-	0.0381	0.13	0.06	-	0.0381	0.13	0.07	-	0.0381	0.13	0.07
Cyanide																				
Cyanide (Free)	0	1	1	2	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025
Cyanide (Total)	0	1	1	2	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025
Cyanide (WAD)	0	1	1	2	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025
Dissolved Metals																				
Aluminum	0	1	1	2	-	0.0010	0.0024	0.0020	-	0.001	0.0024	0.0010	-	0.001	0.0024	0.0020	-	0.001	0.0024	0.0030
Antimony	0	1	1	2	-	0.00048	0.00066	0.00087	-	0.00048	0.00066	0.00079	-	0.00048	0.00066	0.00087	-	0.00048	0.00066	0.00095
Arsenic	0	1	1	2	-	0.0095	0.0118	0.0149	-	0.00951	0.0118	0.0148	-	0.00951	0.0118	0.0149	-	0.00951	0.0118	0.0149
Barium	0	1	1	2	-	0.012	0.004	0.010	-	0.012	0.004	0.009	-	0.012	0.004	0.010	-	0.012	0.004	0.011
Beryllium	0	1	1	2	-	0.00010	0.00010	0.00010	-	0.0001	0.00010	0.00010	-	0.0001	0.00010	0.00010	-	0.0001	0.00010	0.00010
Bismuth	0	1	1	2	-	0.001	0.001	0.001	-	0.0005	0.001	0.001	-	0.0005	0.001	0.001	-	0.0005	0.001	0.001
Boron	0	1	1	2	-	0.368	0.482	0.576	-	0.368	0.482	0.557	-	0.368	0.482	0.576	-	0.368	0.482	0.594
Cadmium	0	1	1	2	-	0.000015	0.000025	0.000010	-	0.000015	0.000025	0.000010	-	0.000015	0.000025	0.000010	-	0.000015	0.000025	0.000010
Calcium	0	1	1	2	-	16	11	11	-	15.8	11	10	-	15.8	11	11	-	15.8	11	12
Chromium	0	1	1	2	-	0.0001	0.00010	0.00010	-	0.0001	0.00010	0.00010	-	0.0001	0.00010	0.00010	-	0.0001	0.00010	0.00010
Cobalt	0	1	1	2	-	0.00010	0.00010	0.00010	-	0.0001	0.00010	0.00010	-	0.0001	0.00010	0.00010	-	0.0001	0.00010	0.00010
Copper	0	1	1	2	-	0.0005	0.0010	0.0002	-	0.00051	0.0010	0.0002	-	0.00051	0.0010	0.0002	-	0.00051	0.0010	0.0002
Iron	0	1	1	2	-	0.016	0.005	0.020	-	0.016	0.005	0.018	-	0.016	0.005	0.020	-	0.016	0.005	0.021
Lead	0	1	1	2	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005	-	0.00005	0.00005	0.00005
Lithium	0	1	1	2	-	0.0069	0.0091	0.0096	-	0.0069	0.0091	0.0095	-	0.0069	0.0091	0.0096	-	0.0069	0.0091	0.0097
Magnesium	0	1	1	2	-	319.0	418.0	431.0	-	319.0	418.0	417.0	-	319.0	418.0	431.0	-	319.0	418.0	445.0
Manganese	0	1	1	2	-	0.010	0.003	0.014	-	0.00997	0.003	0.012	-	0.00997	0.003	0.014	-	0.00997	0.003	0.015
Mercury	0	1	1	2	-	0.0000050	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050
Molybdenum	0	1	1	2	-	0.0517	0.0593	0.0687	-	0.0517	0.0593	0.0597	-	0.0517	0.0593	0.0687	-	0.0517	0.0593	0.0777
Nickel	0	1	1	2	-	0.0012	0.0014	0.0013	-	0.0012	0.0014	0.0011	-	0.0012	0.0014	0.0013	-	0.0012	0.0014	0.0014
Phosphorus	0	1	1	2	-	0.03	0.03	0.04	-	0.025	0.03	0.03	-	0.025	0.03	0.04	-	0.025	0.03	0.05
Potassium	0	1	1	2	-	56	78	78	-	56.4	78	75	-	56.4	78	78	-	56.4	78	81
Selenium	0	1	1	2	-	0.00059	0.00080	0.00077	-	0.00059	0.00080	0.00066	-	0.00059	0.00080	0.00077	-	0.00059	0.00080	0.00087
Silicon	0	1	1	2	-	4.68	2.38	5.25	-	4.68	2.38	4.60	-	4.68	2.38	5.25	-	4.68	2.38	5.89
Silver	0	1	1	2	-	0.000010	0.000010	0.000010	-	0.00001	0.000010	0.000010	-	0.00001	0.000010	0.000010	-	0.00001	0.000010	0.000010
Sodium	0	1	1	2	-	189	274	288	-	189	274	275	-	189	274	288	-	189	274	300
Strontium	0	1	1	2	-	0.25	0.12	0.14	-	0.25	0.12	0.11	-	0.25	0.12	0.14	-	0.25	0.12	0.16
Sulphur	0	1	1	2	-	302	427	423	-	302	427	410	-	302	427	423	-	302	427	435
Thallium	0	1	1	2	-	0.000010	0.000010	0.000010	-	0.00001	0.000010	0.000010	-	0.00001	0.000010	0.000010	-	0.00001	0.000010	0.000010
Tin	0	1	1	2	-	0.00010	0.00010	0.00010	-	0.0001	0.00010	0.00010	-	0.0001	0.00010	0.00010	-	0.0001	0.00010	0.00010
Titanium	0	1	1	2	-	0.01	0.0100	0.0100	-	0.01	0.0100	0.0100	-	0.01	0.0100	0.0100	-	0.01	0.0100	0.0100
Uranium	0	1	1	2	-	0.0027	0.0033	0.0039	-	0.00272	0.0033	0.0035	-	0.00272	0.0033	0.0039	-	0.00272	0.0033	0.0044
Vanadium	0	1	1	2	-	0.0033	0.0048	0.0046	-	0.0033	0.0048	0.0041	-	0.0033	0.0048	0.0046	-	0.0033	0.0048	0.0050
Zinc	0	1	1	2	-	0.0030	0.0010	0.0010	-	0.003	0.0010	0.0010	-	0.003	0.0010	0.0010	-	0.003	0.0010	0.0010
Total Metals																				
Aluminum	0	1	1	2	-	0.08	1.21	0.19	-	0.0797	1.21	0.03	-	0.0797	1.21	0.19	-	0.0797	1.21	0.35
Antimony	0	1	1	2	-	0.00046	0.00080	0.00091	-	0.00046	0.00080	0.00081	-	0.00046	0.00080	0.00091	-	0.00046	0.00080	0.00101
Arsenic	0	1	1	2	-	0.0087	0.0264	0.0143	-	0.00865	0.0264	0.0135	-	0.00865	0.0264	0.0143	-	0.00865	0.0264	0.0151
Barium	0	1	1	2	-	0.014	0.046	0.012	-	0.0141	0.046	0.012	-	0.0141	0.046	0.012	-	0.0141	0.046	0.012
Beryllium	0	1	1	2	-	0.00010	0.00010	0.00010	-	0.0001	0.00010	0.00010	-	0.0001	0.00010	0.00010	-	0.0001	0.00010	0.00010
Bismuth	0	1	1	2	-	0.0005	0.0005	0.0005	-	0.0005	0.0005	0.0005	-	0.0005	0.0005	0.0005	-	0.0005	0.0005	0.0005
Boron	0	1	1	2	-	0.354	0.505	0.579	-	0.354	0.505	0.557	-	0.354	0.505	0.579	-	0.354	0.505	0.600
Cadmium	0	1	1	2	-	0.000015	0.000025	0.000010	-	0.000015	0.000025	0.000010	-	0.000015	0.000025	0.000010	-	0.000015	0.000025	0.000010
Calcium	0	1	1	2	-	16	23	11	-	15.7	23	10	-	15.7	23	11	-	15.7	23	12
Chromium	0	1	1	2	-	0.0003	0.0026	0.0005	-	0.00031	0.0026	0.0003	-	0.00031	0.0026	0.0005	-	0.00031	0.0026	0.0008
Cobalt	0	1	1	2	-	0.00010	0.00087	0.00018	-	0.0001	0.00087	0.00010	-	0.0001	0.00087	0.00018	-	0.0001	0.00087	0.00025
Copper	0	1	1	2	-	0.0013	0.0053	0.0010	-	0.0013	0.0053	0.0005	-	0.0013	0.0053	0.0010	-	0.0013	0.0053	0.0015
Iron	0	1	1	2	-	0.10	1.32	0.18	-	0.099	1.32	0.05	-	0.099	1.32	0.18	-	0.099	1.32	0.32
Lead	0	1	1	2	-	0.00005	0.00039	0.00005	-	0.00005	0.00039	0.00005	-	0.00005	0.00039	0.00005	-	0.0001	0.00039	0.00005
Lithium	0	1	1	2	-	0.0065	0.0107	0.0097	-	0.0065	0.0107	0.0090	-	0.0065	0.0107	0.0097	-	0.0065	0.0107	0.0103
Magnesium	0	1	1	2	-	296	407	425	-	296	407	412	-	296	407	425	-	296	407	438
Manganese	0	1	1	2	-	0.02	0.09	0.02	-	0.0213	0.09	0.01	-	0.0213	0.09	0.02	-	0.0213	0.09	0.02
Mercury	0	1	1	2	-	0.0000050	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050
Molybdenum	0	1	1	2	-	0.053	0.082	0.072	-	0.0533	0.082	0.061	-	0.0533	0.082	0.072	-	0.0533	0.082	0.084
Nickel	0	1	1	2	-	0.0016	0.0040	0.0016	-	0.0016	0.0040	0.0015	-	0.0016	0.0040	0.0016	-	0.0016	0.0040	0.0017
Phosphorus	0	1	1	2	-	0.10	0.43	0.06	-	0.096	0.43	0.05	-	0.096	0.43	0.06	-	0.096	0.43	0.06
Potassium	0	1	1	2	-	53.9	77.0	75.2	-	53.9	77.0	73.0	-	53.9	77.0	75.2	-	53.9	77.0	77.4
Selenium	0	1	1	2	-	0.00058	0.00110	0.00074	-	0.00058	0.00110	0.00065	-	0.0006	0.00110	0.00074	-	0.0006	0.00110	0.00083
Silicon	0	1	1	2	-	4.7	6.2	5.7	-	4.7	6.2	5.3	-	4.7	6.2	5.7	-	4.7	6.2	6.0
Silver	0	1	1	2	-	0.0000100	0.0000100	0.0000100	-	0.00001	0.0000100	0.0000100	-	0.00001	0.0000100	0.0000100	-	0.00001	0.0000100	0.0000100
Sodium	0	1	1	2	-	187	238	287	-	187	238	261	-	187	238	287	-	187	238	312
Strontium	0	1	1	2	-	0.3	0.49	0.15	-	0.26	0.49	0.13	-	0.3	0.49	0.15	-	0.3	0.49	0.18
Sulphur	0	1	1	2	-	304	427	437	-	304	427	425	-	304	427	437	-	304	427	448
Thallium	0	1	1	2	-	0.00001	0.00001	0.00001	-	0.00001	0.00001	0.00001	-	0.00001	0.00001	0.00001	-	0.00001	0.00001	0.00001
Tin	0	1	1	2	-	0.00010	0.00010	0.00010	-	0.0001	0.00010	0.00010	-	0.0001	0.00010	0.00010	-	0.0001	0.00010	0.00010
Titanium	0	1	1	2	-	0.010	0.044	0.010	-	0.01	0.044	0.010	-	0.01	0.044	0.010	-	0.01	0.044	0.010
Uranium	0	1	1	2	-	0.0029	0.0042	0.0041	-	0.0029	0.0042	0.0036	-	0.0029	0.0042	0.0041	-	0.0029	0.0042	0.0047
Vanadium	0	1	1	2	-	0.0041	0.0065	0.0051	-	0.0041	0.0065	0.0046	-	0.0041	0.0065	0.0051	-	0.0041	0.0065	0.0055
Zinc	0	1	1	2	-	0.0030	0.0030	0.0030	-	0.003	0.0030	0.0030	-	0.003	0.0030	0.0030	-	0.003	0.0030	0.0030
Organics																				
Carbon Organic (Dissolved)	0	1	1	2	-	25.2	33	33	-	25.2	33	33	-	25.2	33	33	-	25	33	33
Carbon Organic (Total)	0	1	1	2	-	27	36	33	-	26.9	36	32	-	26.9	36	33	-	27	36	34
Nitrogen Organic (Dissolved)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.
2. SEASONS ARE SPECIFIED AS FOLLOWS: WIN (WINTER; DECEMBER THROUGH MARCH), SPR (SPRING; APRIL AND MAY), SUMMER(JUNE THROUGH AUGUST), FALL (SEPTEMBER THROUGH NOVEMBER).

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.34 - WALL
(PAGE 1 OF 2)

Parameter	Total Count	Complete Dataset - WALL									
		Min	Percentiles 5th	25th	50th	75th	95th	Max	Average	Standard Deviation	Coefficient of Variation
In Situ Parameters											
Conductivity µS/cm	3	25765	27678	35328	44890	58195	68839	71500	47385	22969	4.8E-01
Oxygen Dissolved %	1	68	68	68	68	68	68	68	68	-	-
Oxygen Dissolved	1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	-	-
pH (unitless)	3	8.9	8.9	8.9	8.9	9.1	9.3	9.3	9.1	0.2	2.6E-02
Redox Potential mV	3	-175	-163	-113	-50	14	66	79	-49	127	-2.6E+00
Salinity ppt	2	34.10	34.61	36.65	39.20	41.75	43.79	44.30	39.20	7.21	1.8E-01
Specific Conductivity µS/cm	3	37682	39094	44741	51800	58595	64031	65390	51624	13855	2.7E-01
Temperature °C	3	8.4	9.4	13.2	17.9	23.9	28.6	29.8	18.7	10.7	5.7E-01
Total Dissolved Solids	3	2450	5571	18055	33660	38115	41679	42570	26227	21068	8.0E-01
Turbidity NTU	2	14.2	15.1	18.6	22.9	27.3	30.7	31.6	22.9	12.3	5.4E-01
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	0	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	4	171	229	459	694	979	1332	1420	745	526	7.1E-01
Bicarbonate Alkalinity	2	171	188	254	336	419	485	501	336	233	6.9E-01
Carbonate Alkalinity	2	1.0	17.5	83.5	166.0	248.5	314.5	331.0	166.0	233.3	1.4E+00
Color TCU	3	36.0	36.6	39.1	42.1	47.5	51.7	52.8	43.6	8.5	1.9E-01
Hardness as CaCO3 (Dissolved)	4	3380	5093	11945	18100	22975	26755	27700	16820	10393	6.2E-01
Hydroxide Alkalinity	2	0.5	0.5	0.6	0.8	0.9	1.0	1.0	0.8	0.4	4.7E-01
pH (unitless)	4	7.9	8.1	8.6	8.9	9.0	9.2	9.2	8.7	0.6	6.5E-02
Specific Conductivity µS/cm	4	12300	15825	29925	42600	52800	60960	63000	40125	21620	5.4E-01
Total Dissolved Solids	4	11500	16960	38800	61050	83400	105480	111000	61150	42016	6.9E-01
Total Suspended Solids	4	30.7	33.0	42.3	52.1	94.2	181.2	203.0	84.5	79.8	9.5E-01
Turbidity NTU	4	8.4	9.1	12.0	14.4	29.8	64.1	72.7	27.4	30.3	1.1E+00
Dissolved Anions											
Bromide	4	1.25	1.44	2.19	4.10	23.03	64.61	75.00	21.11	35.97	1.7E+00
Chloride	4	725	894	1569	2170	2593	2839	2900	1991	948	4.8E-01
Fluoride	4	0.06	0.07	0.13	0.15	0.24	0.45	0.50	0.22	0.19	9.0E-01
Sulphate	4	6950	10483	24613	37900	49875	60855	63600	36588	23951	6.5E-01
Nutrients											
Ammonia (Total)	4	0.088	0.096	0.126	0.169	0.463	1.093	1.250	0.419	0.556	1.3E+00
Nitrate (as N)	4	0.125	0.14	0.22	0.25	0.25	0.25	0.25	0.22	0.063	2.9E-01
Nitrite (as N)	4	0.0500	0.05	0.05	0.05	0.07	0.12	0.13	0.07	0.0410	5.8E-01
Nitrogen (Dissolved)	1	16.90	16.90	16.90	16.90	16.90	16.90	16.90	16.90	-	-
Nitrogen (Total)	4	5.48	6.86	12.40	16.85	20.20	23.08	23.80	15.75	7.79	4.9E-01
Nitrogen Kjeldahl (Total)	4	5.50	6.88	12.40	16.85	20.40	23.76	24.60	15.95	8.06	5.1E-01
Orthophosphate (Dissolved)	3	0.191	0.204	0.258	0.324	0.441	0.534	0.557	0.357	0.185	5.2E-01
Phosphorus - Dissolved	4	0.411	0.459	0.653	0.947	1.350	1.806	1.920	1.056	0.653	6.2E-01
Phosphorus - Total	4	0.509	0.664	1.282	1.600	1.908	2.502	2.650	1.590	0.876	5.5E-01
Cyanide											
Cyanide (Free)	3	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Cyanide (Total)	3	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Cyanide (WAD)	3	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Dissolved Metals											
Aluminum	4	0.0050	0.0080	0.0200	0.0375	0.1000	0.2200	0.2500	0.0825	0.1132	1.4E+00
Antimony	4	0.00050	0.00080	0.00200	0.00375	0.01000	0.02200	0.02500	0.00825	0.01132	1.4E+00
Arsenic	4	0.0071	0.0091	0.0170	0.0227	0.0273	0.0327	0.0340	0.0216	0.0112	5.2E-01
Barium	4	0.002	0.005	0.013	0.021	0.070	0.174	0.200	0.061	0.093	1.5E+00
Beryllium	4	0.000500	0.000800	0.002000	0.003750	0.016250	0.043250	0.050000	0.014500	0.023738	1.6E+00
Bismuth	4	0.00250	0.00400	0.01000	0.01875	0.51875	1.70375	2.00000	0.51000	0.99338	1.9E+00
Boron	4	0.540	0.834	2.010	3.115	3.973	4.555	4.700	2.868	1.794	6.3E-01
Cadmium	4	0.0000500	0.0000800	0.0002000	0.0003750	0.0005875	0.0007975	0.0008500	0.0004125	0.0003449	8.4E-01
Calcium	4	58	105	295	375	390	427	436	311	171	5.5E-01
Chromium	4	0.00050	0.00080	0.00200	0.00375	0.01625	0.04325	0.05000	0.01450	0.02374	1.6E+00
Cobalt	4	0.00050	0.00080	0.00200	0.00375	0.00750	0.01350	0.01500	0.00575	0.00644	1.1E+00
Copper	4	0.0010	0.0024	0.0078	0.0135	0.0315	0.0663	0.0750	0.0258	0.0335	1.3E+00
Iron	4	0.025	0.036	0.081	0.100	0.150	0.270	0.300	0.131	0.118	9.0E-01
Lead	4	0.000250	0.000400	0.001000	0.001875	0.008125	0.021625	0.025000	0.007250	0.011869	1.6E+00
Lithium	4	0.00250	0.00400	0.01000	0.01875	0.08125	0.21625	0.25000	0.07250	0.11869	1.6E+00
Magnesium	4	786	1172	2717	4145	5320	6256	6490	3892	2433	6.3E-01
Manganese	4	0.008	0.015	0.042	0.061	0.089	0.137	0.149	0.070	0.059	8.5E-01
Mercury	4	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Molybdenum	4	0.003	0.006	0.021	0.039	0.054	0.065	0.067	0.037	0.028	7.6E-01
Nickel	4	0.0025	0.0040	0.0100	0.0188	0.0313	0.0463	0.0500	0.0225	0.0205	9.1E-01
Phosphorus	4	0.54	0.65	1.11	1.55	2.10	2.82	3.00	1.66	1.03	6.2E-01
Potassium	4	160	201	367	504	615	718	744	478	247	5.2E-01
Selenium	4	0.00050	0.00118	0.00388	0.00750	0.02000	0.04400	0.05000	0.01638	0.02275	1.4E+00
Silicon	4	0.1	0.2	0.4	0.5	0.5	0.5	0.5	0.4	0.2	4.6E-01
Silver	4	0.0000500	0.0000800	0.0002000	0.0003750	0.0006250	0.0009250	0.0010000	0.0004500	0.0004103	9.1E-01
Sodium	4	2530	3499	7375	11295	14825	17765	18500	10905	6801	6.2E-01
Strontium	4	1.73	3.05	8.31	11.80	13.38	14.04	14.20	9.88	5.65	5.7E-01
Sulphur	3	2620	3878	8910	15200	17550	19430	19900	12573	8934	7.1E-01
Thallium	4	0.0000500	0.0000800	0.0002000	0.0003750	0.0028750	0.0085750	0.0100000	0.0027000	0.0048701	1.8E+00
Tin	4	0.000500	0.000800	0.002000	0.003750	0.010000	0.022000	0.025000	0.008250	0.011317	1.4E+00
Titanium	4	0.0500	0.0575	0.0875	0.1750	0.3125	0.4625	0.5000	0.2250	0.2021	9.0E-01
Uranium	4	0.0007	0.0019	0.0067	0.0090	0.0095	0.0099	0.0100	0.0072	0.0044	6.1E-01
Vanadium	4	0.0050	0.0080	0.0200	0.0375	0.0500	0.0500	0.0500	0.0325	0.0218	6.7E-01
Zinc	4	0.0050	0.0118	0.0388	0.0500	0.0548	0.0662	0.0690	0.0435	0.0272	6.2E-01
Total Metals											
Aluminum	4	0.0740	0.0742	0.0748	0.1125	0.1750	0.2350	0.2500	0.1373	0.0832	6.1E-01
Antimony	4	0.00050	0.00080	0.00200	0.00375	0.01000	0.02200	0.02500	0.00825	0.01132	1.4E+00
Arsenic	4	0.0072	0.0093	0.0176	0.0231	0.0273	0.0327	0.0340	0.0218	0.0111	5.1E-01
Barium	4	0.003	0.006	0.014	0.021	0.068	0.174	0.200	0.061	0.093	1.5E+00
Beryllium	4	0.000500	0.000800	0.002000	0.003750	0.016250	0.043250	0.050000	0.014500	0.023738	1.6E+00
Bismuth	4	0.00250	0.00400	0.01000	0.01875	0.51875	1.70375	2.00000	0.51000	0.99338	1.9E+00
Boron	4	0.530	0.841	2.083	3.060	3.690	4.098	4.200	2.713	1.596	5.9E-01
Cadmium	4	0.000050	0.000080	0.000200	0.000375	0.000588	0.000798	0.000850	0.000413	0.000345	8.4E-01
Calcium	4	58	103	282	369	394	426	434	307	169	5.5E-01
Chromium	4	0.00050	0.00080	0.00200	0.00375	0.01625	0.04325	0.05000	0.01450	0.02374	1.6E+00
Cobalt	4	0.00050	0.00080	0.00200	0.00375	0.00750	0.01350	0.01500	0.00575	0.00644	1.1E+00
Copper	4	0.0025	0.0040	0.0100	0.0188	0.0375	0.0675	0.0750	0.0288	0.0322	1.1E+00
Iron	4	0.10	0.10	0.11	0.21	0.32	0.36	0.37	0.22	0.13	6.0E-01
Lead	4	0.000250	0.000400	0.001000	0.001875	0.008125	0.021625	0.025000	0.007250	0.011869	1.6E+00
Lithium	4	0.0025	0.0040	0.0100	0.0188	0.0813	0.2163	0.2500	0.0725	0.1187	1.6E+00
Magnesium	4	781	1175	2753	4170	5240	5984	6170	3823	2321	6.1E-01
Manganese	4	0.02	0.02	0.05	0.07	0.11	0.17	0.18	0.09	0.07	8.3E-01
Mercury	4	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Molybdenum	4	0.003	0.006	0.019	0.037	0.057	0.073	0.077	0.039	0.032	8.3E-01
Nickel	4	0.0025	0.0040	0.0100	0.0188	0.0313	0.0463	0.0500	0.0225	0.0205	9.1E-01
Phosphorus	4	0.64	0.75	1.21	1.75	2.33	2.87	3.00	1.79	1.01	5.6E-01
Potassium	4	156	199	371	508	607	686	706	470	235	5.0E-01
Selenium	4	0.00050	0.00080	0.00200	0.00375	0.01625	0.04325	0.05000	0.01450	0.02374	1.6E+00
Silicon	4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	2.0E-02
Silver	4	0.0000500	0.0000800	0.0002000	0.0003750	0.0006250	0.0009250	0.0010000	0.0004500	0.0004103	9.1E-01
Sodium	4	2420	3425	7445	12160	15600	16560	16800	10885	6542	6.0E-01
Strontium	4	1.76	3.13	8.62	11.95	13.65	15.21	15.60	10.32	6.02	5.8E-01
Sulphur	3	2590	3851	8895	15200	17050	18530	18900	12230	8551	7.0E-01
Thallium	4	0.0000500	0.0000800	0.0002000	0.0003750	0.0028750	0.0085750	0.0100000	0.0027000	0.0048701	1.8E+00
Tin	4	0.000500	0.000800	0.002000	0.003750	0.010000	0.022000	0.025000	0.008250	0.011317	1.4E+00
Titanium	4	0.0500	0.0575	0.0875	0.1750	0.3125	0.4625	0.5000	0.2250	0.2021	9.0E-01
Uranium	4	0.0008	0.0019	0.0065	0.0090	0.0097	0.0099	0.0100	0.0072	0.0043	6.0E-01
Vanadium	4	0.0050	0.0080	0.0200	0.0375	0.0500	0.0500	0.0500	0.0325	0.0218	6.7E-01
Zinc	4	0.0150	0.0203	0.0413	0.0625	0.0938	0.1388	0.1500	0.0725	0.0572	7.9E-01
Organics											
Carbon Organic (Dissolved)	4	21.7	33.3	79.6	137.5	195.3	241.5	253.0	137.4	99.5	7.2E-01
Carbon Organic (Total)	4	25.6	37.4	84.4	140.5	200.5	256.9	271.0	144.4	104.6	7.2E-01
Nitrogen Organic (Dissolved)	1	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	-	-
Nitrogen Organic (Total)	2	14.70	14.91	15.73	16.75	17.78	18.60	18.80	16.75	2.90	1.7E-01

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.34 - WALL
(PAGE 2 OF 2)

Parameter	Seasonal Statistics - WALL																			
	Count				Average				Min				Median				Max			
	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall
In Situ Parameters																				
Conductivity µS/cm	0	2	1	0	-	35328	71500	-	-	25765	71500	-	-	35327.5	71500	-	-	44890	71500	-
Oxygen Dissolved %	0	0	1	0	-	-	68	-	-	-	68	-	-	-	68	-	-	-	68	-
Oxygen Dissolved	0	0	1	0	-	-	4	-	-	-	4	-	-	-	4	-	-	-	4	-
pH (unitless)	0	2	1	0	-	9	9	-	-	8.92	9	-	-	9.13	9	-	-	9.34	9	-
Redox Potential mV	0	2	1	0	-	14	-175	-	-	-50.4	-175	-	-	14.1	-175	-	-	78.6	-175	-
Salinity ppt	0	1	1	0	-	34.10	44.30	-	-	34.1	44.30	-	-	34.1	44.30	-	-	34.1	44.30	-
Specific Conductivity µS/cm	0	2	1	0	-	44741	65390	-	-	37682	65390	-	-	44741	65390	-	-	51800	65390	-
Temperature °C	0	2	1	0	-	13	30	-	-	8.42	30	-	-	13.16	30	-	-	17.9	30	-
Total Dissolved Solids	0	2	1	0	-	18055	42570	-	-	2450	42570	-	-	18055	42570	-	-	33660	42570	-
Turbidity NTU	0	1	1	0	-	14	32	-	-	14.2	32	-	-	14.2	32	-	-	14.2	32	-
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	0	2	1	1	-	988	832	171	-	555	832	171	-	987.5	832	171	-	1420	832	171
Bicarbonate Alkalinity	0	0	1	1	-	-	501	171	-	-	501	171	-	-	501	171	-	-	501	171
Carbonate Alkalinity	0	0	1	1	-	-	331	1	-	-	331	1	-	-	331	1	-	-	331	1
Color TCU	0	2	1	0	-	39	53	-	-	36	53	-	-	39.05	53	-	-	42.1	53	-
Hardness as CaCO3 (Dissolved)	0	2	1	1	-	18100	27700	3380	-	14800	27700	3380	-	18100	27700	3380	-	21400	27700	3380
Hydroxide Alkalinity	0	0	1	1	-	-	0.50	1.00	-	-	0.50	1.00	-	-	0.50	1.00	-	-	0.50	1.00
pH (unitless)	0	2	1	1	-	9	9	8	-	8.91	9	8	-	9.075	9	8	-	9.24	9	8
Specific Conductivity µS/cm	0	2	1	1	-	42600	63000	12300	-	35800	63000	12300	-	42600	63000	12300	-	49400	63000	12300
Total Dissolved Solids	0	2	1	1	-	61050	111000	11500	-	47900	111000	11500	-	61050	111000	11500	-	74200	111000	11500
Total Suspended Solids	0	2	1	1	-	44	203	46	-	30.7	203	46	-	44.3	203	46	-	57.9	203	46
Turbidity NTU	0	2	1	1	-	12	73	13	-	8.37	73	13	-	11.935	73	13	-	15.5	73	13
Dissolved Anions																				
Bromide	0	2	1	1	-	38.75	5.70	1.25	-	2.5	5.70	1.25	-	38.75	5.70	1.25	-	75	5.70	1.25
Chloride	0	2	1	1	-	2170	2900	725	-	1850	2900	725	-	2170	2900	725	-	2490	2900	725
Fluoride	0	2	1	1	-	0.11	0.15	0.50	-	0.061	0.15	0.50	-	0.1055	0.15	0.50	-	0.15	0.15	0.50
Sulphate	0	2	1	1	-	37900	63600	6950	-	30500	63600	6950	-	37900	63600	6950	-	45300	63600	6950
Nutrients								-												
Ammonia (Total)	0	2	1	1	-	0.144	0.138	1.250	-	0.0881	0.138	1.250	-	0.14405	0.138	1.250	-	0.2	0.138	1.250
Nitrate (as N)	0	2	1	1	-	0.25	0.250	0.125	-	0.25	0.250	0.125	-	0.25	0.250	0.125	-	0.25	0.250	0.125
Nitrite (as N)	0	2	1	1	-	0.0500	0.0500	0.1320	-	0.05	0.0500	0.1320	-	0.05	0.0500	0.1320	-	0.05	0.0500	0.1320
Nitrogen (Dissolved)	0	1	0	0	-	16.90	-	-	-	16.9	-	-	-	16.9	-	-	-	16.9	-	-
Nitrogen (Total)	0	2	1	1	-	16.85	23.80	5.48	-	14.7	23.80	5.48	-	16.85	23.80	5.48	-	19	23.80	5.48
Nitrogen Kjeldahl (Total)	0	2	1	1	-	16.85	24.60	5.50	-	14.7	24.60	5.50	-	16.85	24.60	5.50	-	19	24.60	5.50
Orthophosphate (Dissolved)	0	1	1	1	-	0.191	0.557	0.324	-	0.191	0.557	0.324	-	0.191	0.557	0.324	-	0.191	0.557	0.324
Phosphorus - Dissolved	0	2	1	1	-	0.947	1.92	0.41	-	0.733	1.92	0.41	-	0.9465	1.92	0.41	-	1.16	1.92	0.41
Phosphorus - Total	0	2	1	1	-	1.60	2.65	0.51	-	1.54	2.65	0.51	-	1.6	2.65	0.51	-	1.66	2.65	0.51
Cyanide																				
Cyanide (Free)	0	1	1	1	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025
Cyanide (Total)	0	1	1	1	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025
Cyanide (WAD)	0	1	1	1	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025	-	0.0025	0.0025	0.0025
Dissolved Metals																				
Aluminum	0	2	1	1	-	0.1375	0.0500	0.0050	-	0.025	0.0500	0.0050	-	0.1375	0.0500	0.0050	-	0.25	0.0500	0.0050
Antimony	0	2	1	1	-	0.01375	0.00500	0.00050	-	0.0025	0.00500	0.00050	-	0.01375	0.00500	0.00050	-	0.025	0.00500	0.00050
Arsenic	0	2	1	1	-	0.0227	0.0340	0.0071	-	0.0203	0.0340	0.0071	-	0.02265	0.0340	0.0071	-	0.025	0.0340	0.0071
Barium	0	2	1	1	-	0.108	0.027	0.002	-	0.0161	0.027	0.002	-	0.10805	0.027	0.002	-	0.2	0.027	0.002
Beryllium	0	2	1	1	-	0.02625	0.00500	0.00050	-	0.0025	0.00500	0.00050	-	0.02625	0.00500	0.00050	-	0.05	0.00500	0.00050
Bismuth	0	2	1	1	-	1.006	0.025	0.003	-	0.0125	0.025	0.003	-	1.00625	0.025	0.003	-	2	0.025	0.003
Boron	0	2	1	1	-	3.115	4.700	0.540	-	2.5	4.700	0.540	-	3.115	4.700	0.540	-	3.73	4.700	0.540
Cadmium	0	2	1	1	-	0.000550	0.000500	0.000050	-	0.00025	0.000500	0.000050	-	0.00055	0.000500	0.000050	-	0.00085	0.000500	0.000050
Calcium	0	2	1	1	-	405	375	58	-	374	375	58	-	405	375	58	-	436	375	58
Chromium	0	2	1	1	-	0.0263	0.00500	0.00050	-	0.0025	0.00500	0.00050	-	0.02625	0.00500	0.00050	-	0.05	0.00500	0.00050
Cobalt	0	2	1	1	-	0.00875	0.00500	0.00050	-	0.0025	0.00500	0.00050	-	0.00875	0.00500	0.00050	-	0.015	0.00500	0.00050
Copper	0	2	1	1	-	0.0460	0.0100	0.0010	-	0.017	0.0100	0.0010	-	0.046	0.0100	0.0010	-	0.075	0.0100	0.0010
Iron	0	2	1	1	-	0.200	0.100	0.025	-	0.1	0.100	0.025	-	0.2	0.100	0.025	-	0.3	0.100	0.025
Lead	0	2	1	1	-	0.01313	0.00250	0.00025	-	0.00125	0.00250	0.00025	-	0.013125	0.00250	0.00025	-	0.025	0.00250	0.00025
Lithium	0	2	1	1	-	0.1313	0.0250	0.0025	-	0.0125	0.0250	0.0025	-	0.13125	0.0250	0.0025	-	0.25	0.0250	0.0025
Magnesium	0	2	1	1	-	4145.0	6490.0	786.0	-	3360.0	6490.0	786.0	-	4145.0	6490.0	786.0	-	4930.0	6490.0	786.0
Manganese	0	2	1	1	-	0.061	0.149	0.008	-	0.053	0.149	0.008	-	0.0608	0.149	0.008	-	0.0686	0.149	0.008
Mercury	0	2	1	1	-	0.0000050	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050
Molybdenum	0	2	1	1	-	0.0586	0.0270	0.0029	-	0.05	0.0270	0.0029	-	0.0586	0.0270	0.0029	-	0.0672	0.0270	0.0029
Nickel	0	2	1	1	-	0.0313	0.0250	0.0025	-	0.0125	0.0250	0.0025	-	0.03125	0.0250	0.0025	-	0.05	0.0250	0.0025
Phosphorus	0	2	1	1	-	2.15	1.80	0.54	-	1.3	1.80	0.54	-	2.15	1.80	0.54	-	3	1.80	0.54
Potassium	0	2	1	1	-	504	744	160	-	436	744	160	-	504	744	160	-	572	744	160
Selenium	0	2	1	1	-	0.03000	0.00500	0.00050	-	0.01	0.00500	0.00050	-	0.03	0.00500	0.00050	-	0.05	0.00500	0.00050
Silicon	0	2	1	1	-	0.50	0.50	0.13	-	0.5	0.50	0.13	-	0.5	0.50	0.13	-	0.5	0.50	0.13
Silver	0	2	1	1	-	0.000625	0.000500	0.000050	-	0.00025	0.000500	0.000050	-	0.000625	0.000500	0.000050	-	0.001	0.000500	0.000050
Sodium	0	2	1	1	-	11295	18500	2530	-	8990	18500	2530	-	11295	18500	2530	-	13600	18500	2530
Strontium	0	2	1	1	-	11.80	14.20	1.73	-	10.5	14.20	1.73	-	11.8	14.20	1.73	-	13.1	14.20	1.73
Sulphur	0	1	1	1	-	15200	19900	2620	-	15200	19900	2620	-	15200	19900	2620	-	15200	19900	2620
Thallium	0	2	1	1	-	0.005125	0.000500	0.000050	-	0.00025	0.000500	0.000050	-	0.005125	0.000500	0.000050	-	0.01	0.000500	0.000050
Tin	0	2	1	1	-	0.01375	0.00500	0.00050	-	0.0025	0.00500	0.00050	-	0.01375	0.00500	0.00050	-	0.025	0.00500	0.00050
Titanium	0	2	1	1	-	0.175	0.5000	0.0500	-	0.1	0.5000	0.0500	-	0.175	0.5000	0.0500	-	0.25	0.5000	0.0500
Uranium	0	2	1	1	-	0.0097	0.0087	0.0007	-	0.0093	0.0087	0.0007	-	0.00965	0.0087	0.0007	-	0.01	0.0087	0.0007
Vanadium	0	2	1	1	-	0.0375	0.0500	0.0050	-	0.025	0.0500	0.0050	-	0.0375	0.0500	0.0050	-	0.05	0.0500	0.0050
Zinc	0	2	1	1	-	0.0595	0.0500	0.0050	-	0.05	0.0500	0.0050	-	0.0595	0.0500	0.0050	-	0.069	0.0500	0.0050
Total Metals																				
Aluminum	0	2	1	1	-	0.16	0.15	0.07	-	0.075	0.15	0.07	-	0.1625	0.15	0.07	-	0.25	0.15	0.07
Antimony	0	2	1	1	-	0.01375	0.00500	0.00050	-	0.0025	0.00500	0.00050	-	0.01375	0.00500	0.00050	-	0.025	0.00500	0.00050
Arsenic	0	2	1	1	-	0.0231	0.0340	0.0072	-	0.0211	0.0340	0.0072	-	0.02305	0.0340	0.0072	-	0.025	0.0340	0.0072
Barium	0	2	1	1	-	0.109	0.024	0.003	-	0.0177	0.024	0.003	-	0.10885	0.024	0.003	-	0.2	0.024	0.003
Beryllium	0	2	1	1	-	0.02625	0.00500	0.00050	-	0.0025	0.00500	0.00050	-	0.02625	0.00500	0.00050	-	0.05	0.00500	0.00050
Bismuth	0	2	1	1	-	1.00625	0.025	0.0025	-	0.0125	0.025	0.0025	-	1.00625	0.025	0.0025	-	2	0.025	0.0025
Boron	0	2	1	1	-	3.060	4.200	0.530	-	2.6	4.200	0.530	-	3.06	4.200	0.530	-	3.52	4.200	0.530
Cadmium	0	2	1	1	-	0.000550	0.000500	0.000050	-	0.00025	0.000500	0.000050	-	0.00055	0.000500	0.000050	-	0.00085	0.000500	0.000050
Calcium	0	2	1	1	-	407	357	58	-	380	357	58	-	407	357	58	-	434	357	58
Chromium	0	2	1	1	-	0.0263	0.0050	0.0005	-	0.0025	0.0050	0.0005	-	0.02625	0.0050	0.0005	-	0.05	0.0050	0.0005
Cobalt	0	2	1	1	-	0.00875	0.00500	0.00050	-	0.0025	0.00500	0.00050	-	0.00875	0.00500	0.00050	-	0.0150	0.00500	0.00050
Copper	0	2	1	1	-	0.0438	0.0250	0.0025	-	0.0125	0.0250	0.0025	-	0.04375	0.0250	0.0025	-	0.075	0.0250	0.0025
Iron	0	2	1	1	-	0.20	0.37	0.12	-	0.1	0.37	0.12	-	0.2	0.37	0.12	-	0.3	0.37	0.12
Lead	0	2	1	1	-	0.01313	0.00250	0.00025	-	0.00125	0.00250	0.00025	-	0.01313	0.00250	0.00025	-	0.0250	0.00250	0.00025
Lithium	0	2	1	1	-	0.1313	0.0250	0.0025	-	0.0125	0.0250	0.0025	-	0.13125	0.0250	0.0025	-	0.25	0.0250	0.0025
Magnesium	0	2	1	1	-	4170	6170	781	-	3410	6170	781	-	4170	6170	781	-	4930	6170	781
Manganese	0	2	1	1	-	0.07	0.18	0.02	-	0.063	0.18	0.02	-	0.0713	0.18	0.02	-	0.0796	0.18	0.02
Mercury	0	2	1	1	-	0.0000050	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050	-	0.000005	0.0000050	0.0000050
Molybdenum	0	2	1	1	-	0.063	0.024	0.003	-	0.05	0.024	0.003	-	0.06335	0.024	0.003	-	0.0767	0.024	0.003
Nickel	0	2	1	1	-	0.0313	0.0250	0.0025	-	0.0125	0.0250	0.0025	-	0.0313	0.0250	0.0025	-	0.0500	0.0250	0.0025
Phosphorus	0	2	1	1	-	2.20	2.10	0.64	-	1.4	2.10	0.64	-	2.2	2.10	0.64	-	3	2.10	0.64
Potassium	0	2	1	1	-	508.0	706.0	156.0	-	442.0	706.0	156.0	-	508.0	706.0	156.0	-	574.0	706.0	156.0
Selenium	0	2	1	1	-	0.02625	0.00500	0.00050	-	0.00250	0.00500	0.00050	-	0.0263	0.00500	0.00050	-	0.0500	0.00500	0.00050
Silicon	0	2	1	1	-	0.5	0.5	0.5	-	0.5	0.5	0.5	-	0.5	0.5	0.5	-	0.5	0.5	0.5
Silver	0	2	1	1	-	0.0006250	0.0005000	0.0000500	-	0.00025	0.0005000	0.0000500	-	0.000625	0.0005000	0.0000500	-	0.001	0.0005000	0.0000500
Sodium	0	2	1	1	-	12160	16800	2420	-	9120	16800	2420	-	12160	16800	2420	-	15200	16800	2420
Strontium	0	2	1	1	-	13.3	13.00	1.76	-	10.90	13.00	1.76	-	13.3	13.00	1.76	-	15.6	13.00	1.76
Sulphur	0	1	1	1	-	15200	18900	2590	-	15200	18900	2590	-	15200	18900	2590	-	15200	18900	2590
Thallium	0	2	1	1	-	0.00513	0.00050	0.00005	-	0.00025	0.00050	0.00005	-	0.005125	0.00050	0.00005	-	0.01	0.00050	0.00005
Tin	0	2	1	1	-	0.01375	0.00500	0.00050	-	0.0025	0.00500	0.00050	-	0.01375	0.00500	0.00050	-	0.025	0.00500	0.00050
Titanium	0	2	1	1	-	0.175	0.500	0.050	-	0.1	0.500	0.050	-	0.175	0.500	0.050	-	0.25	0.500	0.050
Uranium	0	2	1	1	-	0.0098	0.0084	0.0008	-	0.0096	0.0084	0.0008	-	0.0098	0.0084	0.0008	-	0.0100	0.0084	0.0008
Vanadium	0	2	1	1	-	0.0375	0.0500	0.0050	-	0.025	0.0500	0.0050	-	0.0375	0.0500	0.0050	-	0.05	0.0500	0.0050
Zinc	0	2	1	1	-	0.0625	0.1500	0.0150	-	0.05	0.1500	0.0150	-	0.0625	0.1500	0.0150	-	0.075	0.1500	0.0150
Organics																				
Carbon Organic (Dissolved)	0	2	1	1	-	137.5	253	22	-	98.9	253	22	-	137.5	253	22	-	176	253	22
Carbon Organic (Total)	0	2	1	1	-	141	271	26	-	104.0	271	26	-	140.5	271	26	-	177	271	26
Nitrogen Organic (Dissolved)	0	1	0	0	-	16.70	-	-	-	16.7	-	-	-	16.7	-	-	-	16.70	-	-
Nitrogen Organic (Total)	0	2	0	0	-	16.75	-	-	-	14.70	-	-	-	16.75	-	-	-	18.8	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.
2. SEASONS ARE SPECIFIED AS FOLLOWS: WIN (WINTER; DECEMBER THROUGH MARCH), SPR (SPRING; APRIL AND MAY), SUMMER(JUNE THROUGH AUGUST), FALL (SEPTEMBER THROUGH NOVEMBER).

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.35 - WRSEEP
(PAGE 1 OF 2)

Parameter	Total Count	Complete Dataset - WR-SEEP									
					Percentiles				Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	13	853	1009	1250	1674	2898	6611	11220	2686	2718	1.0E+00
Oxygen Dissolved %	12	14	28	74	90	96	103	105	80	28	3.5E-01
Oxygen Dissolved	12	1.6	2.8	7.1	7.8	9.2	10.0	10.1	7.4	2.5	3.4E-01
pH (unitless)	13	7.3	7.5	8.2	8.4	8.5	8.7	8.8	8.2	0.4	5.4E-02
Redox Potential mV	13	-60	-19	73	86	116	177	191	90	67	7.4E-01
Salinity ppt	12	0.54	0.59	0.76	1.09	1.76	4.31	7.18	1.64	1.81	1.1E+00
Specific Conductivity µS/cm	13	1092	1199	1520	2363	3336	7225	12500	3009	2976	9.9E-01
Temperature °C	13	9.7	11.5	13.6	17.2	21.8	28.6	29.9	18.5	6.2	3.3E-01
Total Dissolved Solids	13	709	779	988	1540	2186	4695	8120	1957	1933	9.9E-01
Turbidity NTU	6	1.9	2.1	2.9	3.3	4.3	15.5	19.1	5.8	6.6	1.1E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	0	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	14	98	98	110	144	206	296	386	171	80	4.7E-01
Bicarbonate Alkalinity	14	90	93	110	138	195	289	366	162	75	4.6E-01
Carbonate Alkalinity	14	0.5	0.8	1.0	2.7	8.2	40.0	76.4	10.1	19.9	2.0E+00
Color TCU	9	11.3	11.9	17.2	29.3	32.4	354.2	566.0	84.7	180.7	2.1E+00
Hardness as CaCO3 (Dissolved)	14	516	520	708	1045	1688	2199	2400	1213	633	5.2E-01
Hydroxide Alkalinity	14	0.5	0.5	0.5	0.5	1.0	1.0	1.0	0.7	0.3	3.6E-01
pH (unitless)	15	7.5	7.8	8.2	8.3	8.4	8.8	9.0	8.3	0.3	4.0E-02
Specific Conductivity µS/cm	15	1090	1209	1610	2380	3360	4074	4270	2482	1052	4.2E-01
Total Dissolved Solids	15	862	973	1335	2060	2975	3630	3770	2120	948	4.5E-01
Total Suspended Solids	15	1.5	1.5	4.2	7.7	11.5	16.3	18.7	8.2	5.3	6.5E-01
Turbidity NTU	14	1.6	1.8	2.1	2.9	3.6	16.6	17.7	4.8	5.2	1.1E+00
Dissolved Anions											
Bromide	14	0.25	0.25	0.25	0.50	0.50	1.07	1.20	0.48	0.29	6.1E-01
Chloride	14	8	9	18	53	163	208	219	87	79	9.1E-01
Fluoride	14	0.10	0.10	0.10	0.20	0.20	0.29	0.42	0.18	0.08	4.7E-01
Sulphate	14	475	528	712	1240	1973	2358	2390	1337	705	5.3E-01
Nutrients											
Ammonia (Total)	14	0.008	0.009	0.017	0.020	0.071	0.304	0.630	0.083	0.162	2.0E+00
Nitrate (as N)	14	0.025	0.03	0.05	0.05	0.34	2.69	4.13	0.60	1.170	1.9E+00
Nitrite (as N)	14	0.0050	0.01	0.01	0.01	0.03	0.08	0.09	0.02	0.0287	1.2E+00
Nitrogen (Dissolved)	4	1.28	1.36	1.67	2.26	3.32	4.77	5.13	2.73	1.71	6.2E-01
Nitrogen (Total)	9	1.35	1.36	1.44	2.00	3.07	5.28	5.29	2.67	1.59	6.0E-01
Nitrogen Kjeldahl (Total)	14	0.51	0.70	1.06	1.50	1.90	2.70	2.85	1.55	0.66	4.3E-01
Orthophosphate (Dissolved)	9	0.001	0.001	0.001	0.001	0.002	1.483	2.470	0.275	0.823	3.0E+00
Phosphorus - Dissolved	14	0.009	0.010	0.013	0.015	0.018	0.033	0.034	0.018	0.007	4.2E-01
Phosphorus - Total	15	0.017	0.019	0.025	0.037	0.048	0.994	3.160	0.245	0.807	3.3E+00
Cyanide											
Cyanide (Free)	15	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Cyanide (Total)	15	0.0025	0.0025	0.0025	0.0025	0.0025	0.0118	0.0215	0.0041	0.0050	1.2E+00
Cyanide (WAD)	15	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0000	0.0E+00
Dissolved Metals											
Aluminum	13	0.0015	0.0016	0.0027	0.0032	0.0050	0.0064	0.0071	0.0038	0.0017	4.6E-01
Antimony	14	0.00046	0.00047	0.00051	0.00061	0.00118	0.00152	0.00162	0.00084	0.00043	5.1E-01
Arsenic	14	0.0005	0.0009	0.0016	0.0026	0.0033	0.0041	0.0048	0.0025	0.0012	4.9E-01
Barium	14	0.021	0.024	0.033	0.043	0.049	0.067	0.068	0.042	0.014	3.4E-01
Beryllium	14	0.000050	0.000050	0.000050	0.000050	0.000088	0.000415	0.001000	0.000129	0.000252	2.0E+00
Bismuth	14	0.00025	0.00025	0.00025	0.00025	0.00044	0.03533	0.10000	0.00743	0.02664	3.6E+00
Boron	14	0.082	0.128	0.166	0.219	0.316	0.359	0.375	0.239	0.092	3.8E-01
Cadmium	14	0.0000100	0.0000133	0.0000213	0.0000250	0.0001800	0.0004363	0.0005500	0.0001289	0.0001643	1.3E+00
Calcium	14	44	69	114	141	245	304	331	171	88	5.2E-01
Chromium	14	0.00005	0.00005	0.00005	0.00005	0.00009	0.00068	0.00100	0.00016	0.00027	1.7E+00
Cobalt	14	0.00005	0.00005	0.00010	0.00013	0.00021	0.00047	0.00051	0.00018	0.00015	8.0E-01
Copper	14	0.0086	0.0111	0.0126	0.0136	0.0176	0.0349	0.0637	0.0179	0.0135	7.5E-01
Iron	13	0.005	0.010	0.015	0.023	0.028	0.086	0.162	0.031	0.040	1.3E+00
Lead	14	0.000025	0.000025	0.000025	0.000025	0.000044	0.000208	0.000500	0.000064	0.000126	2.0E+00
Lithium	14	0.00500	0.00652	0.01071	0.02675	0.07515	0.09212	0.09550	0.04129	0.03458	8.4E-01
Magnesium	14	55	72	104	168	263	360	383	191	105	5.5E-01
Manganese	14	0.001	0.003	0.006	0.016	0.030	0.408	0.923	0.091	0.242	2.7E+00
Mercury	14	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000000	0.0E+00
Molybdenum	14	0.055	0.086	0.123	0.153	0.845	1.588	2.030	0.499	0.605	1.2E+00
Nickel	14	0.0011	0.0013	0.0021	0.0024	0.0029	0.0062	0.0070	0.0029	0.0016	5.7E-01
Phosphorus	14	0.03	0.03	0.03	0.03	0.15	0.84	2.12	0.21	0.55	2.6E+00
Potassium	14	17	20	26	45	62	75	86	46	21	4.7E-01
Selenium	14	0.00100	0.00129	0.00153	0.00214	0.01828	0.03102	0.03810	0.01008	0.01268	1.3E+00
Silicon	14	0.2	0.2	1.3	3.6	4.0	8.7	12.3	3.6	3.1	8.8E-01
Silver	14	0.0000050	0.0000050	0.0000050	0.0000050	0.0000088	0.0000135	0.0000200	0.0000071	0.0000043	6.0E-01
Sodium	14	39	50	78	126	211	282	293	147	87	5.9E-01
Strontium	14	0.88	1.08	1.53	2.41	4.85	5.92	6.56	3.12	1.89	6.1E-01
Sulphur	9	160	179	281	575	725	783	821	500	243	4.9E-01
Thallium	14	0.0000050	0.0000050	0.0000050	0.0000050	0.0000100	0.0000901	0.0002000	0.0000221	0.0000517	2.3E+00
Tin	14	0.000050	0.000050	0.000050	0.000050	0.000088	0.000240	0.000500	0.000093	0.000119	1.3E+00
Titanium	14	0.0050	0.0050	0.0050	0.0050	0.0050	0.0100	0.0100	0.0061	0.0021	3.5E-01
Uranium	14	0.0009	0.0026	0.0047	0.0059	0.0071	0.0162	0.0237	0.0074	0.0055	7.4E-01
Vanadium	14	0.0005	0.0008	0.0010	0.0012	0.0033	0.0044	0.0056	0.0020	0.0015	7.4E-01
Zinc	14	0.0005	0.0005	0.0010	0.0013	0.0019	0.0073	0.0144	0.0023	0.0036	1.5E+00
Total Metals											
Aluminum	15	0.0030	0.0044	0.0379	0.0465	0.1096	0.3289	0.4710	0.1001	0.1244	1.2E+00
Antimony	15	0.00048	0.00049	0.00050	0.00061	0.00126	0.00145	0.00146	0.00086	0.00041	4.7E-01
Arsenic	15	0.0010	0.0011	0.0017	0.0025	0.0034	0.0058	0.0081	0.0029	0.0018	6.3E-01
Barium	15	0.022	0.023	0.029	0.041	0.048	0.069	0.070	0.041	0.015	3.6E-01
Beryllium	15	0.000050	0.000050	0.000050	0.000050	0.000100	0.000370	0.001000	0.000127	0.000243	1.9E+00
Bismuth	15	0.00025	0.00025	0.00025	0.00025	0.00050	0.03035	0.10000	0.00697	0.02574	3.7E+00
Boron	15	0.086	0.129	0.175	0.229	0.309	0.379	0.403	0.245	0.090	3.7E-01
Cadmium	15	0.000015	0.000019	0.000023	0.000050	0.000150	0.000443	0.000600	0.000129	0.000164	1.3E+00
Calcium	15	43	43	102	132	219	294	302	157	87	5.5E-01
Chromium	15	0.00010	0.00014	0.00028	0.00036	0.00054	0.00118	0.00155	0.00049	0.00040	8.1E-01
Cobalt	15	0.00010	0.00010	0.00015	0.00023	0.00035	0.00061	0.00073	0.00028	0.00019	6.7E-01
Copper	15	0.0123	0.0132	0.0149	0.0164	0.0203	0.0369	0.0503	0.0198	0.0096	4.8E-01
Iron	15	0.01	0.02	0.08	0.10	0.20	0.53	0.67	0.17	0.18	1.1E+00
Lead	15	0.000025	0.000025	0.000025	0.000025	0.000050	0.000225	0.000500	0.000071	0.000121	1.7E+00
Lithium	15	0.0050	0.0066	0.0114	0.0241	0.0629	0.0922	0.1000	0.0381	0.0330	8.7E-01
Magnesium	15	52	73	110	176	259	329	349	189	95	5.0E-01
Manganese	15	0.01	0.01	0.02	0.02	0.04	0.36	0.91	0.09	0.23	2.4E+00
Mercury	15	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000080	0.0000150	0.0000057	0.0000026	4.6E-01
Molybdenum	15	0.057	0.089	0.118	0.167	1.008	1.646	2.010	0.562	0.637	1.1E+00
Nickel	15	0.0017	0.0017	0.0025	0.0029	0.0039	0.0072	0.0078	0.0035	0.0018	5.1E-01
Phosphorus	15	0.03	0.03	0.03	0.03	0.15	0.87	2.55	0.24	0.64	2.7E+00
Potassium	15	16	20	28	39	57	75	91	44	21	4.7E-01
Selenium	15	0.00100	0.00127	0.00153	0.00193	0.01835	0.02773	0.03270	0.00991	0.01122	1.1E+00
Silicon	15	0.3	0.5	1.7	3.6	4.2	8.6	12.7	3.7	3.0	8.2E-01
Silver	15	0.0000050	0.0000050	0.0000050	0.0000100	0.0000105	0.0000350	0.0000700	0.0000125	0.0000164	1.3E+00
Sodium	15	38	50	82	137	210	272	282	146	80	5.5E-01
Strontium	15	0.70	0.83	1.39	2.21	4.73	5.60	5.85	2.87	1.80	6.3E-01
Sulphur	9	155	175	279	571	707	729	731	487	231	4.7E-01
Thallium	15	0.0000050	0.0000050	0.0000050	0.0000050	0.0000100	0.0000782	0.0002000	0.0000215	0.0000497	2.3E+00
Tin	15	0.000050	0.000050	0.000050	0.000050	0.000100	0.000220	0.000500	0.000093	0.000115	1.2E+00
Titanium	15	0.0050	0.0050	0.0050	0.0050	0.0105	0.0167	0.0230	0.0087	0.0051	5.9E-01
Uranium	15	0.0010	0.0028	0.0047	0.0059	0.0072	0.0137	0.0186	0.0069	0.0042	6.1E-01
Vanadium	15	0.0010	0.0010	0.0013	0.0022	0.0041	0.0084	0.0139	0.0033	0.0033	1.0E+00
Zinc	15	0.0015	0.0015	0.0015	0.0030	0.0032	0.0068	0.0128	0.0032	0.0028	8.9E-01
Organics											
Carbon Organic (Dissolved)	13	9.8	10.0	10.6	14.6	18.3	26.8	27.6	16.3	6.1	3.8E-01
Carbon Organic (Total)	14	10.1	10.3	12.0	17.1	23.2	27.8	28.4	17.8	6.4	3.6E-01
Nitrogen Organic (Dissolved)	4	0.50	0.54	0.72	0.97	1.24	1.44	1.49	0.98	0.43	4.4E-01
Nitrogen Organic (Total)	5	0.95	0.97	1.04	1.50	1.70	2.37	2.54	1.55	0.64	4.1E-01

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX C6 - SUMMARY STATISTICS
TABLE C6.35 - WRSEEP
(PAGE 2 OF 2)

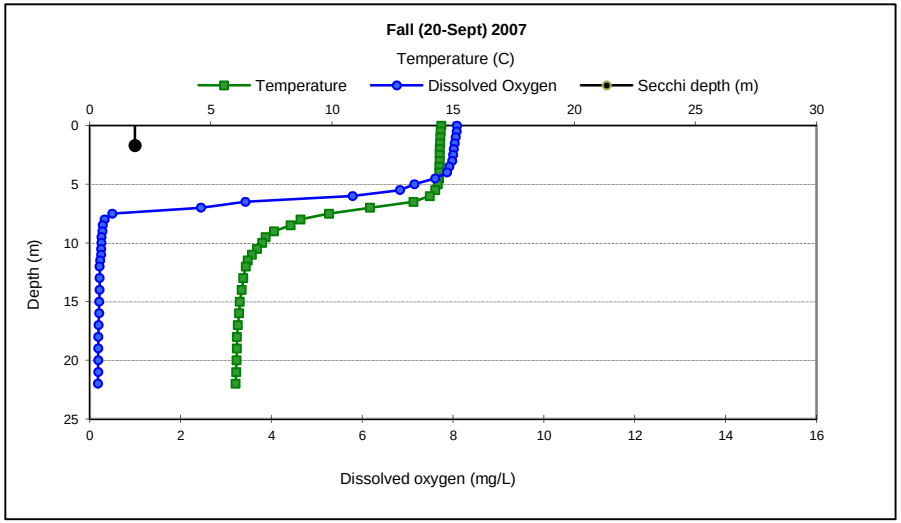
Parameter	Seasonal Statistics - WR-SEEP																			
	Count				Average				Min				Median				Max			
	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall	Win	Spr	Sum	Fall
In Situ Parameters																				
Conductivity µS/cm	1	6	6	0	1674	1576	3966	-	1674	853	1250	-	1674	1330	3119	-	1674	2898	11220	-
Oxygen Dissolved %	1	6	5	0	14	79	94	-	13.9	39	84	-	13.9	85.75	91	-	13.9	99.3	105	-
Oxygen Dissolved	1	6	5	0	2	8	8	-	1.56	3.86	7	-	1.56	8.55	8	-	1.56	10.1	9	-
pH (unitless)	1	6	6	0	7	8	8	-	7.26	7.6	8	-	7.26	8.31	9	-	7.26	8.46	9	-
Redox Potential mV	1	6	6	0	8	80	114	-	8	-60	73	-	8	99.35	88	-	8	168	191	-
Salinity ppt	0	6	6	0	-	1.00	2.28	-	-	0.54	0.63	-	-	0.845	1.54	-	-	1.77	7.18	-
Specific Conductivity µS/cm	1	6	6	0	2363	1939	4186	-	2363	1092	1270	-	2363	1662	2985	-	2363	3336	12500	-
Temperature °C	1	6	6	0	10	14	24	-	9.73	12.6	20	-	9.73	13.95	23	-	9.73	17.2	30	-
Total Dissolved Solids	1	6	6	0	1540	1264	2720	-	1540	709	825	-	1540	1080.5	1941	-	1540	2186	8120	-
Turbidity NTU	0	3	3	0	-	8	4	-	-	1.9	3	-	-	2.8	3	-	-	19.1	5	-
Physical Tests																				
Acidity to pH 8.3 (as CaCO3)	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	0	6	7	1	-	212	147	98	-	105	98	98	-	194	135	98	-	386	228	98
Bicarbonate Alkalinity	0	6	7	1	-	207	132	98	-	105	90	98	-	190.5	128	98	-	366	204	98
Carbonate Alkalinity	0	6	7	1	-	5	15	1	-	1	1	1	-	1	7	1	-	20.4	76	1
Color TCU	1	4	4	0	566	26	23	-	566	12.7	11	-	566	29.7	22	-	566	32.4	37	-
Hardness as CaCO3 (Dissolved)	1	6	6	1	522	966	1377	2400	522	516	609	2400	522	807.5	1375	2400	522	1730	2090	2400
Hydroxide Alkalinity	0	6	7	1	-	0.83	0.57	1.00	-	0.5	0.50	1.00	-	1	0.50	1.00	-	1	1.00	1.00
pH (unitless)	1	6	7	1	8	8	8	8	7.52	8.21	8	8	7.52	8.255	8	8	7.52	8.42	9	8
Specific Conductivity µS/cm	1	6	7	1	2380	1928	2774	3860	2380	1090	1260	3860	2380	1615	2430	3860	2380	3410	4270	3860
Total Dissolved Solids	1	6	7	1	2100	1625	2340	3570	2100	862	1020	3570	2100	1340	2160	3570	2100	3020	3770	3570
Total Suspended Solids	1	6	7	1	19	7	8	8	18.7	1.5	2	8	18.7	4.95	10	8	18.7	15.3	14	8
Turbidity NTU	0	6	7	1	-	6	5	2	-	1.87	2	2	-	3.315	3	2	-	17.7	16	2
Dissolved Anions																				
Bromide	0	6	7	1	-	0.33	0.60	0.50	-	0.25	0.25	0.50	-	0.25	0.50	0.50	-	0.5	1.20	0.50
Chloride	0	6	7	1	-	46	110	174	-	9.9	8	174	-	23.45	102	174	-	165	219	174
Fluoride	0	6	7	1	-	0.13	0.22	0.20	-	0.1	0.10	0.20	-	0.1	0.20	0.20	-	0.2	0.42	0.20
Sulphate	0	6	7	1	-	972	1521	2240	-	475	557	2240	-	756.5	1380	2240	-	2010	2390	2240
Nutrients								-												
Ammonia (Total)	0	6	7	1	-	0.051	0.032	0.630	-	0.0083	0.010	0.630	-	0.0278	0.019	0.630	-	0.128	0.074	0.630
Nitrate (as N)	0	6	7	1	-	0.97	0.103	1.920	-	0.025	0.025	1.920	-	0.115	0.050	1.920	-	4.13	0.394	1.920
Nitrite (as N)	0	6	7	1	-	0.0272	0.0127	0.0910	-	0.005	0.0050	0.0910	-	0.01	0.0100	0.0910	-	0.071	0.0340	0.0910
Nitrogen (Dissolved)	0	3	1	0	-	3.22	1.28	-	-	1.8	1.28	-	-	2.72	1.28	-	-	5.13	1.28	-
Nitrogen (Total)	0	4	4	1	-	2.92	1.76	5.29	-	1.35	1.37	5.29	-	2.535	1.53	5.29	-	5.27	2.62	5.29
Nitrogen Kjeldahl (Total)	0	6	7	1	-	1.20	1.65	2.85	-	0.505	1.01	2.85	-	1.24	1.61	2.85	-	1.83	2.62	2.85
Orthophosphate (Dissolved)	1	2	5	1	2.47	0.001	0.001	0.003	2.47	0.0005	0.001	0.003	2.47	0.0012	0.001	0.003	2.47	0.0019	0.001	0.003
Phosphorus - Dissolved	0	6	7	1	-	0.020	0.02	0.02	-	0.0091	0.01	0.02	-	0.0182	0.01	0.02	-	0.0336	0.03	0.02
Phosphorus - Total	1	6	7	1	3.16	0.04	0.03	0.03	3.16	0.0193	0.02	0.03	3.16	0.04245	0.03	0.03	3.16	0.0644	0.07	0.03
Cyanide																				
Cyanide (Free)	1	6	7	1	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Cyanide (Total)	1	6	7	1	0.0215	0.0034	0.0025	0.0025	0.0215	0.0025	0.0025	0.0025	0.0215	0.0025	0.0025	0.0025	0.0215	0.0077	0.0025	0.0025
Cyanide (WAD)	1	6	7	1	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Dissolved Metals																				
Aluminum	1	6	6	0	0.0050	0.0035	0.0038	-	0.005	0.0015	0.0016	-	0.005	0.0033	0.0031	-	0.005	0.006	0.0071	-
Antimony	1	6	6	1	0.000500	0.00096	0.00065	0.00162	0.0005	0.00048	0.00046	0.00162	0.0005	0.000875	0.00057	0.00162	0.0005	0.00147	0.00121	0.00162
Arsenic	1	6	6	1	0.0005	0.0026	0.0026	0.0030	0.0005	0.00112	0.0015	0.0030	0.0005	0.002315	0.0028	0.0030	0.0005	0.00483	0.0033	0.0030
Barium	1	6	6	1	0.053	0.037	0.048	0.026	0.053	0.0211	0.038	0.026	0.053	0.0336	0.047	0.026	0.053	0.0665	0.068	0.026
Beryllium	1	6	6	1	0.00100	0.00005	0.00007	0.00010	0.001	0.00005	0.00005	0.00010	0.001	0.00005	0.00005	0.00010	0.001	0.00005	0.00010	0.00010
Bismuth	1	6	6	1	0.1	0.000	0.000	0.001	0.1	0.00025	0.000	0.001	0.1	0.00025	0.000	0.001	0.1	0.00025	0.001	0.001
Boron	1	6	6	1	0.170	0.212	0.289	0.165	0.17	0.082	0.183	0.165	0.17	0.1845	0.308	0.165	0.17	0.35	0.375	0.165
Cadmium	1	6	6	1	0.00025	0.000157	0.000082	0.000125	0.00025	0.00001	0.000020	0.000125	0.00025	0.0000875	0.000025	0.000125	0.00025	0.00055	0.000375	0.000125
Calcium	1	6	6	1	44	148	188	331	43.8	92.8	83	331	43.8	125	178	331	43.8	285	290	331
Chromium	1	6	6	1	0.00100	0.0001	0.00007	0.00050	0.001	0.00005	0.00005	0.00050	0.001	0.00005	0.00005	0.00050	0.001	0.00005	0.00010	0.00050
Cobalt	1	6	6	1	0.00030	0.00018	0.00011	0.00051	0.0003	0.00005	0.00005	0.00051	0.0003	0.000155	0.00011	0.00051	0.0003	0.00045	0.00015	0.00051
Copper	1	6	6	1	0.0086	0.0142	0.0155	0.0637	0.0086	0.0126	0.0124	0.0637	0.0086	0.0134	0.0156	0.0637	0.0086	0.0189	0.0194	0.0637
Iron	1	6	6	0	0.030	0.043	0.020	-	0.03	0.005	0.014	-	0.03	0.0215	0.020	-	0.03	0.162	0.027	-
Lead	1	6	6	1	0.00050	0.00003	0.00003	0.00005	0.0005	0.000025	0.00003	0.00005	0.0005	0.000025	0.00003	0.00005	0.0005	0.000025	0.00005	0.00005
Lithium	1	6	6	1	0.0050	0.0226	0.0599	0.0779	0.005	0.00796	0.0073	0.0779	0.005	0.01375	0.0682	0.0779	0.005	0.0669	0.0955	0.0779
Magnesium	1	6	6	1	100.0	144.9	220.4	383.0	100.0	54.9	97.6	383.0	100.0	133.5	226.5	383.0	100.0	248.0	347.0	383.0
Manganese	1	6	6	1	0.923	0.023	0.012	0.131	0.923	0.00137	0.004	0.131	0.923	0.01259	0.013	0.131	0.923	0.076	0.018	0.131
Mercury	1	6	6	1	0.0000050	0.0000050	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050	0.000005	0.000005	0.0000050	0.0000050
Molybdenum	1	6	6	1	0.1400	0.7856	0.2688	0.5250	0.14	0.0554	0.1140	0.5250	0.14	0.588	0.1305	0.5250	0.14	2.03	0.9520	0.5250
Nickel	1	6	6	1	0.0022	0.0030	0.0024	0.0058	0.0022	0.00107	0.0016	0.0058	0.0022	0.002455	0.0024	0.0058	0.0022	0.00696	0.0029	0.0058
Phosphorus	1	6	6	1	2.12	0.09	0.05	0.03	2.12	0.025	0.03	0.03	2.12	0.0875	0.03	0.03	2.12	0.15	0.15	0.03
Potassium	1	6	6	1	86	32	49	65	86.3	17.1	21	65	86.3	28	54	65	86.3	56.2	69	65
Selenium	1	6	6	1	0.00100	0.01251	0.00450	0.03810	0.001	0.00197	0.00145	0.03810	0.001	0.008605	0.00153	0.03810	0.001	0.0272	0.01940	0.03810
Silicon	1	6	6	1	12.30	3.46	2.22	3.60	12.3	0.248	0.24	3.60	12.3	3.755	2.17	3.60	12.3	6.71	4.71	3.60
Silver	1	6	6	1	0.000020	0.000005	0.000007	0.000010	0.00002	0.000005	0.000005	0.000010	0.00002	0.000005	0.000005	0.000010	0.00002	0.000005	0.000010	0.000010
Sodium	1	6	6	1	113	104	172	293	113	39	56	293	113	83.5	174	293	113	212	276	293
Strontium	1	6	6	1	0.88	2.26	3.78	6.56	0.877	1.19	1.32	6.56	0.877	1.855	4.05	6.56	0.877	4.95	5.58	6.56
Sulphur	0	3	5	1	-	316	546	821	-	160	281	821	-	207	575	821	-	580	725	821
Thallium	1	6	6	1	0.000200	0.000007	0.000007	0.000031	0.0002	0.000005	0.000005	0.000031	0.0002	0.000005	0.000005	0.000031	0.0002	0.000014	0.000010	0.000031
Tin	1	6	6	1	0.00050	0.00005	0.00007	0.00010	0.0005	0.00005	0.00005	0.00010	0.0005	0.00005	0.00005	0.00010	0.0005	0.00005	0.00010	0.00010
Titanium	1	6	6	1	0.0050	0.005	0.0067	0.0100	0.005	0.005	0.0050	0.0100	0.005	0.005	0.0050	0.0100	0.005	0.005	0.0100	0.0100
Uranium	1	6	6	1	0.0009	0.0078	0.0054	0.0237	0.00094	0.00461	0.0035	0.0237	0.00094	0.00684	0.0055	0.0237	0.00094	0.0121	0.0071	0.0237
Vanadium	1	6	6	1	0.0010	0.0026	0.0019	0.0010	0.001	0.0005	0.0010	0.0010	0.001	0.0023	0.0015	0.0010	0.001	0.0056	0.0037	0.0010
Zinc	1	6	6	1	0.0025	0.0037	0.0012	0.0010	0.0025	0.0005	0.0005	0.0010	0.0025	0.00155	0.0011	0.0010	0.0025	0.0144	0.0019	0.0010
Total Metals																				
Aluminum	1	6	7	1	0.01	0.16	0.08	0.00	0.005	0.0355	0.02	0.00	0.005	0.10955	0.05	0.00	0.005	0.471	0.27	0.00
Antimony	1	6	7	1	0.0005	0.00095	0.00076	0.00131	0.0005	0.00049	0.00048	0.00131	0.0005	0.000855	0.00060	0.00131	0.0005	0.00146	0.00145	0.00131
Arsenic	1	6	7	1	0.0010	0.0026	0.0034	0.0025	0.001	0.0012	0.0016	0.0025	0.001	0.00242	0.0033	0.0025	0.001	0.00481	0.0081	0.0025
Barium	1	6	7	1	0.053	0.038	0.045	0.023	0.053	0.0219	0.027	0.023	0.053	0.03335	0.046	0.023	0.053	0.07	0.069	0.023
Beryllium	1	6	7	1	0.00100	0.00005	0.00007	0.00010	0.001	0.00005	0.00005	0.00010	0.001	0.00005	0.00005	0.00010	0.001	0.00005	0.00010	0.00010
Bismuth	1	6	7	1	0.1	0.00025	0.00035714	0.0005	0.1	0.00025	0.00025	0.0005	0.1	0.00025	0.00025	0.0005	0.1	0.00025	0.0005	0.0005
Boron	1	6	7	1	0.180	0.219	0.290	0.147	0.18	0.086	0.191	0.147	0.18	0.1915	0.291	0.147	0.18	0.369	0.403	0.147
Cadmium	1	6	7	1	0.00015	0.000167	0.000095	0.000125	0.00015	0.000015	0.000020	0.000125	0.00015	0.0000875	0.000025	0.000125	0.00015	0.0006	0.000375	0.000125
Calcium	1	6	7	1	43	144	163	302	43.4	92.5	43	302	43.4	121	160	302	43.4	274	291	302
Chromium	1	6	7	1	0.00100	0.0005	0.0004	0.0004	0.001	0.00027	0.0001	0.0004	0.001	0.0004	0.0003	0.0004	0.0010	0.00102	0.0016	0.0004
Cobalt	1	6	7	1	0.00030	0.00030	0.00024	0.00039	0.0003	0.00013	0.00010	0.00039	0.0003	0.00023	0.00016	0.00039	0.0003	0.0006	0.00073	0.00039
Copper	1	6	7	1	0.0123	0.0171	0.0189	0.0503	0.0123	0.0145	0.0136	0.0503	0.0123	0.0158	0.0182	0.0503	0.0123	0.0209	0.0312	0.0503
Iron	1	6	7	1	0.03	0.25	0.14	0.01	0.032	0.083	0.05	0.01	0.032	0.1955	0.08	0.01	0.032	0.666	0.47	0.01
Lead	1	6	7	1	0.00050	0.00004	0.00004	0.00005	0.0005	0.000025	0.00003	0.00005	0.0005	0.00003	0.00003	0.00005	0.00050	0.0001	0.00005	0.00005
Lithium	1	6	7	1	0.0050	0.0223	0.0531	0.0612	0.005	0.00777	0.0073	0.0612	0.005	0.014	0.0495	0.0612	0.005	0.0645	0.1000	0.0612
Magnesium	1	6	7	1	103	142	223	321	103	52.3	95	321	103	134	252	321	103	246	349	321
Manganese	1	6	7	1	0.91	0.03	0.03	0.12	0.908	0.00801	0.02	0.12	0.908	0.02085	0.02	0.12	0.908	0.104	0.05	0.12
Mercury	1	6	7	1	0.0000150	0.0000050	0.0000050	0.0000050	0.000015	0.000005	0.0000050	0.0000050	0.000015	0.000005	0.0000050	0.0000050	0.000015	0.000005	0.0000050	0.0000050
Molybdenum	1	6	7	1	0.153	0.796	0.439	0.434	0.153	0.057	0.112	0.434	0.153	0.637	0.134	0.434	0.153	2.01	1.490	0.434
Nickel	1	6	7	1	0.0030	0.0036	0.0033	0.0045	0.0030	0.0017	0.0017	0.0045	0.0030	0.0031	0.0029	0.0045	0.0030	0.0070	0.0078	0.0045
Phosphorus	1	6	7	1	2.55	0.09	0.06	0.03	2.55	0.025	0.03	0.03	2.55	0.105	0.03	0.03	2.55	0.15	0.15	0.03
Potassium	1	6	7	1	90.9	31.4	46.2	57.0	90.9	15.8	21.1	57.0	90.9	28.3	45.0	57.0	90.9	53.0	68.1	57.0
Selenium	1	6	7	1	0.00100	0.01178	0.00631	0.03270	0.00100	0.00192	0.00138	0.03270	0.00100	0.0084	0.00153	0.03270	0.0010	0.0256	0.01860	0.03270
Silicon	1	6	7	1	12.7	3.7	2.5	3.0	12.7	1.3	0.3	3.0	12.7	3.9	3.3	3.0	12.7	6.9	4.8	3.0
Silver	1	6	7	1	0.0000200	0.0000072	0.0000164	0.0000100	0.00002	0.000005	0.0000050	0.0000100	0.00002	0.000005	0.0000100	0.0000100	0.00002	0.000012	0.0000700	0.0000100
Sodium	1	6	7	1	119	102	174	242	119	37.7	55	242	119	84.5	172	242	119	206	282	242
Strontium	1	6	7	1	0.9	2.3	3.23	5.85	0.88	1.29	0.70	5.85	0.882	1.8	2.99	5.85	0.9	5.0	5.49	5.85
Sulphur	0	3	5	1	-	322	538	731	-	155	279	731	-	206	571	731	-	606	727	731
Thallium	1	6	7	1	0.00020	0.00001	0.00001	0.00003	0.0002	0.000005	0.00001	0.00003	0.0002	0.000005	0.00001	0.00003	0.0002	0.000017	0.00001	0.00003
Tin	1	6	7	1	0.00050	0.00005	0.00007	0.00010	0.0005	0.00005	0.00005	0.00010	0.0005	0.00005	0.00005	0.00010	0.0005	0.00005	0.00010	0.00010
Titanium	1	6	7	1	0.005	0.009	0.009	0.010	0.005	0.005	0.005	0.010	0.005	0.005	0.010	0.010	0.005	0.023	0.014	0.010
Uranium	1	6	7	1	0.0010	0.0079	0.0052	0.0186	0.0010	0.0046	0.0035	0.0186	0.0010	0.0069	0.0051	0.0186	0.0010	0.0116	0.0072	0.0186
Vanadium	1	6	7	1	0.0010	0.0034	0.0039	0.0010	0.001	0.0015	0.0010	0.0010	0.001	0.0034	0.0022	0.0010	0.001	0.0061	0.0139	0.0010
Zinc	1	6	7	1	0.0025	0.0042	0.0025	0.0030	0.0025	0.0015	0.0015	0.0030	0.0025	0.0024	0.0030	0.0030	0.0025	0.0128	0.0037	0.0030
Organics																				
Carbon Organic (Dissolved)	0	6	6	1	-	13.1	20	15	-	10.2	10	15	-	11.9	21	15	-	18	28	15
Carbon Organic (Total)	0	6	7	1	-	13	21	23	-	10.4	10	23	-	12.7	23	23	-	18	28	23
Nitrogen Organic (Dissolved)	0	3	1	0	-	1.05	0.79	-	-	0.5	0.79	-	-	1.15	0.79	-	-	1.49	0.79	-
Nitrogen Organic (Total)	0	3	2	0	-	1.41	1.74	-	-	1.04	0.95	-	-	1.50	1.74	-	-	1.7	2.54	-

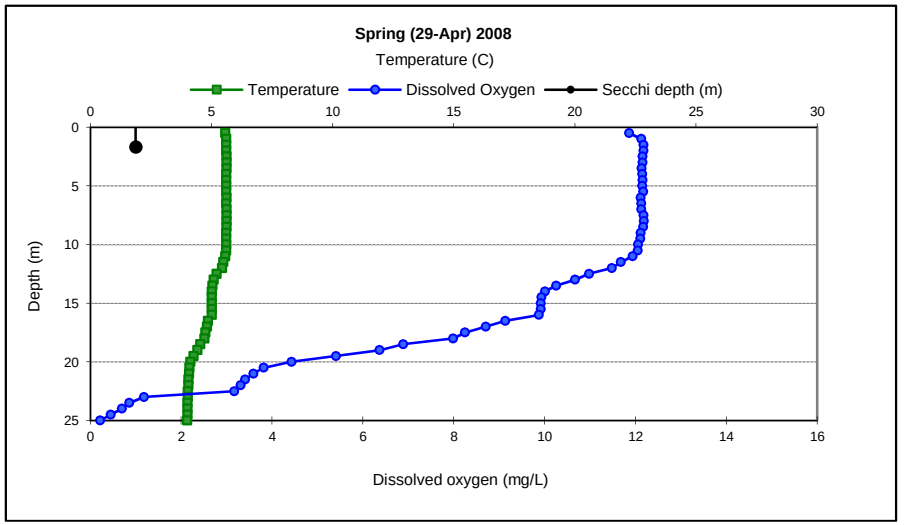
NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.
2. SEASONS ARE SPECIFIED AS FOLLOWS: WIN (WINTER; DECEMBER THROUGH MARCH), SPR (SPRING; APRIL AND MAY), SUMMER(JUNE THROUGH AUGUST), FALL (SEPTEMBER THROUGH NOVEMBER).

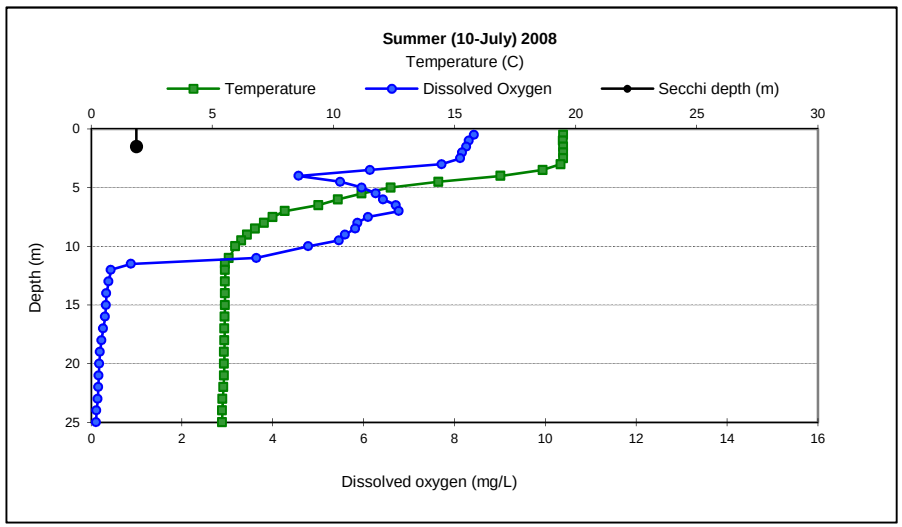
APPENDIX C7

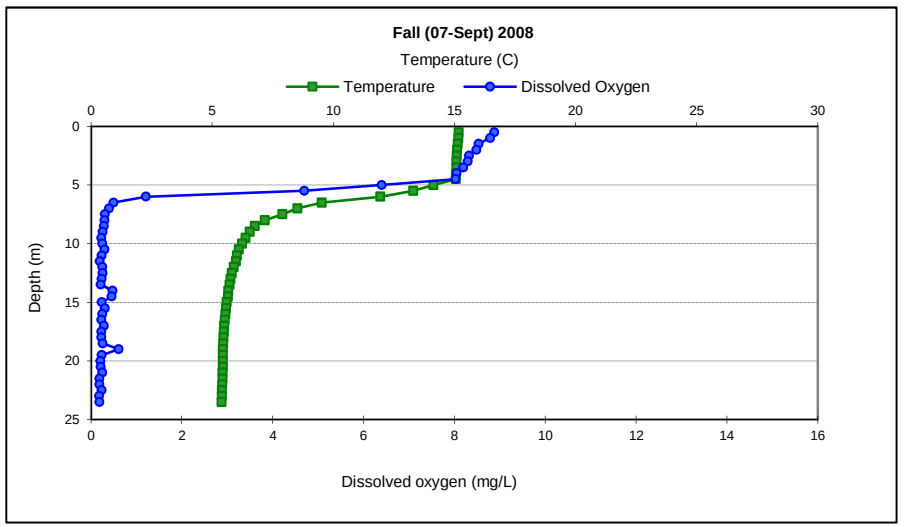
JACKO LAKE PROFILES 2007 TO 2013

(Pages C7-1 to C7-6)









KGHM AJAX MINING INC.

AJAX PROJECT

DISSOLVED OXYGEN AND TEMPERATURE PROFILES
JACKO LAKE 2007/2008

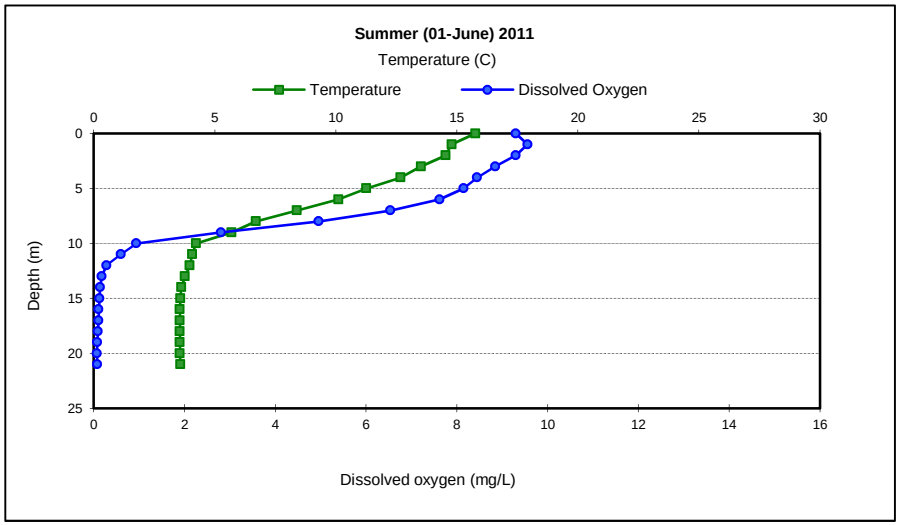
Knight Piésold CONSULTING

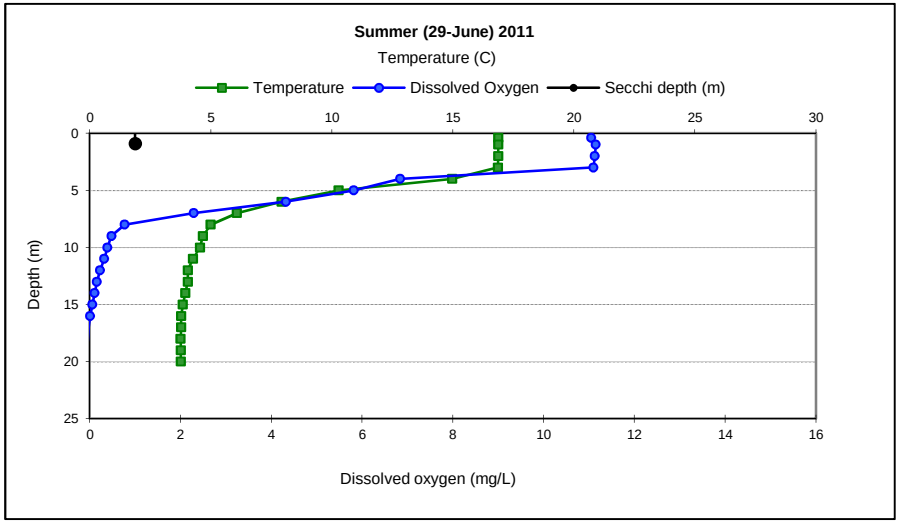
P/A NO.	REF. NO.
VA101-246/31	3

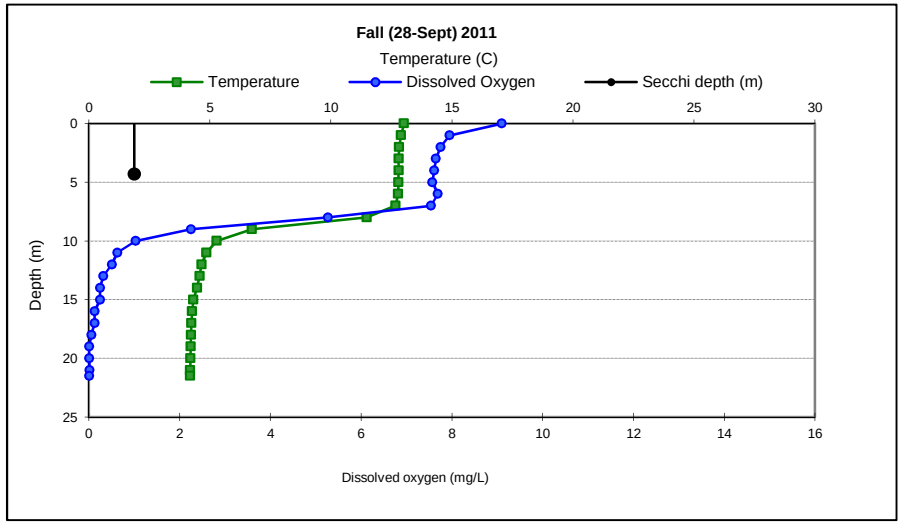
FIGURE C7.1

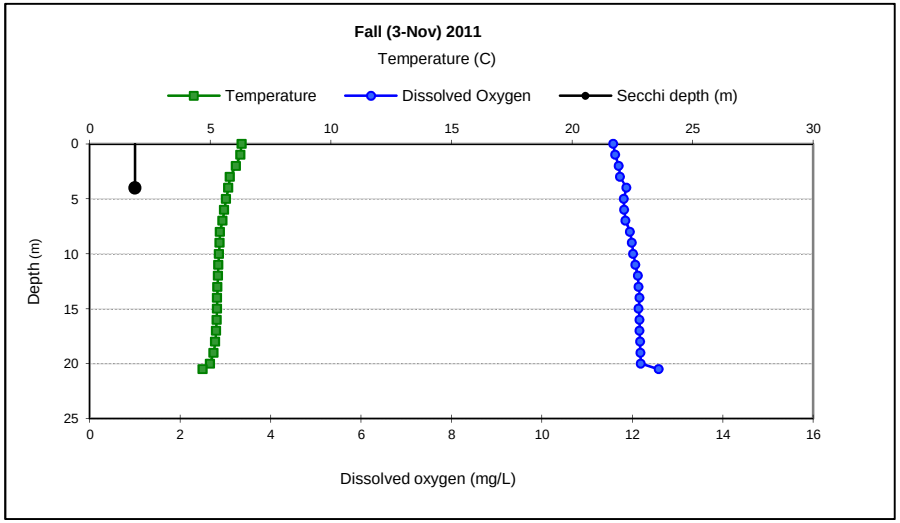
REV 0

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	07JUL'15	ISSUED WITH REPORT	CJ	JEM









REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	07JUL'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

AJAX PROJECT

DISSOLVED OXYGEN AND TEMPERATURE PROFILES JACKO LAKE 2011

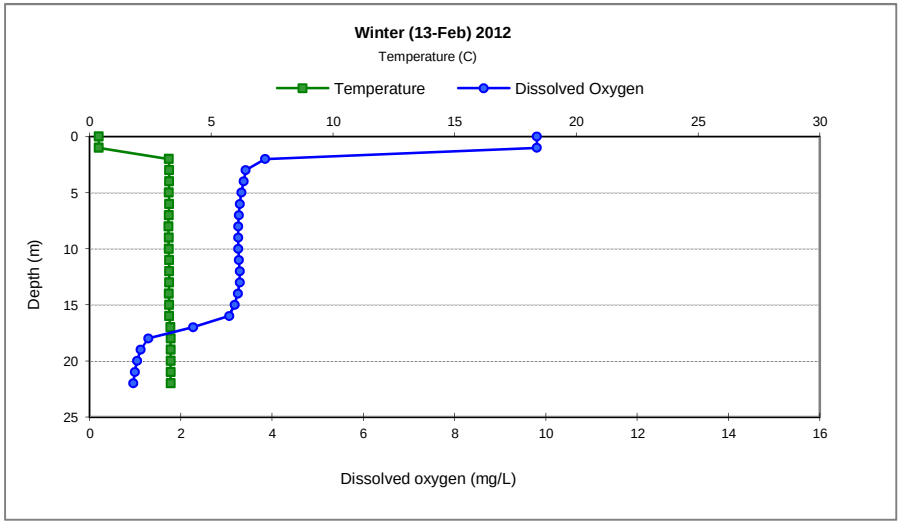
Knight Piésold CONSULTING

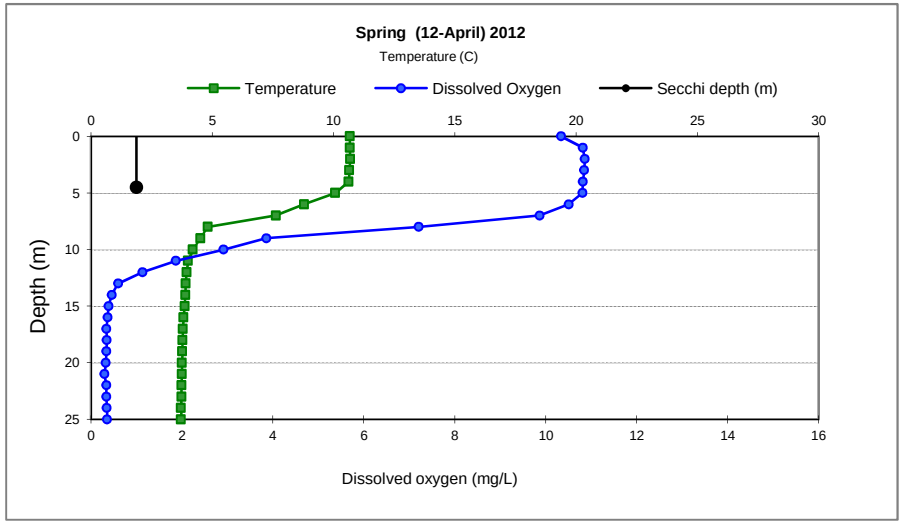
P/A NO. VA101-246/31

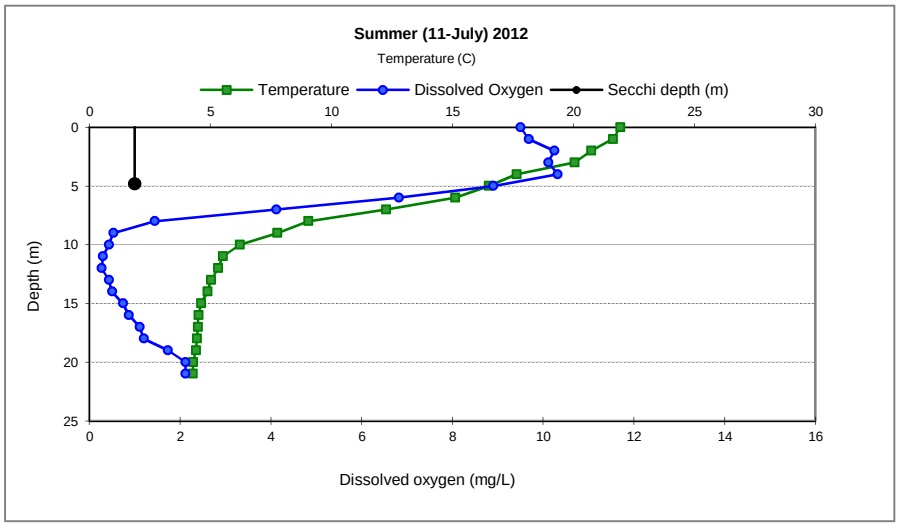
REF. NO. 3

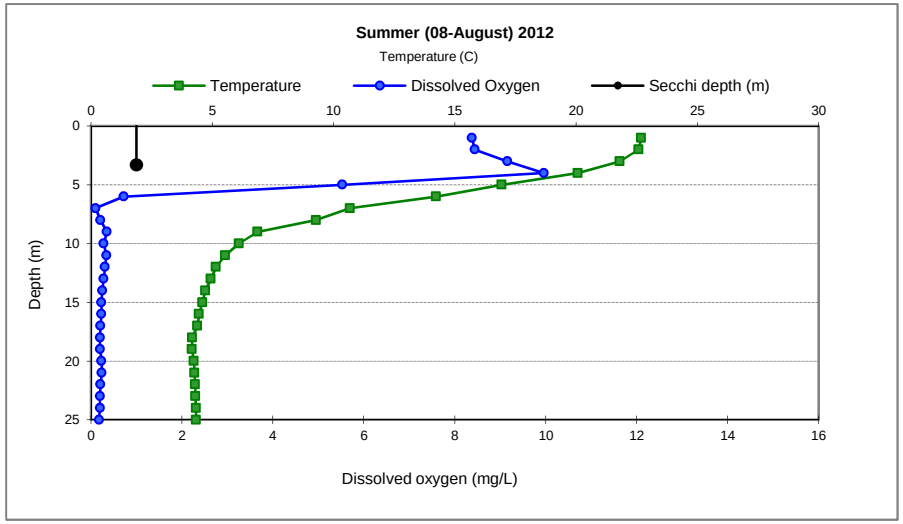
FIGURE C7.2

REV 0









REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	07JUL'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

AJAX PROJECT

DISSOLVED OXYGEN AND TEMPERATURE PROFILES
JACKO LAKE 2012

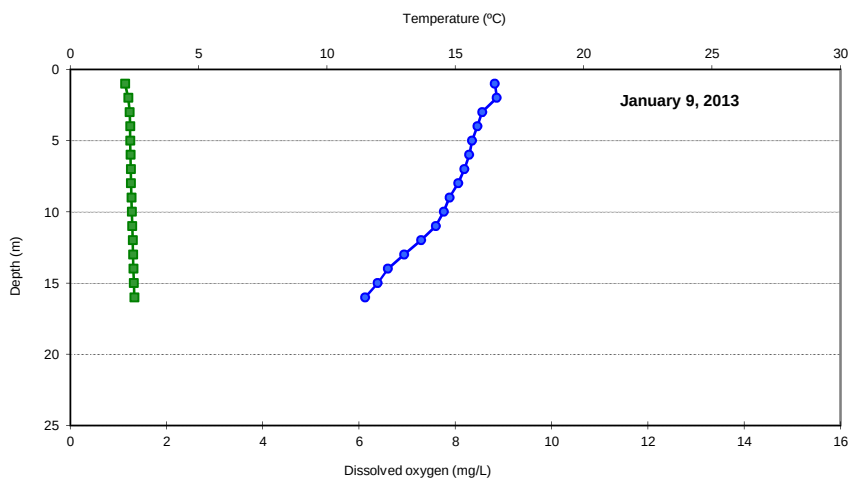
Knight Piésold CONSULTING

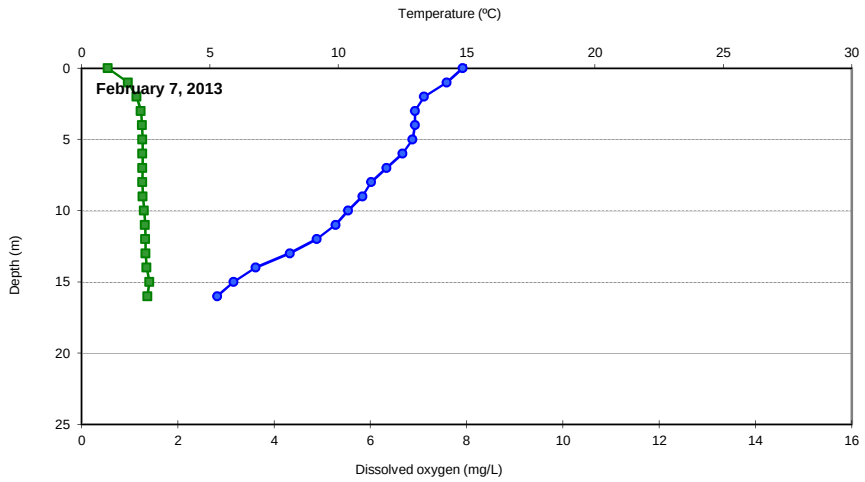
P/A NO. VA101-246/31

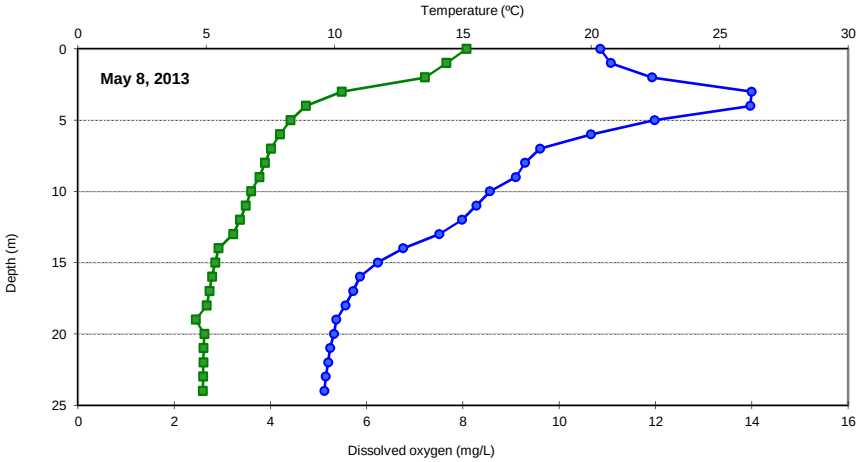
REF. NO. 3

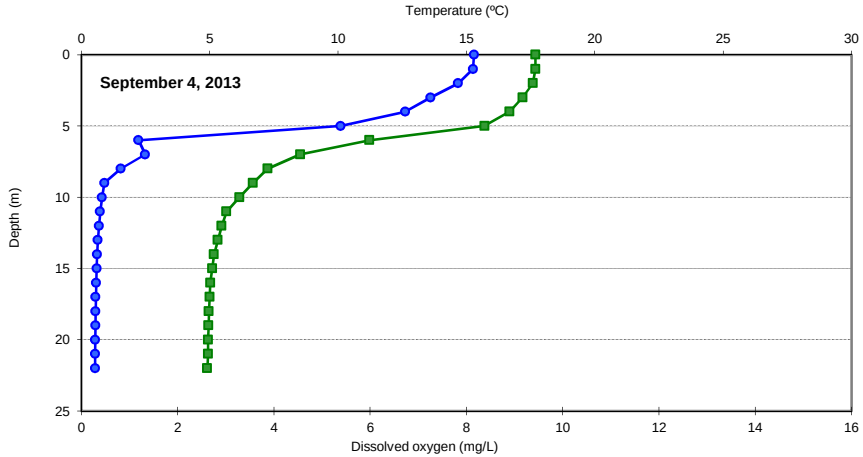
FIGURE C7.3

REV 0









NOTES:
1. DEPTH UNITS ARE METRES BELOW SURFACE.
2. TEMPERATURE IS SHOWN ON THE PRIMARY X-AXIS.
3. DISSOLVED OXYGEN IS SHOWN ON THE SECONDARY X-AXIS.

Legend
Temperature (˚C)
Dissolved Oxygen (mg/L)

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	07JUL'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

AJAX PROJECT

DISSOLVED OXYGEN AND TEMPERATURE PROFILES JACKO LAKE 2013

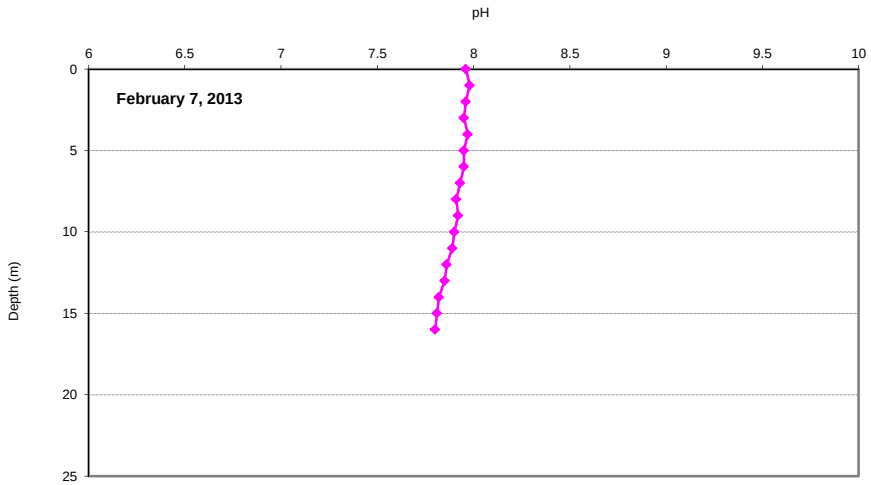
Knight Piésold CONSULTING

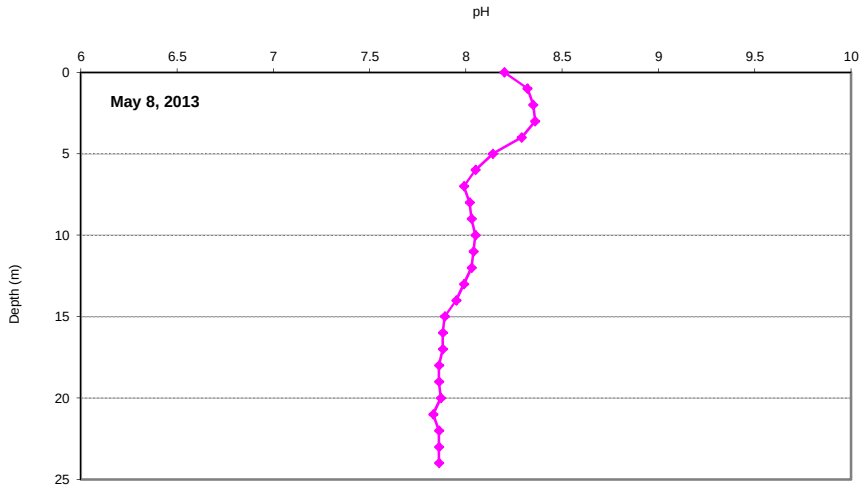
P/A NO. VA101-246/31

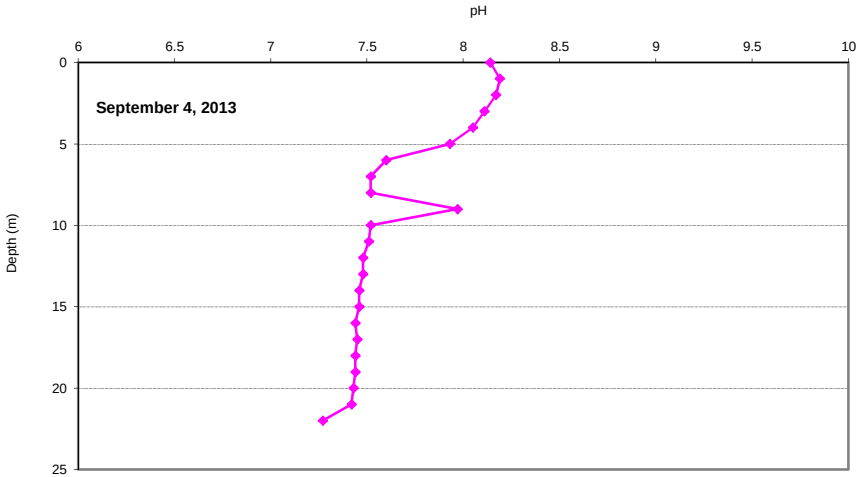
REF NO. 3

FIGURE C7.4

REV 0







NOTES:
1. DEPTH UNITS ARE METRES BELOW SURFACE.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	07JUL'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

AJAX PROJECT

pH PROFILES
JACKO LAKE 2013

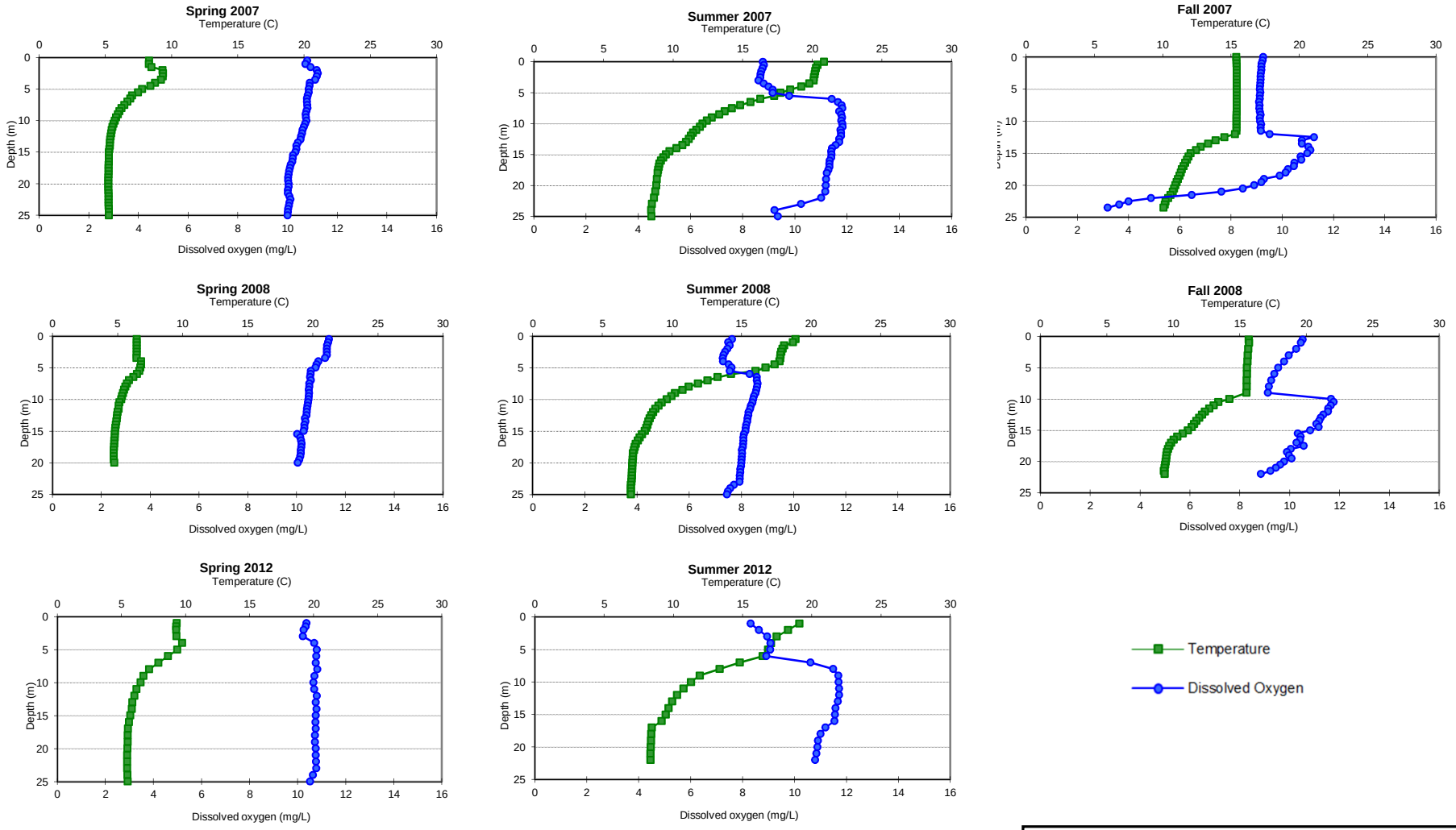
Knight Piésold CONSULTING

P/A NO. VA101-246/31

REF NO. 3

FIGURE C7.5

REV 0



NOTES:

1. ALL NOTES SHOULD BE IN ARIAL 8 CAPITALS EXCEPT FOR UNITS SUCH AS 20 m.
2. ALL NOTES SHOULD BE IN ARIAL 8 CAPITALS EXCEPT FOR UNITS SUCH AS 20 m.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	07JUL'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

AJAX PROJECT

DISSOLVED OXYGEN AND TEMPERATURE PROFILES
AJAX WEST EAST PIT LAKE

Knight Piésold CONSULTING

P/A NO. VA101-246/31

REF. NO. 3

FIGURE C7.6

REV 0

APPENDIX D

GROUNDWATER QUALITY DATA TABLES

Appendix D1 GWQ Summary Guideline Exceedance Tables
Appendix D2 GWQ Summary Guideline Aquatic Life
Appendix D3 GWQ Summary Guideline Drinking Water
Appendix D4 GWQ Summary Guideline Irrigation, Livestock and Recreation
Appendix D5 GWQ Summary Guideline Wildlife Water Quality
Appendix D6 GWQ Summary Statistics

APPENDIX D1

GWQ SUMMARY GUIDELINE EXCEEDANCE TABLES

(Pages D1-1 to D1-4)

APPENDIX D1 - GROUNDWATER QUALITY GUIDELINE COMPARISON SUMMARY TABLES

TABLE D1.1 - AQUATIC LIFE

Site	Guidelines			Cherry Creek Watershed						North Peterson Creek Watershed						Upper Peterson Creek Watershed					
	BCWQG-30 D [2]	BCWQG-MAX [3]	CEQG-PAL [4]	MW11-01S	MW11-02	MW11-07D	MW11-07S	MW11-09D	MW11-09S	BGC14-006D	MW11-04S	MW11-05D	MW11-05S	MW11-06D	MW11-06S	BGC14-001D	BGC14-010	BGC14-012D	BGC14-012S	MW11-08D
Lithology				Glacial Till	Nicola Volcanics	Iron Mask Hybrid	Iron Mask Hybrid	Nicola Volcanics	Nicola Volcanics	Iron Mask Hybrid	Iron Mask Hybrid	Iron Mask Hybrid	Iron Mask Hybrid	Iron Mask Hybrid	Iron Mask Hybrid	Nicola Volcanics	Nicola Volcanics	Nicola Volcanics	Colluvium	Nicola Volcanics
Number of Samples [1]				13	13	13	13	12	12	4	12	12	12	12	12	5	5	5	5	13
In Situ Parameters																				
pH (unitless)		6.5 to 9	6.5 to 9	23%				8%			8%	8%								8%
Physical Tests																				
pH (unitless)		6.5 to 9	6.5 to 9																	
Dissolved Anions																				
Chloride	150	600	640																	
Fluoride		0.4 to 0.01(-51.73+92.57(Log(H))) [6]	0.12	62%	15%	92%	100%	75%	50%	75%	100%	92%	100%	67%	33%	100%	100%	80%	80%	77%
Sulphate	SITE SPECIFIC [14]				92%	100%	92%	100%	100%	100%	92%	42%	58%	100%	100%		100%	100%	80%	100%
Nutrients																				
Ammonia (Total)		0.681 to 28.7 [7,8]	0.017 to 192 [7,8]	38%							8%	8%								
Nitrate (as N)	3	32.8	3	69%																
Nitrite (as N)	0.02 to 0.2 [7]	0.06 to 0.6 [11]	0.06	69%																
Dissolved Metals																				
Aluminum	0.05 to $e^{(1.6-3.327*[pH]+0.402*([pH]*[2]))}$ [7,10]	0.1 to $e^{(1.209-2.426*[pH]+0.286*[pH]*[2])}$ [7,10]	0.005 to 0.1 [7]	8%				8%												8%
Antimony	0.009 [15]																			
Arsenic		0.005	0.005			46%	38%	75%	17%	75%		83%	75%	100%				100%		
Boron		1.2	1.5 (long-term) / 29 (short-term)		100%						100%									100%
Cadmium	0.0000176 to $e^{(0.736*ln(H)-4.943)}$/1000 to 0.000457 [6]	0.0000380 to $e^{(1.03*ln(H)-5.274)}$/1000 to 0.00280 [6]	$10^{(0.83*(log(H)-2.46)}$/1000 (min 0.000036; max 0.000373) [6,12] $10^{(1.016*(log(H)-1.71)}$/1000 (min 0.000106; max 0.0077) [6,13]		8%	8%	38%	8%			25%			8%	8%	20%					
Chromium	0.001 (Cr VI)/0.0089 (Cr III)		0.001 (Cr VI)/0.0089 (Cr III)	31%	15%			17%							17%					8%
Cobalt	0.004	0.11										50%	17%							
Copper	(0.04*H)/1000 to 0.010 [6]	(0.094*H+2)/1000 TO 0.010 [6]	$e^{(0.8545*ln(H)-1.465)}$ 0.2/1000 to 0.004 [6]				8%		17%		8%			8%	8%				40%	
Iron		0.35 [10]/1 [9]	0.3		8%	31%		33%		100%		100%	83%				100%			
Manganese	0.0044*H+0.605 [6]	(0.01102*H)+0.54 [6]						33%				42%	75%							
Mercury	0.00002		0.000026																	
Molybdenum	1	2	0.073	8%			8%				100%			100%	100%					
Selenium	0.002		0.001	85%			8%	8%					83%			100%			20%	
Uranium	0.0085		0.015																	
Zinc	(7.5+0.75*(H-90))/1000 to 0.0075 [6]	(33+0.75*(H-90))/1000 to 0.033 [6]	0.03		15%			8%							58%					

Site	Keynes Creek Watershed							Humphrey Creek Watershed							Davidson Creek Aquifer		Peterson Creek Aquifer			
	BGC14-002D	BGC14-002S	BGC14-011D	BGC14-011S	BGC14-016	BGC14-017D	BGC14-017S	BGC14-009	BGC14-013	BGC14-014D	BGC14-015D	BGC14-015S	RES-3	RES-6	RES-1	RES-4	BGC14-005	MW11-10D	RES-2	RES-5
Lithology	Nicola Volcanics	Glacial Till	Nicola Volcanics	Nicola Volcanics	Nicola Volcanics	Nicola Volcanics	Glacial Till	Iron Mask Hybrid	Nicola Volcanics	Nicola Volcanics	Nicola Volcanics	Glacial Till	Fluvial/Glaciofluvial	Nicola Volcanics	Glacial Till	Fluvial/Glaciofluvial	Iron Mask Hybrid	Fluvial/Glaciofluvial	Fluvial/Glaciofluvial	Glacial Till
Number of Samples [1]	5	5	5	5	5	3	4	5	5	3	4	4	1	1	2	2	5	12	1	1
In Situ Parameters																				
pH (unitless)	20%	20%		20%		33%	25%	20%	40%	33%							40%	25%		
Physical Tests																				
pH (unitless)																				
Dissolved Anions																				
Chloride															100%	50%				
Fluoride	100%	100%	100%	100%	60%	100%	100%	100%	100%	67%	100%	100%	100%		100%	100%	80%	25%	100%	
Sulphate		100%								67%				100%	100%		100%	92%	100%	100%
Nutrients																				
Ammonia (Total)								20%	40%	33%	25%			100%			40%	17%		
Nitrate (as N)															100%					
Nitrite (as N)															50%					
Dissolved Metals																				
Aluminum				20%																
Antimony																				
Arsenic								60%							50%	50%		92%		
Boron																				
Cadmium														100%	50%				100%	
Chromium															100%					
Cobalt										67%										
Copper														100%	100%	50%			100%	100%
Iron		60%			20%			20%	100%									83%		
Manganese															100%	50%				
Mercury																				
Molybdenum																				
Selenium																		8%		
Uranium																				
Zinc		20%							40%		50%		100%		50%				100%	100%

Site	Pit Area																																
	AJGW01-D	AJGW02-D	AJGW02-S	AJGW03-D	AJGW04-D	AJGW05-S	AJGW06-D	AJGW07-D	AJGW07-S	BGC14-003D	BGC14-003I	BGC14-003S	KAX-14-107S	KAX-14-108S	KAX-14-114S	KAX-14-128D	MW12-01	MW12-02	MW12-04	PW01
Lithology	Glacial Till	Nicola Volcanics	Glacial Till	Fluvial/Glaciofluvial	Glacial Till	Fluvial/Glaciofluvial	Iron Mask Hybrid	Nicola Volcanics	Fluvial/Glaciofluvial	Nicola Volcanics	Fluvial/Glaciofluvial	Glacial Till	Lacustrine	Glacial Till	Glacial Till or Fluvial/Glaciofluvial	Nicola Volcanics	Waste Rock Backfill	Waste Rock Backfill	Glacial Till	Nicola Volcanics /Picrite/Sugarloaf Diorite
Number of Samples [1]	2	2	2	21	2	4	19	21	20	3	5	5	3	3	4	1	8	8	8	2
In Situ Parameters																				
pH (unitless)		100%		10%						100%			67%	67%	50%	100%				
Physical Tests																				
pH (unitless)		100%																		
Dissolved Anions																				
Chloride			50%																	
Fluoride			100%	57%	50%	25%	89%	52%	70%	67%	100%	100%	100%	100%	100%		50%	38%	50%	
Sulphate	100%	50%	50%	81%	100%	100%				100%				100%			88%	88%	75%	100%
Nutrients																				
Ammonia (Total)		100%								67%					50%				13%	
Nitrate (as N)	100%																100%	100%		
Nitrite (as N)	50%		100%		100%	75%											100%	100%		
Dissolved Metals																				
Aluminum			5%					5%	67%			67%	67%	25%	100%					
Antimony																		75%		
Arsenic	50%	50%		95%	100%		100%			67%	40%		100%	100%	100%		50%	100%	25%	100%
Boron										100%	100%					100%				
Cadmium	50%			5%	50%												13%			
Chromium	100%						16%		5%											
Cobalt			50%			50%														
Copper	100%	50%		50%					5%								25%	75%		
Iron	100%	83%						81%					100%	100%	75%					100%
Manganese	100%	50%																		
Mercury			50%															13%		
Molybdenum	100%	100%	50%		50%		48%	100%				100%				100%	100%	100%	100%	100%
Selenium						11%	71%	100%		20%					100%	100%	100%	100%		
Uranium																	100%	100%		
Zinc	100%	100%																		

M:\1\01\00246\31\A\Report\3 - Baseline Water Quality - GW SW\Rev0\Appendix\Appendix D - GWQ Data Tables\[Appendix D1 - GWQ Summary Guideline Exceedance Tables.xlsx]D1.1 - AQUATIC LIFE

NOTES:

1. GUIDELINES ARE PRESENTED IN mg/L UNLESS OTHERWISE STATED; SAMPLE COUNTS ARE INTEGER VALUES; ALL OTHER UNITS ARE %.
2. BRITISH COLUMBIA WATER QUALITY GUIDELINES (APPROVED AND WORKING) - 30 DAY AVERAGE LIMITS (BCWQG-30 D) - FRESHWATER AQUATIC LIFE. UNITS ARE mg/L.
3. BRITISH COLUMBIA WATER QUALITY GUIDELINES (APPROVED AND WORKING) - MAXIMUM LIMITS (BCWQG-MAX) - FRESHWATER AQUATIC LIFE. UNITS ARE mg/L.
4. CANADIAN ENVIRONMENTAL QUALITY GUIDELINES - WATER QUALITY GUIDELINE FOR THE PROTECTION OF AQUATIC LIFE (CEQG-PAL) - FRESHWATER. UNITS ARE mg/L.
5. VALUES REPRESENT PERCENTAGES OF SAMPLES COLLECTED AT EACH SITE THAT EXCEED ONE OR MORE AQUATIC LIFE GUIDELINE.
6. HARDNESS (H) DEPENDENT GUIDELINE LIMIT (DISSOLVED).
7. pH DEPENDENT GUIDELINE LIMIT (*IN SITU* VALUE PREFFERED).
8. TEMPERATURE DEPENDENT GUIDELINE LIMIT.
9. GUIDELINE IS SPECIFIC TO TOTAL CONCENTRATION ONLY.
10. GUIDELINE IS SPECIFIC TO DISSOLVED CONCENTRATION ONLY.
11 CHLORIDE (DISSOLVED) DEPENDENT GUIDELINE LIMIT.
12. GUIDELINE IS SPECIFIC TO Cd - LONG-TERM EXPOSURE; ALL SHADING INDICATING EXCEEDANCE OF THE CEQG-PAL GUIDELINE FOR Cd REFERS TO THE LONG-TERM EXPOSURE GUIDELINE.
13. GUIDELINE IS SPECIFIC TO Cd - SHORT-TERM EXPOSURE; ALL SHADING INDICATING EXCEEDANCE OF THE CEQG-PAL GUIDELINE FOR Cd REFERS TO THE LONG-TERM EXPOSURE GUIDELINE.
14. GUIDELINE IS APPLIED ONLY FOR WATERS OF DISSOLVED HARDNESS >250 mg/L AND IS DEPENDENT ON TOXICITY TESTING.
15. GUIDELINE IS APPLICABLE FOR Sb(III) ONLY.
16. THE PERCENTAGE IS BASED ON THE NUMBER OF SAMPLES THAT EXCEED THE LOWEST APPLICABLE GUIDELINE.

APPENDIX D1 - GROUNDWATER QUALITY GUIDELINE COMPARISON SUMMARY TABLES

TABLE D1.2 -AQUATIC LIFE BY LITHOLOGY

Lithology		Glacial Till										Fluvial/Glaciofluvial									
Baseline Area	Lowest Applicable Aquatic Life Guideline [1]	Cherry Creek	Upper Peterson Creek	Open Pit	N. Peterson Creek (EMRSF)	Keynes Creek	Humphrey Creek	Peterson Creek Aquifer	Davison Creek Aquifer	Sum	Percentage of Samples that Exceeded the Lowest Applicable Guideline	Cherry Creek	Upper Peterson Creek	Open Pit	N. Peterson Creek (EMRSF)	Keynes Creek	Humphrey Creek	Peterson Creek Aquifer	Davison Creek Aquifer	Sum	Percentage of Samples that Exceeded the Lowest Applicable Guideline
Number of Wells		1	-	7	-	2	1	1	1	13		-	-	4	-	-	1	2	1	8	
Number of Samples		13	-	26	-	9	4	1	2	55		-	-	50	-	-	1	13	2	66	
In Situ Parameters																					
pH (unitless)	BCWQG-Max and GEQG-PAL	23%	-	15%	-	22%	-	-	-	9	16%	-	-	4%	-	-	-	23%	-	5	8%
Physical Tests																					
pH (unitless)	BCWQG-Max and GEQG-PAL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Anions										0	0%									0	0%
Chloride	BCWQG-30-D	-	-	4%	-	-	-	-	100%	3	5%	-	-	-	-	-	-	-	50%	1	2%
Fluoride	CEQG-PAL	62%	-	73%	-	100%	100%	-	100%	42	76%	-	-	64%	-	-	100%	31%	100%	39	59%
Sulphate	BCWQG-30 D (SBEB)	-	-	54%	-	56%	-	100%	100%	22	40%	-	-	42%	-	-	-	92%	-	33	50%
Nutrients																					
Ammonia (Total)	CEQG-PAL	38%	-	12%	-	-	-	-	-	8	15%	-	-	-	-	-	-	15%	-	2	3%
Nitrate (as N)	BCWQG-30 D and CEQG-PAL	69%	-	8%	-	-	-	-	100%	13	24%	-	-	-	-	-	-	-	-	-	-
Nitrite (as N)	BCWQG-30 D	69%	-	19%	-	-	-	-	50%	15	27%	-	-	6%	-	-	-	-	-	3	5%
Dissolved Metals																					
Aluminum	CEQG-PAL	8%	-	12%	-	-	-	-	-	4	7%	-	-	4%	-	-	-	-	-	2	3%
Antimony	BCWQG-30-D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	BCWQG-Max and GEQG-PAL	-	-	46%	-	-	-	-	50%	13	24%	-	-	44%	-	-	-	85%	50%	34	52%
Boron	BCWQG-Max	-	-	-	-	-	-	-	-	-	-	-	-	10%	-	-	-	-	-	5	8%
Cadmium	CEQG-PAL	-	-	8%	-	-	-	-	50%	3	5%	-	-	2%	-	-	-	8%	-	2	3%
Chromium	BCWQG-30 D and CEQG-PAL	31%	-	-	-	44%	-	-	100%	10	18%	-	-	2%	-	-	-	-	-	1	2%
Cobalt	BCWQG-30 D	-	-	4%	-	-	-	-	-	1	2%	-	-	4%	-	-	-	-	-	2	3%
Copper	CEQG-PAL	-	-	4%	-	-	-	100%	100%	4	7%	-	-	2%	-	-	100%	8%	50%	4	6%
Iron	CEQG-PAL	-	-	23%	-	33%	-	-	-	9	16%	-	-	-	-	-	-	77%	-	10	15%
Manganese	BCWQG-30 D	-	-	-	-	-	-	-	100%	2	4%	-	-	-	-	-	-	-	50%	1	2%
Mercury	BCWQG-30 D	-	-	4%	-	-	-	-	-	1	2%	-	-	-	-	-	-	-	-	-	-
Molybdenum	CEQG-PAL	8%	-	54%	-	-	-	-	-	15	27%	-	-	44%	-	-	-	-	-	22	33%
Selenium	BCWQG-30 D and CEQG-PAL	85%	-	8%	-	-	-	-	-	13	24%	-	-	42%	-	-	-	8%	-	22	33%
Uranium	BCWQG-30 D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	BCWQG-30 D	-	-	-	-	11%	-	100%	50%	3	5%	-	-	-	-	-	100%	8%	-	2	3%

Lithology		Nicola Volcanics										Iron Mask Hybrid									
Baseline Area	Lowest Applicable Aquatic Life Guideline [1]	Cherry Creek	Upper Peterson Creek	Open Pit	N. Peterson Creek (EMRSF)	Keynes Creek	Humphrey Creek	Peterson Creek Aquifer	Davison Creek Aquifer	Sum	Percentage of Samples that Exceeded the Lowest Applicable Guideline	Cherry Creek	Upper Peterson Creek	Open Pit	N. Peterson Creek (EMRSF)	Keynes Creek	Humphrey Creek	Peterson Creek Aquifer	Davison Creek Aquifer	Sum	Percentage of Samples that Exceeded the Lowest Applicable Guideline
Number of Wells		3	4	5	-	5	4	-	-	21		2	-	1	6	-	1	1	-	11	
Number of Samples		37	28	29	-	23	13	-	-	130		26	-	19	64	-	5	5	-	119	
In Situ Parameters																					
pH (unitless)	BCWQG-Max and GEQG-PAL	3%	4%	21%	-	13%	23%	-	-	14	11%	-	-	-	3%	-	20%	40%	-	5	4%
Physical Tests										0	0%									0	0%
pH (unitless)	BCWQG-Max and GEQG-PAL	-	-	7%	-	-	-	-	-	2	2%	-	-	-	-	-	-	-	-	-	-
Dissolved Anions										0	0%									0	0%
Chloride	BCWQG-30-D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoride	CEQG-PAL	46%	86%	45%	-	91%	85%	-	-	86	66%	96%	-	89%	78%	-	100%	80%	-	101	85%
Sulphate	BCWQG-30 D (SBEB)	97%	82%	21%	-	-	23%	-	-	68	52%	96%	-	-	80%	-	-	100%	-	81	68%
Nutrients																					
Ammonia (Total)	CEQG-PAL	-	-	14%	-	-	38%	-	-	9	7%	-	-	-	3%	-	20%	40%	-	5	4%
Nitrate (as N)	BCWQG-30 D and CEQG-PAL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrite (as N)	BCWQG-30 D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Metals																					
Aluminum	CEQG-PAL	3%	4%	10%	-	4%	-	-	-	6	5%	-	-	-	-	-	-	-	-	-	-
Antimony	BCWQG-30-D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	BCWQG-Max and GEQG-PAL	30%	18%	14%	-	-	-	-	-	20	15%	42%	-	100%	53%	-	60%	-	-	67	56%
Boron	BCWQG-Max	35%	46%	14%	-	-	-	-	-	30	23%	-	-	-	19%	-	-	-	-	12	10%
Cadmium	CEQG-PAL	5%	4%	-	-	-	8%	-	-	4	3%	23%	-	-	8%	-	-	-	-	11	9%
Chromium	BCWQG-30 D and CEQG-PAL	11%	4%	-	-	-	-	-	-	5	4%	-	-	16%	3%	-	-	-	-	5	4%
Cobalt	BCWQG-30 D	-	-	-	-	-	15%	-	-	2	2%	-	-	-	13%	-	-	-	-	8	7%
Copper	CEQG-PAL	5%	-	-	-	-	-	-	-	2	2%	4%	-	-	5%	-	-	-	-	4	3%
Iron	CEQG-PAL	14%	18%	66%	-	4%	23%	-	-	33	25%	15%	-	-	41%	-	20%	100%	-	36	30%
Manganese	BCWQG-30 D	11%	-	-	-	-	-	-	-	4	3%	-	-	-	22%	-	-	-	-	14	12%
Mercury	BCWQG-30 D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Molybdenum	CEQG-PAL	-	-	48%	-	-	-	-	-	14	11%	4%	-	-	56%	-	-	-	-	37	31%
Selenium	BCWQG-30 D and CEQG-PAL	3%	18%	55%	-	-	-	-	-	22	17%	4%	-	11%	16%	-	-	-	-	13	11%
Uranium	BCWQG-30 D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	BCWQG-30 D	8%	-	-	-	-	31%	-	-	7	5%	-	-	-	11%	-	-	-	-	7	6%

Lithology		Others				
Baseline Area	Lowest Applicable Aquatic Life Guideline [1]	Upper Peterson Creek - Colluvium	Open Pit Area - Lacustrine	Open Pit Area - Waste Rock	Sum	Percentage of Samples that Exceeded the Lowest Applicable Guideline
Number of Wells		1	1	2	16	0%
Number of Samples		5	3	16	148	0%
In Situ Parameters						
pH (unitless)	BCWQG-Max and GEQG-PAL	-	67%	-	2	1%
Physical Tests					0	0%
pH (unitless)	BCWQG-Max and GEQG-PAL	-	-	-	-	-
Dissolved Anions					0	0%
Chloride	BCWQG-30-D	-	-	-	-	-
Fluoride	CEQG-PAL	80%	100%	44%	14	9%
Sulphate	BCWQG-30 D (SBEB)	80%	-	88%	18	12%
Nutrients						
Ammonia (Total)	CEQG-PAL	-	-	-	-	-
Nitrate (as N)	BCWQG-30 D and CEQG-PAL	-	-	100%	16	11%
Nitrite (as N)	BCWQG-30 D	-	-	100%	16	11%
Dissolved Metals						
Aluminum	CEQG-PAL	-	67%	-	2	1%
Antimony	BCWQG-30-D	-	-	38%	6	4%
Arsenic	BCWQG-Max and GEQG-PAL	-	100%	75%	15	10%
Boron	BCWQG-Max	-	-	-	-	-
Cadmium	CEQG-PAL	-	-	6%	1	1%
Chromium	BCWQG-30 D and CEQG-PAL	-	-	-	-	-
Cobalt	BCWQG-30 D	-	-	-	-	-
Copper	CEQG-PAL	40%	-	50%	10	7%
Iron	CEQG-PAL	-	100%	-	3	2%
Manganese	BCWQG-30 D	-	-	-	-	-
Mercury	BCWQG-30 D	-	-	6%	1	1%
Molybdenum	CEQG-PAL	-	-	100%	16	11%
Selenium	BCWQG-30 D and CEQG-PAL	20%	-	100%	17	11%
Uranium	BCWQG-30 D	-	-	100%	16	11%
Zinc	BCWQG-30 D	-	-	-	-	-

NOTES:
1. PERCENT FOR EACH AREA = (THE NUMBER OF SAMPLES THAT EXCEEDED THE LOWEST APPLICABLE GUIDELINE)/(TOTAL NUMBER OF SAMPLES FOR THAT BASELINE AREA)*100
2. PERCENT OF SAMPLES = (NUMBER OF SAMPLES THAT EXCEEDED THE LOWEST APPLICABLE GUIDELINE) / (TOTAL NUMBER OF SAMPLES) *100

APPENDIX D1 - GROUNDWATER QUALITY GUIDELINE COMPARISON SUMMARY TABLES

TABLE D1.3 - DRINKING WATER

Parameter	Drinking Water Guidelines		Cherry Creek Watershed						North Peterson Creek Watershed							Upper Peterson Creek Watershed					Keynes Creek Watershed							Humphrey Creek Watershed							Davidson Creek Aquifer		Peterson Creek Aquifer				Pit Area																							
	BCWQG [3]	HC [4]	MW11-01S	MW11-02	MW11-07D	MW11-07S	MW11-09D	MW11-09S	BGC14-006D	MW11-04D	MW11-04S	MW11-05D	MW11-05S	MW11-06D	MW11-06S	BGC14-001D	BGC14-010	BGC14-012D	BGC14-012S	MW11-08D	BGC14-002D	BGC14-002S	BGC14-011D	BGC14-011S	BGC14-016	BGC14-017D	BGC14-017S	BGC14-009	BGC14-013	BGC14-014D	BGC14-015D	BGC14-015S	RES-3	RES-6	RES-1	RES-4	BGC14-005	MW11-10D	RES-2	RES-5	AJGW01-D	AJGW02-D	AJGW02-S	AJGW03-D	AJGW04-D	AJGW05-S	AJGW06-D	AJGW07-D	AJGW07-S	BGC14-003D	BGC14-003I	BGC14-003S	KAX-14-107S	KAX-14-108S	KAX-14-114S	KAX-14-128D	MW12-01	MW12-02	MW12-04	PW01
Number of Samples [1]			13	13	13	13	12	12	4	4	12	12	12	12	12	5	5	5	5	13	5	5	5	5	5	3	4	5	5	3	4	4	1	1	2	2	5	12	1	1	2	2	2	21	2	4	19	21	20	3	5	5	3	3	4	1	8	8	8	2
In Situ Parameters																																																														
pH (unitless)		6.5 to 8.5	54%				8%			75%	8%	8%		8%			20%			8%	20%	20%	20%	40%		67%	25%	20%	40%	33%	25%					60%	25%			50%	100%		10%	50%		11%		10%	100%			67%	67%	50%	100%				
Temperature °C	15	15									8%		8%	8%																																																
Total Dissolved Solids		500	69%	69%	77%	77%	75%	67%	75%	50%	75%	75%	83%	75%	75%	100%	100%	100%	100%	69%	100%	100%	100%	20%	100%			80%		67%		25%					100%	75%						71%			11%	62%	55%	67%		20%	100%	100%	50%	100%	88%	88%	88%	
Physical Tests																																																													
Color TCU	15	15					17%			25%	8%	17%								31%																									100%			25%																
pH (unitless)		6.5 to 8.5	31%							75%													60%	20%																			100%				5%			100%					25%	100%					
Total Dissolved Solids		500	92%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	40%	100%			100%		100%			100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	26%	100%	100%	100%		100%	100%	100%	100%	100%	100%	100%	100%
Turbidity NTU		0.1	85%	85%	92%	92%	92%	92%	100%	100%	92%	83%	83%	92%	92%	80%	80%	100%	100%	92%	100%	100%	80%	80%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	83%	100%	100%	100%	100%	100%	90%	50%	75%	84%	86%	85%	100%	100%	100%	100%	100%	100%	100%	75%	75%	88%	100%
Dissolved Anions																																																												
Bromide	0.05	0.01											8%											40%		67%			100%		75%												5%	5%	33%	40%	20%											
Chloride	250																																	50%																										
Fluoride	1.5	1.5																																										100%		50%			5%	5%											
Sulphate	500	500		100%	100%	77%	100%	100%	100%	25%	100%	33%	25%	75%	100%		100%	100%	80%	100%										100%			100%	100%	100%	100%	100%	50%	100%	100%	100%	100%	100%		100%		100%	100%							100%			100%	100%		100%
Nutrients																																																												
Nitrate (as N)	10	10	23%																															100%						100%																						
Dissolved Metals																																																												
Antimony		0.006																																				8%																							100%		
Arsenic	0.025	0.01								50%				83%				100%																	50%									50%		100%											100%	13%	100%
Boron	5	5																																																												
Iron		*0.3*		8%	31%		33%		100%			100%	83%				100%					60%			20%			20%		100%				100%	100%		100%	83%	100%						81%						100%	100%	75%					100%
Manganese		*0.05*	31%	100%	100%	92%	100%	100%	100%	25%	100%	100%	100%	100%	100%	100%	100%	100%	80%	100%	100%	100%	80%	80%	100%	100%		100%	80%	100%	100%	100%		100%	50%		100%	100%			100%		50%	95%	50%	100%	89%	95%	50%		100%	100%	100%	100%	100%	100%	75%	100%	100%	50%
Molybdenum	0.25																																	100%							100%	100%																		100%	100%		50%
Selenium	0.01	0.01				8%																																		100%							48%	100%									100%	100%		
Sodium		*200*		100%	100%	69%	100%	100%		25%	100%			58%	100%			100%		100%			20%																																						100%			50%
Uranium		0.02											8%																						50%																										
Organics																																																												
Carbon Organic (Dissolved	4																																																												
Carbon Organic (Total)	4		8%	31%	100%	23%	100%	100%	25%	100%	100%	100%	100%	8%	17%		20%		100%	100%		20%	20%	100%				100%		100%			100%		50%	100%		50%																							100%	67%	100%	100%				

M:\1\01\00246\31\A\Report\3 - Baseline Water Quality - GW SW\Rev0\Appendix\Appendix D - GWQ Data Tables\[Appendix D1 - GWQ Summary Guideline Exceedance Tables.xlsx]D1.1 - AQUATIC LIFE

NOTES:

1. GUIDELINES ARE PRESENTED IN mg/L UNLESS OTHERWISE STATED; SAMPLE COUNTS ARE INTEGER VALUES; ALL OTHER UNITS ARE %.
2. VALUES REPRESENT PERCENTAGES OF SAMPLES COLLECTED AT EACH SITE THAT EXCEED ONE OR MORE DRINKING WATER GUIDELINE.
3. BCWQG: BC WATER QUALITY GUIDELINES FOR DRINKING WATER. UNITS ARE IN mg/L.
4. HC: HEALTH CANADA DRINKING WATER GUIDELINES. UNITS ARE IN mg/L.
5. ITALICIZED VALUES REPRESENT GUIDELINES BASED ON AESTHETIC OBJECTIVES (EX. TASTE, ODOUR, COLOUR), RATHER THAN HEALTH-BASED EFFECTS.
6. THE PERCENTAGE IS BASED ON THE NUMBER OF SAMPLES THAT EXCEED THE LOWEST APPLICABLE GUIDELINE.

APPENDIX D1 - GROUNDWATER QUALITY GUIDELINE COMPARISON SUMMARY TABLES

TABLE D1.4 - AGRICULTURAL

Parameter	Agricultural Water Use Guidelines				Cherry Creek Watershed						North Peterson Creek Watershed							Upper Peterson Creek Watershed				
	BCWQG-Irrigation[3]	BCWQG-Livestock[4]	CEQG-Irrigation[5]	CEQG-Livestock[6]	MW11-01S	MW11-02	MW11-07D	MW11-07S	MW11-09D	MW11-09S	BGC14-006D	MW11-04D	MW11-04S	MW11-05D	MW11-05S	MW11-06D	MW11-06S	BGC14-001D	BGC14-010	BGC14-012D	BGC14-012S	MW11-08D
Number of Samples					13	13	13	13	12	12	4	4	12	12	12	12	12	5	5	5	5	13
Physical Tests																						
Total Dissolved Solids	500	1000	500	3000	92%	100%	100%	100%	100%	100%	100%	100%	100%	92%	92%	100%	100%	100%	100%	100%	100%	100%
Turbidity NTU	10	5			15%	31%	31%		17%	17%	100%		8%	75%	75%		50%		40%			23%
Dissolved Anions																						
Chloride	100	600	100																			
Fluoride	1 / 2[8]	1	1	1[10]								50%										
Sulphate		1000		1000		100%					75%		8%			42%	100%				20%	
Dissolved Metals																						
Arsenic	0.1	0.025	0.1	0.025																100%		
Boron	0.5	5	0.5	5		100%			8%	17%		75%	100%			67%				100%		100%
Chromium	0.0049	0.05	0.0049	0.05													8%					
Manganese	0.2		0.2			100%	100%	92%	92%	75%	100%	25%	83%	92%	92%		100%	100%	80%	100%		100%
Molybdenum	0.02[9]	0.05	0.01	0.5	100%	8%	100%	100%	100%	100%		100%	100%	92%	92%	100%	100%	20%		100%	40%	100%
Nickel	0.2	1	0.2	1																		
Selenium	0.01	0.03	0.02	0.05				8%														
Uranium	0.01	0.2	0.01	0.2											75%							

Parameter	Keynes Creek Watershed							Humphrey Creek Watershed								Davidson Creek Aquifer		Peterson Creek Aquifer			
	BGC14-002D	BGC14-002S	BGC14-011D	BGC14-011S	BGC14-016	BGC14-017D	BGC14-017S	BGC14-009	BGC14-013	BGC14-014D	BGC14-015D	BGC14-015S	RES-3	RES-6		RES-1	RES-4	BGC14-005	MW11-10D	RES-2	RES-5
Number of Samples	5	5	5	5	5	3	4	5	5	3	4	4	1	1		2	2	5	12	1	1
Physical Tests																					
Total Dissolved Solids	100%	100%	100%	40%	100%			100%		100%			100%	100%		100%	100%	100%	100%	100%	100%
Turbidity NTU						33%	25%	20%		33%	50%		100%	100%		100%			67%		
Dissolved Anions																					
Chloride																100%	50%				
Fluoride																					
Sulphate										100%				100%		100%		100%	100%	100%	100%
Dissolved Metals																					
Arsenic																					
Boron	60%																				
Chromium																					
Manganese	100%	80%		40%	100%			100%		100%		100%				50%		100%	92%		
Molybdenum	100%	80%		100%				100%		100%	100%	100%	100%			50%	50%	100%	100%	100%	100%
Nickel																					
Selenium													100%	100%		100%	100%			100%	100%
Uranium																100%					

Parameter	Pit Area																					
	AJGW01-D	AJGW02-D	AJGW02-S	AJGW03-D	AJGW04-D	AJGW05-S	AJGW06-D	AJGW07-D	AJGW07-S	BGC14-003D	BGC14-003I	BGC14-003S	KAX-14-107S	KAX-14-108S	KAX-14-114S	KAX-14-128D	MW12-01	MW12-02	MW12-04	PW01
Number of Samples	2	2	2	21	2	4	19	21	20	3	5	5	3	3	4	1	8	8	8	2
Physical Tests																				
Total Dissolved Solids	100%	100%	100%	100%	100%	100%	26%	100%	95%	100%			100%	100%	100%	100%	100%	100%	100%	100%
Turbidity NTU	100%	100%	100%	5%	50%	75%	16%	71%	40%		20%		100%	33%	25%	100%			25%	
Dissolved Anions																				
Chloride			100%																	
Fluoride			100%		50%			5%	5%											
Sulphate			100%			100%											100%	100%		100%
Dissolved Metals																				
Arsenic							11%											13%		50%
Boron										100%	100%	100%	100%			100%				50%
Chromium																				
Manganese	50%		50%	95%	50%	100%		24%	15%				100%	100%	100%	100%			100%	
Molybdenum	100%	100%	50%	95%	100%	100%	100%	95%	95%	100%	100%	100%		100%	100%	100%	100%	100%	100%	100%
Nickel							5%													
Selenium	100%							38%	90%								100%	100%		
Uranium																	100%	100%		

M:\1\01\00246\31\A\Report\3 - Baseline Water Quality - GW SW\Rev0\Appendix\Appendix D - GWQ Data Tables\[Appendix D1 - GWQ Summary Guideline Exceedance Tables.xlsx]D1.1 - AQUATIC LIFE

NOTES:

1. GUIDELINES ARE PRESENTED IN mg/L UNLESS OTHERWISE STATED; SAMPLE COUNTS ARE INTEGER VALUES; ALL OTHER UNITS ARE %.
2. VALUES REPRESENT PERCENTAGES OF SAMPLES COLLECTED AT EACH SITE THAT EXCEED ONE OR MORE AQUATIC LIFE GUIDELINE.
3. BCWQG-Irrigation: BC WATER QUALITY GUIDELINES FOR IRRIGATION. UNITS ARE mg/L.
4. BCWQG-Livestock: BC WATER QUALITY GUIDELINES FOR LIVESTOCK. UNITS ARE mg/L.
5. CEQG-Irrigation: CCME GUIDELINES FOR IRRIGATION. UNITS ARE mg/L.
6. CEQG-Livestock CCME GUIDELINES FOR IRRIGATION. UNITS ARE mg/L.
7. THE PERCENTAGE IS BASED ON THE NUMBER OF SAMPLES THAT EXCEED THE LOWEST APPLICABLE GUIDELINE.
8. GUIDELINE IS 1 mg/L FOR CHRONIC EXPOSURE (AVERAGE OVER 30 DAYS) AND 2 mg/L FOR SHORT-TERM EXPOSURE (SINGLE SAMPLES).
9. GUIDELINE IS FOR POORLY DRAINED SOIL WITH A RATIO OF Cu : Mo GREATER THAN 2 : 1.
10. GUIDELINE IS FOR FEED WATER CONTAINING FLUORIDE.

APPENDIX D2

GWQ SUMMARY GUIDELINE AQUATIC LIFE

(Pages D2-1 to D2-19)

TABLE D2.1 - AQUATIC LIFE GUIDELINES
PAGE 1 OF 1

Analytes	BCWQG-30 DAY AVERAGE[2]	BCWQG-MAXIMUM [3]	CEQG-PAL[4]
Physical Tests			
pH		6.5 to 9	6.5 to 9
Dissolved Anions			
Chloride	150	600	120[18]/640[19]
Fluoride		0.4 to 0.01(-51.73+92.57(Log(H))) [12]	
Sulphate	SITE SPECIFIC [20]		
Nutrients			
Ammonia (Total)		0.681 to 28.7 [13,14]	0.017 to 192 [13,14]
Nitrate (as N)		32.8	3
Nitrite (as N)	3	0.06 to 0.6 [15]	0.06
Cyanide			
Cyanide (Free)			0.005
Cyanide (WAD)		0.01	
Metals			
Aluminum	0.05 to $e^{(1.6-3.327*[pH]+0.402*([pH]\ ^{(2)}))}$ [13,16]	0.1 to $e^{(1.209-2.426*[pH]+0.286*[pH]\ ^{(2)})}$ [13,16]	0.005 to 0.1 [13]
Antimony	0.009 [21]		
Arsenic		0.005	0.005
Barium	1		
Beryllium	0.00013		
Boron		1.2	1.5[18]/29[19]
			$10^{(0.83*(log(H)-2.46)}$/1000 (min 0.000036 mg/L; max 0.000373 mg/L) [12,18]
		0.00002 to $e^{(0.762*ln(H)-6.07)}$/1000 to 0.000172 [12]	
			$10^{(1.016*(log(H)-1.71)}$/1000 (min 0.000106 mg/L; max 0.0077 mg/L) [12,19]
Cadmium			
Chromium		0.0089	0.0089
Cobalt	0.004	0.11	
Copper	(0.04*H)/1000 to 0.010 [12]	(0.094*H+2)/1000 TO 0.010 [12]	$e^{(0.8545*ln(H)-1.465)}$ 0.2/1000 to 0.004 [12]
Iron		0.35[16]/1 [17]	0.3
Lead	(3.31+$e^{1.273*ln(H)-4.704}$)/1000 [12]	0.003 to $e^{(1.273*ln(H)-1.460)}$/1000 [12]	e $^{((1.273*ln(H)-4.705))}$ /1000 to 0.007 [12]
Manganese	0.0044*H+0.605 [12]	(0.01102*H)+0.54 [12]	
Mercury	0.00002		0.000026
Molybdenum	1	2	0.073
Nickel	e $^{((0.76*ln(H)+1.06))}$ /1000 to 0.15 [12]		e $^{((0.76*ln(H)+1.06))}$ /1000 to 0.15 [12]
Selenium	0.002	0.002	0.001
Silver	0.00005 to 0.0015 [12]	0.0001 to 0.003 [12]	0.0001
Thallium	0.0008		0.0008
Uranium	0.0085		0.015
Zinc	(7.5+0.75*(H-90))/1000 to 0.0075 [12]	(33+0.75*(H-90))/1000 to 0.033 [12]	0.03

M:\1\01\00246\31\A\Report\3 - Baseline Water Quality - GW SW\Rev0\Appendix\Appendix D - GWQ Data Tables\[Appendix D2 D3 D4 D5 - GWQ Data Compared with Guidelines Rev0.xlsx]D2.1 - AQUATIC LIFE GUIDELINES

NOTES:

1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. BRITISH COLUMBIA WATER QUALITY GUIDELINES (APPROVED AND WORKING) - 30 DAY AVERAGE LIMITS (BCWQG-30 DAY AVERAGE) - FRESHWATER AQUATIC LIFE.
3. BRITISH COLUMBIA WATER QUALITY GUIDELINES (APPROVED AND WORKING) - MAXIMUM LIMITS (BCWQG-MAX) - FRESHWATER AQUATIC LIFE.
4. CANADIAN ENVIRONMENTAL QUALITY GUIDELINES - WATER QUALITY GUIDELINE FOR THE PROTECTION OF AQUATIC LIFE (CEQG-PAL) - FRESHWATER.
5. THIS SHADING INDICATES THAT THE VALUE EXCEEDS THE LIMITS OF THE BCWQG - 30 DAY AVERAGE GUIDELINES.
6. THIS SHADING INDICATES THAT THE VALUE EXCEEDS THE LIMITS OF THE BCWQG - MAXIMUM GUIDELINES.
7. THIS SHADING INDICATES THAT THE VALUED EXCEEDS THE LIMITS OF THE CEQG-PAL.
8. THIS SHADING INDICATES THAT THE VALUE EXCEEDS THE LIMITS OF THE BCWQG - 30 DAY AVERAGE AND THE BCWQG - MAXIMUM.
9. THIS SHADING INDICATES THAT THE VALUE EXCEEDS THE LIMITS OF THE BCWQG - 30 DAY AVERAGE AND THE CEQG-PAL.
10. THIS SHADING INDICATES THAT THE VALUE EXCEEDS THE LIMITS OF THE BCWQG-MAXIMUM AND THE CEQG-PAL.
11. THIS SHADING INDICATES THAT THE VALUE EXCEEDS ALL OF THE ABOVE LISTED GUIDELINES.
12. HARDNESS (H) DEPENDENT GUIDELINE LIMIT (DISSOLVED).
13. pH DEPENDENT GUIDELINE LIMIT (*IN SITU* VALUE PREFFERED).
14. TEMPERATURE DEPENDENT GUIDELINE LIMIT.
15. CHLORIDE (DISSOLVED) DEPENDENT GUIDELINE LIMIT.
16. GUIDELINE IS SPECIFIC TO DISSOLVED CONCENTRATION ONLY.
17. GUIDELINE IS SPECIFIC TO TOTAL CONCENTRATION ONLY.
18. GUIDELINE IS SPECIFIC TO LONG-TERM EXPOSURE.
19. GUIDELINE IS SPECIFIC TO SHORT-TERM EXPOSURE.
20. GUIDELINE IS APPLIED ONLY FOR WATERS OF DISSOLVED HARDNESS >250 mg/L AND IS DEPENDENT ON TOXICITY TESTING.
21. GUIDELINE IS APPLICABLE FOR Sb(III) ONLY.
22. ALL SHADING INDICATING EXCEEDANCE OF THE CEQG-PAL GUIDELINE FOR B, Cd, AND Cl REFERS TO THE LONG-TERM EXPOSURE GUIDELINES.

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE B1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D2.2 - GROUNDWATER QUALITY DATA

PAGE 1 OF 18

Site ID	MDL	AJGW01-D		AJGW02-D		AJGW02-S		AJGW03-D														
Site ID		AJGW01-DA	JGW01-DA	JGW02-DA	JGW02-DA	JGW02-SA	JGW02-SA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-D
Analytes		Mar-08	Jun-10	Jul-08	Jun-10	Jul-08	Sep-08	Jul-08	Sep-08	Jun-10	Aug-10	Nov-10	Mar-11	May-11	Jul-11	Nov-11	Feb-12	Jun-12	Aug-12	Dec-12	Mar-13	May-13
In Situ Parameters																						
Conductivity µS/cm	...	2081	1483	732	810	3651	2317	916	893	934	930	907	913	883	1040	887	843	1325	1220	895	853	941
Oxygen Dissolved %	...	51.7	39.7	50.4	36	39.5	30.2	31.6	6.5	0.8	0.4	4.7	2.7	2.4	29.3		28.5	3.7		2.3	1.1	5.4
Oxygen Dissolved	...	5.95	4.37	5.44	4.03	4.02	3.35	3.48	0.73	0.09	0.04	0.53	0.31	0.27	3.14	157	3.16	0.37	0.1	0.27	0.13	0.61
pH (unitless)	...	8.57	7.74	9.33	10.5	6.81	7.38	7.46	7.56	7.61	6.57	7.74	7.57	7.32	7.83	7.62	7.93	7.75	6.16	7.75	7.65	7.03
Redox Potential mV	...		-28.2	-172	-17.8	-29.7	-49.7	-67	-57.8	-82.3	-1.7	-68.6	-44.5	-61.5			-287		-54	-100	-114	36.9
Salinity ppt	...													0.602			0.64		0.6		0.62	0.66
Specific Conductivity µS/cm	...	1434	2034	976	1134	4442	3185	1263	1245	1288	1260	1290	1278	1234	1379	1262	1273	928		1281	1241	1310
Temperature °C	...		10.8	11.7	10	12.8	10.7	10.6	10.3	10.6	11.3	9.44	10.1	10.1	12.1	9.43	7.29	9.24	12.2	9.26	8.63	10.2
Total Dissolved Solids	...										819	839	831	803			927		779	832	807	852
Turbidity NTU	...														0	-5.8	1.6	0	3.7	2	18.6	0
Physical Tests																						
Acidity to pH 8.3 (as CaCO3)	1	9.2	4.6	<1	<1	24	41.1	5.3	5.8	2	5.3	4.6	5.8	4.3	6.1				4.8		6.3	<1
Alkalinity (Total as CaCO3)	1 to 2	293	254	59.8	<1	469	688	292	281	277	275	275	276	286	287	272	282	272	284	279	275	257
Bicarbonate Alkalinity	1 to 2	293	254	23.4	<1	469	688	292	281	277	275	275	276	286	287		282	272		279	275	257
Carbonate Alkalinity	1 to 2	<2	<2	36.4	<1	<1	<1	<2	<2	<2	<2	<1	<2	<2	<2		<2	<1		<1	<2	<2
Color TCU	5	<5	<5	<5	<5	23	63.7	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	1080	1120	243	292	1090		586	588	647	633	596	599	613	619	609	596	594	629	607	617	558
Hydroxide Alkalinity	1 to 2	<2	<2	<1	<1	<1	<1	<2	<2	<2	<2	<1	<2	<2	<2		<2	<1		<1	<2	<2
pH (unitless)	0.01 to 0.1	8.04	8.14	9.14	9.38	7.57	7.63	8.04	8.04	8.21	8.1	8.11	8.05	8.1	8.1	8.12	8.19	8.1	8.08	8.33	8.11	8.3
Specific Conductivity µS/cm	2	2150	1990	920	1030	4120	3190	1250	1240	1250	1270	1280	1270	1280	1320	1230	1210	1200	1220	1240	1250	1150
Total Dissolved Solids	1 to 2	1630	1640	661	768	4180	2970	881	881	896	944	891	922	928	974	916	879	913	984	926	854	853
Total Suspended Solids	3	338	86.5	144	24.3	151	39.3	1280	<3	4.7	8	4	<3	<3	<3	3	3.3	<3	11.9	10	<5	<3
Turbidity NTU	0.1	191	53.7	160	19.2	89.4	25.3	128	2.24	1.23	0.58	1.04	0.75	0.8	0.65	1.29	3.72	0.66	2.83	1.85	2.07	0.67
Dissolved Anions																						
Bromide	0.05 to 2.495	<2.5	<0.5	<0.05	<0.5	<2.5	<5	<0.05	<0.05	<0.5	<0.5	<0.5	<2.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	0.5 to 1	62	41.6	3.38	<5	152	104	8.29	7.25	7.3	9.1	8.1	9.9	11.1	10.7	8.3	8.5	8.7	9.6	9.1	8.4	8.9
Fluoride	0.02 to 0.4	<1	<0.2		<0.2	1.7	8.1	0.183	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.38	0.22	0.22	0.21	<0.2	<0.2	0.35	0.2
Sulphate	0.5 to 1	763	835	367	484	2020	1260	415	414	446	458	459	457	465	496	463	428	448	460	466	451	419
Nutrients																						
Ammonia (Total)	0.005 to 0.05	0.108	<0.01	0.122	0.265	0.603	0.064		<0.02	0.015	<0.005	0.0087	0.0075	<0.005	0.0065	0.0153	0.0315	0.0698	0.0171	0.0127	0.0182	0.0473
Nitrate (as N)	0.005 to 0.1	35.3	25.7	<0.005	0.063	0.35	<0.5	<0.005	<0.005	<0.05	<0.05	<0.05	<0.05	<0.05	0.078	0.074	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrite (as N)	0.001 to 0.02	0.185	0.022	<0.001	<0.01	0.132	0.23	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	0.012	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen (Dissolved)	0.05 to 0.1													0.15	0.17	0.07	0.05	0.26		0.132	0.093	
Nitrogen (Total)	0.0025 to 0.11																					
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.87	<0.5	0.35	0.348	8.41	7.77		0.092	0.087	0.105	0.116	0.134	0.153	0.08	0.146	0.163	0.295	0.146	0.128	0.158	0.173
Orthophosphate (Dissolved)	0.001 to 0.01	0.0421	0.0455	0.0182	0.0033	0.0605	0.0489	0.0175	0.0161		0.0165	0.0145	0.0152	0.0165					0.0161			
Phosphorus - Dissolved	0.002 to 0.02		0.148		0.0352						0.0169			0.0156	0.0152	0.0197	0.0288	0.0219		0.0148	0.0188	0.0275
Phosphorus - Total	0.002 to 0.02	0.0996		0.213		0.337	0.288	0.701	0.0204	0.0214	0.0217	0.0195	0.02	0.0271	0.0188	0.0289	0.0424	0.0305	0.0388	0.0237	0.0273	0.0335
Cyanide																						
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	0.007	<0.005	<0.005	<0.005	0.0352		<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																						
Aluminum	0.001 to 0.025	<0.025	<0.025	0.016	<0.01	<0.05		0.197	<0.01	<0.01	<0.01	<0.01		<0.01	<0.005	<0.003	<0.003	0.0016	<0.005	0.0013	0.0012	0.0024
Antimony	0.0001 to 0.0025	<0.0025	<0.0025	<0.001	<0.001	<0.005		<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.0005	<0.0001	0.00014	0.00019	<0.0005	<0.0001	<0.0001	0.00016
Arsenic	0.0001 to 0.0025	0.0046	0.0062	0.0026	<0.001	<0.005		0.0062	0.0064	0.0066	0.0058	0.0064		0.0057	0.00554	0.00552	0.00591	0.00558	0.00592	0.00565	0.0054	0.00551
Barium	5E-005 to 0.02	0.175	0.062	0.213	0.169	0.058		0.037	0.028	0.029	0.029	0.03		0.028	0.027	0.0275	0.0299	0.031	0.034	0.0281	0.0278	0.0304
Beryllium	0.0001 to 0.005	<0.005	<0.005	<0.002	<0.002	<0.01		<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	<0.001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2													<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.2	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	0.26		<0.1	<0.1	<0.1	<0.1	<0.1		<0.1	<0.1	0.031	0.032	0.042	<0.1	0.031	0.033	0.033
Cadmium	1E-005 to 8.5E-005	<0.000085	0.000119	<0.00085	<0.001	<0.00017		0.000481	<0.000034	0.000055	<0.00015	<0.0002		<0.000034	<0.0003	0.000013	0.000015	0.000033	<0.000017	0.000012	<0.00001	0.000013
Calcium	0.05 to 0.1	135	139	53.2	96.1	177		73.3	73.8	79.3	78	74.8		77.7	76.1	76	73	75.1	77.8	73.9	75.2	70
Chromium	0.0001 to 0.018	<0.005	<0.005	<0.002	<0.002	<0.01		<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	<0.001	0.00013	<0.0001	0.00043	<0.001	0.00027	<0.0001	0.00021
Cobalt	0.0001 to 0.0015	0.0036	<0.0015	<0.0006	<0.0006	0.0192		<0.0006	<0.0006	<0.0006	<0.0006	<0.0006		<0.0006	<0.0003	0.00012	0.00066	0.00018	<0.0003	0.00013	0.00014	0.00043
Copper	0.0002 to 0.006	<0.005	<0.005	<0.002	<0.002	0.093		<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	<0.002	<0.0005	<0.0005	<0.0002	<0.001	<0.0002	<0.0002	<0.0002
Dissolved Cadmium (by saltwater ext	0.00002																					
Iron	0.01 to 0.03	0.041	<0.03	<0.03	<0.03	0.231		0.085	0.074	0.089	0.082	0.088		0.106	0.097	0.136	0.156	0.124	0.134	0.125	0.14	0.079
Lead	5E-005 to 0.0025	<0.0025	<0.0025	<0.001	<0.001	<0.005		<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.0005	<0.00005	<0.00005	<0.00005	<0.0005	0.00008	<0.00005	<0.00005
Lithium	0.0005 to 0.025	<0.025	<0.025	0.013	0.011	<0.05		<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.005	0.00479	0.00503	0.00484	0.0052	0.00496	0.00463	0.00442
Magnesium	0.1	180	188	26.7	12.7	157		97.8	97.9	109	106	99.4		102	104	102	100	98.8	106	103	104	93.1
Manganese	5E-005 to 0.0015	1.04	0.12	0.00335	<0.0006	1.71		0.287	0.268	0.325	0.269	0.287		0.292	0.249	0.327	0.321	0.296	0.317	0.316	0.284	0.271
Mercury	1E-005 to 5E-005	<0.00002	<0.00001	<0.00002	<0.00001	0.000032		<0.00002	<0.00002	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.556	0.593	0.492	0.377	0.231		0.0452	0.0472	0.0551	0.0437	0.0455		0.0458	0.043	0.0388	0.0467	0.0449	0.0513	0.0497	0.0478	0.0529
Nickel	0.0005 to 0.005	0.0235	0.0128	<0.002	<0.002	0.028		<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	<0.001	0.00114	0.00108	0.00098	<0.001	0.00075	0.00157	0.00627
Phosphorus	0.05 to 0.3													<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.05	<0.05	<0.05
Potassium	0.05 to 2	47.5	50.1	29.5	29.2	30.7		17.6	17.7	19.4	19.1	18.1		17.6	17.6	20.2	18.7	16.9	20.5	18.8	18.7	17.2
Selenium	0.0001 to 0.006	0.0317	0.0416	<0.002	<0.002	<0.01		<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	<0.001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001
Silicon	0.05													9.82	9.44	9.88	9.61	9.8	9.86	9.52	9.62	9.33
Silver	1E-005 to 0.0001	<0.0001	<0.0001	<0.00004	<0.00004	<0.0002		0.000086	<0.00004	<0.00004	<0.00004	<0.00004		<0.00004	<0.00002	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	64.2	63.3	72.1	116	280		64.6	64.2	69.1	68.8	66.8		67.6	62.9	69.5	63.5	57.4	67.1	62.3	57.8	55.6
Strontium	0.0001 to 0.005													0.86	0.809	0.922	0.838	0.782	0.888	0.845	0.782	0.767
Sulphur	0.5																			150	146	131
Thallium	1E-005 to 0.001	<0.001	<0.001	<0.0004	<0.0004	<0.002		<0.0004	<0.0004	<0.0004	<0.0004	<0.0004		<0.0004	<0.0002	<0.00001	<0.00001	<0.00001	<0.0002	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0025	<0.0025	<0.001	<0.001	<0.005		<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.02		<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.0077	0.0065	<0.0004	<0.0004	0.0077		0.00284	0.00294	0.00287	0.00266	0.0025		0.00262	0.00261	0.00242	0.00265	0.00263	0.00278	0.00284	0.00271	0.00254
Vanadium	0.001 to 0.03	<0.005	<0.005	<0.002	0.0034	<0.01		<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	0.001 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.01		<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.003	<0.003	<0.001	<0.005	0.0017	<0.001	0.0018
Total Metals																						
Aluminum	0.003 to 0.025	8.22	1.98	19.5	0.712	2.63	0.245	14.3	0.143	0.055	0.019	0.03	<0.005	0.027	0.0068	0.0294	0.0173	0.0092	0.171	0.0785	0.0351	0.0118
Antimony	0.0001 to 0.0025	<0.0025	<0.0025	<0.001	<0.001	<0.005	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.0005	0.00013	0.00014	0.00032	<0.0005	0.00013	0.00011	0.00035
Arsenic	0.0001 to 0.0025	0.0145	0.0094	0.02	0.0018	0.0055	0.0067	0.0269	0.0064	0.0067	0.0054	0.0054	0.0046	0.0054	0.00535	0.00533	0.00552	0.00574	0.00631	0.00536	0.00565	0.00559
Barium	5E-005 to 0.02	0.236	0.082	0.643	0.237	0.147	0.067	0.216	0.029	0.029	0.029	0.031	0.029	0.028	0.029	0.0279	0.0306	0.0323	0.033	0.0287	0.0291	0.0329
Beryllium	0.0001 to 0.005	<0.005	<0.005	<0.002	<0.002	<0.01	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.002	<0.001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2												<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.2	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	0.46	0.25	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.037	0.036	0.054	<0.1	0.035	0.036	0.039
Cadmium	1E-005 to 8.5E-005	0.0006	0.000156	<0.00094	<0.0012	0.00055	<0.0004	0.000626	0.000051	0.000082	<0.0002	<0.0002	<0.0002	<0.000034	<0.0003	0.000644	0.000134	0.000092	0.00018	0.00004	0.000022	0.000046
Calcium	0.05 to 0.1	164	138	98.4	100	241	203	128	71.9	76.3	77.4	75.8	75.8	77.6	76.9	77.5	74	74.1	75.5	72.2	75.3	68.1
Chromium	0.0001 to 0.005	0.0729	0.0205	0.0579	0.0032	0.016	<0.005	0.038	0.0067	<0.002	<0.002	<0.002	<0.001	<0.002	<0.001	0.00048	0.00033	0.0009	0.0015	0.0015	0.00027	0.00042
Cobalt	0.0001 to 0.0015	0.029	0.005	0.0236	0.00114	0.0296	0.0121	0.0166	<0.0006	<0.0006	<0.0006	<0.0006	0.00052	<0.0006	<0.0003	0.00017	0.00018	0.00026	0.00039	0.00026	0.0002	0.00071
Copper	0.0005 to 0.007	0.145	0.0212	0.214	0.0132	0.607	0.363	0.0847	0.0023	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0005	<0.0005	0.00061	0.0023	0.00319	<0.0005	0.00081
Iron	0.01 to 0.03	12.4	3.05	26.8	0.974	3.46	4.36	24.5	0.324	0.168	0.122	0.145	0.096	0.141	0.109	0.181	0.173	0.155	0.416	0.249	0.172	0.067
Lead	5E-005 to 0.0025	<0.0025	<0.0025	0.0054	<0.001	<0.005	<0.0025	0.0049	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.00005	<0.00005	<0.00005	<0.0005	0.000153	<0.00005	<0.00005
Lithium	0.0005 to 0.025	<0.025	<0.025	0.024	0.011	<0.05	<0.025	0.012	<0.01	<0.01	<0.01	<0.01	<0.005	<0.01	<0.005	0.00454	0.00488	0.00508	0.0056	0.00522	0.00469	0.0045
Magnesium	0.1	191	187	63.6	14.7	253	211	114	96.5	104	105	103	100	105	109	102	101	99.4	104	98	103	91.4
Manganese	5E-005 to 0.0015	1.54	0.228	0.902	0.041	2.23	2.99	1.08	0.288	0.349	0.283	0.29	0.25	0.306	0.269	0.343	0.326	0.29	0.326	0.296	0.291	0.278
Mercury	1E-005 to 5E-005	0.000048	<0.00001	<0.00002	<0.00001	0.00028	0.000057	0.000354	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.485	0.598	0.499	0.399	0.279	0.293	0.0456	0.0475	0.0594	0.0469	0.0458	0.0431	0.049	0.0482	0.0408	0.0479	0.0457	0.0551	0.0506	0.0494	0.0566
Nickel	0.0005 to 0.005	0.215	0.0535	0.0947	0.0046	0.055	0.0224	0.0786	0.0042	0.0021	<0.002	<0.002	0.0012	<0.002	<0.001	0.00101	0.00098	0.00206	0.0036	0.00231	0.00198	0.0136
Phosphorus	0.05 to 0.3												<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.05	<0.05	<0.05
Potassium	0.05 to 2	47.7	48.8	34.2	28.4	54.9	25.8	20.2	17.4	18.6	18.9	19	17.8	17.4	18.6	17.4	18.5	16.6	20	18	18.2	17.5
Selenium	0.0001 to 0.006	0.0318	0.0412	<0.002	<0.002	<0.01	<0.005	0.0049	<0.002	<0.002	<0.002	<0.002	<0.001	<0.002	<0.001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001
Silicon	0.05												9.87	9.77	9.7	10.1	9.86	9.98	10.2	9.37	9.68	9.42
Silver	1E-005 to 0.0001	<0.0001	<0.0001	0.00015	<0.00004	0.0008	0.00011	0.000234	<0.00004	<0.00004	<0.00004	<0.00004	<0.00002	<0.00004	<0.00002	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	63	61.8	73.4	113	475	279	65.8	62.7	66.3	68	69.4	67.6	67	65.3	71.1	63.3	56.5	65.6	60.1	59.5	56.6
Strontium	0.0001 to 0.005												0.847	0.852	0.848	0.891	0.834	0.789	0.87	0.861	0.807	0.795
Sulphur	0.5																			147	151	130
Thallium	1E-005 to 0.001	<0.001	<0.001	<0.0004	<0.0004	<0.002	<0.001	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0002	<0.0004	<0.0002	<0.00001	<0.00001	<0.00001	<0.0002	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0025	<0.0025	0.0015	0.0011	<0.005	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001
Titanium	0.01	0.271	0.096	1.19	0.047	0.121	0.022	0.832	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	0.014	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extracti	0.00002																					
Uranium	1E-005 to 0.001	0.0077	0.0066	0.00149	<0.0004	0.0094	0.007	0.00367	0.00301	0.00294	0.00283	0.00267	0.00252	0.00279	0.00252	0.00236	0.00266	0.00254	0.00277	0.00277	0.00277	0.00253
Vanadium	0.001 to 0.03	0.0293	0.0107	0.0827	0.0069	0.017	0.0056	0.0605	<0.002	<0.002	<0.002	<0.002	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	0.003 to 0.006	0.0194	0.0058	0.0489	<0.005	0.043	<0.005	0.0447	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.003	<0.003	<0.003	<0.005	<0.003	0.0045	0.0038
Organics																						
Carbon Organic (Dissolved)	0.5 to 5	3.63	2.67	2.93	2.51	114		2.51	2.54	2.38	2.42	2.57	2.68	1.9	2.64	2.49	2.44	4.4	2.64	2.69	2.95	2.47
Carbon Organic (Total)	0.5 to 5													1.97	2.53	2.38	2.41	3.72	2.56	2.74	2.73	2.37
Nitrogen Organic (Dissolved)	0.05 to 0.26													0.147	0.073	<0.05	<0.05	0.19		0.119	0.075	
Nitrogen Organic (Total)	0.05 to 0.3													0.157	0.073	0.131	0.131	0.226		0.115	0.14	
ALS LAB ID		L613954	L894378	L655020	L894378	L653846	L678833	L655304	L678594	L893847	L924086	L957406	L990458	L1007006	L1036787	L1081224	L1113319	L1159542	L1201474	L1246516	L1275064	L1306577

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D2.2 - GROUNDWATER QUALITY DATA

Site ID							AJGW04-D		AJGW05-S				AJGW06-D										
Site ID	AJGW03-DA	AJGW03-DA	AJGW03-DA	AJGW03-DA	AJGW03-DA	AJGW03-DA	AJGW04-DA	AJGW04-DA	AJGW05-SA	AJGW05-SA	AJGW05-SA	AJGW05-SA	AJGW06-DA	AJGW06-DA	AJGW06-DA	AJGW06-DA	AJGW06-DA	AJGW06-DA	AJGW06-DA	AJGW06-DA	AJGW06-DA	AJGW06-DA	AJGW06-D
Analytes	Aug-13	Nov-13	Mar-14	May-14	Jun-14	Sep-14	Sep-08	Nov-08	Apr-08	Sep-08	Nov-08	Jun-10	Apr-08	Jul-08	Sep-08	Nov-08	May-10	Aug-10	Nov-10	Mar-11	May-11	Jul-11	Dec-12
In Situ Parameters																							
Conductivity µS/cm	1113	1.22	1126	902	852	872	1573	1247		2007	1217	1701		480	671	996	530	521	497	530	545	583	447000
Oxygen Dissolved %	1.6	10.6	2.7	-1.3	27	7.5	43.2	14.3		43.9	16.1	30.4		17.2		10.5	12.7	1	6.8	9	11	8.4	1.2
Oxygen Dissolved	0.18	1.22	0.32	-0.14	3.04	0.84	4.6	1.78		5.05	1.91	3.35		1.94		1.25	1.38	0.11	0.79	1.02	1.17	0.92	0.15
pH (unitless)	7.54	7.74	7.72	6.49	7.68	7.72	7.68	8.6		7.97	8.12	7.94		8.66	8.22	8.64	7.97	7.12	7.55	7.99	7.14	8.14	8.04
Redox Potential mV	79.5	101	-77.1	-55.3	-59.9	-3.8	-64.4	-91.5		-71.2	-75.6	-79.6		-139	-93.3	-93.8		-66	151	-33.2	-16.4		177
Salinity ppt	0.77	0.63	0.63	0.63	0.6	0.62															0.36		0.33
Specific Conductivity µS/cm	1517	0.851	879	1259	1197	1239	2246	1985		2854	1807	2351		673		1476	721	698	723	753	736	796	677
Temperature °C	11	9.01	9.16	10.1	9.91	9.51	9.28	5.63		9.45	7.99	10.7		9.95	9.88	7.98	11.1	11.7	8.65	9.49	11.3	11	7.07
Total Dissolved Solids	987	810	820	819	778	805												453	470	490			440
Turbidity NTU	1.2	1.2	2.1	-2.1	-2.3	0.9															20.8	0	-1.8
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)				3			11	4	4.4	7.3	7.5	5	<1	<1	2.2	1.1	2	2.5	1.7	3.9	1.5	4.8	2.7
Alkalinity (Total as CaCO3)	293	289	279	288	294	278	523	384	82.1	141	155	174	84.9	79.9	91.8	94.9	109	109	107	123	126	125	112
Bicarbonate Alkalinity	293	289	279	288	294	278	523	384	82.1	141	155	174	84.9	72.2	91.8	94.9	109	109	107	123	126	125	112
Carbonate Alkalinity	<2	<2	<2	<2	<2	<2	<1	<2	<2	<2	<2	<2	<1	7.7	<2	<2	<2	<2	<1	<2	<2	<2	<2
Color TCU	<5						11.4	11	21.1	6.9	6.5	6	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hardness as CaCO3 (Dissolved)	607	615	625	602	618	610	435	345	1080	990	976	963	150	129	152	149	160	173	166	181	194	191	176
Hydroxide Alkalinity	<2	<2	<2	<2	<2	<2	<1	<2	<2	<2	<2	<2	<1	<1	<2	<2	<2	<2	<1	<2	<2	<2	<2
pH (unitless)	8.23	8.27	8.27	8.14	8.23	8.26	7.95	8	7.84	7.71	7.62	8.07	8.48	8.55	8.13	8.14	8.2	8.17	8.21	7.94	8.14	8.03	8.24
Specific Conductivity µS/cm	1300	1250	1260	1230	1240	1280	2300	2190	2650	2940	2390	2410	685	665	690	676	686	695	700	741	761	785	727
Total Dissolved Solids	940	906	907	943	960	959	1680	1610	2220	2340	2020	2060	447	434	456	449	472	468	464	497	517	521	495
Total Suspended Solids	<3			<3	<3	<3	73.1	93.3	105	27.1	828	218	114	18.8	<3	79	13.5	17	12.5	<3	4.6	<3	<3
Turbidity NTU	0.96			0.93	1.48	0.76	93.4		91.4	27		110	41.5	15.5	1.74		4.96	2.72	7.89	2.7	1.91	0.61	0.62
Dissolved Anions																							
Bromide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.5	<2.5	<0.5	<5	<2.5	<1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.05	<1.2	<0.25	<0.25	<0.5
Chloride	9.2	9.2	8.9	9.4	11	9.7	41	40	31	<50	30	20	1.51	1.55	1.56	1.39	1.72	<5	1.96	<5	4.1	3.5	<5
Fluoride	0.31	0.22	0.33	<0.2	0.22	0.229	57	<1	0.37	<2	<1	<0.4	0.369	0.38	0.328	0.326	0.303	0.26	0.306	<0.2	0.24	0.4	0.26
Sulphate	464	462	462	466	468	471	642	751	1450	1570	1260	1290	241	235	247	234	239	252	237	249	259	278	265
Nutrients																							
Ammonia (Total)	0.0068	0.0166	0.0091	0.0083	0.0165	0.0071	0.03	0.0652	<0.02	0.029	<0.005	0.156	<0.02		0.031	<0.005	<0.02	0.0123	0.022	<0.005	<0.005	<0.005	<0.005
Nitrate (as N)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.25	0.675	<0.5	<0.25	<0.1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.05	<0.025	<0.025	<0.05
Nitrite (as N)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.111	1.02	0.111	0.14	0.959	<0.02	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.01	<0.005	0.006	0.012
Nitrogen (Dissolved)																					0.12	0.13	0.143
Nitrogen (Total)																							
Nitrogen Kjeldahl (Total)	0.128	0.189	0.138	0.136	0.168	0.133	0.637		1.34	0.244		0.38	0.175		0.094		0.125	0.459	0.084	0.129	0.15	0.114	0.081
Orthophosphate (Dissolved)		0.017	0.0181	0.0159	0.0188	0.0158	0.267	0.519	<0.001	<0.001	0.0054	0.0339	0.0136	0.0236	0.0105	0.0109	0.005	0.0076	0.0041	<0.001			
Phosphorus - Dissolved	0.0175	0.0164	0.018	0.0183	0.0188	0.015		0.497			0.0108	0.372				0.0189		0.0076			0.0046	0.0111	0.0096
Phosphorus - Total	0.0232	0.0236	0.0252	0.0239	0.0295	0.0191	0.59	0.67	0.0993	0.0549	1.08		0.0949	0.0523	0.0178	0.09	0.0249	0.0129	0.0329	0.023	0.0086	0.0156	0.0143
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005		<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	0.0074		<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005		<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																							
Aluminum	0.0011	0.0016	0.0011	0.0022	0.0023	0.0016	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.0125	0.0399	<0.005	0.0056	<0.005	<0.005	<0.005	<0.01	<0.01	0.0056	0.0026
Antimony	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.00131	0.0007	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.0001
Arsenic	0.00532	0.00574	0.00545	0.00557	0.00577	0.00569	0.0085	0.0221	<0.0025	<0.0025	<0.0025	<0.0025	0.0159	0.0271	0.0334	0.025	0.0241	0.0223	0.0213	0.0215	0.0199	0.0202	0.0141
Barium	0.0253	0.0276	0.0282	0.0279	0.0282	0.0281	0.173	0.147	0.138	0.088	0.077	0.078	0.033	0.021	0.021	0.032	<0.02	0.024	0.023	<0.02	<0.02	0.024	0.0228
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005														<0.2	<0.2	<0.2	<0.0005
Boron	0.026	0.033	0.032	0.031	0.035	0.029	0.13	0.11	<0.1	0.13	0.11	0.11	0.21	0.2	0.22	0.22	0.23	0.24	0.25	0.24	0.25	0.25	0.221
Cadmium	<0.00001	<0.00002	<0.00002	<0.00002	0.000018	0.000021	<0.000085	0.000135	<0.000085	<0.000085	<0.000085	<0.000085	<0.000017	<0.0002	<0.000017	<0.00041	<0.0002	<0.00015	<0.00015	<0.00018	<0.000034	<0.0002	0.000013
Calcium	78.9	75.1	76.5	71.6	77.6	75.7	96.8	77.2	251	205	196	186	35.7	29.9	34.8	34	37.1	39.7	37.7	41.3	44	44.1	40.7
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0013	<0.001	<0.001	<0.001	0.0011	<0.001	0.0017	<0.002	<0.002	<0.001	<0.0001
Cobalt	0.00011	0.00014	0.00012	0.00013	0.00015	0.00012	<0.0015	<0.0015	<0.0015	0.0083	0.0043	0.0033	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0006	<0.0006	<0.0003	<0.0001
Copper	<0.0002	<0.0002	<0.0002	0.00026	0.00034	<0.0002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.002	<0.002	<0.003	<0.0002
Dissolved Cadmium (by saltwater ext			<0.00002																				
Iron	0.119	0.119	0.107	0.106	0.114	0.129	<0.03	<0.03	<0.03	0.191	0.063	<0.03	<0.03	<0.03	<0.03	0.033	0.045	0.036	0.04	0.043	0.039	0.064	0.062
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.00005
Lithium	0.00377	0.00516	0.00447	0.00455	0.0051	0.00502	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	0.00308
Magnesium	99.6	104	105	103	103	102	46.9	36.9	109	116	118	121	14.7	13.1	15.9	15.6	16.4	18.1	17.5	19	20.4	19.6	18.1
Manganese	0.284	0.306	0.292	0.303	0.283	0.291		0.656	0.242	3.87	2.19	1.5	0.0117	0.0319	0.0758	0.107	0.0704	0.0743	0.0822	0.0592	0.072	0.103	0.0832
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.047	0.0492	0.0464	0.0465	0.0505	0.0464	0.0152	0.0376	0.0703	0.0726	0.0862	0.102	0.0494	0.0511	0.0468	0.0478	0.0422	0.0385	0.04	0.0409	0.0394	0.0393	0.0426
Nickel	0.00058	0.00099	0.00068	0.00069	0.00122	0.00129	<0.005	<0.005	0.0565	0.0435	0.016	0.0189	<0.001	<0.001	<0.001	<0.001	0.0011	<0.001	0.0013	<0.002	<0.002	<0.001	0.00076
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05														<0.3	<0.3	<0.3	<0.05
Potassium	18.4	18.5	18.3	17.1	19.1	18.4	42.4	39.3	26	36.6	29.8	32.4	2.1	2	<2	<2	<2	<2	<2	<2	<2	<2	1.36
Selenium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0056	0.004	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.0001
Silicon	9.35	9.6	9.68	9.47	9.66	10.1														5.15	5.14	5.08	4.97
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00004	<0.00004	<0.00002	<0.00001
Sodium	62.6	63.3	58.9	61.5	60.8	64.6	379	341	217	344	218	208	91.6	90	87.2	83.7	91.2	97	97.3	100	102	95.6	93.3
Strontium	0.789	0.708	0.798	0.826	0.895	0.852														1.03	1.11	1.03	1.06
Sulphur	145	142	152	150	149	156																	89.5
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0004	<0.0002	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.00271	0.00283	0.00269	0.00271	0.00301	0.0028	<0.001	0.0021	0.0017	0.0057	0.0046	0.0037	0.00414	0.00257	0.00191	0.00188	0.00106	0.00104	0.00096	0.00108	0.00104	0.00092	0.000514
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0012	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001
Zinc	0.0016	0.0018	0.0018	<0.001	0.0064	0.0018	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0083	<0.005	<0.005	<0.005	<0.001
Total Metals																							
Aluminum	0.021	0.013	0.0129	0.0182	0.0513	0.0218	1.6	0.678	3.43	1.68	17.3	7.27	1.77	0.24	0.0236	1.02	0.199	0.179	0.0603	0.011	0.268	0.0073	0.01
Antimony	0.00011	0.00016	<0.0001	<0.0001	0.00018	0.00016	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.0012	0.0007	<0.0005	0.00105	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	0.00013
Arsenic	0.00528	0.00576	0.00563	0.00555	0.00577	0.00579	0.012	0.0226	0.0029	0.0035	0.0096	0.0061	0.0154	0.029	0.036	0.024	0.0231	0.0205	0.0215	0.0208	0.0194	0.0187	0.0147
Barium	0.0249	0.0274	0.0275	0.0262	0.0288	0.0282	0.195	0.159	0.223	0.112	0.439	0.211	0.098	0.032	0.022	0.065	0.027	0.027	0.02	<0.02	0.02	0.024	0.023
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005														<0.2	<0.2	<0.2	<0.0005
Boron	0.029	0.042	0.034	0.038	0.038	0.034	0.13	0.11	<0.1	0.12	0.12	0.12	0.2	0.2	0.22	0.22	0.23	0.24	0.24	0.24	0.26	0.26	0.232
Cadmium	0.000018	<0.00004	<0.00003	<0.00004	0.00005	0.000049	0.000162	0.000197	0.000136	0.000159	0.00123	0.00055	0.000046	<0.0003	0.000041	<0.00041	<0.0002	<0.0002	<0.00016	<0.00024	0.000051	<0.0003	0.000026
Calcium	77.1	74.6	76	71.1	74.9	73.9	96.8	82.6	267	198	224	194	38.6	31.5	35.3	41.8	37.7	39.7	36.6	40.9	45.4	43.3	41.4
Chromium	0.00037	0.00021	0.00012	0.00027	0.00067	0.00028	0.02	0.0604	0.017	0.0052	0.0648	0.0257	0.0029	0.0012	0.0066	0.0922	0.0045	0.0018	0.0027	<0.002	<0.002	<0.001	0.00022
Cobalt	0.00014	0.00017	0.00016	0.00015	0.0002	0.00018	0.0027	<0.0015	0.0056	0.0104	0.0294	0.0161	0.00128	0.00067	0.00039	0.00184	0.00036	<0.0003	0.00031	0.00398	<0.0006	<0.0003	<0.0001
Copper	<0.0005	<0.0005	0.00055	0.0009	0.00238	0.00081	0.0124	0.0052	0.0406	0.0217	0.213	0.0913	0.0166	0.0011	<0.001	0.0119	<0.02	<0.004	<0.001	<0.002	<0.002	<0.002	0.00055
Iron	0.151	0.137	0.136	0.145	0.207	0.176	2.45	1.26	6.41	2.97	27.7	11.1	2.58	0.461	0.08	1.65	0.26	0.216	0.122	0.065	0.191	0.092	0.103
Lead	<0.00005	<0.00005	<0.00005	<0.00005	0.000057	<0.00005	<0.0025	<0.0025	<0.0025	<0.0025	0.0064	0.0028	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.00005
Lithium	0.00341	0.00523	0.0052	0.00487	0.00477	0.00516	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	0.00366
Magnesium	99.3	105	101	98.7	102	101	48.6	37.4	107	115	134	129	15.2	13.6	16.3	16.4	16.2	17.8	17.5	18.7	20.8	19.7	18.6
Manganese	0.298	0.313	0.303	0.299	0.292	0.303	2.94	0.702	0.357	3.84	2.8	1.93	0.0652	0.051	0.0773	0.157	0.0984	0.0922	0.0612	0.0604	0.0761	0.107	0.096
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	0.000052	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0461	0.0516	0.0491	0.049	0.0503	0.0498	0.0394	0.0459	0.0591	0.0727	0.0948	0.101	0.0463	0.0509	0.0488	0.0487	0.0444	0.0426	0.0395	0.0425	0.0437	0.0425	0.0443
Nickel	0.0008	0.00121	0.00084	0.00088	0.00176	0.00124	0.0239	0.0308	0.0784	0.0506	0.0921	0.0579	0.0029	0.0013	0.0039	0.0472	0.0037	0.0017	0.0024	<0.002	<0.002	<0.001	0.0011
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05														<0.3	<0.3	<0.3	<0.05
Potassium	18.3	19.2	18.5	17.3	18.6	18.2	40.3	37.5	25.7	34	30.3	33.9	2.3	2.1	<2	<2	<2	<2	<2	<2	<2	<2	1.41
Selenium	0.00011	<0.0001	0.00013	<0.0001	<0.0001	<0.0001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0047	0.0046	0.0011	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.0001
Silicon	9.29	9.75	9.74	9.36	9.83	10.1														5.13	6.13	5.07	5.03
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0001	<0.0001	<0.0001	<0.0001	0.00015	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	0.000087	<0.00004	<0.00002	<0.00001
Sodium	61.3	64.2	63.2	63.1	62.3	64.2	368	333	222	325	204	216	86.3	91	89.4	82.4	89.6	95.2	97.9	99.1	103	96	95.1
Strontium	0.771	0.717	0.838	0.83	0.85	0.898														1.02	1.13	1.05	1.06
Sulphur	149	151	157	154	155	157																	91.5
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0004	<0.0002	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0025	<0.0025	0.0035	<0.0025	<0.0025	<0.0025	<0.0005	<0.0005	<0.0005	0.00069	0.00093	0.00095	<0.0005	<0.001	<0.001	<0.0005	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.078	0.036	0.238	0.134	1.22	0.545	0.116	0.017	<0.01	0.053	<0.01	<0.01	<0.01	<0.01	0.011	<0.01	<0.01
Total Cadmium (by saltwater extracti			<0.00002																				
Uranium	0.00282	0.00287	0.00271	0.00273	0.00283	0.00285	<0.001	0.0021	0.0021	0.0058	0.0054	0.0041	0.00407	0.0028	0.00198	0.00213	0.00121	0.0012	0.00104	0.00114	0.00121	0.00087	0.00052
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0066	<0.005	0.0161	0.0093	0.0907	0.039	0.0095	0.0029	0.0011	0.0042	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001
Zinc	<0.003	<0.003	<0.003	<0.003	0.0087	0.0036	<0.005	<0.005	0.0142	<0.005	0.0612	0.0243	<0.005	<0.005	<0.005	<0.005	<0.005	0.0099	0.007	<0.005	<0.005	<0.005	<0.003
Organics																							
Carbon Organic (Dissolved)	2.81	2.39					123	14.1	10.3	26.4	9.22	8.88	3.73	2.75	4.12	2.91	2.66	2.66	4.19	4.6	4.14	2.87	2.94
Carbon Organic (Total)	2.41	2.18	2.16	2.37	2.18	2.26															3.43	2.79	2.54
Nitrogen Organic (Dissolved)																					0.12	0.123	0.128
Nitrogen Organic (Total)																					0.15	0.113	0.081
ALS LAB ID	L1346553	L1392959	L1430651	L1452371	L1470495	L1517413	L678833	L710078	L623639	L678833	L710078	L894378	L623639	L655304	L679955	L710078	L892818	L924086	L957406	L990459	L1007395	L1036787	L1249108

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D2.2 - GROUNDWATER QUALITY DATA

Site ID																			AJGW07-D				
Site ID	AJGW06-D	AJGW06-D	AJGW06-D	AJGW06-D	AJGW06-D	AJGW06-D	AJGW06-D	AJGW06-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D
Analytes	Mar-13	May-13	Aug-13	Nov-13	Mar-14	May-14	Jun-14	Sep-14	Apr-08	Jul-08	Sep-08	Nov-08	Jun-10	Aug-10	Nov-10	Mar-11	May-11	Jul-11	Oct-11	Feb-12	Jun-12	Aug-12	Dec-12
In Situ Parameters																							
Conductivity µS/cm	448	567	613	0.681	706	515	522	535		733		1052	688	659	629	626	615	689	864	631	975	887	605
Oxygen Dissolved %	14.5	3.9	2.3	2.3	5.6	3.7	4.9			56.4		20.7	7.5	1.6	32.2	10	2.6		1.6	3.4	21.9		4.4
Oxygen Dissolved	1.71	0.45	0.25	0.28	0.65	0.42	0.59			5.92		2.36	0.79	0.18	3.6	1.11	0.29		0.18	0.39	2	2.12	0.48
pH (unitless)	8.18	8.01	7.97	8.11	8.07	8.22	8.06	8.01		7.68	7.58	8.34	7.59	7.24	7.81	7.62	7.68	8.16	7.92	8.04	7.98	7.89	7.94
Redox Potential mV	-91.3	-178	52.2	0.443	-89.9	-103	-141	-134		-79.1	-60.4	-83.7	-97.5	-130	-113	-71.6	144			-294		-165	-232
Salinity ppt	0.34	0.4	0.4	0.33	0.35	0.37	0.36	0.37									0.42			0.45		0.4	0.41
Specific Conductivity µS/cm	688	815	818	0.438	481	748	744	790		966	911	1493	903	886	902	868	841	961	875	911	729		847
Temperature °C	6.68	9.02	11.9	6.21	8.44	8.74	9.35	10		12.4	10.6	9.58	12.5	11.6	9.19	10.4	10.9	10.3	9.98	8.91	11.4	14.8	10.5
Total Dissolved Solids	446	530	532	-140000	459	486	483	487						757	586	575	546			592		568	544
Turbidity NTU	113	0	1	1.3	1.6	6.2	1.5	2									2.5		-1.4	2	0	0	-1
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)	3.1								4.2	2	3.8	3.9	1.8	4.2	3.9	5.7	4.1	1.8	2			2.8	
Alkalinity (Total as CaCO3)	159	115	122	117	106	108	112	113	217	208	214	224	228	218	211	227	230	220	232	225	219	218	222
Bicarbonate Alkalinity	159	115	122	117	106	108	112	113	217	208	214	224	228	218	211	227	230	220	232	225	219		222
Carbonate Alkalinity	<2	<2	<2	<2	<2	<1	<1	<1	<2	<2	<2	<2	<2	<2	<1	<2	<2	<2	<2	<2	<1		<2
Color TCU	<5	<5	<5						<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hardness as CaCO3 (Dissolved)	177	183	178	172	177	181	179	172	449	426	443	423	416	436	408	407	413	415	413	410	398	374	403
Hydroxide Alkalinity	<2	<2	<2	<2	<2	<1	<1	<1	<2	<2	<2	<2	<2	<2	<1	<2	<2	<2	<2	<2	<1		<2
pH (unitless)	8.21	8.21	8.1	8.17	8.25	7.88	8.14	8.18	8.09	8.18	8.1	7.87	8.19	8.12	8.1	8.01	8.08	8.2	8.27	8.22	8.07	8.18	8.13
Specific Conductivity µS/cm	727	736	748	731	728	735	739	756	935	918	910	919	857	888	890	859	865	899	910	908	855	861	835
Total Dissolved Solids	476	486	518	495	509	486	500	508	641	653	645	641	623	641	612	609	611	645	587	661	611	619	597
Total Suspended Solids	<3	<3	<3			<3	<3	<3	79.5	7.3	<3	71	6	4	<3	<3	<3	<3	<3	3.3	<3	<3	<3
Turbidity NTU	0.39	0.26	0.37			0.31	0.44	0.53	84	7.21	3.14		4.6	6.44	8.67	3.86	7.16	10.5	22.1	8.11	5.57	8.24	5.31
Dissolved Anions																							
Bromide	<0.05	<0.5	<0.25	<0.25	<0.5	<0.05	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.25		<0.5	<1.3	<0.25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	2.13	<5	<2.5	3.3	<5	2.51	2.67	<5	5.85	5.94	5.7	5.86	4.3		<5	6.8	5.8	5.6	<5	5.3	5.2	13.8	<5
Fluoride	0.309	0.25	0.34	0.28	0.45	0.299	0.3	0.041	0.21	0.167	0.174	0.151	0.16		<0.2	<0.2	0.15	0.25	<0.2	<0.2	<0.2	2.67	<0.2
Sulphate	258	270	265	278	274	258	260	277	288	289	283	273	258		264	251	262	291	274	297	269	274	258
Nutrients																							
Ammonia (Total)	<0.005	<0.005	<0.005	0.0105	<0.005	<0.005	<0.005	<0.005	0.03		<0.02	0.0131	<0.02	<0.005	<0.005	<0.005	<0.005	<0.005	0.0139	0.019	0.0064	0.0072	0.0067
Nitrate (as N)	<0.005	<0.05	<0.025	<0.025	<0.05	<0.005	0.0102	<0.05	0.0724	0.0264	0.0413	<0.005	<0.025		<0.05	<0.05	<0.025	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrite (as N)	<0.001	<0.01	<0.005	<0.005	<0.01	<0.001	<0.001	<0.01	<0.001	0.0021	<0.001	0.0012	<0.005		<0.01	<0.01	<0.005	<0.01	0.014	<0.01	<0.01	0.01	0.015
Nitrogen (Dissolved)	0.06																0.11	0.11	0.14	0.05	1.8		0.07
Nitrogen (Total)																							
Nitrogen Kjeldahl (Total)	0.082	0.085	0.082	0.087	0.085	0.075	0.109	0.117	0.159		<0.05		<0.05	<0.05	<0.05	0.065	0.091	0.11	0.153	0.121	0.082	0.066	0.077
Orthophosphate (Dissolved)				0.0076	0.0079	0.0093	0.0093	0.0103	0.0075	0.005	0.0029	<0.001	0.0015	0.0012	0.0021	0.0017	<0.001	<0.001	0.0026			<0.001	
Phosphorus - Dissolved	0.0082	0.0101	0.0113	0.0094	0.0095	0.0087	0.0107	0.0115				<0.002		0.0025			0.0022	<0.002	0.0036	0.0141	0.0047		0.0053
Phosphorus - Total	0.0109		0.0124	0.0119	0.0116	0.0106	0.0129	0.0136	0.0909	0.0189	0.0085	0.11	0.0168	0.0108	0.0127	0.0095	0.0129	0.0108	0.0378	0.0447	0.035	0.0237	0.0228
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																							
Aluminum	0.0021	0.0019	0.0023	0.002	0.0013	0.0023	0.0015	0.0018	<0.01	<0.01	<0.005	<0.005	<0.01	<0.005	<0.01		<0.01	<0.005	<0.003	<0.003	0.0012	0.0012	<0.001
Antimony	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.0005	<0.001		<0.001	<0.0005	0.00014	0.00025	0.00021	<0.0001	0.00019
Arsenic	0.0176	0.0152	0.0161	0.0148	0.0152	0.0153	0.0152	0.0142	0.0016	0.0021	0.00193	0.00114	<0.001	0.00129	0.0013		0.0013	0.0012	0.00047	0.00129	0.00117	0.00071	0.00121
Barium	0.0184	0.0201	0.0201	0.02	0.0179	0.0175	0.019	0.0201	0.05	0.051	0.037	0.044	0.036	0.037	0.038		0.033	0.034	0.0433	0.0509	0.0441	0.0403	0.0405
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.002	<0.002	<0.001	<0.001	<0.002	<0.001	<0.002		<0.002	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005									<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.217	0.209	0.184	0.206	0.186	0.227	0.213	0.217	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1	<0.1	0.092	0.108	0.095	0.079	0.095
Cadmium	<0.00001	<0.00001	0.000013	<0.00001	<0.00002	0.000011	<0.00005	<0.00001	<0.000034	<0.000034	<0.000017	<0.00031	<0.0004	<0.00025	<0.000034		<0.000034	<0.000017	<0.000015	<0.00003	<0.00005	<0.00005	0.000015
Calcium	40.6	42.1	41.2	40.1	41.6	41.5	41.1	40	100	92.3	97.7	92.4	90.5	94.2	88.8		89.6	90.2	86.1	86.6	83.3		84.1
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.002	<0.002	<0.001	<0.001	<0.002	<0.001	<0.002		<0.002	<0.001	0.00014	0.00023	0.00015	<0.0001	<0.0001
Cobalt	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0006	0.00076	<0.0003	<0.0003	<0.0006	<0.0003	<0.0006		<0.0006	<0.0003	<0.0001	0.00013	0.00018	<0.0001	0.00011
Copper	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.002	<0.002	<0.001	<0.001	<0.002	<0.001	<0.002		<0.002	<0.001	<0.0005	<0.0005	0.00028	0.00022	<0.0002
Dissolved Cadmium (by saltwater ext					<0.00002		<0.00002																
Iron	0.07	0.066	0.059	0.083	0.066	0.064	0.075	0.081	0.094	0.229	0.219	0.787	0.339	0.581	0.328		0.613	0.835	0.841	0.42	0.545	1.19	0.612
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.0005	<0.001		<0.001	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.00324	0.00294	0.00287	0.00309	0.00316	0.00277	0.00297	0.00297	<0.01	<0.01	0.0056	0.0053	<0.01	<0.005	<0.01		<0.01	<0.005	0.00525	0.00598	0.0057	0.0045	0.00544
Magnesium	18.3	18.8	18.2	17.4	17.8	18.7	18.6	17.4	48.1	47.6	48.2	46.8	46.1	48.8	45.2		45.9	46.1	48	47.1	46.1		46.9
Manganese	0.08	0.0904	0.101	0.0971	0.0809	0.0852	0.0978	0.102	0.0874	0.209	0.0931	0.138	0.0867	0.0979	0.0839		0.079	0.104	0.159	0.19	0.127	0.144	0.107
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0413	0.0421	0.0431	0.0427	0.0398	0.0411	0.0407	0.0405	0.11	0.0794	0.0722	0.0682	0.0797	0.0667	0.0715		0.0693	0.0718	0.0537	0.0746	0.0771	0.0617	0.0772
Nickel	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0049	0.0048	0.0031	0.0028	0.0042	0.0015	<0.002		<0.002	<0.001	<0.0005	0.00095	0.00218	0.001	0.00091
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05									<0.3	<0.3	<0.3	<0.3	<0.3		<0.05
Potassium	1.38	1.45	1.35	1.36	1.39	1.34	1.38	1.21	7.9	8	8.2	8.9	7.7	8.5	8.4		7.6	8	8.65	8.9	8.04	7.94	8.45
Selenium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0234	0.0227	0.0312	0.0255	0.0301	0.0061	0.0203		0.0058	0.0033	0.0169	0.0236	0.0163	0.00039	0.0205
Silicon	5	5.08	4.89	5.13	5.12	5.1	5.04	4.73									6.99	6.52	6.57	6.92	6.96		6.99
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00004	<0.00004	<0.00002	<0.00002	<0.00004	<0.00002	<0.00004		<0.00004	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	87.5	84.7	89.7	87.6	89.4	90.4	86.7	94.5	40.6	41.7	39.3	41.6	39.5	42.3	42.5		41.5	38.6	42.2	46.6	42.3	42.5	41.8
Strontium	0.917	0.933	0.958	0.96	0.937	0.968	1.01	0.972									0.591	0.586	0.63	0.674	0.621	0.604	0.585
Sulphur	86.5	86.6	82.7	93.8	91.9	90.2	88.4	94.3															84
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0004	<0.0004	<0.0002	<0.0002	<0.0004	<0.0002	<0.0004		<0.0004	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.0005	<0.001		<0.001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01	0.012	<0.01	<0.01		<0.01
Uranium	0.000564	0.00053	0.000522	0.000478	0.000441	0.0005	0.000514	0.00043	0.00206	0.00144	0.00141	0.00138	0.00138	0.00088	0.00107		0.00091	0.00079	0.000663	0.000999	0.000997	0.00027	0.00105
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0027	0.0022	0.003	0.0019	<0.002	0.0013	<0.002		<0.002	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	<0.001	<0.001	<0.001	0.0012	<0.001	<0.001	0.0017	0.0023	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0102		<0.005	<0.005	<0.003	<0.003	<0.001	<0.001	0.0018
Total Metals																							
Aluminum	0.0053	0.0033	0.0048	0.0043	<0.003	0.0072	0.0052	0.0138	1.65	0.073	<0.022	0.182	0.065	0.0063	<0.01	0.0076	<0.01	<0.005	0.0118	0.0059	0.0061	0.0075	<0.003
Antimony	0.00018	0.00012	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	0.00012	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	0.00025	0.00028	0.00024	0.00013	0.0002
Arsenic	0.0175	0.016	0.0158	0.0153	0.0152	0.0154	0.0155	0.0148	0.0033	0.0023	0.00191	0.00291	0.0013	0.00128	0.0014	0.00122	0.0014	0.00132	0.00076	0.00142	0.00139	0.00073	0.00127
Barium	0.019	0.0211	0.0203	0.0189	0.0181	0.0179	0.0193	0.0211	0.072	0.054	0.037	0.056	0.037	0.037	0.036	0.034	0.035	0.036	0.0449	0.0517	0.047	0.0393	0.0414
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.002	<0.002	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005								<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.228	0.225	0.207	0.22	0.199	0.213	0.232	0.225	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.1	0.116	0.105	0.087	0.094
Cadmium	0.000016	0.000017	0.000017	<0.00002	<0.00003	0.000014	<0.00005	0.00002	0.000067	<0.000034	0.000019	<0.00041	<0.0004	<0.0003	<0.000034	0.000035	<0.000034	<0.00004	<0.00006	<0.00006	<0.00005	<0.00005	0.000022
Calcium	40.4	41	41.8	40.5	41.5	41.7	40.7	43.5	97	92.4	94.8	86.1	88.1	92.1	84.7	88.1	92.9	92.9	86.3	86.4	91.3		85.1
Chromium	0.00012	0.00012	0.0002	<0.0001	<0.0001	0.00013	<0.0001	0.00019	0.0059	<0.002	<0.002	0.0097	0.0052	<0.001	<0.002	<0.001	<0.002	<0.001	0.00055	0.00098	0.0011	0.00087	0.00042
Cobalt	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00215	0.00094	<0.0003	0.00065	0.0007	<0.0003	<0.0006	<0.0003	<0.0006	<0.0003	0.00012	0.00016	0.00021	0.00011	0.00011
Copper	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0225	0.0059	0.0069	0.0303	0.0051	0.0045	0.0054	<0.0045	0.0036	0.0033	0.00226	0.00185	0.00311	0.00527	0.00265
Iron	0.092	0.076	0.084	0.092	0.076	0.089	0.087	0.123	3.15	0.703	0.38	8.88	0.606	0.665	0.84	0.497	0.769	1.03	1.32	0.647	0.775	1.24	0.768
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	0.000072
Lithium	0.00317	0.00303	0.00309	0.00319	0.00325	0.0025	0.00311	0.00281	<0.01	<0.01	0.0058	0.0052	<0.01	<0.005	<0.01	<0.005	<0.01	<0.005	0.00536	0.0056	0.00588	0.0044	0.00549
Magnesium	18.3	18.9	18.6	17.9	17.9	18.6	18.7	19.7	48	47.7	47.7	46.2	45.5	48	44.3	44.6	48.3	48.3	48.7	47.6	45.7		46.6
Manganese	0.0858	0.0974	0.103	0.0987	0.0903	0.0925	0.0988	0.113	0.156	0.215	0.1	0.212	0.102	0.107	0.0819	0.0622	0.0826	0.112	0.174	0.203	0.137	0.145	0.11
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0442	0.0468	0.0466	0.0462	0.0422	0.0407	0.0412	0.0429	0.104	0.0789	0.0749	0.0655	0.0835	0.0723	0.0699	0.0729	0.0758	0.0722	0.0641	0.0785	0.0805	0.0639	0.0819
Nickel	0.00052	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0131	0.0058	0.0048	0.0096	0.0061	0.002	<0.002	0.0019	<0.002	<0.001	0.00068	0.00143	0.00243	0.00135	0.00114
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05								<0.3	<0.3	<0.3	<0.3	<0.3	<0.3		<0.05
Potassium	1.41	1.56	1.4	1.44	1.41	1.31	1.39	1.39	8.1	8.1	8.2	9.1	7.6	8.3	8.2	7.7	7.9	8.3	9.04	9.06	8.53	7.87	8.86
Selenium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0218	0.0236	0.0241	0.0113	0.0206	0.0046	0.0205	0.0148	0.0055	0.0032	0.0149	0.0191	0.0155	0.00063	0.0185
Silicon	5.01	5.09	5.01	5.15	5.1	5.13	5.08	5.36								7.23	7.22	6.75	6.56	6.75	7.33		7.16
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00004	<0.00004	<0.00002	<0.00002	<0.00004	0.000028	<0.00004	<0.00002	<0.00004	0.000021	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	87.8	88.1	89.9	90.1	93.3	92.2	90	94	39.2	42	39.6	43.1	39.2	41.8	41.4	41.4	43.3	40.8	43.9	49.2	44.5	41.4	42.2
Strontium	0.958	0.96	1.03	0.974	0.963	0.958	1.01	0.987								0.586	0.62	0.615	0.629	0.735	0.637	0.608	0.61
Sulphur	88.5	87.5	87	97.9	93.8	89.6	89.2	96.6															87.9
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0004	<0.0004	<0.0002	<0.0002	<0.0004	<0.0002	<0.0004	<0.0002	<0.0004	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.119	<0.01	<0.01	0.019	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.013	<0.01	<0.01		<0.01
Total Cadmium (by saltwater extracti					<0.00002		<0.00002																
Uranium	0.000608	0.000564	0.000543	0.000495	0.000469	0.000499	0.000521	0.000457	0.00215	0.00143	0.00145	0.00099	0.00153	0.00103	0.00105	0.00117	0.00101	0.00078	0.000626	0.001	0.00101	0.000276	0.0011
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0111	0.0028	0.0036	0.0094	<0.002	0.0016	<0.002	0.0016	<0.002	0.0012	<0.001	<0.001	0.0012	<0.001	0.0011
Zinc	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0064	<0.005	<0.005	<0.005	<0.005	<0.005	0.0098	<0.005	<0.005	<0.005	<0.003	0.0159	<0.003	<0.003	<0.003
Organics																							
Carbon Organic (Dissolved)	2.93	2.52	2.91	2.75					2.1	1.95	1.59	1.93	1.51	1.51	1.22	1.53	0.97	1.26	2.4	1.87	16.3	3.85	1.52
Carbon Organic (Total)	2.81	2.47	2.8	2.35	2.18	2.51	2.46	2.83									0.85	1.1	2.44	2.13	1.78	1.86	1.5
Nitrogen Organic (Dissolved)	0.055																0.11	0.105	0.112	<0.05	1.79		<0.05
Nitrogen Organic (Total)	0.082																0.11	0.105	0.122	0.102	0.075		
ALS LAB ID	**L1275064**	**L1308855**	**L1346553**	**L1394041**	**L1430651**	**L1461077**	**L1478436**	**L1514758**	**L623639**	**L655304**	**L678594**	**L710078**	**L892818**	**L924086**	**L957406**	**L990458**	**L1007006**	**L1035635**	**L1077032**	**L1113319**	**L1159973**	**L1200094**	**L1247459**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D2.2 - GROUNDWATER QUALITY DATA

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Site ID	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-S	AJGW07-S	AJGW07-S	AJGW07-S	AJGW07-S	AJGW07-S	AJGW07-S	AJGW07-S	AJGW07-S	AJGW07-S	AJGW07-S	AJGW07-S	AJGW07-S	AJGW07-S	AJGW07-S	AJGW07-S	AJGW07-S	AJGW07-S
Analytes	Mar-13	May-13	Nov-13	Mar-14	May-14	Jun-14	Apr-08	Jul-08	Sep-08	Nov-08	Jun-10	Aug-10	3/Nov/201(	Mar-11	May-11	Jul-11	Oct-11	Feb-12	Jun-12	Aug-12	Mar-13	May-13	Aug-13	
In Situ Parameters																								
Conductivity µS/cm	541	639	0.902	903	609	583		714	659	1255	713	662	644	674	615	695	662	636	1001	921	638	664	681	
Oxygen Dissolved %	1.6	1.6	2.6	1.2	17.7	0.2		25.7	29	23	5.8	6.1	11.8	7.3	4.3	0	14.7	7.1	15.5		5.3	34.6	28.5	
Oxygen Dissolved	0.18	0.18	0.3	0.14	1.98	0.02		2.69	3.2	2.69	0.62	0.67	1.27	0.81	0.47	0	1.69	0.83	1.41	1.62	0.61	3.92	3.07	
pH (unitless)	8.33	8.17	8.19	8.17	6.93	8.29		7.43	7.56	8.23	7.51	7.66	7.66	7.57		7.35	7.76	7.87	7.84	8.68	8.08	7.72	7.61	
Redox Potential mV	-213	-240	239	-106	-183	-213		-65.6	-59	-79.9	-3.3	-30.1	94.5	-32				609		-132	-104	90.4	165	
Salinity ppt	0.38	0.44	0.45	0.45	0.42	0.39										0.49		0.46		0.5	0.45	0.46	0.45	
Specific Conductivity µS/cm	770	894	0.604	631	847	791		938	910	1763	947	901	924	931	848	990	939	937	722		915	930	918	
Temperature °C	9.24	10.1	9.81	9.31	10.3	11.3		12.5	10.6	9.2	12.1	11.1	9.12	10.5	10.6	9.4	9.6	8.19	10.3	13.9	9.14	10	11.5	
Total Dissolved Solids	501	581	538	585	551	515						586	600	605				12.8		591	595	606	597	
Turbidity NTU	2.1	0	6.3	5.6	-1.7	-3.6										48	8.2	11.8	6.4	1	4.4	35.9	1	
Physical Tests																								
Acidity to pH 8.3 (as CaCO3)		<1			1.6		4.7	3.2	5.1	1.6	2.7	4.6	3.1	5.9	4.1	2.8	<1			4		<1		
Alkalinity (Total as CaCO3)	231	207	216	211	209	182	230	268	240	254	266	270	256	256	268	274	265	259	254	260	265	258		
Bicarbonate Alkalinity	231	207	216	211	209	178	230	268	240	254	266	270	256	256	268	274	265	259	246		265	258		
Carbonate Alkalinity	<2	<1	<2	<1	<2	4.7	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	8.7		<1	<1		
Color TCU	<5	<5					<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
Hardness as CaCO3 (Dissolved)	402	408	420	412	363	374	463	427	451	433	436	452	430	429	441	441	441	426	425	409	437	430		
Hydroxide Alkalinity	<2	<1	<2	<1	<2	<1	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1		<1	<1		
pH (unitless)	8.28	8.33	8.25	8.36	8.2	8.34	8.05	8.16	8.06	7.9	8.16	8.12	8.15	8.01	8.03	8.15	8.28	8.23	8.34	8.13	8.32	8.34		
Specific Conductivity µS/cm	868	864	918	881	812	830	933	917	921	913	893	913	910	896	903	924	934	897	881	902	915	881		
Total Dissolved Solids	598	646	623	621	592	583	649	650	650	640	645	637	637	634	632	646	590	640	630	641	628	650		
Total Suspended Solids	4.3	5.6			6.8	5	92	38.3	12.6	247	3.5	3	5.2	6	6.4	42.9	13.7	8.7	3.2	3.3	3	<3		
Turbidity NTU	15.3	19.4			22.3	15.4	54.3	21.4	37.2		1.17	0.36	6.24	6.57	6.66	43.3	9.74	7.64	0.65	1.08	1.98	0.97		
Dissolved Anions																								
Bromide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.25	<0.05	<0.05	<0.05	<0.05	<0.25	<0.5	<0.5	<1.3	<0.25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
Chloride	<5	6.8	6.3	<5	5.3	7.4	6.63	4.92	5.18	4.89	3.8	5.7	<5	6	5.3	<5	<5	5.9	7.9	14.5	<5	5.2		
Fluoride	0.29	<0.2	<0.2	0.38	<0.2	0.16	0.167	0.199	0.194	0.187	0.2	<0.2	<0.2	<0.2	0.18	0.35	0.22	0.22	0.21	3.82	0.31	<0.2		
Sulphate	271	296	314	290	272	260	281	252	258	249	255	256	251	252	254	264	263	259	260	257	264	262		
Nutrients																								
Ammonia (Total)	0.0114	0.0085	0.0136	0.0101	0.0059	0.0064	<0.02		<0.02	<0.005	<0.02	<0.005	<0.005	<0.005	<0.005	0.0098	0.0077	0.0056	<0.005	<0.005	<0.005	<0.005		
Nitrate (as N)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.025	0.0383	<0.005	0.017	0.0174	0.025	<0.05	<0.05	<0.05	<0.025	0.078	<0.05	<0.05	<0.05	0.074	<0.05	<0.05		
Nitrite (as N)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.005	0.003	<0.001	<0.001	<0.001	<0.005	<0.01	<0.01	<0.01	<0.005	<0.01	0.012	<0.01	<0.01	0.01	<0.01	<0.01		
Nitrogen (Dissolved)	<0.05														0.09	0.17	0.08	0.05	0.05		0.055			
Nitrogen (Total)																								
Nitrogen Kjeldahl (Total)	0.078	0.062	0.077	0.066	0.069	0.092	0.101		0.063		<0.05	0.051	0.055	0.057	0.076	0.092	0.071	0.051	0.076	0.061	0.071	0.06		
Orthophosphate (Dissolved)			<0.001	0.0021	<0.001	<0.001	0.017	0.0196	0.0173	0.0194	0.0281	0.0292	0.0263	0.0279	0.0283	0.03	0.0312			0.0302				
Phosphorus - Dissolved	<0.002	<0.002	<0.002	0.0038	0.0026	<0.002				0.0186		0.029			0.029	0.0332	0.0359	0.031	0.0292		0.032	0.0341		
Phosphorus - Total	0.0271	0.0326	0.0297	0.0347	0.0298	0.0293	0.0973	0.0686	0.0369	0.282	0.033	0.0294	0.0349	0.0388	0.0449	0.087	0.0537	0.0457	0.0322	0.0329	0.0349	0.0368		
Cyanide																								
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		
Dissolved Metals																								
Aluminum	0.0034	<0.001	0.0016	0.001	0.0015	0.0015	<0.01	<0.01	<0.01	0.0778	<0.01	<0.005	<0.01	<0.005	<0.01	<0.005	<0.003	<0.003	0.0015	0.0013	0.0034	0.0015		
Antimony	<0.0001	<0.0001	<0.0001	0.00011	<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	0.00022	0.00024	0.00024	0.00023	0.00026	0.00022		
Arsenic	0.0005	0.00057	0.00052	0.0006	0.0006	0.00069	0.0024	0.0028	0.0036	0.00407	0.0043	0.00394	0.0036	0.00385	0.004	0.00454	0.00436	0.00473	0.00393	0.00455	0.00483	0.00454		
Barium	0.0386	0.0414	0.0418	0.0408	0.0382	0.0376	0.043	0.052	0.048	0.085	0.04	0.043	0.046	0.042	0.042	0.042	0.0388	0.0373	0.0361	0.037	0.0359	0.0369		
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.002	<0.002	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005								<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		
Boron	0.103	0.084	0.103	0.098	0.092	0.089	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.066	0.07	0.066	0.062	0.076	0.06		
Cadmium	<0.00005	<0.00005	<0.00002	<0.00003	<0.00003	<0.00005	<0.000034	<0.000034	<0.000034	<0.00051	<0.0004	<0.000017	<0.000034	0.000029	<0.000034	<0.00005	<0.00004	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		
Calcium	83.6	84	86.1	83.4	67.1	71.5	105	92.3	99.8	94.2	91.7	95.3	90.8	92.5	94.3	94.3	93.5	89.4	90.8		93	90.5		
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.002	<0.002	<0.002	<0.001	<0.004	<0.001	<0.002	0.0012	<0.002	<0.001	0.00015	0.00014	0.00022	0.00021	0.00018	0.00028		
Cobalt	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0006	0.00115	0.00117	0.00133	<0.0006	<0.0003	<0.0006	<0.0003	<0.0006	<0.0003	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		
Copper	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0022	0.0027	<0.002	0.0027	0.0022		0.0024	<0.0035	0.0026	0.0012	<0.0005	0.00119	0.00174	0.00166	0.00122	0.00145		
Dissolved Cadmium (by saltwater ext				<0.00002		<0.00002																		
Iron	1.45	2.05	2.05	1.33	2.13	1.93	<0.03	<0.03	0.053	0.227	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.01	<0.01	<0.01		
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		
Lithium	0.0058	0.00442	0.00539	0.00613	0.00418	0.00454	<0.01	<0.01	<0.01	<0.005	<0.01	<0.005	<0.01	<0.005	<0.01	<0.005	0.00406	0.00415	0.00402	0.00348	0.00464	0.00376		
Magnesium	46.8	48.2	49.8	49.5	47.5	47.5	48.8	47.6	49.1	48.1	50.2	52	49.3	48.1	49.9	49.9	50.5	49.2	48.2		49.8	49.5		
Manganese	0.141	0.234	0.237	0.189	0.21	0.215	0.0501	0.241	0.257	0.368	0.0375	0.0415	0.0573	0.0626	0.0748	0.0516	0.0614	0.0602	0.02	0.0336	0.0373	0.0188		
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		
Molybdenum	0.0676	0.0724	0.0733	0.0758	0.0804	0.0952	0.0981	0.12	0.109	0.106	0.135	0.124	0.121	0.107	0.127	0.136	0.132	0.141	0.129	0.138	0.145	0.136		
Nickel	0.00071	0.00074	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.002	0.0023	0.004	<0.002	0.001	<0.002	0.001	<0.002	<0.001	<0.0005	0.00064	<0.0005	<0.0005	<0.0005	<0.0005		
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05								<0.3	<0.3	<0.3	<0.3	<0.3	<0.3		<0.05	<0.05		
Potassium	8.59	8.2	8.68	9.02	7.75	8.67	6.9	7.5	7.5	8	7.6	8.6	7.7	7.6	7.6	8	7.52	7.68	7.07	7.32	7.82	7.76		
Selenium	0.00012	<0.0001	0.00322	0.00876	0.0001	<0.0001	0.0179	0.0179	0.022	0.0266	0.0396	0.0326	0.0317	0.0305	0.0286	0.0248	0.0269	0.0252	0.0221	0.0238	0.025	0.0234		
Silicon	5.78	5.24	5.87	6.05	4.54	4.54								7.6	7.51	7.31	7.53	7.32	7.68		7.23	7.19		
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00004	<0.00004	<0.00004	<0.00002	<0.00004	<0.00002	<0.00004	<0.00002	<0.00004	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		
Sodium	42.9	42.1	42.8	46.6	42.8	38.4	34.5	42.9	41.2	41.9	44	46.9	43.7	44.7	45.8	43.5	42.8	45.2	40.8	42.5	43.3	41.4		
Strontium	0.609	0.664	0.647	0.676	0.582	0.597								0.702	0.72	0.705	0.679	0.728	0.667	0.694	0.724	0.699		
Sulphur	87.5	88.6	95.9	98.2	89.5	87.8															86	78.6		
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0004	<0.0004	<0.0004	<0.0002	<0.0004	<0.0002	<0.0004	<0.0002	<0.0004	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.013	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.013	<0.01	<0.01		<0.01	<0.01		
Uranium	0.000245	0.000179	0.000472	0.000471	0.000146	0.000123	0.00243	0.00308	0.00288	0.00327	0.00422	0.00405	0.00345	0.00325	0.00363	0.00399	0.00399	0.00397	0.00343	0.0038	0.0044	0.00391		
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0023	0.0026	0.0029	0.0027	0.0032	0.003	0.0029	0.0025	0.0028	0.0031	0.0032	0.0033	0.003	0.0031	0.0031	0.0029		
Zinc	<0.001	<0.001	<0.001	0.0013	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.003	<0.003	<0.001	<0.001	0.0011		
Total Metals																								
Aluminum	0.0109	0.0092	0.009	0.0049	0.0068	0.011	2.16	0.71	0.79	2.58	0.03	0.0076	0.281	0.261	0.256	1.84	0.517	0.268	0.0369	0.0442	0.0714	0.0408		
Antimony	0.00011	0.00011	0.00014	0.00014	<0.0001	0.00011	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	0.00025	0.00023	0.00025	0.00025	0.00029	0.00022		
Arsenic	0.00058	0.00065	0.00056	0.00082	0.00062	0.00077	0.0037	0.003	0.0041	0.0045	0.0039	0.00359	0.0038	0.00317	0.0039	0.00557	0.00445	0.00458	0.00399	0.00442	0.00491	0.0047		
Barium	0.0405	0.0422	0.0432	0.0414	0.0369	0.0382	0.07	0.058	0.058	0.093	0.04	0.043	0.047	0.046	0.047	0.062	0.0449	0.04	0.037	0.0378	0.0388	0.0378		
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.002	<0.002	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005								<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		
Boron	0.108	0.094	0.113	0.102	0.094	0.097	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.071	0.073	0.073	0.083	0.08	0.065		
Cadmium	<0.00005	<0.00005	<0.00003	<0.00005	<0.00003	<0.00005	0.00009	0.00006	0.000039	<0.00051	<0.0004	<0.000017	<0.000034	0.000038	<0.000034	<0.00008	<0.00005	<0.00007	<0.00005	<0.00005	<0.00005	<0.00005		
Calcium	84.4	83.7	86.1	83.4	70.3	69.5	103	91.1	103	93.2	88.9	93.1	90.4	92	96.2	97.8	91	90.2	98.5		95.9	91		
Chromium	0.00028	0.00025	0.00031	0.00017	0.00014	0.00017	0.0055	<0.002	0.0068	0.0115	<0.002	<0.001	0.0021	0.0012	<0.002	0.0042	0.00137	0.0009	0.00042	0.00052	0.00043	0.00045		
Cobalt	<0.0001	<0.0001	0.00012	<0.0001	<0.0001	<0.0001	0.00245	0.00196	0.00239	0.00408	<0.0006	<0.0003	<0.0006	0.00046	<0.0006	0.00211	0.00061	0.0004	<0.0001	0.00011	0.00017	0.0001		
Copper	0.00363	0.00189	0.00212	0.00182	0.00126	0.00085	0.0306	0.0169	0.0172	0.0404	0.004		0.0072	0.0066	0.0063	0.0217	0.00776	0.00683	0.00332	0.00275	0.00351	0.00287		
Iron	1.58	2.13	2.18	1.86	2.37	2.08	3.28	0.963	0.919	4.02	0.049	<0.03	0.404	0.369	0.352	2.09	0.602	0.36	0.053	0.06	0.099	0.057		
Lead	<0.00005	<0.00005	0.000062	<0.00005	<0.00005	<0.00005	<0.001	<0.001	<0.001	0.0006	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	0.000108	0.000072	<0.00005	<0.00005	<0.00005	<0.00005		
Lithium	0.00581	0.00474	0.00561	0.00606	0.00428	0.0045	<0.01	<0.01	<0.01	0.0057	<0.01	<0.005	<0.01	<0.005	<0.01	<0.005	0.00435	0.00401	0.00419	0.00371	0.00468	0.00388		
Magnesium	46.9	47.9	50	47.1	46.4	46.7	49.4	46.9	49.3	49.5	48.7	50.6	49.3	48.7	51.5	52.1	49.9	49.6	48.6		50.5	49		
Manganese	0.149	0.245	0.251	0.19	0.217	0.221	0.126	0.268	0.304	0.303	0.0854	0.0542	0.152	0.0786	0.0925	0.154	0.129	0.0946	0.0302	0.0447	0.0899	0.039		
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		
Molybdenum	0.0686	0.0766	0.0807	0.0799	0.0849	0.102	0.0958	0.121	0.108	0.107	0.138	0.134	0.124	0.116	0.137	0.138	0.131	0.145	0.137	0.142	0.157	0.14		
Nickel	0.00137	0.00129	0.00082	0.00076	0.00062	<0.0005	0.0078	0.0038	0.008	0.012	<0.002	<0.001	0.0023	0.0019	<0.002	0.0053	0.00164	0.00129	0.00053	0.00051	0.00059	<0.0005		
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05								<0.3	<0.3	<0.3	<0.3	<0.3	<0.3		<0.05	<0.05		
Potassium	8.8	8.32	9.53	8.81	7.99	8.33	7.5	7.4	7.4	8.6	7.6	8.5	7.8	7.8	7.9	8.5	7.67	7.72	7.27	7.29	8.1	7.98		
Selenium	0.00024	0.00012	0.00276	0.00873	0.00018	<0.0001	0.0168	0.0167	0.0218	0.0206	0.029	0.0255	0.029	0.0211	0.0243	0.0253	0.0244	0.022	0.0216	0.0213	0.0231	0.0226		
Silicon	5.77	5.3	5.93	6.15	4.65	4.5								8.31	8.31	11.2	8.51	8.01	8.05		7.54	7.44		
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00004	<0.00004	<0.00004	0.000048	<0.00004	0.000021	<0.00004	<0.00002	<0.00004	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		
Sodium	43.3	43.3	45.9	46.7	43.5	39.7	34.9	41.9	40.4	41.2	43.2	45.9	44.5	44.9	47.1	45.5	43.4	45.6	42.3	42.3	45	42.3		
Strontium	0.62	0.698	0.67	0.677	0.598	0.631								0.716	0.743	0.746	0.673	0.748	0.697	0.704	0.733	0.71		
Sulphur	89.3	91.2	99.4	97.9	91.4	89.5															88.5	80.4		
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0004	<0.0004	<0.0004	<0.0002	<0.0004	<0.0002	<0.0004	<0.0002	<0.0004	<0.0002	0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001		
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.185	0.054	0.047	0.228	<0.01	<0.01	0.026	0.027	0.024	0.121	0.047	0.028	<0.01		<0.01	<0.01		
Total Cadmium (by saltwater extracti				<0.00002		<0.00002																		
Uranium	0.000235	0.000188	0.000511	0.000533	0.000169	0.000127	0.00252	0.00312	0.00296	0.00352	0.00443	0.00451	0.00355	0.00341	0.00388	0.00425	0.00396	0.004	0.00361	0.004	0.00444	0.00401		
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0126	0.0056	0.0064	0.0149	0.0034	0.0032	0.0044	0.0038	0.004	0.0102	0.0053	0.0045	0.0035	0.0033	0.0037	0.0035		
Zinc	<0.003	<0.003	0.003	<0.003	<0.003	<0.003	0.0066	<0.005	<0.005	0.0083	<0.005	<0.005	0.0089	<0.005	<0.005	0.0055	<0.003	0.0033	<0.003	<0.003	<0.003	<0.003		
Organics																								
Carbon Organic (Dissolved)	1.74	1.67	1.62				2.18	2.12	1.85	2.01	1.78	1.74	2.28	1.84	1.04	1.86	1.82	1.79	2.16	1.78	1.7	1.41		
Carbon Organic (Total)	1.58	1.44	1.58	1.62	1.45	1.67									1.08	1.9	1.75	1.34	1.55	1.7	1.52	1.29		
Nitrogen Organic (Dissolved)	<0.05														0.088	0.082	0.06	<0.05	<0.05		0.05			
Nitrogen Organic (Total)	<0.05														0.108	0.082	0.09	<0.06	0.076		0.055			
ALS LAB ID	L1276505	L1306577	L1392288	L1430651	L1452371	L1469742	L623639	L655304	L678594	L710078	L892818	L924086	L956921	L990458	L1007006	L1035437	L1077032	L1113319	L1159973	L1200094	L1276505	L1306577	L1345714	

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D2.2 - GROUNDWATER QUALITY DATA

Site ID					BGC14-001D					BGC14-002D					BGC14-002S					BGC14-003D			
Site ID	AJGW07-S	AJGW07-S	AJGW07-S	AJGW07-S	BGC14-001	BGC14-001	BGC14-001	BGC14-001	BGC14-001	BGC14-002	BGC14-002	BGC14-002	BGC14-002	BGC14-002	BGC14-002	BGC14-002	BGC14-002	BGC14-002	BGC14-002	BGC14-003	BGC14-003	BGC14-003	BGC14-003
Analytes	Nov-13	Mar-14	May-14	Jun-14	Mar-14	May-14	Jun-14	Jul-14	Aug-14	Mar-14	May-14	Jun-14	Jul-14	Aug-14	Mar-14	May-14	Jun-14	Jul-14	Aug-14	Jun-14	Jul-14	Aug-14	Mar-14
In Situ Parameters																							
Conductivity µS/cm	0.9	931	605	689	1060	719	677	699	719	1297	842	822	862	832	1419	876	873	943	920	570	632	1128	699
Oxygen Dissolved %	56.2	2.5	7.77	14.7	73.3	4.4	4.2	16.3	3.9	32.5	0	2.1	1.1	1.1	45	-0.3	2.9	2.7	9.8	0.6	2.4	5.5	43.3
Oxygen Dissolved	6.5	0.29	41.6	1.61	8.65	0.52	0.47	1.88	0.48	3.79	0	0.25	0.12	0.12	5.27	-0.001	0.32	0.23	1.04	0.07	0.26	0.0006	5.28
pH (unitless)	7.81	7.75	8.7	7.89	7.68	7.41	7.5	6.55	6.96	7.43	7.71	7.26	9.32	7.11	7.32	7.64	7.44	9.13	7.51	9.41	9.14	9.14	8.35
Redox Potential mV	0.587	57.6	51.2	-13	76	11.2	-39.4	22.9	-31.4	53.7	-44.5	-44.8	-158	-68.9	-37.9	-84.1	-83	-155	-97.6	-88.2	36.1	-4.9	37.8
Salinity ppt	0.45	0.46	0.42	0.47	0.53	0.52	0.48	0.49	0.52	0.65	0.61	0.6	0.59	0.59	0.72	0.62	0.62	0.6	0.6	0.4	0.42	8E-07	0.35
Specific Conductivity µS/cm	0.637	657	892	939	716	1047	960	994	1052	889	1212	1189	1193	1169	965	1240	1240	1209	1200	806	850	1588	458
Temperature °C	9.69	9.59	10.3	11.1	8	8.57	9.45	9.45	8.39	8.45	9.05	8.83	10.6	9.83	8.37	9.49	9.49	13.9	12.7	9.7	11.8	9.84	6.8
Total Dissolved Solids	42500	605	546	610	689	681	624	646	684	843	788	773	772	761	923	806	805	781	780	525	553	0.00103	454
Turbidity NTU	6.2	1.6	5.73	8.7	4.8	6.5	-3.4	0	0	2.9	-2.4	-3.2	0	0	1.8	-2.6	-3.1	0	0	0.7	0	2.5	10.5
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)			2.8								4.8					4.6							
Alkalinity (Total as CaCO3)	286	271	293	271	424	437	451	449	457	288	291	287	287	290	266	262	279	260	263	138	135	136	200
Bicarbonate Alkalinity	286	271	293	263	424	437	451	449	457	288	291	287	287	290	266	262	279	259	263	94.2	110	98.6	198
Carbonate Alkalinity	<2	<1	<2	7.9	<2	<1	<1	<1	<2	<2	<2	<1	<1	<2	<2	<2	<2	<1	<2	43.4	24.7	37.8	2.4
Color TCU										<5	5.8				6.2	8.6							
Hardness as CaCO3 (Dissolved)	444	439	438	455	445	404	439	422	429	409	385	399	393	399	512	443	459	437	445	22.1	21.5	20.2	125
Hydroxide Alkalinity	<2	<1	<2	<1	<2	<1	<1	<1	<2	<2	<2	<1	<1	<2	<2	<2	<2	<1	<2	<1	<1	<1	<1
pH (unitless)	8.21	8.31	8.15	8.34	8.2	8.31	8.19	8.01	8.23	8.16	8.02	8.14	8.29	8.08	8.09	8.02	8.1	8.28	8.08	8.97	8.86	8.9	8.3
Specific Conductivity µS/cm	903	905	879	908	1050	1030	1020	1010	1010	1260	1230	1270	1240	1230	1330	1270	1270	1260	1240	848	856	844	703
Total Dissolved Solids	608	611	632	640	653	618	635	604	614	854	862	795	856	843	963	921	929	887	852	569	575	573	463
Total Suspended Solids			3.5	3.6		<3	<3	<3	<3	<3	3	<3	3.2	4	<3	<3	<3	<3	3.6	4	<3	<3	7.9
Turbidity NTU			1.81	1.33		0.47	0.54	0.65	0.8	1.99	0.61	0.56	0.78	0.81	1.29	0.75	1.98	1.83	1.67	3.33	2.71	1.31	6.68
Dissolved Anions																							
Bromide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.117	<0.5	<0.5	<0.25
Chloride	5.3	<5	<5	9.4	<5	<5	<5	<5	<5	6.3	7.1	6	5.5	5.4	8.4	9.2	8.5	6.8	6.8	9.33	9.2	8.4	3
Fluoride	0.2	0.37	0.2	0.22	0.34	0.22	0.255	0.232	0.216	0.43	0.31	0.338	0.31	0.356	0.44	0.33	0.34	0.33	0.361	0.121	0.148	0.117	0.57
Sulphate	246	247	248	254	185	154	150	147	142	419	405	418	399	416	494	468	484	448	457	254	268	255	172
Nutrients																							
Ammonia (Total)	<0.005	<0.005	<0.005	<0.005	0.0757	0.0542	0.0547	0.0625	0.0523	0.199	0.211	0.205	0.199	0.199	0.128	0.125	0.145	0.139	0.146	0.101	0.0819	0.0828	0.0215
Nitrate (as N)	<0.05	<0.05	<0.05	0.056	0.282	0.27	0.301	0.313	0.299	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.005	<0.05	<0.05	<0.025
Nitrite (as N)	<0.01	<0.01	<0.01	<0.01	0.021	0.015	<0.01	<0.01	0.014	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.031	<0.01	<0.001	<0.01	<0.01	<0.005
Nitrogen (Dissolved)																							
Nitrogen (Total)																							
Nitrogen Kjeldahl (Total)	0.071	0.066	0.079	0.101	0.249	0.178	0.186	0.137	0.189	0.371	0.349	0.383	0.355	0.348	0.345	0.331	0.387	0.139	0.363	0.222	0.247	0.209	0.177
Orthophosphate (Dissolved)	0.0301	0.034	0.035	0.0371	0.0058	0.0151	0.0151	0.0168	0.0175	0.0128	0.0212	0.0209	0.022	0.0258	0.017	0.0234	0.0157	0.0228	0.0296	0.176	0.267	0.27	0.0286
Phosphorus - Dissolved	0.0313	0.0328	0.0354	0.0367	0.014	0.0163	0.0144	0.0203	0.0173	0.0215	0.0241	0.0194	0.0255	0.0241	0.026	0.0242	0.0151	0.0256	0.025	0.189	0.28	0.259	0.0502
Phosphorus - Total	0.0343	0.0328	0.0396	0.0412	0.0069	0.0179	0.0204	0.0246	0.0223	0.014	0.0264	0.0354	0.0406	0.0448	0.0193	0.0359	0.0703	0.0679	0.0661	0.187	0.302	0.295	
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																							
Aluminum	0.002	0.0012	0.0027	0.0013	0.0052	0.0038	0.003	0.003	0.003	0.0042	0.0043	0.0029	0.0045	0.0034	0.0062	0.0054	0.0059	0.0054	0.0054	0.0465	0.0511	0.0592	0.0062
Antimony	0.00024	0.00025	0.00027	0.00024	0.00025	0.00022	0.0002	0.00015	0.00014	0.00024	0.00031	0.00022	0.00017	<0.0001	0.00024	0.00022	0.00016	0.00012	0.00015	<0.0002	0.00023	0.00021	0.00028
Arsenic	0.00481	0.00475	0.00481	0.00478	0.00044	0.00047	0.00065	0.00068	0.00057	0.00077	0.00136	0.00247	0.00233	0.00242	0.00071	0.00129	0.00288	0.00256	0.00251	0.00535	0.00496	0.00547	0.00436
Barium	0.0347	0.0331	0.0356	0.0363	0.0329	0.0299	0.0299	0.0305	0.0294	0.027	0.0245	0.0237	0.0237	0.0224	0.024	0.0217	0.0207	0.0198	0.0193	0.00979	0.00997	0.00906	0.0302
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.0005
Boron	0.071	0.063	0.068	0.061	0.122	0.122	0.116	0.106	0.114	0.504	0.58	0.482	0.492	0.528	0.395	0.438	0.367	0.396	0.398	8.13	8.9	10.1	1.73
Cadmium	<0.00004	<0.00006	<0.00005	<0.0001	0.000072	0.000025	0.000023	0.000023	0.000017	0.000035	0.000021	<0.00002	<0.00001	<0.00001	0.000019	0.00001	0.000013	0.000013	0.000018	<0.00002	<0.00002	<0.00002	0.000019
Calcium	91.7	93	92	97.4	60.6	57.1	60.2	58.6	57.7	64.4	63.1	62.6	59.9	59.4	86.7	73.3	73.7	67.8	67.7	5.15	5.09	4.73	21.3
Chromium	0.00025	0.00016	0.00027	0.00023	0.00047	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00028	0.00017	0.00014	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	0.00021
Cobalt	<0.0001	<0.0001	<0.0001	<0.0001	0.00117	0.00125	0.00132	0.00121	0.00105	0.0017	0.00217	0.00284	0.00244	0.00194	0.00247	0.00226	0.00276	0.00214	0.00182	<0.0002	0.00022	<0.0002	0.00029
Copper	0.00179	0.00181	0.00228	0.00163	0.00219	0.00058	0.00043	0.00043	0.00045	0.00064	0.00033	<0.0002	<0.0002	<0.0002	0.0002	0.00022	0.00064	0.00033	0.00059	<0.0004	<0.0004	<0.0004	0.00102
Dissolved Cadmium (by saltwater ext		<0.00002		<0.00002								<0.00002								<0.00002	<0.00002	<0.00002	
Iron	0.013	<0.01	<0.01	<0.01	<0.01	0.012	0.038	0.051	0.057	<0.01	0.023	0.125	0.142	0.211	0.065	0.111	0.449	0.335	0.363	<0.01	0.013	0.014	<0.01
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000076	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.0001	<0.0001	<0.00005
Lithium	0.00419	0.00456	0.00392	0.00359	0.0158	0.0141	0.0148	0.0147	0.015	0.00946	0.00826	0.00656	0.0073	0.00731	0.00589	0.00619	0.00576	0.00607	0.00585	0.0086	0.0064	0.0075	0.00915
Magnesium	52.1	50.2	50.6	51.3	71.3	63.6	70.2	66.9	69.3	60.4	55.3	58.9	59	60.9	71.8	63.1	66.8	65	67	2.24	2.13	2.04	17.5
Manganese	0.0166	0.0222	0.00946	0.00973	0.208	0.296	0.345	0.334	0.313	0.408	0.672	1.09	0.94	0.823	0.731	0.981	1.31	1.14	1.03	0.0281	0.0348	0.0336	0.107
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.125	0.124	0.128	0.128	0.0101	0.00984	0.00978	0.00814	0.00943	0.0116	0.0122	0.0116	0.0119	0.0125	0.0147	0.0163	0.0155	0.0164	0.0171	0.0172	0.0175	0.0178	0.0167
Nickel	<0.0005	<0.0005	<0.0005	<0.0005	0.00405	0.00282	0.0026	0.00229	0.00184	0.00507	0.00518	0.00512	0.00414	0.00327	0.00615	0.00471	0.00449	0.00347	0.00338	<0.001	0.0017	0.0013	0.00157
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.072	<0.05	<0.05	0.051	0.067	0.133	0.079	0.182	0.284	0.292	<0.05
Potassium	8.02	8.05	7.59	8.32	7.35	6.51	7.57	7.72	7.46	8.9	8.31	9.26	8.91	9.55	13.3	12.7	14.4	13.2	13.9	10.2	9.95	9.45	9.95
Selenium	0.0266	0.0273	0.0223	0.0229	0.0038	0.00344	0.00314	0.00291	0.00281	0.00019	0.00022	0.00028	0.00013	0.00015	0.00026	0.00015	0.00015	0.00016	0.00013	<0.0002	0.00026	0.00027	0.00128
Silicon	7.51	7.42	7.4	7.44	4.74	4.74	4.82	4.69	4.65	6.27	6.07	6.34	6.19	6.18	6.57	6.33	6.69	6.52	6.44	4.29	3.97	4.12	5.56
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00001
Sodium	41.2	42.4	42.4	40.1	99.9	85.3	81.3	81.4	76.8	148	148	131	132	136	126	128	122	116	121	163	166	161	110
Strontium	0.682	0.685	0.706	0.716	1.18	1.13	1.26	1.13	1.3	1.52	1.33	1.34	1.36	1.41	1.39	1.19	1.32	1.25	1.28	0.168	0.155	0.159	0.66
Sulphur	77.7	81.3	77.3	80.6	57.1	51.4	47.7	47.7	48.9	135	129	135	136	132	163	144	149	147	146	86.9	88	85.6	57.1
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	0.000034	0.000031	0.000029	0.000027	0.000027	0.000041	0.000027	0.000026	0.000027	0.000017	0.000016	0.000012	0.000011	0.000013	0.000011	<0.00002	<0.00002	<0.00002	0.000018
Tin	<0.0001	<0.0001	<0.0001	<0.0001	0.00017	<0.0001	<0.0001	<0.0001	<0.0001	0.00017	0.00013	<0.0001	<0.0001	<0.0001	0.00021	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	0.00014
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.01
Uranium	0.00386	0.00387	0.00405	0.00398	0.00336	0.00327	0.00312	0.00247	0.00299	0.00267	0.00319	0.00274	0.00272	0.0026	0.0032	0.00306	0.00255	0.00261	0.00271	0.000532	0.00101	0.000812	0.00142
Vanadium	0.003	0.0033	0.003	0.0029	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	0.002
Zinc	<0.001	0.001	0.0041	0.0106	0.005	0.0016	0.007	0.0061	0.0055	0.003	0.0032	0.017	0.0042	0.005	0.0015	0.0021	0.0132	0.0074	0.0571	0.0025	0.0023	<0.002	0.0017
Total Metals																							
Aluminum	0.0089	<0.003	0.0886	0.0632	0.134	0.016	0.0198	0.0233	0.0278	0.102	0.0305	0.0249	0.0365	0.0347	0.0426	0.0236	0.0108	0.0143	0.021	0.202	0.309	0.111	0.308
Antimony	0.00029	0.00024	0.00029	0.00029	0.00027	0.00024	0.0002	0.00021	0.00015	0.00027	0.00035	0.00025	0.0002	0.00012	0.00026	0.0003	0.00016	0.00012	0.00018	<0.0002	0.0003	0.0003	0.00035
Arsenic	0.00465	0.00448	0.00487	0.0048	<0.0005	0.00045	0.00074	0.00078	0.00057	0.00084	0.00151	0.0025	0.00237	0.00242	0.00072	0.00137	0.00299	0.00268	0.00249	0.00533	0.00517	0.00509	0.00447
Barium	0.0352	0.0331	0.0371	0.0384	0.0352	0.0303	0.0311	0.031	0.0294	0.0285	0.0269	0.0246	0.0241	0.0234	0.0251	0.0221	0.0201	0.0203	0.0196	0.0107	0.0116	0.00952	0.0337
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.0005
Boron	0.08	0.066	0.077	0.064	0.129	0.127	0.126	0.131	0.119	0.534	0.614	0.464	0.478	0.586	0.423	0.448	0.372	0.398	0.43	8.74	10.5	10.4	1.77
Cadmium	<0.00004	<0.00006	<0.00006	<0.0001	0.000074	0.000027	0.000025	0.000025	0.000022	0.000044	0.000028	<0.00003	0.000029	0.000018	0.000025	0.000014	0.000014	0.000019	0.000034	<0.00002	0.000028	0.000023	0.000029
Calcium	91.5	88.9	91	93.5	61.9	57.5	58.7	56.7	57.4	64	62.8	61.7	59.8	59.5	86.4	73.9	70.2	68.2	67	5.1	5.28	4.72	20.9
Chromium	0.00041	0.00026	0.00053	0.00066	<0.0009	0.00013	0.00016	0.00014	<0.0001	0.00063	0.00022	0.00019	0.00026	0.00024	0.00058	0.00027	0.0002	0.00018	0.00018	0.00119	0.00244	0.00035	<0.0013
Cobalt	<0.0001	<0.0001	0.00022	0.00016	0.00125	0.00131	0.00135	0.00128	0.00105	0.00194	0.00234	0.00298	0.00256	0.00206	0.00265	0.00249	0.00286	0.00228	0.0019	0.0003	0.00053	0.00024	0.00062
Copper	0.00201	0.00185	0.00459	0.00404	0.00331	0.0008	0.00089	0.00097	0.00101	0.00148	0.00067	0.0007	0.00102	0.0007	0.00062	<0.0005	0.00098	0.00081	0.00121	<0.001	0.0017	<0.001	0.00326
Iron	0.022	<0.01	0.12	0.091	0.146	0.027	0.06	0.072	0.09	0.129	0.055	0.152	0.179	0.248	0.128	0.147	0.462	0.387	0.417	0.248	0.419	0.096	0.432
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000098	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	0.00011	<0.0001	0.000129
Lithium	0.00448	0.00444	0.00416	0.0033	0.016	0.0145	0.0147	0.016	0.0148	0.00973	0.00837	0.00552	0.00726	0.0077	0.00635	0.00593	0.00558	0.00641	0.00602	0.0089	0.0082	0.0075	0.00929
Magnesium	51	46.7	48	50.5	68.1	64.9	69.8	67.2	69.1	60.8	53.4	59	57.8	63	70.9	62.2	64.9	64.2	67.1	2.54	2.72	2.1	17.1
Manganese	0.0182	0.0213	0.12	0.0607	0.203	0.303	0.354	0.364	0.33	0.429	0.72	1.11	0.953	0.849	0.766	1.07	1.36	1.18	1.08	0.0338	0.0449	0.0357	0.115
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.137	0.127	0.135	0.127	0.011	0.01	0.0101	0.00999	0.00997	0.0126	0.0123	0.0117	0.0125	0.0135	0.0163	0.0157	0.0162	0.0172	0.0179	0.0179	0.0209	0.0184	0.0173
Nickel	<0.0005	<0.0005	0.0007	0.0007	0.00406	0.00305	0.00288	0.00244	0.00195	0.00598	0.00574	0.00557	0.00441	0.00356	0.00636	0.00522	0.00454	0.00386	0.00355	0.0026	0.005	0.0019	0.0032
Phosphorus	<0.05	<0.05	0.051	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.053	0.056	<0.05	<0.05	0.068	0.091	0.091	0.186	0.305	0.294	0.053
Potassium	8.6	7.73	7.32	8.15	7.44	6.68	7.42	7.75	7.49	8.8	8.14	9	8.93	9.8	13.2	12.6	13.6	13.3	13.7	9.73	9.97	9.28	9.58
Selenium	0.0248	0.0236	0.0219	0.022	0.00325	0.00294	0.00282	0.00255	0.00245	0.00021	0.00016	0.00024	0.00017	0.00011	0.00031	0.00019	0.00017	0.00015	0.00015	0.00021	0.00029	0.0003	0.00124
Silicon	7.59	7.16	7.41	7.5	5.13	4.79	4.87	4.8	4.68	6.42	6.03	6.4	6.26	6.38	6.7	6.32	6.65	6.62	6.49	4.73	4.81	4.21	6.2
Silver	<0.00001	<0.00001	<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00001
Sodium	43.4	41.9	41.8	41.5	101	86.2	82.5	82.9	77.1	151	156	134	132	141	131	130	125	120	123	161	171	161	107
Strontium	0.694	0.681	0.727	0.716	1.23	1.15	1.24	1.3	1.28	1.55	1.32	1.33	1.42	1.48	1.45	1.17	1.35	1.3	1.31	0.174	0.182	0.161	0.676
Sulphur	81.8	80.9	80.4	83.4	61.1	52.4	50.7	50.1	48.9	141	128	142	136	139	169	144	153	149	149	87.4	90.4	85.1	56.2
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	0.000036	0.000035	0.000032	0.000031	0.000032	0.00004	0.000026	0.000027	0.000026	0.000019	0.000018	0.000012	0.000013	0.000013	0.000013	<0.00002	<0.00002	<0.00002	0.000018
Tin	<0.0001	<0.0001	<0.0001	<0.0001	0.00035	0.0001	<0.0001	<0.0001	<0.0001	0.00023	0.00023	0.00017	0.0002	0.00015	0.00027	0.00016	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	0.00035
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	0.012
Total Cadmium (by saltwater extracti		<0.00002		0.000029								<0.00002								<0.00002			
Uranium	0.0041	0.00395	0.00421	0.00401	0.00364	0.00346	0.00322	0.0031	0.003	0.00295	0.00328	0.00289	0.00285	0.00276	0.00342	0.0032	0.00267	0.00271	0.0028	0.00058	0.00112	0.00085	0.00156
Vanadium	0.0033	0.0033	0.0037	0.0034	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0021	0.0025	<0.002	0.0032
Zinc	<0.003	<0.003	<0.003	0.0122	0.0038	<0.003	0.0087	0.0083	0.0067	<0.003	<0.003	0.0188	0.0078	0.0104	<0.003	<0.003	0.0096	0.0087	0.0577	<0.006	<0.006	<0.006	<0.003
Organics																							
Carbon Organic (Dissolved)	1.46																						
Carbon Organic (Total)	1.29	1.39	1.39	1.6	2.19	1.54	1.51	1.31	1.08	2.76	2.84	2.62	3.04	2.39	4.16	3.8	3.69	3.58	3.45	3.03	3.68	3.36	2.64
Nitrogen Organic (Dissolved)																							
Nitrogen Organic (Total)																							
ALS LAB ID	**L1392288**	**L1430651**	**L1452371**	**L1469742**	**L1435486**	**L1455485**	**L1473799**	**L1486405**	**L1507004**	**L1432458**	**L1453027**	**L1471871**	**L1485034**	**L1503481**	**L1432458**	**L1453027**	**L1470495**	**L1485034**	**L1503481**	**L1478436**	**L1488139**	**L1508557**	**L1435549**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D2.2 - GROUNDWATER QUALITY DATA

Site ID	BGC14-003I			
Site ID	BGC14-003	BGC14-003	BGC14-003	BGC14-003
Analytes	May-14	Jun-14	Jul-14	Aug-14
In Situ Parameters				
Conductivity µS/cm	491	449	447	481
Oxygen Dissolved %	12	1.3	8.3	8.1
Oxygen Dissolved	1.41	0.16	0.58	0.91
pH (unitless)	8.25	8.22	7.6	8.23
Redox Potential mV	38.4	-19.7	87.7	13.4
Salinity ppt	0.35	0.33	0.34	0.34
Specific Conductivity µS/cm	722	674	703	699
Temperature °C	8.27	7.52	8.32	8.67
Total Dissolved Solids	469	438	456	455
Turbidity NTU	12.4	2.8	2	3.2
Physical Tests				
Acidity to pH 8.3 (as CaCO3)	<1			
Alkalinity (Total as CaCO3)	196	202	199	202
Bicarbonate Alkalinity	196	197	189	199
Carbonate Alkalinity	<1	4.4	10	3.5
Color TCU	<5			
Hardness as CaCO3 (Dissolved)	118	115	117	117
Hydroxide Alkalinity	<1	<1	<1	<1
pH (unitless)	8.38	8.32	8.41	8.4
Specific Conductivity µS/cm	694	721	715	719
Total Dissolved Solids	455	472	459	495
Total Suspended Solids	<3	5.5	4.7	<3
Turbidity NTU	4.1	4.31	2.94	0.62
Dissolved Anions				
Bromide	0.064	<0.25	<0.5	0.051
Chloride	2.61	2.6	<5	2.5
Fluoride	0.423	0.35	0.313	0.317
Sulphate	165	169	158	164
Nutrients				
Ammonia (Total)	0.0457	0.0448	0.0627	0.043
Nitrate (as N)	<0.005	<0.025	<0.05	<0.005
Nitrite (as N)	<0.001	<0.005	<0.01	0.0037
Nitrogen (Dissolved)				
Nitrogen (Total)				
Nitrogen Kjeldahl (Total)	0.178	0.156	0.176	0.165
Orthophosphate (Dissolved)	0.0591	0.0657	0.0679	0.065
Phosphorus - Dissolved	0.0661	0.0674	0.0768	0.0627
Phosphorus - Total	0.0787	0.0791	0.0821	0.0672
Cyanide				
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005
Dissolved Metals				
Aluminum	0.0068	0.0059	0.0066	0.0053
Antimony	0.00017	0.00013	0.00013	0.00011
Arsenic	0.0048	0.00487	0.00511	0.00531
Barium	0.0266	0.0251	0.0254	0.0246
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005
Boron	1.89	1.66	1.83	1.69
Cadmium	0.000015	<0.00001	0.000011	0.00001
Calcium	19.8	19.1	19.1	19.2
Chromium	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.00016	0.00011	0.00012	0.00012
Copper	0.00042	0.00046	0.00039	0.00038
Dissolved Cadmium (by saltwater ext				
Iron	<0.01	<0.01	<0.01	<0.01
Lead	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0103	0.00979	0.0103	0.0115
Magnesium	16.7	16.4	16.7	16.8
Manganese	0.107	0.0744	0.1	0.0915
Mercury	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0168	0.0165	0.0171	0.0174
Nickel	0.00127	0.00069	0.00069	0.00052
Phosphorus	0.071	0.065	0.083	0.066
Potassium	9.58	9.59	9.85	9.72
Selenium	0.001	0.00084	0.00066	0.00046
Silicon	6.04	6.22	6.27	6.54
Silver	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	110	105	110	105
Strontium	0.645	0.638	0.663	0.677
Sulphur	56.8	55.2	57.7	56.9
Thallium	<0.00001	<0.00001	0.000011	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01
Uranium	0.00128	0.00111	0.00108	0.00105
Vanadium	0.0014	0.0015	0.0014	0.0014
Zinc	<0.001	0.0021	0.0077	0.0019
Total Metals				
Aluminum	0.132	0.144	0.0815	0.0325
Antimony	0.00022	0.00018	0.00016	0.00014
Arsenic	0.00456	0.00493	0.0053	0.00558
Barium	0.0288	0.0272	0.0273	0.0252
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005
Boron	1.97	1.77	2.02	1.77
Cadmium	0.00003	0.000019	0.000025	0.000011
Calcium	20	19	19	19.6
Chromium	0.00056	0.00063	0.00034	0.00016
Cobalt	0.00035	0.00036	0.00029	0.0002
Copper	0.00272	0.00231	0.00139	0.00115
Iron	0.216	0.233	0.136	0.046
Lead	0.000066	0.000059	<0.00005	<0.00005
Lithium	0.0102	0.0102	0.011	0.0118
Magnesium	16.9	16.3	16.7	16.9
Manganese	0.135	0.133	0.151	0.129
Mercury	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0173	0.018	0.0185	0.0184
Nickel	0.00201	0.00155	0.00119	0.00074
Phosphorus	0.08	0.079	0.079	0.073
Potassium	9.61	9.39	9.77	10.1
Selenium	0.00096	0.00084	0.00067	0.00048
Silicon	6.31	6.46	6.44	6.66
Silver	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	109	103	112	105
Strontium	0.661	0.664	0.716	0.693
Sulphur	57.7	55.3	58.8	58.1
Thallium	0.000013	0.000012	0.000012	<0.00001
Tin	0.00015	0.00011	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extracti				
Uranium	0.00132	0.00118	0.00112	0.0011
Vanadium	0.002	0.0025	0.0018	0.0015
Zinc	<0.003	<0.003	0.0092	0.0031
Organics				
Carbon Organic (Dissolved)				
Carbon Organic (Total)	1.78	1.64	1.84	1.66
Nitrogen Organic (Dissolved)				
Nitrogen Organic (Total)				
ALS LAB ID	**L1456126**	**L1475118**	**L1488139**	**L1507004**

Site ID	BGC14-003S				
Site ID	BGC14-003	BGC14-003	BGC14-003	BGC14-003	BGC14-003
Analytes	Mar-14	May-14	Jun-14	Jul-14	Aug-14
In Situ Parameters					
Conductivity µS/cm	732	533	464	464	479
Oxygen Dissolved %	53.3	3	1.4	1.4	101
Oxygen Dissolved	7.27	0.35	0.17	0.17	11.6
pH (unitless)	7.99	7.88	7.99	7.99	8
Redox Potential mV	68.3	82.9	-31.3	-31.3	95.3
Salinity ppt	0.36	0.39	0.34	0.34	0.33
Specific Conductivity µS/cm	470	785	689	689	683
Temperature °C	6.25	8.16	7.88	7.88	9.35
Total Dissolved Solids	476	510	448	443	444
Turbidity NTU	4	7.4	-3.6	0	4.2
Physical Tests					
Acidity to pH 8.3 (as CaCO3)		<1			
Alkalinity (Total as CaCO3)	182	182	183	174	173
Bicarbonate Alkalinity	182	182	183	174	173
Carbonate Alkalinity	<2	<2	<2	<1	<1
Color TCU		6.6			
Hardness as CaCO3 (Dissolved)	204	199	189	191	188
Hydroxide Alkalinity	<2	<2	<2	<1	<1
pH (unitless)	8.17	8.27	8.19	8.15	8.35
Specific Conductivity µS/cm	697	733	712	692	686
Total Dissolved Solids	464	492	451	454	454
Total Suspended Solids	<3	<3	<3	<3	<3
Turbidity NTU	1.59	1.17	0.46	0.41	0.38
Dissolved Anions					
Bromide	<0.25	<0.25	<0.25	<0.5	0.068
Chloride	4.1	4.9	3.7	<5	3
Fluoride	0.36	0.27	0.29	0.258	0.288
Sulphate	200	212	196	186	180
Nutrients					
Ammonia (Total)	0.0505	0.0617	0.0591	0.0678	0.0686
Nitrate (as N)	<0.025	<0.025	<0.025	<0.05	<0.005
Nitrite (as N)	<0.005	<0.005	<0.005	<0.01	<0.001
Nitrogen (Dissolved)					
Nitrogen (Total)					
Nitrogen Kjeldahl (Total)	0.19	0.195	0.186	0.192	0.176
Orthophosphate (Dissolved)	0.0374	0.0498	0.0513	0.0522	0.0526
Phosphorus - Dissolved	0.0464	0.0507	0.0498	0.0566	0.0565
Phosphorus - Total	0.0425	0.0525	0.0511	0.0562	0.0577
Cyanide					
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals					
Aluminum	0.0052	0.006	0.0058	0.0086	0.0063
Antimony	0.00029	0.00029	0.00028	0.00027	0.00034
Arsenic	0.00141	0.00145	0.00145	0.00151	0.00158
Barium	0.0338	0.0294	0.0273	0.0277	0.0277
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.997	1.01	0.896	1.04	0.838
Cadmium	<0.00005	<0.00006	<0.00005	<0.00003	<0.00001
Calcium	38.4	37.9	35.2	34.5	34.3
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.00058	0.00048	0.00044	0.00049	0.00051
Copper	0.00148	0.00063	0.00094	0.00053	0.00061
Dissolved Cadmium (by saltwater ext	0.00004	0.000029	0.000029	<0.00002	
Iron	<0.01	<0.01	<0.01	<0.01	<0.01
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.00113	0.00094	0.00115	0.00099	0.00089
Magnesium	26.2	25.4	24.5	25.4	24.9
Manganese	0.111	0.158	0.166	0.184	0.199
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0284	0.0287	0.0301	0.0313	0.0333
Nickel	0.0024	0.0022	0.00171	0.00141	0.00143
Phosphorus	<0.05	<0.05	<0.05	0.06	0.061
Potassium	8.95	8.57	8.45	9.16	8.66
Selenium	0.00088	0.00067	0.00054	0.00045	0.00042
Silicon	5.77	6.29	6.19	6.26	6.24
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	81.8	82.6	74	76	74.6
Strontium	0.603	0.547	0.533	0.569	0.565
Sulphur	66.8	69.4	62.2	61.2	61.2
Thallium	0.000026	0.000025	0.000021	0.000019	0.000019
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.00306	0.00327	0.00309	0.00297	0.00317
Vanadium	0.0016	0.0012	0.0013	0.0013	0.001
Zinc	0.0015	<0.001	0.0044	0.0067	0.0037
Total Metals					
Aluminum	0.0958	0.0354	0.0326	0.0227	0.0618
Antimony	0.00028	0.00031	0.00034	0.0003	0.00042
Arsenic	0.00142	0.00146	0.0015	0.00156	0.00156
Barium	0.0343	0.0306	0.0288	0.0275	0.0268
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	1.03	1.06	0.974	1.02	0.84
Cadmium	<0.00008	<0.00006	<0.0001	<0.00003	0.000017
Calcium	36.6	37.9	36.3	33.6	33
Chromium	<0.00037	0.00016	0.00026	0.00014	0.00035
Cobalt	0.00063	0.00053	0.0005	0.00052	0.00053
Copper	0.00172	0.00124	0.00179	0.00094	0.00195
Iron	0.107	0.038	0.035	0.02	0.073
Lead	<0.00005	<0.00005	<0.00005	<0.00005	0.000053
Lithium	0.00129	0.00107	0.00141	0.00108	0.00096
Magnesium	25.3	25.6	25.2	25.1	24.2
Manganese	0.114	0.164	0.181	0.185	0.193
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.03	0.0307	0.0329	0.0324	0.0328
Nickel	0.00281	0.00254	0.00205	0.00159	0.00162
Phosphorus	0.056	0.062	<0.05	0.062	0.059
Potassium	8.59	8.66	8.63	9.15	8.49
Selenium	0.00087	0.00063	0.00061	0.00045	0.0004
Silicon	5.91	6.31	6.36	6.28	6.13
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	80.4	84	79.4	77.9	70.8
Strontium	0.605	0.571	0.553	0.575	0.566
Sulphur	65.9	70.9	64.8	62.1	59
Thallium	0.000025	0.000034	0.000022	0.000021	0.000017
Tin	0.00014	<0.0001	0.0001	<0.0001	0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extracti	0.000063	0.000038	0.000037	0.000022	
Uranium	0.00318	0.00355	0.0034	0.00319	0.00318
Vanadium	0.002	0.0015	0.0017	0.0014	0.0013
Zinc	<0.003	<0.003	0.0068	0.0044	0.0067
Organics					
Carbon Organic (Dissolved)					
Carbon Organic (Total)	2.94	2.89	2.45	2.05	2.16
Nitrogen Organic (Dissolved)					
Nitrogen Organic (Total)					
ALS LAB ID	**L1435549**	**L1456126**	**L1475118**	**L1486405**	**L1505010**

Site ID	BGC14-005				
Site ID	BGC14-005	BGC14-005	BGC14-005	BGC14-005	BGC14-005
Analytes	Apr-14	May-14	Jun-14	Jul-14	Aug-14
In Situ Parameters					
Conductivity µS/cm	2100	2155	2010	2534	2095
Oxygen Dissolved %	0.31	4	1.7	2.9	4.8
Oxygen Dissolved	0.03	0.42	0.19	0.33	0.52
pH (unitless)	8.86	8.16	9.83	10.2	8.45
Redox Potential mV	-182	-170	-274	-301	-216
Salinity ppt	1.53	1.6	1.46	1.88	1.54
Specific Conductivity µS/cm	2923	3058	2807	3558	2946
Temperature °C	10.9	9.49	10.1	9.89	9.87
Total Dissolved Solids	1899	1988	1824	2312	1915
Turbidity NTU	11.6	7.3	-1.7	-3.1	0
Physical Tests					
Acidity to pH 8.3 (as CaCO3)	2.7	4.4			
Alkalinity (Total as CaCO3)	159	177	163	171	172
Bicarbonate Alkalinity	159	177	163	171	172
Carbonate Alkalinity	<2	<2	<1	<2	<2
Color TCU					
Hardness as CaCO3 (Dissolved)	1580	1560	1530	1590	1540
Hydroxide Alkalinity	<2	<2	<1	<2	<2
pH (unitless)	8.17	8.09	8.24	8.22	8.24
Specific Conductivity µS/cm	2860	2890	2970	2880	2990
Total Dissolved Solids	2920	2810	2830	2820	2880
Total Suspended Solids	8.4	5.9	9.4	4.3	7.6
Turbidity NTU	1.83	4.06	2.53	3.28	2.47
Dissolved Anions					
Bromide	<1	<1	<1	<1	<1
Chloride	13	10	<10	<10	<10
Fluoride	<0.4	0.197	0.183	0.195	0.175
Sulphate	1840	1870	1850	1880	1890
Nutrients					
Ammonia (Total)	0.0676	0.0663	0.0683	0.0659	0.0798
Nitrate (as N)	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite (as N)	<0.02	<0.02	<0.02	<0.02	<0.02
Nitrogen (Dissolved)					
Nitrogen (Total)					
Nitrogen Kjeldahl (Total)	0.143	0.171	0.16	0.162	0.153
Orthophosphate (Dissolved)	0.0149	0.001	0.0035	0.0075	0.0012
Phosphorus - Dissolved	0.0139	<0.002	0.0029	0.0084	<0.002
Phosphorus - Total	0.0276	0.0272	0.0283	0.0224	0.0218
Cyanide					
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals					
Aluminum	0.0037	0.0021	0.0025	0.0024	0.0013
Antimony	<0.0001	<0.0002	<0.0001	0.00017	<0.0001
Arsenic	0.00135	0.00123	0.00113	0.00119	0.00114
Barium	0.0234	0.0229	0.0295	0.0322	0.0339
Beryllium	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.001	<0.0005	<0.0005	<0.0005
Boron	0.08	0.075	0.07	0.076	0.074
Cadmium	<0.00002	<0.00002	0.000011	<0.00001	<0.00001
Calcium	297	294	283	301	293
Chromium	0.00033	0.0003	0.00017	0.00011	0.0001
Cobalt	0.00091	0.00092	0.00081	0.00083	0.00078
Copper	0.00047	<0.0004	<0.0002	0.00073	<0.0002
Dissolved Cadmium (by saltwater ext	<0.00002	<0.00002			
Iron	0.485	0.578	0.575	0.597	0.572
Lead	<0.00005	<0.0001	<0.00005	<0.00005	<0.00005
Lithium	0.0145	0.0122	0.0138	0.0147	0.0149
Magnesium	204	201	200	202	197
Manganese	0.496	0.493	0.461	0.457	0.465
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0353	0.0312	0.03	0.0302	0.0309
Nickel	0.0022	0.0017	0.00111	0.00092	0.00102
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	11.1	12.1	12.1	13.7	13.7
Selenium	<0.0001	<0.0002	0.00012	<0.0001	<0.0001
Silicon	9.23	9.44	9.76	9.86	9.82
Silver	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001
Sodium	192	171	169	187	181
Strontium	2.53	2.21	2.17	2.32	2.37
Sulphur	596	592	564	567	570
Thallium	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001
Tin	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.02	<0.01	<0.01	<0.01
Uranium	0.00151	0.00162	0.0016	0.00164	0.00166
Vanadium	<0.001	<0.002	<0.001	<0.001	<0.001
Zinc	0.0029	<0.002	0.001	<0.001	<0.001
Total Metals					
Aluminum	0.0068	0.0071	0.01	0.0057	0.0071
Antimony	<0.0001	<0.0002	0.0001	0.00021	0.00015
Arsenic	0.00132	0.0012	0.00119	0.00123	0.00117
Barium	0.0235	0.0237	0.031	0.0333	0.0336
Beryllium	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.001	<0.0005	<0.0005	<0.0005
Boron	0.081	0.083	0.066	0.083	0.08
Cadmium	<0.00002	<0.00002	0.000014	0.00001	<0.00001
Calcium	291	289	289	306	293
Chromium	0.00302	0.00167	0.00072	0.00058	0.00081
Cobalt	0.0009	0.00101	0.00088	0.00091	0.0009
Copper	<0.0005	<0.001	<0.0005	0.00106	<0.0005
Iron	0.522	0.607	0.648	0.668	0.697
Lead	<0.00005	<0.0001	<0.00005	<0.00005	<0.00005
Lithium	0.0137	0.0131	0.012	0.0156	0.015
Magnesium	204	200	198	217	196
Manganese	0.479	0.502	0.483	0.469	0.483
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.035	0.0328	0.0283	0.0314	0.0322
Nickel	0.00307	0.0022	0.00136	0.0014	0.00137
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	10.9	11.5	12.3	14	13.5
Selenium	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001
Silicon	9.12	9.42	9.99	10.1	9.93
Silver	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001
Sodium	187	178	170	186	187
Strontium	2.46	2.38	1.97	2.39	2.38
Sulphur	590	611	561	613	577
Thallium	<0.00001	<0.00002	0.00002	<0.00001	<0.00001
Tin	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.02	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extracti	<0.00002	<0.00002			
Uranium	0.00146	0.00169	0.00154	0.00169	0.00175
Vanadium	<0.001	<0.002	<0.001	<0.001	<0.001
Zinc	<0.003	<0.006	0.0045	<0.003	<0.003
Organics					
Carbon Organic (Dissolved)	1.62				
Carbon Organic (Total)	2.34	1.91	2.11	2	1.88
Nitrogen Organic (Dissolved)					
Nitrogen Organic (Total)					
ALS LAB ID	**L1447261**	**L1463124**	**L1478887**	**L1496084**	**L1510175**

Site ID	BGC14-006D			
Site ID	BGC14-006	BGC14-006	BGC14-006	BGC14-006
Analytes	May-14	Jul-14	Aug-14	Sep-14
In Situ Parameters				
Conductivity µS/cm		2774	2592	2623
Oxygen Dissolved %		6.3	20.2	15
Oxygen Dissolved		0.69	2.11	1.74
pH (unitless)		7.32	6.97	7.01
Redox Potential mV		-87.9	-31.7	-47
Salinity ppt		2.02	1.89	2.03
Specific Conductivity µS/cm		3817	3576	3833
Temperature °C		10.7	10.6	8.48
Total Dissolved Solids		2477	2322	2942
Turbidity NTU		5.2	0	0
Physical Tests				
Acidity to pH 8.3 (as CaCO3)				
Alkalinity (Total as CaCO3)	137	108	131	135
Bicarbonate Alkalinity	137	108	131	135
Carbonate Alkalinity	<2	<1	<2	<2
Color TCU				
Hardness as CaCO3 (Dissolved)	2460	2360	2360	2450
Hydroxide Alkalinity	<2	<1	<2	<2
pH (unitless)	7.73	7.93	7.71	7.68
Specific Conductivity µS/cm	3700	3840	3700	3700
Total Dissolved Solids	4010	4020	3910	4020
Total Suspended Solids	33.4	9.4	5.4	5.8
Turbidity NTU	28.8	16.7	11	10.4
Dissolved Anions				
Bromide	<1	<1	<1	<1
Chloride	12	11	<10	10
Fluoride	<0.4	0.24	0.226	0.232
Sulphate	2740	2710	2720	2730
Nutrients				
Ammonia (Total)	0.238	0.248	0.247	0.267
Nitrate (as N)	<0.1	<0.1	<0.1	<0.1
Nitrite (as N)	<0.02	<0.02	<0.02	<0.02
Nitrogen (Dissolved)				
Nitrogen (Total)				
Nitrogen Kjeldahl (Total)	0.391	0.323	0.258	0.29
Orthophosphate (Dissolved)	<0.001	<0.001	<0.001	<0.001
Phosphorus - Dissolved	<0.002	<0.002	<0.002	<0.002
Phosphorus - Total	0.0137	<0.002	0.0034	0.004
Cyanide				
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005
Dissolved Metals				
Aluminum	<0.002	<0.002	<0.002	<0.002
Antimony	<0.0002	<0.0002	<0.0002	<0.0002
Arsenic	<0.0002	0.00598	0.00644	0.00662
Barium	0.00773	0.00849	0.00787	0.00738
Beryllium	<0.0002	<0.0002	<0.0002	<0.0002
Bismuth	<0.001	<0.001	<0.001	<0.001
Boron	0.123	0.144	0.151	0.138
Cadmium	<0.00002	0.000024	<0.00002	0.00002
Calcium	453	446	461	477
Chromium	<0.0002	<0.0002	<0.0002	<0.0002
Cobalt	0.00076	0.00096	0.00082	0.00071
Copper	<0.0004	<0.0004	<0.0004	<0.0004
Dissolved Cadmium (by saltwater ext	<0.00002		0.000022	
Iron	1.19	1.49	1.6	1.88
Lead	<0.0001	<0.0001	<0.0001	<0.0001
Lithium	0.0235	0.0275	0.0283	0.0256
Magnesium	322	304	294	306
Manganese	0.323	0.384	0.355	0.362
Mercury	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.00464	0.00485	0.00467	0.00483
Nickel	<0.001	0.0013	0.0011	<0.001
Phosphorus	<0.05	<0.05	<0.05	<0.3
Potassium	6.15	6.05	5.95	6.38
Selenium	<0.0002	<0.0002	<0.0002	<0.0002
Silicon	8.74	8.25	8.28	8.4
Silver	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	131	145	154	155
Strontium	8.31	8.57	8.54	8.65
Sulphur	879	854	773	
Thallium	<0.00002	<0.00002	<0.00002	<0.00002
Tin	0.00085	<0.0002	<0.0002	<0.0002
Titanium	<0.02	<0.02	<0.02	0.016
Uranium	0.000616	0.00127	0.000984	0.000939
Vanadium	<0.002	<0.002	<0.002	<0.002
Zinc	<0.002	0.0025	0.0052	0.0033
Total Metals				
Aluminum	0.282	0.0165	0.0148	0.0205
Antimony	0.00024	<0.0002	<0.0002	<0.0002
Arsenic	0.00358	0.00636	0.00694	0.00765
Barium	0.0107	0.00927	0.0083	0.00751
Beryllium	<0.0002	<0.0002	<0.0002	<0.0002
Bismuth	<0.001	<0.001	<0.001	<0.001
Boron	0.133	0.155	0.155	0.146
Cadmium	0.000032	0.00003	0.000027	0.000028
Calcium	437	460	475	483
Chromium	0.00083	<0.0002	<0.0002	<0.0002
Cobalt	0.00089	0.00106	0.00091	0.00075
Copper	0.0017	<0.001	<0.001	<0.001
Iron	2.06	1.68	1.77	2.23
Lead	0.00016	<0.0001	<0.0001	<0.0001
Lithium	0.0258	0.0282	0.0281	0.0261
Magnesium	316	312	319	313
Manganese	0.341	0.398	0.381	0.358
Mercury	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.00471	0.00522	0.00489	0.00499
Nickel	0.0015	0.0015	0.0012	<0.001
Phosphorus	<0.05	<0.05	<0.05	<0.3
Potassium	6.17	6.34	6.24	6.37
Selenium	<0.0002	<0.0002	<0.0002	<0.0002
Silicon	9.15	8.6	8.64	8.69
Silver	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	132	153	164	154
Strontium	8.35	8.78	8.79	8.94
Sulphur	851	869	825	
Thallium	<0.00002	<0.00002	<0.00002	<0.00002
Tin	0.00458	0.00026	<0.0002	<0.0002
Titanium	<0.02	<0.02	<0.02	0.017
Total Cadmium (by saltwater extracti				
Uranium	0.000635	0.00137	0.0011	0.000945
Vanadium	<0.002	<0.002	<0.002	<0.002
Zinc	<0.006	<0.006	0.0073	<0.006
Organics				
Carbon Organic (Dissolved)				
Carbon Organic (Total)	4.19	1.41	1.13	1.22
Nitrogen Organic (Dissolved)				
Nitrogen Organic (Total)				
ALS LAB ID	**L1459725**	**L1485034**	**L1497579**	**L1512652**

Site ID	BGC14-009				
Site ID	BGC14-009	BGC14-009	BGC14-009	BGC14-009	BGC14-009
Analytes	Apr-14	May-14	Jul-14	Jul-14	Aug-14
In Situ Parameters					
Conductivity µS/cm	728	706	641	788	1289
Oxygen Dissolved %	7.6	2.2	0.6	4	7.3
Oxygen Dissolved	0.89	0.25	0.07	0.44	0.79
pH (unitless)	7.64	7.56	9.41	7.81	7.54
Redox Potential mV	-53.1	-101	-189	-103	-67.1
Salinity ppt	0.36	0.51	0.45	0.54	0.88
Specific Conductivity µS/cm	489	1016	909	1074	1724
Temperature °C	7.85	9	9.58	11.1	11.8
Total Dissolved Solids	473	661	591	698	1121
Turbidity NTU	-2	6.5	-2.3	-4.4	2.2
Physical Tests					
Acidity to pH 8.3 (as CaCO3)		4			
Alkalinity (Total as CaCO3)	121	125	136	146	150
Bicarbonate Alkalinity	121	125	136	146	150
Carbonate Alkalinity	<2	<2	<1	<2	<2
Color TCU					
Hardness as CaCO3 (Dissolved)	175	248	236	233	232
Hydroxide Alkalinity	<2	<2	<1	<2	<2
pH (unitless)	8.03	7.96	8.08	7.96	8.1
Specific Conductivity µS/cm	715	975	954	907	917
Total Dissolved Solids	524	619	689	625	642
Total Suspended Solids	<3	<3	<3	<3	18.2
Turbidity NTU	0.62	2.09	1.31	1.04	7.57
Dissolved Anions					
Bromide	<0.25	<0.5	<0.5	<0.5	<0.5
Chloride	7.5	11.2	7.8	6.7	6.2
Fluoride	0.19	0.21	0.28	0.165	0.166
Sulphate	250	374	368	329	324
Nutrients					
Ammonia (Total)	0.131	0.146	0.162	0.156	0.185
Nitrate (as N)	<0.025	<0.05	<0.05	<0.05	<0.05
Nitrite (as N)	0.0054	<0.01	<0.01	<0.01	<0.01
Nitrogen (Dissolved)					
Nitrogen (Total)					
Nitrogen Kjeldahl (Total)	0.298	0.416	0.368	0.406	0.352
Orthophosphate (Dissolved)	0.0027	0.0078	0.0384	0.0394	0.0602
Phosphorus - Dissolved	0.0339	0.017	0.0415	0.0402	0.0538
Phosphorus - Total	0.0041	0.0666	0.075	0.0694	0.0567
Cyanide					
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals					
Aluminum	0.008	0.0048	0.0051	0.0058	0.0056
Antimony	0.00317	0.00077	0.00038	0.00044	0.00029
Arsenic	0.00431	0.0051	0.00498	0.00503	0.0053
Barium	0.023	0.0259	0.024	0.0215	0.0208
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.122	0.122	0.131	0.125	0.149
Cadmium	0.000012	<0.00001	<0.00002	<0.00002	<0.00001
Calcium	52.8	74.5	70.4	69.6	69.8
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.00167	0.00257	0.00182	0.00154	0.00125
Copper	0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Dissolved Cadmium (by saltwater ext			<0.00002	<0.00002	
Iron	<0.01	0.31	0.251	0.221	0.238
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.00469	0.00495	0.0051	0.00477	0.00581
Magnesium	10.6	15	14.7	14.4	14.1
Manganese	0.471	1.27	1.11	0.92	0.727
Mercury	0.000011	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0247	0.0236	0.0227	0.0213	0.0213
Nickel	0.00399	0.00453	0.00365	0.00314	0.00262
Phosphorus	<0.05	0.07	0.073	0.075	0.102
Potassium	0.79	0.98	0.93	0.91	0.83
Selenium	0.00026	0.00023	0.00021	0.00017	0.00026
Silicon	8.53	7.96	8.08	8.5	8.64
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	97.1	111	115	103	108
Strontium	0.0857	0.131	0.139	0.121	0.128
Sulphur	79.6	129	117	106	107
Thallium	0.00002	<0.00001	0.000013	0.000015	0.000013
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.00251	0.0027	0.00249	0.00231	0.00262
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	<0.001	0.0018	0.0079	0.0026	0.0033
Total Metals					
Aluminum	0.0335	0.0217	0.0247	0.0489	0.185
Antimony	0.00315	0.00083	0.00046	0.00049	0.00059
Arsenic	0.00425	0.00521	0.00528	0.00516	0.00533
Barium	0.022	0.0264	0.0255	0.0216	0.022
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.127	0.123	0.147	0.128	0.159
Cadmium	0.00002	0.000012	<0.00003	<0.00002	0.000032
Calcium	52.4	74.3	73.3	66.9	66
Chromium	0.00011	0.00015	0.00023	0.00022	0.00054
Cobalt	0.00171	0.00275	0.00196	0.00161	0.00144
Copper	<0.001	<0.0005	0.00052	0.00073	0.00205
Iron	0.035	0.341	0.298	0.267	0.405
Lead	<0.00005	<0.00005	<0.00005	<0.00005	0.000099
Lithium	0.00448	0.00463	0.0052	0.00468	0.00605
Magnesium	10.8	14.7	15.5	13.9	13.5
Manganese	0.464	1.34	1.12	0.926	0.736
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0265	0.0241	0.0252	0.0215	0.0222
Nickel	0.0041	0.00478	0.00391	0.0034	0.0032
Phosphorus	<0.05	0.074	0.081	0.078	0.105
Potassium	0.83	0.94	0.99	0.89	0.81
Selenium	0.00027	0.00024	0.00022	0.00025	0.00045
Silicon	8.74	7.73	8.6	8.35	8.73
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	92.2	114	123	104	110
Strontium	0.0881	0.134	0.149	0.121	0.129
Sulphur	80.8	130	126	104	106
Thallium	0.00002	0.00001	0.000015	0.000014	0.000018
Tin	0.00019	0.00011	0.00016	0.00015	0.00041
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extracti			<0.00002	<0.00002	
Uranium	0.00246	0.00273	0.00272	0.00231	0.00275
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	<0.003	<0.003	0.0099	0.0035	0.0081
Organics					
Carbon Organic (Dissolved)	4.02				
Carbon Organic (Total)	4.92	6.96	6.46	5.97	6.82
Nitrogen Organic (Dissolved)					
Nitrogen Organic (Total)					
ALS LAB ID	**L1440275**	**L1463124**	**L1481825**	**L1494504**	**L1508557**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D2.2 - GROUNDWATER QUALITY DATA

Site ID	BGC14-010					BGC14-011D					BGC14-011S					BGC14-012D					BGC14-012		
Site ID	BGC14-01(	BGC14-01(	BGC14-01(	BGC14-01(	BGC14-01(	BGC14-011	BGC14-011	BGC14-011	BGC14-011	BGC14-011	BGC14-011	BGC14-011	BGC14-011	BGC14-011	BGC14-011	BGC14-012	BGC14-012	BGC14-012	BGC14-012	BGC14-012	BGC14-012	BGC14-012	BGC14-012
Analytes	Mar-14	May-14	Jun-14	Jul-14	Aug-14	Mar-14	May-14	Jun-14	Jul-14	Aug-14	Mar-14	May-14	Jun-14	Jul-14	Aug-14	Mar-14	May-14	Jun-14	Jul-14	Aug-14	Mar-14	May-14	Jun-14
In Situ Parameters																							
Conductivity µS/cm	1586	1079	1026	1108	1176	966	1000	660	754	653	714	834	453	532	528	2029	1408	1314	1581	1446	796	1047	1368
Oxygen Dissolved %	6.3	5.5	17.6	2.7	14.3	13.4	0	0.8	4.3	2.1	14.4	0	0.5	18.6	2.8	75.5	3.7	5.7	25	7.4	18.1	5.1	2.3
Oxygen Dissolved	0.76	0.64	2.02	0.3	1.66	1.64	0	0.1	0.48	0.28	1.75	0	0.06	2.13	0.31	9.51	0.43	0.66	2.62	0.85	133	0.63	0.28
pH (unitless)	6.93	7.03	7.06	8.78	6.97	8.57	8.07	8.1	7.97	7.65	9.36	8.28	8.92	8.4	7.83	7.81	7.72	7.68	7.55	7.32	8	7.61	7.43
Redox Potential mV	-9.6	-36.3	-20.7	-128	-47.6	-108	-134	-77.5	-32.1	-99.6	-2.3	-199	-215	-144	-218	-84.2	-97.2	-86.3	-62.4	-81.8	58.9	-28.1	33.1
Salinity ppt	0.8	0.79	0.75	0.76	0.86	0.48	0.5	0.48	0.51	0.48	0.35	0.4	0.33	0.37	0.36	1.03	1.06	0.97	1.06	1.08	0.39	0.85	1.09
Specific Conductivity µS/cm	1044	1561	1482	1504	1678	629		967	1030	965	459		671	759	739	1267	2072	1910	12055	2092	461	1683	2121
Temperature °C	7.1	8.8	8.95	11.1	9.52	6.7	10.5	8.35	10.6	8.07	6.28	10.7	8.03	9.37	9.92	5.36	8.25	8.72	13.1	8.82	2.97	5.23	6.38
Total Dissolved Solids	1031	1013	964	980	1096	628	640	628	670	627	464	539	436	493	431	1320	1345	1241	1340	1362	517	1093	1380
Turbidity NTU	6.7	7.1	-1.3	0	0	6.7		-2.6	1.5	0	2.4		-2.9	3.1	0	2.3	6.3	-3.6	0.9	0	2.3	1.09	-3.6
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)		16.5					<1					<1											
Alkalinity (Total as CaCO3)	383	392	377	371	386	321	318	331	323	328	194	179	157	174	178	219	220	213	212	221	190	286	406
Bicarbonate Alkalinity	383	392	377	371	386	312	310	311	307	319	164	174	150	168	178	219	220	213	212	221	190	286	406
Carbonate Alkalinity	<2	<2	<1	<1	<2	9.4	8.1	19.6	16.4	8.8	29.6	5	6.9	5.7	<1	<2	<2	<1	<1	<2	<2	<2	<1
Color TCU																							
Hardness as CaCO3 (Dissolved)	896	856	885	892	907	58.4	65.4	70.4	71.6	66.5	73.1	78	69.4	79.8	82.8	718	666	734	699	718	289	698	1090
Hydroxide Alkalinity	<2	<2	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2	<2	<1	<1	<2	<2	<2	<1
pH (unitless)	7.88	7.75	8	8.1	7.95	8.56	8.39	8.53	8.53	8.42	8.99	8.48	8.46	8.42	8.32	8.04	8.28	8.2	8.03	8.18	8.17	8.21	8.16
Specific Conductivity µS/cm	1520	1510	1580	1570	1590	974	968	1010	1020	1000	659	760	703	746	752	1970	2010	2010	2030	2020	771	1630	2230
Total Dissolved Solids	1240	1240	1270	1330	1290	621	636	648	658	656	438	505	456	489	502	1550	1600	1580	1540	1690	512	1260	1840
Total Suspended Solids		<3	4.3	4	6.4		5.5	<3	<3	<3		<3	<3	4.6	7.2	<3	<3	<3	3.3	7.1	<3	<3	<3
Turbidity NTU		2.34	4.3	6.4	5.69		2.76	1	0.82	0.54		0.75	0.6	1.18	1.81	1.35	0.9	1.09	1.14	2.1	0.58	0.27	0.28
Dissolved Anions																							
Bromide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.25	0.153	0.149	<0.25	<0.5	<1	<1	<1	<1	<1	<0.5	<0.5	<1
Chloride	8.2	9.5	8.8	7.7	7.9	20.2	18.6	19.5	19.1	19.5	11.9	11.9	11.9	12.7	13.5	<10	12	<10	<10	<10	<5	14.1	16
Fluoride	0.28	0.27	0.307	0.28	0.286	0.66	0.63	0.656	0.62	0.674	0.49	0.584	0.583	0.52	0.539	0.72	<0.4	0.301	0.281	0.258	0.45	0.2	0.232
Sulphate	573	579	593	607	619	172	173	182	185	189	158	185	178	181	194	993	995	995	974	985	237	671	1030
Nutrients																							
Ammonia (Total)	0.054	0.0553	0.0726	0.0705	0.0868	0.0096	0.0216	0.025	0.0237	0.031	0.0225	0.0184	0.0106	0.0055	0.0088	0.0992	0.0932	0.0901	0.0936	0.084	<0.005	0.0126	0.0182
Nitrate (as N)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.025	<0.005	<0.005	<0.025	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.1
Nitrite (as N)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.005	<0.001	<0.001	<0.005	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.01	<0.02
Nitrogen (Dissolved)																							
Nitrogen (Total)																							
Nitrogen Kjeldahl (Total)	0.216	0.201	0.22	0.789	0.26	0.096	0.151	0.224	0.181	0.201	0.182	0.214	0.303	0.337	0.349	0.248	0.226	0.244	0.257	0.246	0.39	0.495	0.871
Orthophosphate (Dissolved)	0.0016	0.002	0.0013	0.0021	<0.001	0.009	0.0278	0.0309	0.039	0.0379	0.0641	0.0588	0.0825	0.141	0.13	0.0046	0.0089	0.0088	0.0125	0.0089	0.0384	0.0351	0.0389
Phosphorus - Dissolved	0.0021	0.0031	<0.002	<0.002	<0.002	0.0111	0.0302	0.0345	0.0432	0.0398	0.0708	0.0666	0.086	0.165	0.14	0.0059	0.0087	0.0081	0.0127	0.0086	0.0531	0.0392	0.0416
Phosphorus - Total	0.016	0.0182	0.0181	0.0221	0.0489	0.0207	0.0502	0.0384	0.0451	0.0406	0.071	0.0752	0.0985	0.177	0.169	0.0134	0.0205	0.0162	0.0243	0.0257	0.0613	0.0415	0.0466
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																							
Aluminum	0.0024	0.0033	0.003	0.0029	0.0024	0.0083	0.0105	0.0097	0.0092	0.0082	0.0449	0.034	0.0501	0.033	0.0286	0.0043	0.0055	0.0055	0.005	0.0038	0.0052	0.0042	0.0038
Antimony	0.00031	0.00023	0.0001	<0.0001	<0.0001	0.00016	0.00026	0.00019	0.00012	<0.0001	0.00018	0.00024	0.00026	0.00027	0.00024	<0.0002	0.00012	0.00011	0.00015	<0.0001	0.0009	0.00024	0.00017
Arsenic	0.00096	0.00072	0.00081	0.00074	0.00087	0.00037	0.00062	0.00069	0.00068	0.00061	0.00105	0.00086	0.00124	0.00183	0.00197	0.0371	0.0379	0.0387	0.036	0.0401	0.0038	0.00265	0.00295
Barium	0.0247	0.0244	0.0279	0.0275	0.0268	0.0207	0.0231	0.0242	0.0251	0.0218	0.015	0.0172	0.0162	0.0242	0.0263	0.016	0.0187	0.0173	0.0183	0.0152	0.0225	0.0287	0.0386
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.02	0.019	0.022	0.022	0.018	0.029	0.028	0.03	0.03	0.033	0.017	0.016	0.014	0.017	0.017	0.626	0.586	0.602	0.592	0.571	0.068	0.149	0.176
Cadmium	0.000052	0.00004	0.000027	0.000028	0.000026	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	0.000027	<0.00001	<0.00001	<0.00001	<0.00001	0.000033	0.000017	0.000017	0.000011	0.000013	0.000024	0.000025	0.000021
Calcium	166	160	163	164	168	7.44	9.78	10.7	10.9	9.49	9.85	10.2	9.09	10.5	11.1	71.6	66.6	71.3	70.9	70.1	39.1	98	152
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00011
Cobalt	0.00154	0.00159	0.00256	0.00232	0.00226	0.00014	0.00052	0.00057	0.00061	0.00041	0.00017	0.00052	0.00034	0.00034	0.00025	0.00122	0.002	0.00146	0.00152	0.00093	0.00044	0.00099	0.00067
Copper	<0.0002	0.00034	0.00028	<0.0002	0.00023	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0005	0.00023	<0.0002	0.00067	<0.0002	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	0.00847	0.00394	0.00485
Dissolved Cadmium (by saltwater ex																							
Iron	0.507	0.626	0.745	0.803	0.719	<0.01	0.023	0.023	0.025	0.032	<0.01	<0.01	0.035	0.111	0.105	0.134	0.184	0.227	0.191	0.256	<0.01	0.013	0.032
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0396	0.0427	0.0424	0.0433	0.0387	0.0196	0.0158	0.0155	0.0125	0.0158	0.0147	0.0151	0.013	0.0136	0.0133	0.0465	0.0452	0.0495	0.0448	0.0493	0.00762	0.0127	0.0172
Magnesium	117	111	116	117	118	9.67	9.95	10.6	10.8	10.4	11.8	12.7	11.3	13	13.4	131	121	135	127	132	46.5	110	174
Manganese	0.287	0.327	0.699	0.557	0.67	0.0288	0.119	0.155	0.17	0.123	0.0175	0.108	0.163	0.324	0.386	0.173	0.442	0.365	0.381	0.248	0.0489	0.0847	0.0743
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.00297	0.00306	0.00333	0.00324	0.00326	0.00477	0.00617	0.00614	0.0059	0.00597	0.0183	0.0225	0.0228	0.0238	0.0217	0.0168	0.0162	0.0163	0.0164	0.0167	0.0105	0.00965	0.0102
Nickel	0.00224	0.00268	0.00434	0.00356	0.00374	<0.0005	0.00173	0.00199	0.00259	0.00144	0.00094	0.00162	0.00105	0.00154	0.00088	0.002	0.00244	0.00186	0.00204	0.00116	0.00168	0.0022	0.00275
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.084	<0.05	0.084	0.062	0.103	0.211	0.164	<0.05	<0.05	<0.05	<0.05	<0.05	0.056	<0.05	<0.05
Potassium	11.5	11.3	12	11.8	12.3	5.17	5.95	6.18	6.14	5.81	6.19	6.26	5.69	5.9	5.89	6.71	5.97	6.76	6.74	6.66	12	17.3	24.9
Selenium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00012	0.00011	<0.0001	0.00012	0.00061	0.0006	0.0003	0.00025	0.00033	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	0.00225	0.00028	0.00029
Silicon	24.7	24.2	22.1	23.5	23	4.11	4.31	4.44	4.43	4.31	3.21	3.09	3.07	3.19	3.37	7.32	7.12	7.36	7.16	7.36	5.29	6.48	7.68
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	41.1	40.4	47.9	42.7	44.4	200	191	191	197	203	130	127	112	125	124	226	207	218	217	208	63.5	115	162
Strontium	1.76	2.02	1.93	2.02	2.05	0.297	0.286	0.293	0.254	0.296	0.28	0.322	0.25	0.323	0.336	10.5	10	9.92	9.62	10.1	0.596	1.46	2.24
Sulphur	174	174	192	198	199	53.9	55.3	60	62	59.4	50.9	59	61.4	64.6	70.6	308	313	311	316	321	77.8	220	315
Thallium	0.000024	0.000021	0.000028	0.000027	0.000025	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	0.000014	0.000017	0.000017	0.000015	<0.00001	<0.00001	<0.00001
Tin	0.00017	0.00011	<0.0001	<0.0001	<0.0001	0.00018	0.00021	0.00012	0.00011	0.00014	0.00015	0.00025	0.00032	0.00019	0.00028	0.00022	0.00018	0.00014	0.00016	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.00242	0.00228	0.00295	0.00265	0.00269	0.000359	0.00138	0.00152	0.00156	0.0013	0.00161	0.00209	0.00128	0.00151	0.00123	0.000745	0.000961	0.000848	0.00113	0.000827	0.0012	0.00205	0.00343
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0013	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	0.0337	0.0096	0.0089
Zinc	0.0023	0.003	0.0105	0.0057	0.015	<0.001	<0.001	0.0025	0.0013	0.0071	0.0022	0.0017	0.0014	0.0059	<0.001	<0.002	0.0017	0.0033	0.0019	0.0024	0.0011	0.002	0.0052
Total Metals																							
Aluminum	0.439	0.0437	0.0149	0.0407	0.145	0.241	0.144	0.0864	0.046	0.064	0.0771	0.0554	0.0697	0.122	0.0999	0.0362	0.0218	0.0195	0.0247	0.0807	0.0163	0.0116	0.0151
Antimony	0.00057	0.00028	0.00014	0.00013	0.00019	0.00038	0.00037	0.00029	0.00017	0.00019	0.00019	0.00027	0.00035	0.00035	0.00036	<0.0002	0.00019	0.00016	0.00026	0.00014	0.00095	0.00025	0.00023
Arsenic	0.00106	0.00072	0.00084	0.00077	0.00091	0.0004	0.00061	0.00071	0.00073	0.00068	0.00106	0.00087	0.00126	0.0019	0.0021	0.0379	0.0386	0.0411	0.0367	0.0431	0.00391	0.00264	0.00297
Barium	0.0271	0.0244	0.0288	0.0284	0.0298	0.0242	0.0257	0.0291	0.0255	0.0237	0.0151	0.018	0.0168	0.0236	0.0282	0.0172	0.0204	0.0178	0.0187	0.0164	0.0226	0.029	0.0399
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.022	0.02	0.027	0.03	0.022	0.031	0.029	0.032	0.035	0.047	0.017	0.016	0.018	0.022	0.024	0.629	0.608	0.642	0.614	0.612	0.071	0.152	0.196
Cadmium	0.00006	0.000042	0.000032	0.000033	0.000035	0.000014	0.000013	0.00001	0.000011	<0.00001	0.000024	0.000021	0.000014	0.000023	0.00002	0.000027	0.000029	0.000016	0.000023	0.000023	0.000021	0.00003	0.000024
Calcium	166	156	165	164	162	7.71	9.89	10.8	10.7	9.96	9.81	10.2	9.12	10.1	11.3	70.2	66.5	69.5	69.6	70.7	38.6	97.4	153
Chromium	0.00031	0.00012	0.00015	0.00026	0.00072	0.00031	0.00029	0.00019	0.00022	0.00021	0.00016	0.00014	0.00017	0.00047	0.00027	<0.0002	0.00016	0.00019	0.00018	0.00029	<0.00026	0.00015	0.00027
Cobalt	0.00173	0.00164	0.0027	0.00237	0.00245	0.00026	0.00058	0.0007	0.00064	0.0005	0.0002	0.00055	0.00068	0.00059	0.00049	0.00124	0.002	0.00151	0.00156	0.00106	0.00046	0.00104	0.00071
Copper	0.00052	<0.0005	<0.0005	<0.0005	0.00179	0.00059	0.00065	<0.0005	<0.0005	0.00061	0.0006	0.00066	0.00059	0.00118	0.00073	<0.001	0.00051	0.00059	<0.0005	0.00119	0.00956	0.00516	0.0062
Iron	0.844	0.677	0.803	0.854	1.08	0.252	0.173	0.104	0.061	0.088	0.046	0.031	0.067	0.25	0.243	0.193	0.239	0.253	0.234	0.374	0.021	0.022	0.043
Lead	0.000198	<0.00005	<0.00005	<0.00005	0.000131	0.000065	<0.00005	0.000105	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000187	0.000054	<0.0001	0.000228	<0.00005	0.000101	0.000063	<0.00005	<0.00005	<0.00005
Lithium	0.0406	0.0416	0.0437	0.0442	0.0388	0.019	0.015	0.0143	0.0139	0.0162	0.0141	0.014	0.015	0.0134	0.0136	0.0469	0.0471	0.0502	0.0451	0.0505	0.00763	0.0122	0.0178
Magnesium	115	110	120	119	118	9.89	9.96	10.5	10.6	10.8	11.7	12.6	11.4	12.3	13.5	135	125	134	128	134	44.2	110	178
Manganese	0.299	0.331	0.708	0.582	0.71	0.0352	0.122	0.168	0.169	0.141	0.0182	0.114	0.168	0.315	0.398	0.171	0.433	0.375	0.4	0.262	0.0496	0.088	0.0771
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.00319	0.00321	0.00353	0.00343	0.00338	0.00502	0.00712	0.00709	0.00692	0.00677	0.0196	0.0243	0.0283	0.0237	0.0234	0.0174	0.0176	0.018	0.0171	0.0179	0.0111	0.0102	0.0114
Nickel	0.00245	0.00287	0.00454	0.00387	0.00452	0.00066	0.002	0.00239	0.00281	0.00181	0.00098	0.00177	0.00131	0.00244	0.00129	0.0019	0.00265	0.00188	0.00228	0.00147	0.00179	0.0023	0.00294
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.075	<0.05	0.093	0.077	0.11	0.186	0.185	<0.05	<0.05	<0.05	<0.05	<0.05	0.072	<0.05	0.057
Potassium	11.5	10.8	12.6	11.8	12.2	5.22	5.96	6.06	6.05	6.16	6.18	6.13	5.73	5.48	5.96	6.59	6.36	6.62	6.62	6.83	11.7	17.1	24.3
Selenium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00012	0.00014	0.00013	0.00011	0.00057	0.00054	0.00033	0.00027	0.00022	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	0.00241	0.00023	0.00031
Silicon	26.6	23.9	24.2	23.6	22.7	4.71	4.61	4.61	4.45	4.61	3.32	3.14	3.14	3.23	3.58	7.36	7.32	7.51	7.31	7.68	5.25	6.44	7.93
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	0.000015	<0.00001	<0.00001	0.000013	<0.00001	0.000012
Sodium	42.7	40.7	50.8	43.2	44.5	206	191	189	190	210	128	128	112	115	126	222	210	221	218	215	65.3	104	168
Strontium	1.8	2	2.06	2.09	2	0.304	0.305	0.312	0.294	0.315	0.285	0.333	0.299	0.311	0.35	10.8	10.5	10.2	9.84	10.4	0.585	1.51	2.37
Sulphur	186	174	204	203	200	56.7	57	61.9	61.8	62.6	53.6	59.4	62.3	61.6	66	321	319	321	327	329	78.9	215	334
Thallium	0.000027	0.00002	0.000029	0.000028	0.000024	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000012	<0.00001	<0.00001	<0.00001	<0.00001	0.000024	0.000015	0.000019	0.000019	0.000015	<0.00001	<0.00001	<0.00001
Tin	0.00052	0.00027	0.00012	0.00016	0.00023	0.00043	0.00044	0.00025	0.00017	0.00033	0.00017	0.0003	0.00047	0.00069	0.0006	0.00037	0.00038	0.00026	0.00031	0.00029	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	0.012	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extracti																							
Uranium	0.00258	0.00231	0.00298	0.00272	0.0027	0.000391	0.00146	0.00176	0.00189	0.0016	0.0017	0.00211	0.00153	0.00146	0.00132	0.000737	0.000987	0.00091	0.0012	0.000898	0.00128	0.00204	0.00377
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0016	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	0.0346	0.0102	0.0098
Zinc	<0.003	<0.003	0.0117	0.0066	0.0206	<0.003	<0.003	0.0032	<0.003	0.0083	<0.003	<0.003	<0.003	0.0053	0.0045	<0.006	<0.003	0.0038	0.0042	0.0046	<0.003	<0.003	0.0069
Organics																							
Carbon Organic (Dissolved)																							
Carbon Organic (Total)	3.17	3.24	3.35	3.53	4.02	2.09	3.13	3.79	4.58	3.42	22.6	23.1	30.7	24.4	14.5	2.41	2.45	2.73	2.68	2.58	6.9	9.15	13.1
Nitrogen Organic (Dissolved)																							
Nitrogen Organic (Total)																							
ALS LAB ID	**L1434993**	**L1454698**	**L1471871**	**L1485034**	**L1505010**	**L1434993**	**L1454698**	**L1472814**	**L1485034**	**L1503481**	**L1434993**	**L1454698**	**L1472814**	**L1485034**	**L1503481**	**L1435549**	**L1455485**	**L1473799**	**L1486405**	**L1507004**	**L1435549**	**L1455485**	**L1473799**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D2.2 - GROUNDWATER QUALITY DATA

Site ID	S		BGC14-013					BGC14-014D			BGC14-015D				BGC14-015S				BGC14-016				
Site ID	BGC14-012	BGC14-012	BGC14-013	BGC14-013	BGC14-013	BGC14-013	BGC14-013	BGC14-014	BGC14-014	BGC14-014	BGC14-015	BGC14-015	BGC14-015	BGC14-015	BGC14-015	BGC14-015	BGC14-015	BGC14-015	BGC14-016	BGC14-016	BGC14-016	BGC14-016	BGC14-016
Analytes	**Jul-14**	**Aug-14**	**Mar-14**	**Jun-14**	**Jul-14**	**Jul-14**	**Aug-14**	**May-14**	**Jul-14**	**Aug-14**	**May-14**	**Jul-14**	**Jul-14**	**Aug-14**	**May-14**	**Jun-14**	**Jul-14**	**Aug-14**	**Mar-14**	**May-14**	**Jun-14**	**Jul-14**	**Aug-14**
In Situ Parameters																							
Conductivity µS/cm	1507	1522	280	327	285	370	289		2100	3281	433	419	456	429	550	507	526	567	535	621	572	15	1179
Oxygen Dissolved %	34.8	51.1	6.3	60.7	1.8	4.8	1.1		51.9	73.8	-0.3	0.8	8.2	30.9	2.4	1.2	2	10.7	26	2.7	0.9	-7.4	14.9
Oxygen Dissolved	4	5.82	0.8	7.27	0.21	0.55	0.13		5.47	7.75	-0.04	0.09	0.87	3.52	0.27	0.13	0.22	1.18	3.28	0.31	0.1	-0.32	1.72
pH (unitless)	7.39	6.9	8.45	8.23	9.64	9.54	8.03		10.3	7.61	8.31	8.64	8.18	7.95	7.76	8.06	7.72	7.26	7.59	7.32	7.58	7.35	7.28
Redox Potential mV	-35.4	0.8	3.8	49.4	-81	-81.2	-32.8		-196	-2.2	-147	-114	-101	-10.1	8.5	-104	-103	-83.3	30.9	-135	-74.2	-63.6	-32.4
Salinity ppt	1.11	1.12	0.21	0.24	0.2	0.26	0.21		1.51	2.49	0.29	0.28	0.29	0.3	0.37	0.34	0.35	0.38	0.42	0.44	0.41	0.42	0.84
Specific Conductivity µS/cm	2164	2169	444	490	419	535	434		2881	45.3	604	576	601	607	756	693	716	771	855	892	826	854	1649
Temperature °C	9.06	9.39	5.68	7.53	8.25	8.9	7.47		10.8	10.7	10.2	10.7	12.3	9.73	10.7	11	11.1	11.3	5.43	9.11	9.08	10.4	10.1
Total Dissolved Solids	1140	1410	289	320	272	347	282		1876	3013	392	374	391	394	491	450	455	504	556	579	536	585	1070
Turbidity NTU	1.9	0	2.4	8.1	-2.4	51.2	0		-2.6	2.5	12.4	0.3	26	4	9.1	-0.3	2.6	0	2.3	6.6	-3.2	2.3	0.7
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)								10.2															
Alkalinity (Total as CaCO3)	411	455	142	141	132	131	130	131	109	123	167	179	180	176	299	296	296	298	387	388	383	395	380
Bicarbonate Alkalinity	411	455	142	141	131	131	130	131	109	123	167	177	177	176	299	296	296	297	387	388	383	395	380
Carbonate Alkalinity	<1	<2	<2	<2	<1	<1	<2	<2	<1	<2	<1	2.6	3.5	<1	<2	<1	<1	<1	<2	<2	<1	<2	<2
Color TCU																							
Hardness as CaCO3 (Dissolved)	985	927	56.3	55.6	42.2	46	42.6	1120	1230	1240	64.2	68.7	71.2	68.7	355	343	351	353	477	479	455	475	468
Hydroxide Alkalinity	<1	<2	<2	<2	<1	<1	<2	<2	<1	<2	<1	<1	<1	<1	<2	<1	<1	<1	<2	<2	<1	<2	<2
pH (unitless)	8	8.12	8.18	8.27	8.28	8.33	8.25	7.45	7.84	7.69	8.36	8.41	8.34	8.4	8.17	8.16	8.2	8.27	8.13	7.98	8.06	7.97	7.79
Specific Conductivity µS/cm	2140	2070	438	453	440	430	434	2200	2380	2330	572	593	615	611	707	710	734	728	844	858	854	833	854
Total Dissolved Solids	1810	1730	294	284	299	293	283	1820	2200	2170	380	386	399	403	440	408	443	452	510	517	522	527	568
Total Suspended Solids	<3	<3	3.1	<3	<3	<3	<3	25.2	5.4	10.3	20.8	9.4	45.4	14.5	6.5	3.6	<3	<3	<3	<3	<3	<3	<3
Turbidity NTU	0.29	0.46	1.65	1	0.93	0.25	0.22	16.8	3.9	3.99	5.15	3.26	18.7	4.87	1.37	0.97	1.12	0.87	1.16	0.85	0.77	2.07	0.92
Dissolved Anions																							
Bromide	<1	<1	0.073	0.077	0.079	0.061	0.063	<1	<1	<1	0.062	0.053	0.065	<0.05	<0.25	<0.5	<0.25	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	13	11	5.11	5.3	4.98	4.77	4.69	18	<10	<10	2.6	2.68	2.83	2.73	2.7	<5	<2.5	2.03	<5	<5	<5	<5	<5
Fluoride	0.228	0.231	0.249	0.271	0.275	0.277	0.27	<0.4	0.204	0.48	0.391	0.394	0.437	0.406	0.24	0.233	0.242	0.26	<0.2	<0.2	0.126	0.134	0.136
Sulphate	939	860	82.7	88.3	86.1	83.8	82.6	1370	1410	1420	127	128	131	130	121	119	120	118	135	123	134	134	145
Nutrients																							
Ammonia (Total)	0.022	0.0206	0.0711	0.054	0.0712	0.0651	0.0824	<0.005	0.222	0.441	0.0582	0.0838	0.0819	0.122	0.0332	0.039	0.0491	0.0554	<0.005	<0.005	<0.005	0.0089	0.0104
Nitrate (as N)	<0.1	<0.1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.005	<0.005	<0.005	<0.005	<0.025	<0.05	<0.025	<0.005	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrite (as N)	<0.02	<0.02	0.001	<0.001	<0.001	0.0012	<0.001	<0.02	<0.02	<0.02	<0.001	<0.001	<0.001	<0.001	<0.005	<0.01	<0.005	0.0013	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen (Dissolved)																							
Nitrogen (Total)																							
Nitrogen Kjeldahl (Total)	0.717	0.637	0.152	0.157	0.143	0.126	0.158	0.528	0.516	0.551	0.203	0.228	0.275	0.244	0.155	0.169	0.168	0.18	0.114	0.147	0.143	0.142	0.155
Orthophosphate (Dissolved)	0.0398	0.0428	0.0193	0.0185	0.0259	0.0285	0.031	0.0024	0.0017	0.0017	0.0382	0.057	0.0672	0.0641	0.0533	0.0628	0.0619	0.0648	0.014	0.0169	0.0209	0.0107	0.0155
Phosphorus - Dissolved	0.0456	0.0432	0.0233	0.0188	0.0294	0.0311	0.0305	0.0068	<0.002	<0.02	0.0441	0.0579	0.0687	0.0646	0.0607	0.0643	0.0649	0.0654	0.0178	0.0159	0.0188	0.0132	0.0136
Phosphorus - Total	0.0457	0.049	0.0261	0.0269	0.0325	0.0315	0.0311	0.0861	0.0449	0.0449	0.0535	0.0643	0.0778	0.0588	0.0654	0.0704		0.0776	0.0208	0.0311	0.0344	0.0333	0.0369
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																							
Aluminum	0.0062	0.0035	0.0127	0.0123	0.0116	0.0119	0.0113	0.0075	0.0029	0.0034	0.0108	0.0097	0.0086	0.0094	0.0056	0.0044	0.0047	0.0046	0.0055	0.0049	0.0041	0.0042	0.0045
Antimony	0.00013	0.00012	<0.0001	0.00012	<0.0001	<0.0001	<0.0001	0.00043	0.00024	0.00044	0.00011	0.00011	0.00017	0.00017	0.00015	0.00012	0.00011	<0.0001	0.00035	0.00037	0.00016	0.00012	<0.0001
Arsenic	0.00265	0.00283	0.00311	0.00317	0.00337	0.00356	0.00369	0.00159	0.00208	0.00228	0.00406	0.00398	0.0034	0.00402	0.00259	0.00253	0.00275	0.00279	0.00177	0.00207	0.00228	0.00248	0.00275
Barium	0.0365	0.0367	0.0193	0.0173	0.0147	0.0145	0.0139	0.0416	0.0379	0.0372	0.0164	0.0156	0.0172	0.0169	0.0368	0.0372	0.0367	0.0353	0.0393	0.0397	0.0397	0.038	0.0368
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.179	0.184	0.241	0.257	0.278	0.281	0.239	0.09	0.072	0.077	0.122	0.114	0.116	0.129	0.063	0.063	0.062	0.067	0.031	0.027	0.031	0.031	0.027
Cadmium	0.000013	0.000012	0.000014	0.000017	0.000014	<0.00001	<0.00001	0.000013	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		0.000013	<0.00001	<0.00001	0.000043	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	140	128	12.9	12.8	9.62	10.6	9.65	208	216	220	9.05	9.41	10.4	9.86	42.4	42.6	43.3	43.2	61.3	64.4	60.2	60.7	60.6
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	<0.0001	0.00089	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00035	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.00061	0.00066	0.00026	0.0004	0.0003	0.0003	0.0002	0.00112	0.0068	0.00633	0.00049	0.00051	0.00064	0.00052	0.00098	0.00112	0.00147	0.00136	0.00174	0.00319	0.00291	0.00256	0.00241
Copper	0.00349	0.0028	0.00085	0.00055	0.00038	0.00063	0.00028	<0.0002	0.00022	0.00029	0.00099	<0.0002	<0.0002	0.00047	0.00079	0.00029	<0.0002	<0.0002	0.00072	<0.0002	<0.0002	<0.0002	<0.0002
Dissolved Cadmium (by saltwater ext																							
Iron	0.044	0.058	<0.01	<0.01	<0.01	<0.01	<0.01	0.318	0.765	0.768	0.012	0.013	0.024	0.029	0.011	<0.01	0.038	0.081	<0.01	0.205	0.165	0.231	0.303
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0167	0.0179	0.0148	0.0146	0.0142	0.014	0.0145	0.00459	0.00382	0.0037	0.0453	0.043	0.0382	0.043	0.00494	0.00438	0.00435	0.00396	0.0223	0.0189	0.0196	0.0218	0.0207
Magnesium	155	148	5.86	5.73	4.41	4.76	4.49	145	168	168	10.1	11	11	10.7	60.4	57.5	59	59.5	78.8	77.4	74.1	78.6	76.9
Manganese	0.0696	0.0777	0.0447	0.122	0.119	0.101	0.0829	4.2	2.9	2.78	0.122	0.133	0.197	0.154	0.249	0.294	0.374	0.371	0.3	1	0.886	0.731	0.924
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.00957	0.00823	0.00597	0.00648	0.00639	0.00618	0.00571	0.0196	0.0312	0.0353	0.0156	0.0152	0.0159	0.0158	0.0173	0.0159	0.0164	0.0161	0.00321	0.00374	0.0038	0.00372	0.00443
Nickel	0.0026	0.00268	0.00098	0.00112	0.0008	0.00071	0.00054	0.00582	0.0096	0.00935	0.00168	0.00139	0.00208	0.00164	0.0028	0.0025	0.0025	0.00232	0.00345	0.00399	0.00374	0.00337	0.00321
Phosphorus	0.063	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.054	0.051	0.06	0.081	0.082	0.071	0.076	0.076	0.071	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	25.3	25.4	2.85	2.7	2.25	2.62	2.49	16.6	18.4	17.9	1.26	1.29	1.34	1.26	7.68	7.38	8.05	7.72	2.16	2.33	2.25	2.24	2.33
Selenium	0.00022	0.00021	0.00013	0.00011	<0.0001	<0.0001	<0.0001			0.00067	<0.0001	0.00011	0.00015	0.00015	0.00013	0.00011	<0.0001	<0.0001	0.00039	0.00047	0.00017	0.00013	0.00012
Silicon	8.04	9.09	6.47	6.33	5.56	6.48	6.3	6.29	5.94	5.8	8.31	7.82	7.36	7.46	9.22	9.2	8.98	8.85	8.01	8.28	8.27	8.1	8.09
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	155	155	75.1	73.2	72.8	77.6	75.9	131	127	131	98.6	99.2	109	107	33.4	35.3	36.1	34.4	22.1	20.9	23.3	24.2	28.9
Strontium	2.13	2.05	0.31	0.312	0.302	0.282	0.272	3.92	4.13	4.44	0.515	0.566	0.595	0.598	0.671	0.683	0.688	0.676	2.58	2.92	2.68	2.73	2.66
Sulphur	296	279	27.8	29.6	29.6	28.7	26.5	401	449	472	45	44.3	44.2	44.4	40.7	38.8	39.1	40.7	43.7	44.7	41.9	44	46.3
Thallium	<0.00001	<0.00001	0.000022	0.000011	0.000012	<0.00001	<0.00001	<0.00001	<0.00001	0.000014	<0.00001	<0.00001	<0.00001	<0.00001	0.000016	0.000019	0.000012	<0.00001	0.000018	<0.00001	0.000017	<0.00001	0.000013
Tin	<0.0001	<0.0001	0.00012	0.00029	<0.0001	<0.0001	<0.0001	0.00131	<0.0001	0.00013	0.00018	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00021	0.00016	0.00013	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.0031	0.00288	0.000596	0.000639	0.000517	0.000487	0.000448	0.00326	0.0026	0.00276	0.000507	0.000547	0.000898	0.000731	0.00367	0.00346	0.00369	0.00358	0.00131	0.00182	0.00161	0.00132	0.00156
Vanadium	0.0072	0.0061	0.0012	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	0.0021	0.0095	0.0032	0.0094	0.0079	0.0045	0.0022	<0.001	0.0094	0.0106	0.0059	0.0093	0.0025	0.0083	0.0059	0.0039	0.0021	0.0015	0.0035	<0.001	0.0049	0.0025	0.0029
Total Metals																							
Aluminum	0.0106	0.009	0.0658	0.0683	0.0609	0.0162	0.025	0.271	0.0205	0.0246	0.943	0.417	0.79	0.72	0.271	0.101	0.0344	0.0308	0.0307	0.0146	0.0292	0.0421	0.0069
Antimony	0.00017	0.00013	<0.0001	0.00015	0.00013	<0.0001	<0.0001	0.00045	0.00035	0.00046	0.00014	0.00019	0.00024	0.00021	0.00016	0.00013	0.00012	0.00011	0.00038	0.00041	0.0002	0.00019	0.00012
Arsenic	0.00287	0.00287	0.00312	0.00323	0.00362	0.00357	0.00359	0.00169	0.00226	0.0025	0.00399	0.00435	0.00298	0.0041	0.00264	0.00275	0.00293	0.00276	0.0018	0.00203	0.00221	0.00266	0.00265
Barium	0.0373	0.037	0.02	0.0184	0.0163	0.0138	0.0138	0.045	0.0375	0.0369	0.018	0.0187	0.0179	0.0192	0.0393	0.0409	0.0385	0.0358	0.04	0.0399	0.0394	0.0406	0.0365
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.212	0.197	0.268	0.262	0.298	0.278	0.276	0.101	0.081	0.083	0.127	0.125	0.113	0.133	0.062	0.067	0.072	0.096	0.031	0.03	0.034	0.035	0.032
Cadmium	0.000019	0.000015	0.000018	0.000033	0.000019	<0.00001	0.000011	0.000146	0.000053	0.000035	0.000012	0.000013	0.000019	0.000023		0.000021	0.000013	<0.00001	0.000063	0.000015	0.000013	0.000019	<0.00001
Calcium	138	128	12.4	12.9	10.9	10.2	9.57	200	212	212	8.76	9.84	9.84	9.8	41.5	41.3	44.2	42.5	61	63.4	59.8	64.3	59.4
Chromium	0.00024	0.00021	0.00021	0.00032	0.0002	<0.0001	0.00011	0.00127	0.00025	0.00066	0.00033	0.00031	0.00028	0.00046	0.00087	0.00036	0.00018	0.0002	0.00058	0.00013	0.00021	0.0003	0.00012
Cobalt	0.00068	0.00063	0.00023	0.00046	0.00038	0.0003	0.00023	0.00608	0.00684	0.00626	0.0007	0.00071	0.00074	0.00068	0.00121	0.00129	0.00156	0.00145	0.00181	0.00331	0.00299	0.0028	0.00245
Copper	0.00462	0.00334	0.00069	0.00148	0.00077	<0.0005	0.00089	<0.0015	0.00137	0.00092	0.00055	0.00051	0.00072	0.00177	0.0029	0.00113	<0.0005	0.00063	<0.001	<0.0005	0.00057	0.00073	<0.0005
Iron	0.049	0.054	0.071	0.074	0.056	0.011	0.023	0.971	0.866	0.905	0.356	0.211	0.361	0.305	0.36	0.119	0.072	0.108	0.063	0.216	0.179	0.29	0.295
Lead	<0.00005	<0.00005	0.000055	0.000059	<0.00005	<0.00005	<0.00005	0.000234	<0.00005	0.000091	0.000384	0.000141	0.000482	0.000277	0.000126	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000051	<0.00005	<0.00005
Lithium	0.0188	0.0183	0.0148	0.0143	0.0139	0.0133	0.0159	0.00463	0.00404	0.00358	0.0442	0.0424	0.0347	0.0413	0.00472	0.00427	0.00451	0.00407	0.0211	0.0188	0.0191	0.0225	0.0206
Magnesium	157	147	5.74	5.74	5	4.7	4.47	144	168	175	10.1	11.5	10.6	11	58.2	55.5	60.9	58.2	75.6	78	73.5	80.2	76.5
Manganese	0.0723	0.075	0.044	0.122	0.131	0.103	0.0828	4.24	2.94	2.73	0.13	0.163	0.179	0.164	0.262	0.319	0.397	0.371	0.314	1.01	0.867	0.769	0.91
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000021	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0108	0.00879	0.00628	0.00644	0.00655	0.00649	0.00645	0.0241	0.0353	0.0355	0.0162	0.0167	0.0147	0.0157	0.0169	0.0167	0.0173	0.0169	0.00336	0.00377	0.00405	0.00412	0.00459
Nickel	0.00275	0.00253	0.00095	0.00134	0.00101	0.00066	0.0006	0.0114	0.00985	0.00922	0.00175	0.00194	0.00216	0.00201	0.00378	0.00306	0.00286	0.00249	0.00372	0.00437	0.00369	0.00373	0.00312
Phosphorus	0.054	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.07	0.064	0.067	0.051	0.064	0.078	0.081	0.074	0.075	0.07	0.089	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	24.4	24.7	2.79	2.68	2.59	2.6	2.49	16	18.3	18.9	1.31	1.38	1.43	1.34	7.5	7.23	8.26	7.34	2.38	2.35	2.26	2.44	2.29
Selenium	0.00037	0.00021	0.00013	0.00013	<0.0001	<0.0001	<0.0001			0.00147	<0.0001	0.00013	0.00016	0.00012	0.00012	0.00011	0.00012	<0.0001	0.00036	0.00055	0.0002	0.00014	0.00013
Silicon	8.15	9.06	6.57	6.37	6.39	6.45	6.34	6.63	5.93	5.87	11.1	9.52	9.39	9.84	9.52	9.17	9.39	8.73	8.3	8.24	8.29	8.68	7.97
Silver	<0.00001	<0.00001	<0.00001	0.000021	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	167	157	75.3	75.2	79	74.9	75.1	128	124	131	96.8	107	95.3	108	34	37.7	38.6	33.6	21.9	20.9	22.8	25.2	28.2
Strontium	2.28	2.02	0.332	0.306	0.296	0.291	0.293	3.76	4.57	4.39	0.556	0.603	0.561	0.585	0.653	0.679	0.722	0.687	2.59	2.92	2.67	2.92	2.66
Sulphur	310	284	27.9	30.3	29.9	28.6	26.4	391	447	469	43.5	47.9	42.5	43.6	40.6	38.7	43.2	40.8	45.8	44.1	41.9	47.2	47.4
Thallium	<0.00001	<0.00001	0.000015	0.000012	0.000011	<0.00001	0.00001	0.000015	0.000015	0.000016	0.000016	0.000016	0.000022	0.000015	0.00002	0.000018	0.000014	<0.00001	0.000019	<0.00001	0.00002	0.000012	0.000014
Tin	<0.0001	<0.0001	0.00026	0.00047	0.00021	<0.0001	<0.0001	0.00275	0.0002	0.00019	0.00027	0.00014	0.00012	0.00017	0.00011	0.0001	<0.0001	0.0001	0.00024	0.0003	0.00029	0.0002	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.015	<0.01	0.011	0.013	0.013	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extracti																							
Uranium	0.00339	0.00299	0.000597	0.000665	0.000546	0.000513	0.000475	0.00301	0.00283	0.00279	0.000612	0.000724	0.000971	0.000781	0.00379	0.00361	0.00394	0.00372	0.00139	0.00193	0.00159	0.00147	0.00164
Vanadium	0.0079	0.0064	0.0015	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0015	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	0.0033	0.0092	<0.003	0.0127	0.0102	<0.003	0.0034	0.0041	0.0464	0.0202	<0.003	0.0206	0.0046	0.0204	<0.003	0.0059	<0.003	0.0051	<0.003	<0.003	0.0066	0.0037	0.0031
Organics																							
Carbon Organic (Dissolved)					1.21																		
Carbon Organic (Total)	11.5	9.41	1.24	1.74	1.41	1.07	0.89	8.1	6.5	5.76	2.19	2.77	3.11	3.06	1.99	1.9	2.02	1.94	3.5	2.31	2.31	2.95	2.88
Nitrogen Organic (Dissolved)																							
Nitrogen Organic (Total)																							
ALS LAB ID	**L1486405**	**L1507004**	**L1438371**	**L1464552**	**L1483419**	**L1496084**	**L1510175**	**L1459061**	**L1496798**	**L1510761**	**L1459725**	**L1481200**	**L1494491**	**L1508557**	**L1459725**	**L1478887**	**L1491785**	**L1507004**	**L1437641**	**L1458341**	**L1478887**	**L1490937**	**L1509422**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D2.2 - GROUNDWATER QUALITY DATA

Site ID	BGC14-017D			BGC14-017S				KAX-14-107S			KAX-14-108S			KAX-14-114S				KAX-14-128D				
Site ID	GC14-017	GC14-017	GC14-017	GC14-017	GC14-017	GC14-017	GC14-017	AX-14-107	AX-14-107	AX-14-107	AX-14-108	AX-14-108	AX-14-108	AX-14-114	AX-14-114	AX-14-114	AX-14-114	KAX-14-128D	MW11-01S	MW11-01S	MW11-01S	MW11-01S
Analytes	May-14	Jul-14	Jul-14	May-14	Jun-14	Jul-14	Aug-14	Jul-14	May-14	Sep-14	Jul-14	Aug-14	Sep-14	Jun-14	Jul-14	Aug-14	Sep-14	Sep-14	Jul-11	Oct-11	Feb-12	Jun-12
In Situ Parameters																						
Conductivity µS/cm	457	414	483	474	445	495	491	767	738	769	1425	1347	1314		809	35	824	765	725	741	625	1071
Oxygen Dissolved %	11	42.6	26.5	84.5	27.1	83.6	9.5	12.8	0.8	8.3	3.8	0.3	46.9		7.3	21.7	9.7	0.9		9.3	8.1	20.2
Oxygen Dissolved	1.29	4.61	3.03	9.7	3.16	9.3	1.06	1.42	0.08	0.94	0.4	0.03	5.31		0.81	1.97	1.07	0.26	6.22	1.01	0.97	1.96
pH (unitless)	8.23	10.2	8.61	8.26	8.04	5.4	7.55	5.5	7.41	5.91	5.95	7.62	5.88		10.5	7.12	6.05	5.57	8.37	8.4	8.85	9.05
Redox Potential mV	39	-15.9	-18.1	111	68.6	208	70.6	-134	-267	-163	-41	-125	19		-250	167	-45.8	-196			36.5	
Salinity ppt	0.33	0.27	0.34	0.33	0.31	0.34	0.34	0.53	0.51	0.54	0.96	0.93	0.95		0.56	0.02	0.58	0.53			0.46	
Specific Conductivity µS/cm	669	556	692	675	644	684	689	1062	1017	1076	1867	1819	1866		1118	39	1166	1055	936	529	934	775
Temperature °C	8.38	11.7	9.12	9.4	8.85	10.6	10.1	10.4	10.6	10.1	12.6	11.4	9.52		10.5	20.1	9.64	10.6	13.2	10.1		10.1
Total Dissolved Solids	436	362	450	439	419	444	448	688	661	701	1220	1183	1207		725	25	758	686			7.67	
Turbidity NTU	60.1	-3	0.3	56.8	3.9	0	0	-0.7	0	0	-0.6	0	0		17.8	1.1	0	0	9.8	9.1	21.8	1.4
Physical Tests																						
Acidity to pH 8.3 (as CaCO3)	<1			<1															1.6			
Alkalinity (Total as CaCO3)	205	210	200	350	392	391	401	424	441	437	194	201	195	287	334	328	320	209	129	232	124	148
Bicarbonate Alkalinity	205	203	195	342	392	391	401	405	441	437	194	201	195	281	315	315	317	209	129		110	132
Carbonate Alkalinity	<2	6.9	4.1	8.2	<1	<1	<2	19.2	<2	<1	<1	<2	<1	5.8	18.6	13	2.5	<1	<2		13	15.4
Color TCU																			13.5	<5	5.9	<5
Hardness as CaCO3 (Dissolved)	61.2	58.8	59.2	387	396	401	396	257	256	250	484	477	471	285	273	281	273	325	297	232	313	351
Hydroxide Alkalinity	<2	<1	<1	<1	<1	<1	<2	<1	<2	<1	<1	<2	<1	<1	<1	<1	<1	<1	<2		<1	<1
pH (unitless)	8.27	8.5	8.36	8.31	8.17	8.22	8.08	8.46	8.28	8.24	8.27	8.15	8.12	8.42	8.53	8.45	8.31	8.57	8.19	8.3	8.54	8.63
Specific Conductivity µS/cm	635	579	580	641	673	679	659	1090	1070	1060	1890	1880	1810	1190	1190	1170	1150	1030	895	443	928	950
Total Dissolved Solids	426	371	366	356	366	398	366	690	759	688	1400	1420	1340	778	788	796	749	856	600	241	630	672
Total Suspended Solids	27	<3	<3	62	8.4	<3	<3	5.2	5.2	<3	6	13.8	5.6	7.7	12.6	8.3	3	<3	10.3	3.2	4	4.7
Turbidity NTU	46.9	0.98	2	24.8	4.47	0.96	0.17	8.19	7.78	11.6	3.84	5.93	3.4	5.07	5	3.78	2.79	106	5.5	3.64	3.94	1.33
Dissolved Anions																						
Bromide	<0.25	0.062	0.059	<0.25	<0.05	<0.25	<0.05	<0.5	<0.5	<0.5	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5
Chloride	8.6	4.43	4.08	<2.5	0.8	<2.5	0.81	8.2	8.3	8.2	22	24	18	17.4	15	20.2	14.8	13.1	<5	1	<5	<5
Fluoride	0.27	0.295	0.297	0.14	0.153	0.148	0.156	0.283	0.31	0.297	0.252	0.288	0.252	0.3	0.37	0.301	0.269	0.072	0.42	0.239	<0.2	<0.2
Sulphate	134	100	98.1	13.9	13	12.9	12.8	175	162	172	835	873	762	340	313	310	310	291	351	17.3	345	344
Nutrients																						
Ammonia (Total)	<0.005	0.0062	0.0052	<0.005	<0.005	0.024	<0.005	0.0375	0.0587	0.0788	0.128	0.163	0.175	1.01	1.02	1.11	1.09	0.0561	0.345	0.0565	0.089	0.119
Nitrate (as N)	<0.025	<0.005	<0.005	0.277	0.245	0.248	0.259	<0.05	<0.05	<0.05	<0.1	<0.1	<0.1	<0.05	<0.05	0.064	<0.05	<0.05	<0.05	<0.005	8.81	9.01
Nitrite (as N)	<0.005	<0.001	<0.001	<0.005	<0.001	0.0085	0.0061	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	0.155	0.167
Nitrogen (Dissolved)																			0.67	0.16	15.2	10.9
Nitrogen (Total)																			0.67	0.139	9.17	9.18
Nitrogen Kjeldahl (Total)	0.121	0.107	0.133	0.155	0.123	0.128	0.102	0.554	0.627	0.552	0.388	0.491	0.404	2.17	2.35	2.87	2.25	0.521	0.67	0.139	0.21	<0.05
Orthophosphate (Dissolved)	0.0518	0.0593	0.0591	0.023	0.0194	0.0184	0.0231	0.135	0.115	0.119	0.043	0.0643	0.0756	0.152	0.176	0.246	0.229	0.0724	0.0668			
Phosphorus - Dissolved	0.0605	0.0612	0.0604	0.0291	0.0205	0.0251	0.025	0.148	0.112	0.16	0.0423	0.0652	0.077	0.167	0.228	0.251	0.273	0.0821	0.0707	0.0192	0.115	0.0717
Phosphorus - Total	0.0925	0.0611	0.0628	0.109	0.037		0.025	0.202	0.184	0.21	0.165	0.181	0.196	0.201	0.301	0.339	0.356	0.0831	0.0869	0.0272	0.116	0.0751
Cyanide																						
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																						
Aluminum	0.0074	0.0079		0.0039	0.0045	0.0034	0.0034	0.0072	0.0059	0.0058	0.0081	0.0071	0.0068	0.005	0.0045	0.0048	0.0079	0.0113	0.0092	0.0048	0.0131	0.0116
Antimony	0.0002	0.00017	0.00017	0.00012	<0.0001	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00031	0.00026	<0.0001	0.00019	0.00012	<0.0005	0.00288	0.00021	<0.0005
Arsenic	0.00126	0.00131	0.00133	0.00085	0.00097	0.0009	0.00093	0.00536	0.00534	0.00534	0.00621	0.00615	0.00637	0.00526	0.00599	0.00666	0.00583	0.00165	0.00252	0.00339	0.00349	0.00288
Barium	0.0258	0.0248	0.0244	0.126	0.15	0.137	0.137	0.0322	0.0339	0.0317	0.0238	0.0256	0.0223	0.0565	0.0691	0.0835	0.0729	0.0501	<0.02	0.09	0.0187	0.022
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.0005	<0.0005	<0.2
Boron	0.096	0.095	0.088	0.015	0.015	0.015	0.014	0.642	0.701	0.67	0.182	0.193	0.183	0.352	0.346	0.402	0.368	2.61	<0.1	0.014	0.057	<0.1
Cadmium	0.000011	0.000018	0.000014	0.000037	<0.00005	0.00002	0.00002	<0.00001	<0.00001	<0.00001	<0.00006	<0.00001	0.000021	<0.00003	<0.00003	<0.00001	<0.00001	<0.00001	<0.00004	0.00004	0.000042	0.000044
Calcium	13.8	12	11.9	65	65.8	67	65.3	30.3	29.7	28.6	57.7	56.5	55.2	31.2	32.9	32.7	31.5	95.8	36	50.7	31.6	33.3
Chromium	<0.0001	<0.0001	<0.0001	0.0027	0.00267	0.00278	0.00275	<0.0001	0.00012	0.00011	<0.0001	<0.0001	0.00012	<0.0001	<0.0001	<0.0001	<0.0001	0.00024	0.0078	0.00081	0.00107	0.0021
Cobalt	0.00036	0.00037	0.00044	0.00018	<0.0001	<0.0001	<0.0001	0.0005	0.00039	0.00027	0.00202	0.00177	0.00125	0.00107	0.00112	0.00147	0.00136	<0.0001	<0.0003	0.00079	<0.0001	<0.0003
Copper	0.00039	0.00184	0.00054	0.00169	0.00231	0.0009	0.00081	<0.0002	<0.0002	<0.0002	0.00043	<0.0002	<0.0002	0.00158	0.00113	0.00098	0.00063	<0.0002	0.002	0.0009	0.00092	<0.001
Dissolved Cadmium (by saltwater ex					0.000035						<0.00002			<0.00002	<0.00002							
Iron	<0.01	<0.01	0.131	<0.01	<0.01	<0.01	<0.01	0.756	0.645	0.415	0.804	0.664	0.444	0.159	0.362	0.617	0.462	0.074	<0.03	<0.03	<0.03	<0.03
Lead	<0.00005	<0.00005	<0.00005	<0.00005	0.000068	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000053	<0.00005	<0.00005	<0.00005	<0.00005	<0.0005	<0.00005	<0.00005	<0.0005
Lithium	0.0442	0.0436	0.0407	0.00849	0.00852	0.00854	0.00862	0.00492	0.00535	0.00504	0.00386	0.00403	0.00459	0.00889	0.00956	0.0086	0.00823	0.01	<0.005	0.00431	0.0056	0.0052
Magnesium	6.5	6.99	7.14	54.7	56.4	56.7	56.5	44	44.1	43.3	82.5	81.6	80.8	50.2	46.3	48.5	47.2	20.9	50.3	25.5	56.9	65
Manganese	0.0785	0.0801	0.0865	0.0272	0.0105	0.00635	0.00608	0.668	0.646	0.469	1.16	1.13	0.752	0.356	0.673	1.1	0.974	0.339	0.00079	0.111	0.00891	0.0165
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0069	0.00588	0.00622	0.00154	0.00145	0.00149	0.00148	0.00506	0.00444	0.00422	0.208	0.212	0.233	0.0341	0.0389	0.0338	0.0303	0.0277	0.0835	0.0117	0.0442	0.0471
Nickel	0.00161	0.00141	0.00169	0.00112	0.00082	0.00067	0.00051	0.00265	0.00249	0.0023	0.00366	0.00326	0.00246	0.00923	0.00888	0.00984	0.00972	<0.0005	0.0012	0.00513	0.0006	<0.001
Phosphorus	0.064	0.066	0.065	<0.05	<0.05	<0.05	<0.05	0.175	0.163	0.169	0.137	0.164	0.15	0.19	0.259	0.319	0.3	0.086	<0.3	<0.3	<0.3	<0.3
Potassium	1.27	1.12	1.24	2.24	2.44	2.35	2.3	13.9	13.9	14	33	32.2	33.6	23	24.9	21	20.8	31.3	17.7	1.35	22.9	21.5
Selenium	0.00018	0.00012	0.00017	0.00099	0.00085	0.0009	0.00092	0.00032	0.00053	0.00023	0.00013	0.00011	<0.0001	0.00046	0.00053	0.00024	0.00024	0.00138	0.0044	0.00136	0.0039	0.0048
Silicon	7	6.99	7.18	7.52	7.51	7.53	7.71	10.6	10.9	10.3	11.5	11.4	12.4	7.61	6.69	7.24	7.62	13.2	4.96	5.03	4.4	6.1
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00002
Sodium	119	108	102	9.25	9.32	9.56	9.87	150	158	146	234	246	227	150	152	159	153	103	71.4	8.3	75.5	77.8
Strontium	0.835	0.836	0.87	1.48	1.53	1.51	1.49	0.791	0.809	0.811	1.23	1.26	1.18	1.02	1.14	1.02	0.923	1.64	0.693	0.867	0.736	0.824
Sulphur	42.6	32.9	32.4	4.63	4.39	4.51	4.44	81	95.4	104	253	256	251	112	101	99.4	101	415				
Thallium	0.000014	0.000012	0.000012	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	0.000021	0.000013	<0.0002
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	0.0001	<0.0001	<0.0005
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.00347	0.00247	0.00244	0.00126	0.00113	0.00114	0.00111	0.00142	0.00138	0.00152	0.00171	0.00162	0.00138	0.00312	0.00355	0.00254	0.00231	0.000159	0.0019	0.00306	0.00109	0.00087
Vanadium	<0.001	<0.001	<0.001	0.0034	0.0039	0.0039	0.0041	0.0011	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0014	0.0011	<0.001	<0.001	0.0029	<0.001	0.0078	0.0093
Zinc	<0.001	0.0064	0.0034	0.0031	0.0172	0.0135	0.007	0.0019	<0.001	0.0098	0.0176	0.0039	0.0037	0.0018	<0.001	<0.001	0.0019	0.0045	<0.005	0.0047	<0.003	<0.005
Total Metals																						
Aluminum	2.93	0.026		1.63	0.177	0.0282	0.0095	0.0198	0.019	0.0195	0.0813	0.175	0.0927	0.0948	0.0758	0.0647	0.0568	0.015	0.245	0.136	0.117	0.0509
Antimony	0.00026	0.00021	0.00015	0.00025	0.00011	0.00016	0.00012	0.00015	0.00015	0.00015	0.00011	0.00023	0.00014	0.00037	0.00032	0.0002	0.00032	0.00036	<0.0005	0.00253	0.00021	<0.0005
Arsenic	0.0017	0.0013	0.00116	0.00152	0.00105	0.00094	0.00098	0.00576	0.00561	0.00578	0.00647	0.00663	0.00655	0.00538	0.00647	0.00667	0.00596	0.00275	0.00274	0.00347	0.00356	0.0031
Barium	0.0383	0.025	0.0213	0.144	0.16	0.137	0.14	0.0322	0.0335	0.0323	0.0244	0.0276	0.0235	0.0653	0.0873	0.0818	0.0728	0.0496	0.024	0.0936	0.0204	0.02
Beryllium	0.00023	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.0005	<0.0005	<0.2
Boron	0.099	0.099	0.087	0.015	0.018	0.02	0.018	0.676	0.745	0.684	0.19	0.22	0.194	0.383	0.358	0.4	0.396	2.65	<0.1	0.015	0.063	<0.1
Cadmium	0.000057	0.000032	<0.00001	0.000065	<0.00005	0.000026	0.000023	<0.00001	<0.00001	<0.00001	<0.00012	0.000053	0.000062	<0.00006	<0.00008	0.000029	0.000032	<0.00001	<0.00004	0.000045	0.000045	0.000046
Calcium	14.3	11.9	10.9	63.4	65.6	64.6	65.9	30.1	29	28.2	58.1	58.9	55.2	32.7	32.5	31.3	30.4	92.2	37.2	51.2	30.5	35.7
Chromium	0.00104	0.00013	<0.0001	0.00688	0.00333	0.00297	0.00301	0.00024	0.0002	0.00029	0.00263	0.00079	0.00049	0.00051	0.00057	0.00043	0.00037	0.00092	0.0085	0.00331	0.00162	0.0027
Cobalt	0.00125	0.00039	0.00037	0.00148	0.00023	<0.0001	<0.0001	0.00076	0.00059	0.00046	0.0021	0.002	0.00141	0.00124	0.00137	0.00154	0.00151	0.00017	<0.0003	0.00084	0.00014	<0.0003
Copper	0.00294	0.00204	<0.0005	0.0117	0.00233	0.00121	0.00099	0.00124	0.00052	<0.0005	0.00102	0.00162	0.00139	0.017	0.0164	0.0142	0.0111	<0.0005	0.0038	0.00091	0.00171	0.0019
Iron	2.03	0.032	<0.01	2.06	0.194	0.031	0.012	0.8	0.668	0.502	0.949	0.887	0.585	0.302	0.574	0.677	0.565	0.123	0.302	0.18	0.145	0.047
Lead	0.00111	<0.00005	<0.00005	0.000464	0.000058	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000064	0.000101	0.000071	0.000219	0.000385	0.000311	0.000226	<0.00005	<0.0005	0.00009	<0.00005	<0.0005
Lithium	0.0422	0.0448	0.0373	0.0081	0.00834	0.00846	0.00874	0.00501	0.00551	0.00528	0.00391	0.0043	0.00463	0.00886	0.00924	0.00836	0.00813	0.00961	<0.005	0.00407	0.00541	0.0055
Magnesium	7.46	6.96	6.58	53.1	55.8	55.9	56.5	44.5	43.2	43.2	85.1	82.7	81.7	49.5	45.7	46.8	46.4	19.9	52.6	26.1	56.3	65.4
Manganese	0.107	0.0822	0.0771	0.0722	0.0173	0.00828	0.00643	0.689	0.656	0.511	1.2	1.19	0.789	0.355	0.697	1.05	0.951	0.348	0.0124	0.118	0.0149	0.0197
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000032	0.000049	0.000048	0.000028	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.00685	0.00651	0.00589	0.00145	0.00151	0.00154	0.00154	0.00599	0.00518	0.00546	0.217	0.225	0.244	0.0349	0.0391	0.0315	0.0332	0.0774	0.0868	0.0113	0.0421	0.0489
Nickel	0.00289	0.00152	0.0015	0.00646	0.00109	0.00074	0.00056	0.00297	0.00269	0.00245	0.00406	0.00418	0.00297	0.011	0.0105	0.0107	0.0107	0.00098	0.0017	0.00545	0.00103	<0.001
Phosphorus	0.102	0.074	0.064	0.084	<0.05	<0.05	<0.05	0.211	0.179	0.188	0.162	0.173	0.157	0.208	0.293	0.306	0.297	0.091	<0.3	<0.3	<0.3	<0.3
Potassium	1.67	1.1	1.19	2.36	2.31	2.32	2.34	13.7	13.4	14.1	33.3	32.9	33.9	23.5	23.6	19.8	20.5	28.5	18.3	1.43	23.6	23.1
Selenium	0.00021	0.00013	0.00012	0.00087	0.00093	0.00085	0.00084	0.00014	0.00012	0.00012	0.00015	0.00012	0.0001	0.00053	0.00072	0.00037	0.00038	<0.0001	0.0046	0.00124	0.00406	0.0051
Silicon	16.5	7.04	6.36	11	7.86	7.54	7.7	10.6	10.5	10.4	11.9	12	12.7	8	6.75	7.12	7.67	12.6	5.66	5.41	4.58	6.29
Silver	0.000016	<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000028	0.000024	0.000021	0.000025	<0.00001	<0.00002	<0.00001	<0.00001	<0.00002
Sodium	117	104	94.3	9.07	9.5	9.87	9.96	152	160	150	237	254	231	159	154	148	143	101	73.8	8.56	77.8	83.4
Strontium	0.868	0.914	0.804	1.4	1.57	1.54	1.56	0.81	0.811	0.83	1.28	1.32	1.23	1.05	1.19	0.978	1	1.64	0.731	0.82	0.689	0.88
Sulphur	41.3	33.7	30.2	4.56	4.66	4.71	4.57	58.8	54.6	57.3	266	266	258	117	102	96.7	99.8	103				
Thallium	0.000045	<0.00001	0.00001	0.000023	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00003	0.000051	0.000032	0.00002	<0.00001	<0.0002	0.000021	0.000014	<0.0002
Tin	0.00034	<0.0001	<0.0001	0.00024	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	0.00017	0.00011	0.00028	0.00019	0.00013	0.00021	<0.0001	0.00011	0.00015	<0.0005	0.00029	0.00011	<0.0005
Titanium	0.059	<0.01	<0.01	0.072	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.015	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extracti					0.000033						0.000057			0.000033	0.000048							
Uranium	0.00358	0.00251	0.00224	0.00126	0.00118	0.00119	0.00119	0.00144	0.00137	0.00154	0.00179	0.00167	0.00143	0.00335	0.0037	0.00237	0.00237	0.000182	0.00202	0.0029	0.00105	0.00094
Vanadium	0.0046	<0.001	<0.001	0.0091	0.0048	0.0041	0.0043	0.0013	0.001	<0.001	<0.001	<0.001	<0.001	0.0015	0.0025	0.0019	0.0016	<0.001	0.0039	<0.001	0.0084	0.0099
Zinc	0.0053	0.0069	0.0053	0.0065	0.014	0.0186	0.0098	<0.003	0.0036	0.0088	0.0115	0.0075	0.0056	0.0036	0.0056	0.0041	0.0037	<0.003	<0.005	0.0055	0.0044	<0.005
Organics																						
Carbon Organic (Dissolved)								10.9	13.4	4.49	4.38	4.48	3.76	10.6	12.9	9.05	7.9	12.5	4.32	1.43	1.96	2.35
Carbon Organic (Total)	3.27	2.56	3.03	2.6	1.61	1.23	1.34												4.14	1.29	2	1.71
Nitrogen Organic (Dissolved)																			0.33	0.103	6.1	<2.2
Nitrogen Organic (Total)																			0.33	0.103	<0.3	<0.06
ALS LAB ID	L1459061	L1481200	L1494504	L1459061	L1478436	L1491785	L1509422	L1488886	L1502282	L1516148	L1488886	L1502282	L1516148	L1464552	L1481825	L1502282	L1516148	L1517413	L1035635	L1074388	L1114029	L1160966

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D2.2 - GROUNDWATER QUALITY DATA

Site ID	MW11-01S	MW11-01S	MW11-01S	MW11-01S	MW11-01S	MW11-01S	MW11-01S	MW11-01S	MW11-01S
Analytes	Aug-12	Dec-12	Mar-13	May-13	Aug-13	Nov-13	Mar-14	Jun-14	Sep-14
In Situ Parameters									
Conductivity µS/cm	951	680	625	800	808	0.948	658	740	653
Oxygen Dissolved %		3.8	1.8	0.6	1.1	2.2	1.5	4.6	3.4
Oxygen Dissolved	1.03	0.43	0.21	0.07	1.1	0.26	0.17	0.49	0.43
pH (unitless)	6.31	9.03	8.58	8.55	8.59	8.48	8.5	8.44	8.49
Redox Potential mV	179	19.3	105	134	212	125	3.74	67.3	115
Salinity ppt	0.5	0.49	0.46	0.58	0.56	0.47	0.48	0.48	0.46
Specific Conductivity µS/cm		979	926	1156	1125	655	959	966	934
Temperature °C	13.5	8.99	7.78	8.86	10.2	8.79	8.43	12.7	9.24
Total Dissolved Solids	608	635	605	752	730	617	627	628	607
Turbidity NTU	9.1	3.8	3.4	14	2.2	2.7	4.1	3.7	3.8
Physical Tests									
Acidity to pH 8.3 (as CaCO3)	<1								
Alkalinity (Total as CaCO3)	141	159	153	152	159	146	148	161	161
Bicarbonate Alkalinity		143	143	149	154	146	141	156	158
Carbonate Alkalinity		15.5	9.9	2.9	4.4	<1	6.5	5.5	2.7
Color TCU	<5	<5	<5	<5	<5				
Hardness as CaCO3 (Dissolved)	367	382	389	386	374	369	366	370	366
Hydroxide Alkalinity		<1	<1	<1	<1	<1	<1	<1	<1
pH (unitless)	8.59	8.67	8.41	8.4	8.37	8.43	8.38	8.38	8.41
Specific Conductivity µS/cm	941	975	1040	1040	1010	991	980	974	965
Total Dissolved Solids	697	697	705	700	717	662	666	669	686
Total Suspended Solids	8.5	3.7	<3	<3	<3			3.5	<3
Turbidity NTU	4.62	7.33	0.75	0.81	4.55			1.61	0.56
Dissolved Anions									
Bromide	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.25	<0.5
Chloride	19.6	<5	<5	<5	<5	<5	<5	2.8	<5
Fluoride	0.33	<0.2	0.32	<0.2	0.4	<0.2	0.4	0.191	0.199
Sulphate	390	356	361	371	365	361	369	359	367
Nutrients									
Ammonia (Total)	0.103	0.11	0.101	0.0819	0.0933	0.0888	0.0879	0.0974	0.102
Nitrate (as N)	10.8	9.42	11.9	11.4	9.13	6.43	3.73	2	1.37
Nitrite (as N)	0.635	0.069	0.084	0.025	0.059	0.116	0.142	0.174	0.201
Nitrogen (Dissolved)		9.98	10.8						
Nitrogen (Total)	11.7	8.72	12	11	8.68				
Nitrogen Kjeldahl (Total)	0.249	<0.05	<0.05	0.255	<0.05	<0.05	<0.05	<0.05	0.189
Orthophosphate (Dissolved)	0.0762					0.0429	0.0436	0.0414	0.0441
Phosphorus - Dissolved		0.0507	0.0596	0.0588	0.0546	0.0471	0.0471	0.0442	0.0452
Phosphorus - Total	0.0923	0.0568	0.0608		0.057	0.05	0.0499	0.0507	0.047
Cyanide									
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals									
Aluminum	0.0105	0.0075	0.0062	0.0057	0.0055	0.0055	0.006	0.0052	0.0057
Antimony	0.0002	0.00014	0.00015	0.00012	0.00014	0.00015	0.00016	0.00013	0.00014
Arsenic	0.00302	0.00271	0.00243	0.00222	0.0023	0.00208	0.00201	0.00211	0.00205
Barium	0.0202	0.019	0.0209	0.0211	0.0212	0.0205	0.0208	0.0211	0.021
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.074	0.073	0.08	0.066	0.067	0.074	0.071	0.068	0.068
Cadmium	0.000011	<0.00001	0.000012	0.000014	0.00002	<0.00002	<0.00003	<0.00005	0.000011
Calcium	37.2	39.8	37.7	39.9	38.8	38.4	39.6	40.8	39.9
Chromium	0.00074	0.00106	0.00045	0.00027	0.00048	<0.0001	0.0001	<0.0001	<0.0001
Cobalt	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001
Copper	0.00074	0.00065	0.00055	0.00063	0.00052	0.00041	0.00045	0.00079	0.00045
Dissolved Cadmium (by saltwater ext							<0.00002	<0.00002	
Iron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.00513	0.00429	0.00476	0.00422	0.00388	0.00474	0.00387	0.0036	0.00387
Magnesium	66.5	68.7	71.5	69.4	67.4	66.3	64.9	65.1	64.6
Manganese	0.0161	0.0319	0.037	0.0408	0.0491	0.0485	0.0588	0.0641	0.0656
Mercury		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0446	0.0527	0.0467	0.0468	0.05	0.0518	0.0537	0.0591	0.0619
Nickel	0.00106	<0.0005	0.00051	<0.0005	<0.0005	<0.0005	<0.0005	0.00059	<0.0005
Phosphorus	0.089	<0.05	0.066	0.059	0.053	<0.05	<0.05	0.053	<0.05
Potassium	20.6	20.1	19.6	20	18.9	19.7	19.3	20.3	20.5
Selenium	0.00567	0.00489	0.00459	0.00369	0.00291	0.00197	0.00119	0.00071	0.00059
Silicon	5.97	6.64	6.59	6.84	6.85	6.85	6.79	7.19	7.64
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	74.9	77.1	74.9	72.5	76.6	72	71.5	68.9	72.1
Strontium	0.825	0.933	0.979	0.89	0.894	0.865	0.912	0.935	0.931
Sulphur		113	117	119	118	115	117	118	125
Thallium	0.000011	0.000011	0.000011	0.00001	0.000011	<0.00001	0.000015	<0.00001	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.000964	0.000934	0.000846	0.000834	0.00084	0.000731	0.000803	0.000786	0.000758
Vanadium	0.0074	0.0083	0.0066	0.0059	0.0064	0.0063	0.0058	0.0056	0.0056
Zinc	0.0011	<0.001	<0.001	<0.001	0.0013	<0.001	<0.001	0.0019	<0.001
Total Metals									
Aluminum	0.267	0.197	0.0301	0.0576	0.0437	0.0667	0.0451	0.063	0.0381
Antimony	0.00029	0.00015	0.00018	0.00017	0.00018	0.0002	0.00017	0.00016	0.00018
Arsenic	0.00306	0.00283	0.00249	0.00242	0.00228	0.00211	0.00202	0.00218	0.00208
Barium	0.024	0.0218	0.0215	0.0239	0.0216	0.0217	0.0217	0.0225	0.0219
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.094	0.067	0.088	0.074	0.072	0.079	0.077	0.077	0.077
Cadmium	0.000031	0.000014	0.000017	0.000016	0.000025	<0.00003	<0.00004	<0.00005	0.000018
Calcium	36.3	37.5	37.4	40	38.4	39.3	38.2	40.4	39.1
Chromium	0.0111	0.00181	0.00061	0.00059	0.00109	0.00067	0.00051	0.0005	0.00042
Cobalt	0.00042	0.00025	<0.0001	0.00012	0.00011	0.00015	0.00013	0.00016	0.00014
Copper	0.00398	0.0029	0.00094	0.00135	0.00112	0.00108	0.00143	0.00145	0.00109
Iron	0.304	0.415	0.028	0.059	0.048	0.092	0.057	0.076	0.047
Lead	0.000144	0.00005	<0.00005	0.000257	0.00006	<0.00005	0.000137	0.000086	0.000074
Lithium	0.00562	0.00399	0.00471	0.00428	0.00406	0.00463	0.00398	0.00349	0.00412
Magnesium	65	64	67.4	70.7	66.3	65.9	63.1	64.4	63.2
Manganese	0.0345	0.0402	0.0395	0.0478	0.051	0.052	0.0625	0.0693	0.0702
Mercury		0.000012	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0481	0.0462	0.0482	0.0494	0.0518	0.0572	0.0572	0.0615	0.0664
Nickel	0.00726	0.00096	0.00062	0.00059	0.00067	0.00071	0.00078	0.0008	0.00063
Phosphorus	0.099	0.055	0.053	0.06	0.059	0.051	0.052	0.057	<0.05
Potassium	20.5	18.8	19.7	20.3	19.1	21.3	20	20.1	20.2
Selenium	0.00558	0.00485	0.0045	0.00353	0.00284	0.00194	0.0011	0.00068	0.0006
Silicon	6.39	6.96	6.52	7.07	6.82	7.19	6.82	7.38	7.73
Silver	0.000028	<0.00001	0.000017	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	77.8	76.2	75.9	78.5	74.6	73.4	72.1	69.7	73.4
Strontium	0.842	0.819	1	0.916	0.91	0.88	0.921	0.979	0.997
Sulphur		109	118	122	119	122	119	122	124
Thallium	0.000011	0.000014	0.000014	0.000012	0.000015	<0.00001	<0.00001	<0.00001	0.00002
Tin	0.00042	<0.0001	<0.0001	0.00018	<0.0001	0.00011	0.00015	0.00011	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extracti							<0.00002	<0.00002	
Uranium	0.001	0.000806	0.000878	0.000893	0.000843	0.00079	0.000797	0.00084	0.000797
Vanadium	0.0087	0.0092	0.0069	0.0067	0.0065	0.0069	0.0061	0.0063	0.0062
Zinc	0.0051	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0033	0.0031
Organics									
Carbon Organic (Dissolved)	1.81	2.41	1.73	1.56	1.71	1.38			
Carbon Organic (Total)	1.8	2.07	1.31	1.41	1.62	1.34	1.34	1.42	1.39
Nitrogen Organic (Dissolved)		<2	<2.2						
Nitrogen Organic (Total)			<0.06						
ALS LAB ID	L1202478	L1247921	L1277099	L1308855	L1348177	L1392288	L1431355	L1478436	L1517413

Site ID	MW11-02	MW11-02	MW11-02	MW11-02	MW11-02	MW11-02	MW11-02	MW11-02	MW11-02	MW11-02	MW11-02	MW11-02	MW11-02	MW11-04D
Analytes	Aug-11	Nov-11	Feb-12	Jun-12	Aug-12	Dec-12	Mar-13	May-13	Aug-13	Nov-13	Mar-14	Jun-14	Sep-14	Jun-12
In Situ Parameters														
Conductivity µS/cm	1931	1957	1830	3284	3010	1918	1841	2234	2494	2.85	3072	2030	2052	1081
Oxygen Dissolved %	9.5		48.5	25.4		59	14.2	19.7	6	7.2	6.1	5	5.3	28.4
Oxygen Dissolved	1.04	39.3	5.95	2.46	0.15	7.02	1.67	2.27	0.65	0.86	0.72	0.59	0.63	2.64
pH (unitless)	7.23	7.64	7.83	7.76	7.27	7.6	7.64	7.71	7.67	7.73	7.66	7.73	8.06	9.91
Redox Potential mV					-140	-99.3	-76.7	-38.6	237	1.48	-36.7	-67.4	-88.5	
Salinity ppt					1.6	1.51	1.44	1.7	1.81	59.7	1.6	1.54	1.54	
Specific Conductivity µS/cm	2643	3016	2934	2294		2893	2778	3240	3437	1.9	3029	2945	2943	795
Temperature °C	10.9	6.62	5.23	9.08	14.7	7.36	7.33	8.76	10.7	7.51	7.13	8.74	9.14	11
Total Dissolved Solids					1930	1880000	1806	2102	2234	1851000	1997	1916	1911	
Turbidity NTU	0.8	1.8	23.6	0	32.3	3.3	4.7	0	3.4	2.4	3.2	13.2	3	5.2
Physical Tests														
Acidity to pH 8.3 (as CaCO3)	5.3				4.5									
Alkalinity (Total as CaCO3)	220	203	218	177	186	180	195	176	165	192	176	182	173	48.9
Bicarbonate Alkalinity	220		218	177		180	195	176	165	192	176	182	173	33.3
Carbonate Alkalinity	<2		<2	<1		<2	<2	<2	<2	<2	<2	<2	<1	15.6
Color TCU	10.5	10.5	7.4	5.2	5.2	<5	<5	<5	<5	<5				17
Hardness as CaCO3 (Dissolved)	428	464	428	450	463	432	431	426	433		433	443	429	38.1
Hydroxide Alkalinity	<2		<2	<1		<2	<2	<2	<2	<2	<2	<2	<1	<1
pH (unitless)	7.93	8.07	7.87	8.02	7.97	8.12	8.06	8.1	8.05	8.17	8.05	8.17	8.03	9.04
Specific Conductivity µS/cm	2870	2910	2800	2840	2870	2850	3010	2900	2900	2940	2950	2980	2950	936
Total Dissolved Solids	2180	2260	2170	2270	2240	2260	2240	2210	2200	2220	2260	2260	2140	644
Total Suspended Solids	4	11.7	26	<3	7.2	11.7	7.4	4.7	6.8			12.5	3.8	<3
Turbidity NTU	4	7.14	22.2	2.07	4.07	7.54	4.24	2.32	3.18			7.82	1.17	0.93
Dissolved Anions														
Bromide	<1	<1	<1	<1	<5	<1	<1	<1	<1	<2.5	<1	<1	<1	<0.5
Chloride	17	16	16	16	<50	16	16	17	15	16	16	17	16	26.1
Fluoride	<0.4	<0.4	<0.4	<0.4	0.13	<0.4	<0.4	<0.4	0.58	<0.4	<0.4	0.119	0.099	1.11
Sulphate	1340	1460	1360	1430	1460	1430	1440	1430	1410	1420	1480	1470	1440	356
Nutrients														
Ammonia (Total)	0.0458	0.0885	<0.05	0.072	0.0928	0.0835	0.0831	0.0701	0.0699	0.0687	0.0674	0.0434	0.0705	0.124
Nitrate (as N)	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.11	<0.05
Nitrite (as N)	<0.02	<0.02	<0.02	<0.02	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01
Nitrogen (Dissolved)	0.25	0.22	0.14	1.75		0.137	0.129							0.3
Nitrogen (Total)	0.28	0.323	0.334	0.224	<0.51	0.19	0.13	0.15	0.133					0.3
Nitrogen Kjeldahl (Total)	0.28	0.323	0.33	0.224	0.181	0.194	0.13	0.154	0.186	0.161	0.179	0.192	0.169	0.3
Orthophosphate (Dissolved)					0.0522					0.0693	0.0721	0.0832	0.0808	
Phosphorus - Dissolved	0.0426	0.0153	0.021	0.0558	0.0522	0.066	0.0639	0.0705	0.0753	0.0706	0.0728	0.079		0.247
Phosphorus - Total	0.0558	0.0692	0.098	0.0826	0.0823	0.0987	0.0895	0.0916	0.0927	0.0926	0.0972	0.0986	0.117	0.252
Cyanide														
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.0059	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals														
Aluminum	<0.05	0.0108	<0.015	0.0106	0.0072	0.006	0.007	0.0061	0.006	0.0053	0.0047	0.0074	0.0054	0.147
Antimony	0.0055	0.00069	0.0016	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00028	<0.0005
Arsenic	<0.005	0.00288	0.00331	0.00306	0.00348	0.00262	0.00284	0.00258	0.00251	0.00278	0.0035	0.00321	0.00306	0.012
Barium	0.033	0.0421	0.0395	0.0363	0.0364	0.0318	0.0314	0.0288	0.0265	0.029	0.0283	0.0286	0.0277	<0.02
Beryllium	<0.01	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001
Bismuth	<0.2	<0.001	<0.0025	<0.0025	<0.0025	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.2
Boron	1.31	1.36	1.22	1.32	1.24	1.31	1.47	1.22	1.35	1.3	1.34	1.32	1.3	2.25
Cadmium	<0.00017	<0.00002	0.000105	<0.00005	<0.00005	<0.00005	<0.00002	<0.00002	0.000022	<0.00002	<0.00002	<0.00002	<0.00002	<0.00017
Calcium	84.8	92.9	86.3	88.5	91.5	84.7	83.3	84.5	83.1	82.1	83.7	86	83.7	14.4
Chromium	<0.01	<0.0002	0.00105	<0.0005	0.00124	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001
Cobalt	<0.003	0.00283	0.00259	0.00162	0.00156	0.00129	0.00125	0.00113	0.00103	0.00099	0.00102	0.00093	0.00093	<0.0003
Copper	<0.01	<0.001	<0.0025	<0.001	<0.001	<0.001	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.001
Dissolved Cadmium (by saltwater ext											<0.00002	<0.00002		
Iron	<0.03	0.332	0.038	0.083	0.207	0.046	0.075	0.018	0.012	0.079	0.044	0.136	0.102	<0.03
Lead	<0.005	<0.0001	<0.00025	<0.00025	<0.00025	<0.00025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005
Lithium	<0.05	0.0264	0.0381	0.0435	0.0452	0.0515	0.0538	0.0607	0.0595	0.0681	0.0648	0.0637	0.0616	<0.005
Magnesium	52.6	56.3	51.6	55.6	56.9	53.6	54.3	52.2	54.9	56.1	54.5	55.3	53.3	0.51
Manganese	1.04	1.41	1.43	1.27	1.24	1.13	1.2	1.08	1.06	1.08	1.01	0.967	0.967	0.017
Mercury	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.014	0.0103	0.00862	0.00489	0.00462	0.00313	0.00263	0.00179	0.00166	0.00148	0.00152	0.00121	0.00124	0.216
Nickel	0.017	0.0095	0.0141	0.0041	0.0051	<0.0025	0.0029	0.0019	0.0017	0.0019	0.0017	0.0018	0.0015	0.0015
Phosphorus	<0.3	<0.3	<0.3	<0.3	0.097	0.077	0.072	0.076	0.087	0.087	0.096	0.103	0.108	<0.3
Potassium	2.7	2.31	2.66	1.61	1.37	1.22	1.14	1.09	1.06	1.07	1.03	1.02	0.95	10.2
Selenium	<0.01	0.00021	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001
Silicon	5.86	5.52	6.19	6.37	6.42	6.09	6.33	6.67	6.65	6.73	6.31	6.6	6.51	2.66
Silver	<0.0002	<0.00002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	551	627	528	547	530	538	542	523	510	517	545	533	564	175
Strontium	3.07	4.03	3.45	3.55	3.68	3.75	4.02	3.62	3.96	3.47	3.82	3.75	3.98	0.235
Sulphur						455	435	464	445	442	455	459	458	
Thallium	<0.002	<0.00002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.0002
Tin	<0.005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
Titanium	<0.01	<0.01	<0.01	0.012	<0.05	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01
Uranium	0.0069	0.0034	0.0034	0.00171	0.00165	0.0014	0.00129	0.000989	0.00095	0.000857	0.000746	0.000696	0.000679	0.00026
Vanadium	<0.01	<0.002	<0.005	<0.005	<0.005	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.0033
Zinc	<0.005	0.0061	0.035	<0.005	0.0061	<0.005	<0.002	0.004	0.0025	0.0032	0.135	0.0062	0.0048	<0.005
Total Metals														
Aluminum	0.184	0.14	0.617	0.085	0.15	0.264	0.164	0.0754	0.0667	0.0259	0.0405	0.381	0.0411	0.236
Antimony	0.0055	0.00083	0.00301	<0.0005	<0.0005	<0.0005	0.00024	0.0003	0.00023	0.00022	0.00033	0.00034	0.00041	<0.0005
Arsenic	<0.005	0.00297	0.00364	0.00298	0.00354	0.00305	0.00303	0.00279	0.00272	0.00291	0.00394	0.00351	0.00309	0.0126
Barium	0.035	0.0441	0.0516	0.0347	0.036	0.0361	0.0319	0.0279	0.0272	0.0292	0.0288	0.0323	0.0265	<0.02
Beryllium	<0.01	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001
Bismuth	<0.2	<0.001	<0.0025	<0.0025	<0.0025	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.2
Boron	1.32	1.24	1.24	1.38	1.27	1.34	1.42	1.26	1.28	1.34	1.35	1.39	1.23	2.33
Cadmium	<0.00017	0.000077	0.000308	<0.00005	<0.00005	<0.00005	<0.00002	0.000023	0.000038	<0.00002	0.000026	0.00007	<0.00002	<0.00026
Calcium	84.5	97.5	81.6	86.2	89.7	84.3	83.8	81.6	81.5	81.9	82.2	86.9	80.4	16.3
Chromium	<0.01	0.00104	0.00835	0.00076	0.00804	0.00115	0.00062	0.00152	0.00068	0.00042	0.00061	0.00104	0.00045	0.0036
Cobalt	<0.003	0.00293	0.00296	0.00159	0.00179	0.00153	0.0014	0.00122	0.00114	0.00104	0.00105	0.0012	0.00093	<0.0003
Copper	<0.01	0.0012	0.0049	<0.0025	<0.0025	<0.0025	<0.001	0.0021	<0.001	0.0018	0.0015	0.0027	0.0014	0.0026
Iron	0.392	0.77	0.85	0.211	0.396	0.409	0.288	0.168	0.164	0.163	0.157	0.59	0.166	0.081
Lead	<0.005	<0.0001	0.00044	<0.00025	<0.00025	<0.00025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00016	<0.0001	<0.0005
Lithium	<0.05	0.0241	0.0394	0.0442	0.045	0.0522	0.0516	0.0602	0.0559	0.0701	0.0649	0.0658	0.0581	<0.005
Magnesium	52.6	57.5	51.8	56.4	56.6	53.6	54.1	52	54	55.7	54.5	57	53.2	0.63
Manganese	0.972	1.44	1.39	1.15	1.25	1.18	1.24	1.08	1.11	1.09	1	0.996	0.909	0.0232
Mercury	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.014	0.0104	0.00935	0.00555	0.00518	0.00324	0.00279	0.00219	0.00162	0.00186	0.00237	0.0013	0.00124	0.231
Nickel	0.018	0.0124	0.017	0.004	0.0072	0.0035	0.0032	0.0021	0.0021	0.002	0.0019	0.0023	0.0018	0.0031
Phosphorus	<0.3	<0.3	<0.3	<0.3	0.104	0.104	0.091	0.092	0.097	0.111	0.1	0.117	0.112	<0.3
Potassium	2.7	2.31	2.65	1.39	1.41	1.26	1.14	1.1	1.03	1.14	1.03	1.08	0.94	11.8
Selenium	<0.01	0.00028	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001
Silicon	6.08	6.21	7.54	6.49	6.78	6.62	6.63	6.75	6.82	6.92	6.42	7.45	6.42	3.01
Silver	<0.0002	<0.00002	<0.00005	<0.00005	0.000053	<0.00005	<0.00002	<0.00002	0.000033	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	547	630	506	497	531	555	541	525	532	512	542	536	535	194
Strontium	3.06	3.9	3.55	3.56	3.59	3.88	3.88	3.72	3.72	3.64	3.86	3.95	3.81	0.265
Sulphur						466	450	461	453	459	474	476	460	
Thallium	<0.002	<0.00002	0.000056	<0.00005	<0.00005	<0.00005	<0.00002	0.000031	0.000033	<0.00002	<0.00002	0.000027	<0.00002	<0.0002
Tin	<0.005	0.00051	0.00112	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005
Titanium	0.015	0.013	0.04	0.016	<0.05	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	0.036	<0.02	<0.01
Total Cadmium (by saltwater extracti														
Uranium	0.0067	0.00341	0.00346	0.0017	0.00175	0.00146	0.00126	0.00102	0.000927	0.000909	0.000772	0.000754	0.000656	0.00031
Vanadium	<0.01	<0.002	<0.005	<0.005	<0.005	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	0.0029	<0.002	0.0041
Zinc	<0.005	<0.006	0.036	<0.015	<0.015	<0.015	<0.006	<0.006	<0.006	<0.006	0.149	0.0246	0.0141	<0.005
Organics														
Carbon Organic (Dissolved)	8.81	4.7	9.21	17.2	3.99	3.42	3.51	3.81	3.78	3.41				6.4
Carbon Organic (Total)	9.45	4.88	11.3	4.04	3.59	3.22	3.48	3.38	3.69	3.21	2.24	2.25	2.33	5.81
Nitrogen Organic (Dissolved)	0.204	0.132	0.094	1.68		0.054	<0.05							0.176
Nitrogen Organic (Total)	0.234	0.172	0.33	0.152			<0.06							0.176
ALS LAB ID	L1041015	L1081224	L1114029	L1159542	L1202478	L1247928	L1277099	L1307601	L1348177	L1393344	L1431355	L1474413	L1516193	L1160966

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D2.2 - GROUNDWATER QUALITY DATA

Site ID	MW11-04D			MW11-04S						
Site ID	MW11-04D	MW11-04D	MW11-04D	MW11-04S	MW11-04S	MW11-04S	MW11-04S	MW11-04S	MW11-04S	MW11-04S
Analytes	Aug-12	Dec-12	Aug-13	Jul-11	Oct-11	Feb-12	Jun-12	Aug-12	Dec-12	Mar-13
In Situ Parameters										
Conductivity µS/cm	1000	611	1688	1609	1342	1412	2317	1970	1274	1356
Oxygen Dissolved %		3	6.8	56.3	19	36.8	15.1		38.9	2.1
Oxygen Dissolved	1.87	0.36	0.75	5.45	2.43	4.26	1.44	1.65	4.56	0.25
pH (unitless)	9	9.62	7.81	7.85	7.85	7.78	8.11	9.75	7.83	7.53
Redox Potential mV	30		147			-298		-74	-25.3	122
Salinity ppt	0.5		1.22			1.11		1	0.96	1.28
Specific Conductivity µS/cm		906	2360	1937	1909	2166	1679		1882	1976
Temperature °C	13.4	7.93	10.1	16.3	9.42	6.78	10.3	12.7	8.06	8.56
Total Dissolved Solids	638		1533			1410		1260	1222	1283
Turbidity NTU	1.5	-0.4	1.6	4	0.4	6.7	0	0.8	-0.9	-2.1
Physical Tests										
Acidity to pH 8.3 (as CaCO3)	<1			4.6	3.2			4		
Alkalinity (Total as CaCO3)	37.1	50.5	71.1	81.9	106	99	91.8	80.9	84.5	75.7
Bicarbonate Alkalinity		35.7	71.1	81.9	106	99	91.8		84.5	75.7
Carbonate Alkalinity		14.8	<2	<2	<2	<2	<1		<2	<2
Color TCU	11.6	14.6	7.3	11.6	15.7	13.2	10.7	8.9	9.1	8.6
Hardness as CaCO3 (Dissolved)	33.8	43.2	237	257	291	259	246	246	221	236
Hydroxide Alkalinity		<1	<2	<2	<2	<2	<1		<2	<2
pH (unitless)	9.22	8.81	7.94	8.11	8.22	8.01	7.98	7.78	7.98	7.96
Specific Conductivity µS/cm	905	917	2030	2110	2150	2110	2030	1960	1920	2030
Total Dissolved Solids	592	610	1470	1500	1457	1540	1510	1440	1420	1340
Total Suspended Solids	<3	4.7	<3	<3	9.7	10.4	3.3	<3	4	<3
Turbidity NTU	0.84	2.39	1.22	0.81	4.47	6.06	1.35	0.44	1.19	0.86
Dissolved Anions										
Bromide	<0.5	<0.5	<1	<1	<1	<1	<1	<1	<1	<1
Chloride	26.1	25.7	21	23	24	28	24	23	22	22
Fluoride	1.02	0.99	0.83	0.54	0.44	0.42	0.48	0.52	0.5	0.9
Sulphate	341	349	941	967	986	990	972	934	921	952
Nutrients										
Ammonia (Total)	0.092	0.108	0.065	0.0765	0.118	0.101	0.067	0.0744	0.0728	0.0639
Nitrate (as N)	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.13	<0.1
Nitrite (as N)	<0.01	0.037	0.028	<0.02	0.028	0.024	<0.02	<0.02	0.024	0.044
Nitrogen (Dissolved)		0.265		0.44	0.49	0.27	0.63		0.321	0.219
Nitrogen (Total)	0.189	0.327	0.31	0.44	0.61	0.441	0.352	0.25	0.243	0.261
Nitrogen Kjeldahl (Total)	0.189	0.338	0.286	0.44	0.666	0.42	0.352	0.254	0.302	0.28
Orthophosphate (Dissolved)	0.169				0.031			0.0643		
Phosphorus - Dissolved		0.264	0.0842	0.0556	0.0346	0.0496	0.0585		0.0737	0.0723
Phosphorus - Total	0.178	0.287	0.0964	0.0601	0.0547	0.0757	0.0692	0.0766	0.0848	0.0815
Cyanide										
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	0.0051	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals										
Aluminum	0.0833	0.175	0.0114	<0.025	0.0119	0.0146	0.043	0.0131	0.0129	0.0112
Antimony	0.00023	0.00043	<0.0002	<0.0025	0.00094	0.00075	<0.0025	0.00034	0.00026	<0.0002
Arsenic	0.0123	0.00925	0.00197	<0.0025	0.00154	0.00147	<0.0025	0.00193	0.00187	0.00187
Barium	0.00859	0.0106	0.0428	0.054	0.057	0.0482	0.048	0.0413	0.0383	0.0403
Beryllium	<0.0001	<0.0001	<0.0002	<0.005	<0.0002	<0.0002	<0.005	<0.0002	<0.0002	<0.0002
Bismuth	<0.0005	<0.0005	<0.001	<0.2	<0.001	<0.001	<0.2	<0.001	<0.001	<0.001
Boron	1.7	1.75	1.35	1.67	1.72	1.72	1.71	1.45	1.56	1.32
Cadmium	<0.00006	<0.00007	<0.00012	<0.00085	<0.0002	0.000129	0.000219	<0.00007	0.0001	<0.0001
Calcium		16.3	82.1	87.6	100	88.6	83.8	85.4	75.5	81.7
Chromium	0.00029	<0.0001	<0.0002	<0.005	0.0006	0.00056	<0.005	<0.0002	<0.0002	<0.0002
Cobalt	<0.0001	<0.0001	0.00051	<0.0015	0.00055	0.00074	<0.0015	0.0006	0.0006	0.00045
Copper	<0.0002	0.00062	0.00069	<0.005	0.0014	0.0032	0.0224	0.00088	0.00094	0.00069
Dissolved Cadmium (by saltwater ext										
Iron	<0.01	<0.01	0.023	<0.03	<0.03	<0.03	<0.03	<0.01	<0.01	<0.01
Lead	<0.00005	<0.00005	<0.0001	<0.0025	<0.0001	<0.0001	<0.0025	<0.0001	<0.0001	<0.0001
Lithium	0.003	0.00269	0.0037	<0.025	0.0073	0.0028	<0.025	0.003	0.0028	<0.001
Magnesium		0.59	7.77	9.41	9.89	9.05	8.85	7.91	7.8	7.8
Manganese	0.0164	0.0158	0.564	0.118	0.158	0.363	0.337	0.371	0.439	0.543
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001
Molybdenum	0.218	0.204	0.222	0.165	0.145	0.158	0.165	0.198	0.201	0.206
Nickel	0.00093	0.0014	0.0019	<0.005	0.0082	0.0045	<0.005	0.0046	0.0024	0.0022
Phosphorus		0.247	0.095	<0.3	<0.3	<0.3	<0.3	0.081	0.08	0.089
Potassium	6.24	9.73	7.08	8.6	11.3	8.06	7.8	7.29	7.39	7.28
Selenium	0.00026	0.00036	<0.0002	<0.005	0.00051	0.00034	<0.005	0.00029	0.00022	<0.0002
Silicon		2.73	3.19	3.22	3.47	3.53	3.88	3.57	3.46	3.48
Silver	<0.00001	<0.00001	<0.00002	<0.0001	<0.00002	<0.00002	<0.0001	<0.00002	<0.00002	<0.00002
Sodium	169	170	357	391	373	357	382	340	343	343
Strontium	0.212	0.228	1.8	1.49	1.56	1.73	1.83	1.73	1.6	1.7
Sulphur		114	289						298	312
Thallium	<0.00001	0.000013	0.000034	<0.001	0.000058	0.000058	<0.001	0.000041	0.000047	0.000045
Tin	<0.0001	0.0003	<0.0002	<0.0025	0.00184	<0.0002	<0.0025	<0.0002	<0.0002	<0.0002
Titanium		<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02
Uranium	0.000137	0.000282	0.000806	0.0018	0.00214	0.00202	0.0019	0.00123	0.00103	0.000982
Vanadium	0.0018	0.003	<0.002	<0.005	<0.002	<0.002	<0.005	<0.002	<0.002	<0.002
Zinc	<0.001	<0.001	0.0023	0.0062	0.0073	0.0202	0.0054	0.0034	0.0034	0.0032
Total Metals										
Aluminum	0.0977	0.287	0.0294	0.041	0.102	0.302	0.131	0.0739	0.0407	0.0363
Antimony	0.00025	0.00051	<0.0002	<0.0025	0.00091	0.00101	<0.0025	0.00035	0.0003	0.00022
Arsenic	0.0124	0.00879	0.00199	<0.0025	0.0015	0.00164	<0.0025	0.00196	0.00189	0.00199
Barium	0.00845	0.0116	0.0391	0.053	0.0564	0.0562	0.05	0.0426	0.0386	0.0425
Beryllium	<0.0001	<0.0001	<0.0002	<0.005	<0.0002	<0.0002	<0.005	<0.0002	<0.0002	<0.0002
Bismuth	<0.0005	<0.0005	<0.001	<0.2	<0.001	<0.001	<0.2	<0.001	<0.001	<0.001
Boron	1.75	1.82	1.3	1.64	1.68	1.76	1.81	1.55	1.55	1.42
Cadmium	<0.00009	<0.0001	<0.00011	<0.00085	<0.00024	0.000168	0.000252	<0.00009	<0.00012	<0.0001
Calcium		16.6	77.8	86	93.4	91	88.4	83.3	75.3	84.1
Chromium	0.00182	0.00119	0.00044	<0.005	0.00164	0.00496	<0.005	0.00054	0.00038	0.00065
Cobalt	0.00011	0.00014	0.00051	<0.0015	0.00066	0.00097	<0.0015	0.00065	0.00065	0.00051
Copper	0.00104	0.00369	0.0012	<0.005	0.0028	0.0088	0.0244	0.0024	0.002	0.0035
Iron	0.03	0.088	0.072	<0.03	0.106	0.352	0.103	0.066	0.054	0.069
Lead	0.000052	0.00012	<0.0001	<0.0025	<0.0001	0.00053	<0.0025	<0.0001	0.00014	<0.0001
Lithium	0.00324	0.00255	0.0038	<0.025	0.0072	0.0032	<0.025	0.0033	0.0027	0.0012
Magnesium		0.64	7.51	9.24	9.39	9.48	9.33	7.78	7.85	8
Manganese	0.0176	0.0279	0.526	0.123	0.16	0.415	0.368	0.379	0.444	0.578
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001		<0.00001	<0.00001
Molybdenum	0.224	0.201	0.213	0.17	0.145	0.161	0.172	0.199	0.202	0.209
Nickel	0.00152	0.00211	0.0019	<0.005	0.0104	0.0082	<0.005	0.0028	0.0027	0.0026
Phosphorus		0.255	0.097	<0.3	<0.3	<0.3	<0.3	0.084	0.09	0.107
Potassium	6.02	10	6.82	8.3	11.8	8.19	8.3	7.04	7.38	7.35
Selenium	0.00032	0.00041	<0.0002	<0.005	0.00046	0.00035	<0.005	0.00026	0.00024	0.00022
Silicon		2.9	3.14	3.22	3.38	4.37	4.16	3.61	3.49	3.58
Silver	0.000011	<0.00001	<0.00002	<0.0001	<0.00002	0.000022	<0.0001	<0.00002	<0.00002	<0.00002
Sodium	163	173	336	382	358	368	403	348	340	361
Strontium	0.21	0.229	1.76	1.48	1.45	1.75	1.9	1.74	1.66	1.76
Sulphur		113	284						298	322
Thallium	0.000015	0.000017	0.00004	<0.001	0.000056	0.000056	<0.001	0.000044	0.000049	0.000043
Tin	0.00014	0.00041	<0.0002	<0.0025	0.00262	0.00135	<0.0025	<0.0002	<0.0002	<0.0002
Titanium		<0.01	<0.02	<0.01	<0.01	0.023	<0.01	<0.02	<0.02	<0.02
Total Cadmium (by saltwater extracti										
Uranium	0.000142	0.000315	0.000779	0.0018	0.00192	0.00204	0.002	0.00128	0.00104	0.000969
Vanadium	0.0019	0.0036	<0.002	<0.005	<0.002	<0.002	<0.005	<0.002	<0.002	<0.002
Zinc	<0.003	0.0038	<0.006	<0.005	0.0105	0.0254	0.0086	<0.006	<0.006	<0.006
Organics										
Carbon Organic (Dissolved)	4.54	4.75	6.57	7.03	8.47	7.69	10.1	6.87	6.76	6.2
Carbon Organic (Total)	4.5	4.85	6.53	6.88	8.59	8.96	7.3	6.65	6.96	6.25
Nitrogen Organic (Dissolved)		0.12		0.363	0.344	0.146	0.563		0.097	0.111
Nitrogen Organic (Total)				0.363	0.464	0.32	0.285			0.154
ALS LAB ID	**L1200094**	**L1248467**	**L1346553**	**L1038606**	**L1076555**	**L1115110**	**L1160966**	**L1202478**	**L1248467**	**L1277798**

Site ID	MW11-04S					MW11-05D							
Site ID	MW11-04S	MW11-04S	MW11-04S	MW11-04S	MW11-04S	MW11-05D	MW11-05D	MW11-05D	MW11-05D	MW11-05D	MW11-05D	MW11-05D	MW11-05D
Analytes	May-13	Nov-13	Mar-14	Jun-14	Sep-14	Oct-11	Feb-12	Jun-12	Aug-12	Dec-12	Mar-13	May-13	Aug-13
In Situ Parameters													
Conductivity µS/cm	1560	1.97	1783	1420	1472	971	1062	1827	1590	914	933	1016	1111
Oxygen Dissolved %	10.6	9.5	19.5	5.7	7.7		33	10.1		3.7	79.9	43.9	58.2
Oxygen Dissolved	1.21	1.14	2.27	0.64	0.9	34.4	3.96	1.04	3	0.45	9.6	5.11	6.39
pH (unitless)	7.76	7.47	7.42	7.85	8.23	9.04	7.56	7.68	6.86	7.35	7.31	7.36	7.27
Redox Potential mV	92.8	96.6	97.5	50.2	61		-292		-127		-167	-184	-104
Salinity ppt	1.14	1.01	0.91	1.04	1.07		0.81		0.8		0.71	0.75	0.77
Specific Conductivity µS/cm	2220	1.31	1219	2028	2088	1435	1610	1351		1391	1403	1482	1525
Temperature °C	9.42	8	8.43	9.29	9.56	8.06	7.16	10.1	13.8	7.03	7.47	8.55	10.8
Total Dissolved Solids	1443	1283	1159	1319	1355		1047		1010		912	963	991
Turbidity NTU	4.6	1.4	2.6	2.8	2.1	7.6	10.6	40.1	21.2	7.9	-2.7	0	9.3
Physical Tests													
Acidity to pH 8.3 (as CaCO3)						<1			14.9				
Alkalinity (Total as CaCO3)	77.1	80.1	71.7	68.7	53.8	275	313	364	431	439	441	416	419
Bicarbonate Alkalinity	77.1	80.1	71.7	68.7	53.8	272	313	364		439	441	416	419
Carbonate Alkalinity	<2	<2	<2	<2	<1	3.2	<2	<1		<2	<2	<2	<2
Color TCU	7.7	7.4	6.7			18.7	16.6	12.7	14.1	11.9	10	8.8	7.5
Hardness as CaCO3 (Dissolved)	230		237	248	248	582	626	652	675	619	619	590	569
Hydroxide Alkalinity	<2	<2	<2	<2	<1	<1	<2	<1		<2	<2	<2	<2
pH (unitless)	7.97	8	7.91	7.86	7.75	8.33	8.01	8.01	7.76	7.98	8.03	7.96	8.02
Specific Conductivity µS/cm	2010	2060	2000	2070	2060	1600	1510	1480	1480	1440	1460	1340	1260
Total Dissolved Solids	1470	1470	1520	1490	1540	1190	1150	1140	1140	1080	994	958	905
Total Suspended Solids	<3		<3	<3	3.4	36	25.8	36.7	30.5	22	14.4	13.3	15.2
Turbidity NTU	0.9		0.39	0.98	0.84	21.9	24.1	37.1	50.9	61	60.3	55.5	51.1
Dissolved Anions													
Bromide	<1	<1	<1	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	23	25	21	21	22	27	19.7	15.5	14.4	10.8	9	8.5	5.4
Fluoride	0.55	0.6	0.86	0.645	0.572	<0.4	0.29	0.3	0.34	0.32	0.49	0.35	0.53
Sulphate	924	960	965	970	1010	597	560	518	509	456	399	380	359
Nutrients													
Ammonia (Total)	0.092	0.127	0.0933	0.0677	0.0713	0.314	0.176	0.107	0.134	0.14	0.138	0.12	0.122
Nitrate (as N)	<0.1	<0.1	<0.1	<0.1	0.13	<0.1	<0.05	<0.05	<0.05	<0.05	0.073	0.051	<0.05
Nitrite (as N)	<0.02	<0.02	<0.02	<0.02	0.023	<0.02	<0.01	0.015	<0.01	<0.01	0.017	<0.01	<0.01
Nitrogen (Dissolved)						0.89	0.41	0.28		0.312	0.176		
Nitrogen (Total)	0.28					0.661	0.502	<0.25	0.39	<0.5	0.221	0.313	0.21
Nitrogen Kjeldahl (Total)	0.282	0.304	0.287	0.301	0.256	0.661	0.5	<0.5	0.39	0.357	0.294	0.262	0.248
Orthophosphate (Dissolved)		0.0837	0.09	0.0973	0.099	0.0392			<0.001				
Phosphorus - Dissolved	0.0886	0.0914	0.0984	0.0912		0.0368	<0.002	0.0035		<0.002	<0.002	<0.002	0.0038
Phosphorus - Total	0.097	0.119	0.129	0.0962	0.132	0.101	0.153	0.205	0.242	0.292	0.218	0.29	0.304
Cyanide													
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	0.007	0.0075	<0.005		<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	0.012	0.0111	0.0089	0.0148	0.0159	<0.003	0.0058	0.0068	0.0055	0.0047	0.0036	0.0046	0.0025
Antimony	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0006	0.00047	<0.0005	<0.0005	0.00032	0.00032	0.00033	0.00034
Arsenic	0.00182	0.00189	0.002	0.00189	0.00192	0.00496	0.00496	0.00568	0.0073	0.00661	0.00685	0.00674	0.00654
Barium	0.0386	0.0419	0.0412	0.0406	0.0434	0.0536	0.0527	0.072	0.067	0.0556	0.0552	0.0511	0.0474
Beryllium	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005
Boron	1.44	1.58	1.54	1.62	1.59	0.045	0.048	<0.1	<0.1	0.068	0.055	0.06	0.055
Cadmium	<0.0001	<0.00007	<0.00009	<0.00009	0.000022	0.000027	0.000015	0.000025	<0.000017	0.000011	<0.00001	<0.00001	<0.00001
Calcium	79.5	83.3	82.6	85.9	85.8	86.9	86.8	82.4	92.8	80.3	81	76.9	73.7
Chromium	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00016	0.0005	<0.001		0.00016	0.00016	0.00013	<0.0001
Cobalt	0.00038	0.00051	0.00034	0.0004	0.00045	0.00279	0.00442	0.00536	0.00507	0.00555	0.00455	0.00408	0.00377
Copper	0.00041	<0.0004	0.00096	0.00066	0.00069	<0.0005	<0.0005	<0.001	<0.001	<0.0002	<0.0002	<0.0002	<0.0002
Dissolved Cadmium (by saltwater ext				0.00003									
Iron	<0.01	0.082	<0.01	0.013	<0.01	0.519	1.71	2.66	4.72	4.35	4.38	4.17	3.44
Lead	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	0.000066	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0036	0.005	0.0038	0.0043	0.0037	0.0116	0.0103	0.0094	0.0104	0.00977	0.0101	0.0108	0.00996
Magnesium	7.73	8.07	7.41	8.09	8.13	88.7	99.4	108	108	102	101	96.6	93.6
Manganese	0.537	0.547	0.514	0.516	0.519	3.21	3.61	3.81	4.12	3.62	3.31	2.89	2.63
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.21	0.22	0.2	0.2	0.212	0.0474	0.041	0.0348	0.032	0.0332	0.0304	0.0297	0.0296
Nickel	0.0018	0.0019	0.0017	0.0017	0.0015	0.00519	0.011	0.0085	0.0095	0.00818	0.00599	0.0055	0.00556
Phosphorus	0.092	0.108	0.108	0.11	0.109	<0.3	<0.3	<0.3	<0.3	0.17	0.219	0.196	0.149
Potassium	7.07	7.48	6.84	7.3	6.96	53	25.9	11.5	11.4	9.99	8.43	8.15	6.36
Selenium	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00046	0.00029	<0.001	<0.001	0.0001	0.00013	<0.0001	<0.0001
Silicon	3.31	3.37	3.26	3.26	3.23	9.73	12.2	14.8	14.2	14.5	15.1	15.4	15.5
Silver	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	341	351	374	347	381	134	116	113	151	120	113	97.1	88.9
Strontium	1.7	1.82	1.82	1.82	1.95	0.684	0.666	0.678	0.706	0.648	0.642	0.606	0.587
Sulphur	299	303	308	314	312					142	133	121	113
Thallium	0.000029	<0.00002	0.000047	0.000026	0.000028	<0.00001	<0.00001	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00015	0.00015	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.000787	0.000695	0.000673	0.000595	0.000624	0.00328	0.00741	0.00577	0.00587	0.00439	0.00367	0.00302	0.00275
Vanadium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	0.0031	<0.002	0.0064	0.006	0.006	<0.003	<0.003	0.0083	0.0073	0.0016	0.0025	0.0019	0.0026
Total Metals													
Aluminum	0.0294	0.0236	0.0199	0.0496	0.0265	0.0651	0.118	0.188	0.159	0.0569	0.0261	0.017	0.0212
Antimony	<0.0002	<0.0002	<0.0002	0.00022	0.00022	0.00106	0.00112	0.00052	0.00058	0.00049	0.00041	0.00035	0.00041
Arsenic	0.00193	0.00203	0.0021	0.00203	0.00193	0.0044	0.00554	0.0066	0.00754	0.00699	0.00725	0.00688	0.00683
Barium	0.0399	0.0416	0.0416	0.04	0.0411	0.0471	0.0648	0.075	0.071	0.0599	0.0588	0.0524	0.0524
Beryllium	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005
Boron	1.52	1.6	1.68	1.64	1.56	0.055	0.052	<0.1	<0.1	0.073	0.057	0.067	0.059
Cadmium	<0.0002	<0.00008	<0.0001	<0.00009	<0.00002	0.000094	0.000171	0.000113	0.000092	0.000049	0.000023	0.00002	0.000023
Calcium	75.1	82	85.1	84.3	80.5	72.5	90.8	94.4	94.3	79.8	83	74.1	71.7
Chromium	0.00026	0.00043	0.00023	0.00039	0.00048	0.00093	0.00454	0.0065	0.0152	0.00085	0.00065	0.00041	0.0005
Cobalt	0.00042	0.00051	0.00038	0.00045	0.00042	0.00231	0.00507	0.00641	0.0059	0.00559	0.00481	0.00426	0.00391
Copper	0.0014	0.001	0.0016	0.0019	0.0011	0.00149	0.00305	0.0051	0.0056	0.00212	0.00146	0.00063	0.00067
Iron	0.077	0.105	0.032	0.066	0.094	1	2.35	4	5.22	5.04	5.03	4.58	4.1
Lead	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.000088	0.00027	<0.0005	<0.0005	0.000092	0.000057	<0.00005	<0.00005
Lithium	0.0038	0.0044	0.0043	0.0042	0.0038	0.0126	0.0104	0.01	0.0107	0.01	0.0105	0.0113	0.00996
Magnesium	7.87	8.05	7.89	8	7.65	80.2	98.9	111	105	96.9	100	94.1	89.8
Manganese	0.574	0.554	0.541	0.539	0.485	2.5	3.85	4.08	4.23	3.5	3.44	2.9	2.59
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.222	0.214	0.217	0.206	0.202	0.0548	0.0427	0.0368	0.0349	0.0341	0.0319	0.0308	0.0302
Nickel	0.002	0.0021	0.0018	0.0023	0.0016	0.00583	0.0129	0.0113	0.0146	0.00837	0.00657	0.0058	0.00594
Phosphorus	0.102	0.105	0.117	0.119	0.129	<0.3	<0.3	<0.3	<0.3	0.257	0.284	0.28	0.27
Potassium	7.48	7.46	7.34	7.05	6.56	67.5	26.5	12.7	10.1	9.33	8.44	7.96	6.08
Selenium	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0005	0.00026	<0.001	<0.001	<0.0001	0.00011	<0.0001	<0.0001
Silicon	3.32	3.37	3.49	3.34	3.09	9.98	12.5	16.3	14.4	14.3	15.3	15.1	15
Silver	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00002	0.000097	0.000021	<0.00001	0.000021	<0.00001
Sodium	336	358	381	347	348	121	118	125	143	114	114	101	89
Strontium	1.74	1.76	1.95	1.81	1.87	0.673	0.71	0.773	0.7	0.654	0.658	0.63	0.591
Sulphur	297	311	319	314	302					143	138	121	113
Thallium	0.00003	<0.00002	0.000052	0.000031	0.000026	<0.00001	<0.00001	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0009	0.00103	<0.0005	<0.0005	0.00021	0.00013	<0.0001	<0.0001
Titanium	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	0.018	0.014	0.012	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extracti				0.000033									
Uranium	0.000817	0.000709	0.000761	0.000623	0.000606	0.00334	0.0079	0.00597	0.00614	0.0045	0.00387	0.00307	0.00268
Vanadium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	0.0015	0.0014	<0.001	<0.001	<0.001	<0.001
Zinc	<0.006	<0.006	0.0068	0.009	0.0083	0.01	0.0186	0.017	0.0183	0.0047	0.0033	0.0034	0.0036
Organics													
Carbon Organic (Dissolved)	6.37	6.7				33	22.7	21	20.3	17.8	17.8	13.5	11.9
Carbon Organic (Total)	6.34	6.28	11.4	4.63	5.4	31.8	23.9	21.4	20.4	18.4	19.3	13.1	12.4
Nitrogen Organic (Dissolved)						0.58	0.235	0.158		0.172	<0.05		
Nitrogen Organic (Total)						0.37	0.33	<0.5			<0.05		
ALS LAB ID	**L1307601**	**L1393344**	**L1432458**	**L1474413**	**L1516193**	**L1078289**	**L1115110**	**L1160966**	**L1201474**	**L1248467**	**L1277798**	**L1307601**	**L1348177**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D2.2 - GROUNDWATER QUALITY DATA

Site ID											MW11-05S											MW11-06D	
Site ID	MW11-05D	MW11-05D	MW11-05D	MW11-05D	MW11-05S	MW11-05S	MW11-05S	MW11-05S	MW11-05S	MW11-05S	MW11-05S	MW11-05S	MW11-05S	MW11-05S	MW11-05S	MW11-05S	MW11-06D	MW11-06D	MW11-06D	MW11-06D	MW11-06D	MW11-06D	MW11-06D
Analytes	Nov-13	Mar-14	Jun-14	Sep-14	Nov-11	Feb-12	Jun-12	Aug-12	Dec-12	Mar-13	May-13	Aug-13	Nov-13	Mar-14	Jun-14	Sep-14	Jul-11	Oct-11	Jun-12	Aug-12	Dec-12	Mar-13	May-13
In Situ Parameters																							
Conductivity µS/cm	1.23	1295	832	792	875	913	1732	1050	911000	891	1031	1111	1.29	1303	855	854	856	709	1992	2010	771	650	927
Oxygen Dissolved %	20.9	6.8	53.8	5.6		37.6	26.4		2.9	31.1	16.2	7	15.6	36	2.1	10.2	43.6		24.4		28.8	0.5	0.7
Oxygen Dissolved	2.5	0.8	6.19	0.67	115	4.75	2.56	3.47	0.35	3.73	1.86	0.77	1.88	4.29	0.24	1.17	4.18	136	2.32	2.32	3.43	0.06	0.08
pH (unitless)	7.74	7.33	7.47	7.47	7.27	7.6	7.69	6.98	7.39	7.39	7.36	7.17	7.47	7.39	7.42	7.5	7.98	8.35	8.4	8.15	8.48	8.86	8.22
Redox Potential mV	-143	-127	-141	-145		-293		-9	-191	-154	-190	-115	0.809	-112	-136	-156				-158	-140	-210	-244
Salinity ppt	0.801	0.65	0.6	0.58		0.74		0.5	0.69	0.67	0.75	0.78	0.65	0.63	0.62	0.62				1	0.58	0.49	0.67
Specific Conductivity µS/cm	0.823	871	1195	1157	1273	1478	1181		1369	1337	1486	1531	0.851	867	1238	1232	1005	1031	1474		1163	999	1327
Temperature °C	7.61	7.85	9.02	8.47	8.41	4.97	8.25	16.9	7.49	7.52	8.95	10.6	7.49	7.5	8.76	8.54	17.3	8.67	10.9	12.3	7.35	6.72	9.2
Total Dissolved Solids	620	842	775	752		961		661	889	869	966	996	131000	847	806	801				1300	756	649	863
Turbidity NTU	3.1	4.7	2.7	5.5	3.2	6.7	4.1	22.1	9.5	-3.3	0	5	5.1	13	9.5	14.3	0	-5.2	0	2	2.1	1.8	0
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)								10.3									4.4			3.3			2.3
Alkalinity (Total as CaCO3)	402	398	315	375	268	286	292	318	339	330	298	284	347	337	338	330	48.2	42.9	38.6	41.3	42.3	39.7	40.4
Bicarbonate Alkalinity	402	398	315	375		286	292		339	330	298	284	347	337	338	330	48.2		38.6		42.3	39.7	40.4
Carbonate Alkalinity	<2	<2	<2	<1		<2	<1		<2	<2	<2	<2	<2	<2	<2	<1	<2		<1		<2	<2	<2
Color TCU	7.2				14.7	12.3	8.7	8	10.4	7.8	8.5	5.9	7				<5	<5	<5	<5	<5	<5	<5
Hardness as CaCO3 (Dissolved)		569	578	547	562	607	597	609	568	597	563	554		571	559	543	157	140	424	586	195	156	205
Hydroxide Alkalinity	<2	<2	<2	<1		<2	<1		<2	<2	<2	<2	<2	<2	<2	<1	<2		<1		<2	<2	<2
pH (unitless)	8.12	8.15	8.19	7.93	7.97	7.95	7.91	7.75	8.01	8.04	7.97	7.95	8.1	8.04	8.1	7.92	7.8	7.9	7.7	8.02	7.85	7.92	8.03
Specific Conductivity µS/cm	1260	1200	1210	1170	1220	1510	1510	1390	1380	1400	1320	1290	1310	1210	1260	1240	1090	987	1730	1920	1130	1080	1180
Total Dissolved Solids	876	853	847	814	930	1210	1210	1150	1060	968	963	948	678	887	922	920	720	675	1340	1630	797	690	857
Total Suspended Solids			14.4	11.8	23.7	7.1	14.7	7.9	4	12.7	12	17.3			15.1	16.2	<3	<3	<3	<3	<3	3.3	<3
Turbidity NTU			37.8	35.9	10.7	7.58	9.34	17.6	29.8	29.6	37.4	55			49.6	34.7	0.39	1.87	0.38	0.47	0.83	0.42	0.57
Dissolved Anions																							
Bromide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5
Chloride	8	7.8	<5	<5	14.9	25.1	26.4	16.9	15.3	12.8	13.4	9.8	11.9	7.9	9	8.8	11.8	9.1	12	12	9.8	9.1	11.7
Fluoride	0.37	0.63	0.397	0.343	0.24	0.25	0.26	0.3	0.28	0.45	0.3	0.48	0.33	0.63	0.342	0.326	0.63	0.38	<0.4	<0.4	0.31	0.55	0.32
Sulphate	353	344	339	327	437	573	573	511	489	450	433	416	415	399	415	405	476	423	918	1040	520	476	558
Nutrients																							
Ammonia (Total)	0.131	0.116	0.1	0.115	<0.005	<0.05	0.0342	0.0109	0.0318	0.0367	0.0279	0.0342	0.0782	0.0564	<0.005	0.03	0.0215	0.0509	0.0707	0.0814	0.048	0.059	0.058
Nitrate (as N)	<0.05	0.119	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	<0.05	0.078	<0.05	<0.05	<0.05	0.051	<0.05	0.059	<0.05	<0.05	<0.1	<0.1	<0.05	<0.05	<0.05
Nitrite (as N)	<0.01	0.026	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.017	<0.01	<0.01	0.014	0.013	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01
Nitrogen (Dissolved)					0.33	0.2	0.79		0.23	0.136							0.19	0.1	0.28		0.072	0.074	
Nitrogen (Total)					0.406	<0.043	<0.25	0.21	<0.5	0.232	0.212	0.184					0.14	0.09	0.119	0.13	0.117	<0.071	0.108
Nitrogen Kjeldahl (Total)	0.283	0.255	0.287	0.203	0.406	<0.2	<0.5	0.21	0.28	0.307	0.212	0.219	0.307	0.347	0.332	0.264	0.14	0.128	0.119	0.127	0.117	0.066	0.123
Orthophosphate (Dissolved)	0.002	0.0046	0.0023	0.0022				0.0026					0.0023	<0.001	0.0015	<0.001				0.0116			
Phosphorus - Dissolved	<0.002	<0.002	<0.002		0.0136	0.0027	<0.002	0.0026	0.0021	<0.002	<0.002	<0.002	0.0035	<0.002	<0.002		0.0214	0.0485	0.0135		0.0448	0.0348	0.0225
Phosphorus - Total	0.306	0.305	0.211	0.336	0.0728	0.107	0.118	0.142	0.237	0.16	0.232	0.285	0.287	0.207	0.225	0.284	0.0281	0.055	0.0165	0.015	0.0496	0.038	0.0239
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	0.0056	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																							
Aluminum	0.0058	0.0053	0.006	0.0046	0.0058	0.0074	0.0071	0.0062	0.0059	0.0029	0.0039	0.0024	0.0026	0.0022	0.0023	0.0015	0.019	0.0139	0.022	<0.01	0.0078	0.0074	0.0065
Antimony	0.00034	0.00046	0.00047	0.00054	0.00037	0.0001	<0.0005	<0.0001	<0.0001	0.00011	0.0001	<0.0001	<0.0001	<0.0001	0.00015	0.00031	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.0001	<0.0001
Arsenic	0.00729	0.00661	0.00603	0.00683	0.00142	0.00379	0.00409	0.00501	0.00572	0.0052	0.00706	0.00761	0.00658	0.00595	0.00557	0.00569	0.0084	0.01	0.0156	0.015	0.0116	0.0122	0.0136
Barium	0.0475	0.0445	0.042	0.0414	0.0662	0.0809	0.089	0.0821	0.0719	0.0725	0.0746	0.0704	0.0694	0.0684	0.0655	0.0641	<0.02	0.015	0.022	0.023	0.0138	0.0126	0.016
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.002	<0.0001	<0.002	<0.002	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.0005	<0.2	<0.2	<0.0005	<0.0005	<0.0005
Boron	0.064	0.054	0.056	0.049	0.05	0.042	<0.1	0.048	0.047	0.037	0.044	0.042	0.045	0.04	0.049	0.045	0.65	0.612	0.64	0.59	0.561	0.545	0.481
Cadmium	<0.00001	<0.00001	<0.00001	<0.00001	0.000032	0.000013	0.000045	0.000011	0.000013	<0.00001	<0.00001	0.000012	<0.00001	<0.00003	<0.00001	<0.00001	<0.0004	<0.00003	0.000071	<0.000034	<0.00003	0.000017	<0.00005
Calcium	75.6	73.4	75.7	70.7	103	104	93.7	100	89.7	97.7	90	89	83.8	92.1	93	88	47.6	42.5	119	164	55.7	46.9	60.4
Chromium	0.00015	0.00012	<0.0001	<0.0001	0.00059	0.00031	<0.001	0.00016	0.00024	0.00019	0.00019	0.00016	0.00027	0.00021	<0.0001	0.0002	<0.002	<0.0001	<0.002	<0.002	<0.0001	<0.0001	<0.0001
Cobalt	0.00302	0.00312	0.00275	0.00254	0.00385	0.00533	0.0043	0.00368	0.00148	0.00211	0.00191	0.00239	0.0005	0.00103	0.00135	0.00067	<0.0006	0.00016	<0.0006	<0.0006	<0.0001	<0.0001	<0.0001
Copper	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.001	<0.0002	<0.0002	0.0015	<0.0002	<0.0002	<0.0002	0.00029	<0.0002	0.00032	<0.004	<0.0005	0.0051	0.0025	<0.0002	<0.0002	<0.0002
Dissolved Cadmium (by saltwater ext																							
Iron	4.14	3.73	3.3	3.17	0.105	0.904	1.18	2.1	1.94	2.2	3.35	4.51	0.077	4.04	4.05	2.85	<0.03	0.043	0.095	0.098	0.058	0.057	0.044
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0005	0.000066	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.001	<0.00005	<0.001	<0.001	<0.00005	<0.00005	<0.00005
Lithium	0.014	0.0104	0.0108	0.00961	0.00433	0.00635	0.0065	0.00867	0.00901	0.00997	0.0108	0.00982	0.0183	0.0126	0.0106	0.00992	<0.01	0.00541	0.01	0.013	0.00679	0.00549	0.00704
Magnesium	98.2	93.7	94.4	89.9	73.8	84.5	88.1	86.8	83.6	85.8	82.1	80.7	56.5	82.7	79.5	78.5	9.39	8.2	31	42.9	13.7	9.53	13
Manganese	2.31	2.15	1.93	1.76	2.34	4.29	4.46	4.52	4.78	5.07	4.54	4.26	3.73	3.87	3.26	2.71	0.081	0.124	0.092	0.0882	0.105	0.0838	0.0725
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0329	0.0304	0.03	0.0309	0.0212	0.0258	0.0275	0.0259	0.0266	0.0307	0.0263	0.0303	0.0173	0.0234	0.024	0.0237	0.0777	0.0921	0.083	0.0833	0.0945	0.0871	0.0857
Nickel	0.00408	0.00467	0.00473	0.00413	0.0136	0.00751	0.0048	0.00262	0.00225	0.00283	0.00177	0.00174	0.00141	0.00165	0.0026	0.00157	<0.002	<0.0005	<0.002	<0.002	<0.0005	0.00201	0.00076
Phosphorus	0.293	0.211	0.225	0.264	<0.3	<0.3	<0.3	0.155	0.207	0.123	0.2	0.178	0.085	0.145	0.085	0.142	<0.3	<0.3	<0.3	<0.3	0.051	<0.05	<0.05
Potassium	6.05	6.06	5.4	4.68	10.2	7.79	6.8	7.69	7.96	7.96	7.82	6.26	1.02	7.85	5.65	5.59	<2	1.08	<2	<2	1.19	0.98	1.13
Selenium	<0.0001	<0.0001	<0.0001	<0.0001	0.00054	0.00044	<0.001	0.00063	0.0003	0.00022	0.00014	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.002	0.0001	<0.002	<0.002	0.00015	<0.0001	<0.0001
Silicon	16.2	15.8	16.8	16.9	8.74	9.76	10.3	10.9	9.66	10.4	10.4	10.2	6.59	10.4	10.6	10.8	3.32	3.78	3.9	4.04	3.66	3.51	3.71
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00004	<0.00001	<0.00004	<0.00004	<0.00001	<0.00001	<0.00001
Sodium	81.2	78.4	72.8	68.2	85.4	118	133	118	118	101	99.2	90.1	93	76.3	81.3	88.4	162	156	234	269	162	148	168
Strontium	0.634	0.6	0.592	0.587	0.664	0.655	0.683	0.666	0.646	0.699	0.673	0.646	0.6	0.663	0.637	0.635	2.44	2.31	7.88	8.14	3.2	2.6	3.4
Sulphur	107	108	109	108					156	148	139	132	431	125	127	133					170	147	169
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	0.000029	<0.00001	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0004	<0.00001	<0.0004	<0.0004	<0.00001	<0.00001	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001	0.00038	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0017	0.00014	<0.001	<0.001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.00275	0.00236	0.00212	0.00191	0.0116	0.0159	0.0187	0.0198	0.0214	0.0183	0.0149	0.0128	0.0114	0.0102	0.00849	0.0082	<0.0004	0.00014	<0.0004	<0.0004	0.000114	0.00004	0.000025
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001
Zinc	0.0012	0.0029	0.0032	0.0027	0.0043	<0.003	0.0094	0.0031	0.0022	0.0031	0.0039	0.0036	0.0024	0.0058	0.0074	0.0068	0.0131	0.0067	<0.005	<0.005	<0.001	<0.001	<0.001
Total Metals																							
Aluminum	0.0333	0.0267	0.0496	0.0244	0.327	0.0706	0.0723	0.0426	0.0258	0.0302	0.0196	0.0114	0.0564	0.0678	0.032	0.0568	0.02	0.113	0.036	0.024	0.0341	0.0303	0.0143
Antimony	0.00043	0.00054	0.00068	0.00072	0.0004	0.00025	<0.0005	0.0001	0.00013	0.00018	0.00015	0.00011	0.00023	0.00016	0.00026	0.0007	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.0001	<0.0001
Arsenic	0.00753	0.00669	0.007	0.00643	0.00156	0.00406	0.00461	0.00512	0.00569	0.00643	0.00708	0.00807	0.00709	0.00564	0.00662	0.00651	0.008	0.00972	0.0161	0.0156	0.0122	0.0123	0.0139
Barium	0.05	0.0465	0.0464	0.0416	0.0714	0.0858	0.088	0.0736	0.0746	0.0788	0.0722	0.0715	0.0739	0.0698	0.0705	0.0673	<0.02	0.0164	0.023	0.023	0.0145	0.0125	0.0159
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.002	<0.0001	<0.002	<0.002	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.0005	<0.2	<0.2	<0.0005	<0.0005	<0.0005
Boron	0.065	0.056	0.062	0.051	0.058	0.047	<0.1	0.043	0.049	0.04	0.046	0.045	0.051	0.043	0.08	0.054	0.67	0.617	0.67	0.61	0.629	0.576	0.503
Cadmium	0.000028	<0.00003	<0.00003	0.000014	0.000124	0.000056	0.000105	0.000043	0.000045	0.000049	0.000034	0.000037	0.000069	0.000207	0.000038	0.000037	<0.0004	<0.00003	0.000074	<0.000034	<0.00003	0.000017	<0.00005
Calcium	77.8	71.2	75.5	67.5	106	105	101	93.9	87.1	101	87.9	88.8	84.3	90.9	92.5	81.9	47.7	42.2	125	161	55.1	46.3	59.9
Chromium	0.00058	0.00036	0.00057	0.00034	0.00201	0.00129	<0.001	0.00046	0.00065	0.0011	0.00059	0.00047	0.00103	0.00121	0.00082	0.00121	<0.002	0.00019	<0.002	<0.002	0.00059	0.00023	0.00011
Cobalt	0.00327	0.00325	0.003	0.00257	0.00426	0.00578	0.00469	0.00395	0.00247	0.00273	0.00218	0.00252	0.00066	0.00128	0.00161	0.00083	<0.0006	0.00022	<0.0006	<0.0006	<0.0001	0.00023	<0.0001
Copper	0.00781	0.0037	0.00222	0.0011	0.00298	0.0013	0.0015	0.00192	0.00209	0.00208	0.00215	0.00099	0.00388	0.00357	0.00205	0.00314	<0.006	<0.0005	0.0056	0.0085	0.00058	0.00347	<0.0005
Iron	4.38	4.1	3.89	3.28	0.514	0.979	1.55	2.28	2.47	3.19	3.55	5.15	0.161	4.08	5.05	3.98	<0.03	0.119	0.106	0.114	0.083	0.259	0.101
Lead	<0.00005	0.000067	0.000165	<0.00005	0.000187	0.000142	<0.0005	0.000167	0.000139	0.000104	0.000071	0.000059	0.000148	0.000147	0.000124	0.000088	<0.001	<0.00005	<0.001	<0.001	0.000078	<0.00005	<0.00005
Lithium	0.0125	0.0101	0.0111	0.00918	0.00422	0.00611	0.0072	0.00817	0.0089	0.0108	0.0108	0.00971	0.0189	0.0129	0.0111	0.0095	<0.01	0.00509	0.011	0.013	0.00764	0.00588	0.00743
Magnesium	98.2	91.5	91.6	85.9	73.5	85.7	88.8	82.9	79.6	86.4	80.5	78.1	55.4	81.5	79.3	74.5	9.58	8.17	31.7	43.5	13.5	9.95	12.9
Manganese	2.5	2.2	2.06	1.72	2.51	4.56	4.72	5.03	4.79	5.24	4.59	4.22	3.77	3.95	3.33	2.66	0.0834	0.128	0.103	0.0927	0.107	0.0842	0.0727
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0317	0.031	0.0316	0.0306	0.023	0.0271	0.0296	0.0267	0.0282	0.034	0.0279	0.0321	0.0215	0.0253	0.0262	0.0239	0.0807	0.0964	0.087	0.0863	0.104	0.0906	0.0899
Nickel	0.00461	0.00503	0.00539	0.00435	0.0168	0.00867	0.0054	0.00308	0.00298	0.0036	0.00196	0.00178	0.00185	0.00308	0.00331	0.00206	<0.002	<0.0005	<0.002	<0.002	0.00063	0.0022	0.00069
Phosphorus	0.299	0.292	0.319	0.287	<0.3	<0.3	<0.3	0.182	0.221	0.235	0.233	0.241	0.099	0.178	0.212	0.231	<0.3	<0.3	<0.3	<0.3	0.054	<0.05	<0.05
Potassium	6.12	5.76	5.32	4.47	10.8	8	7.1	7.19	7.34	8.08	7.06	6.11	1.07	8.17	5.71	5.18	<2	1.12	<2	<2	1.18	1.06	1.11
Selenium	<0.0001	<0.0001	<0.0001	<0.0001	0.00067	0.00052	<0.001	0.00026	0.0002	0.0002	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.002	<0.0001	<0.002	<0.002	<0.0001	<0.0001	<0.0001
Silicon	16.6	15.5	16.7	16.2	9.48	9.89	10.8	10.6	9.43	10.7	10.3	10.2	6.78	10.4	10.8	10.2	3.36	3.93	4	4.09	3.7	3.59	3.69
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	0.000015	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00004	<0.00001	<0.00004	<0.00004	<0.00001	<0.00001	<0.00001
Sodium	84.4	79.3	74.5	66.1	87.4	124	140	120	114	104	102	89.1	93.3	77.8	80.5	85.4	165	160	248	266	166	151	167
Strontium	0.585	0.595	0.605	0.574	0.694	0.673	0.733	0.685	0.642	0.709	0.665	0.63	0.643	0.684	0.643	0.623	2.46	2.38	8.23	8.05	3.44	2.65	3.6
Sulphur	114	108	109	105					155	156	138	133	444	127	130	126					168	154	170
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	0.000035	<0.00001	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0004	<0.00001	<0.0004	<0.0004	<0.00001	<0.00001	<0.00001
Tin	0.00011	<0.0001	0.00013	<0.0001	0.00112	0.0003	<0.0005	0.00011	0.00012	0.00016	<0.0001	<0.0001	0.00015	0.00015	0.00017	0.00021	0.0022	0.00023	<0.001	<0.001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	0.02	0.015	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extracti			0.000025																				
Uranium	0.0026	0.00235	0.00218	0.00187	0.0118	0.0157	0.0197	0.0215	0.0215	0.0195	0.0155	0.0128	0.012	0.0107	0.00876	0.00802	<0.0004	0.000142	<0.0004	<0.0004	0.000118	0.000045	0.000033
Vanadium	<0.001	<0.001	<0.001	<0.001	0.0013	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001
Zinc	0.0032	0.0032	0.0049	0.0048	0.007	0.0066	0.011	0.0043	0.0033	0.0056	0.0055	0.0036	0.0053	0.011	0.0106	0.0105	0.0084	<0.003	0.0484	<0.005	<0.003	0.03	0.0129
Organics																							
Carbon Organic (Dissolved)	11.1				12.8	22.5	23	20.2	16.2	13.1	12.6	12	13.8				7.28	2.38	3.25	2.18	2.06	1.72	1.5
Carbon Organic (Total)	11.3	11.1	9.78	8.8	12.6	21.9	27.4	20.4	17.1	13.8	12.2	12.1	11.8	9.69	9.23	9.9	5.47	2.18	1.78	2.03	2.18	1.53	1.33
Nitrogen Organic (Dissolved)					0.329	0.168	0.756		0.199	<0.05							0.169	<0.05	0.209		<0.05	<0.05	
Nitrogen Organic (Total)					0.406	<0.3	<0.5			0.1							0.119	<0.05	<0.06		<0.08	<0.08	
ALS LAB ID	**L1393344**	**L1434002**	**L1474413**	**L1516193**	**L1081224**	**L1115110**	**L1160966**	**L1202478**	**L1248467**	**L1277798**	**L1307601**	**L1348177**	**L1393344**	**L1434002**	**L1474413**	**L1516193**	**L1036785**	**L1079367**	**L1160966**	**L1201474**	**L1246516**	**L1277099**	**L1306577**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D2.2 - GROUNDWATER QUALITY DATA

Site ID					
Site ID	MW11-06D	MW11-06D	MW11-06D	MW11-06D	MW11-06D
Analytes	Aug-13	Nov-13	Apr-14	Jun-14	Sep-14
In Situ Parameters					
Conductivity µS/cm	1400	2.12	1919	1597	1585
Oxygen Dissolved %	3.6	1.3	3.4	3.3	25.8
Oxygen Dissolved	0.4	0.16	0.4	0.36	2.85
pH (unitless)	8.31	8.33	8.28	8.26	8.28
Redox Potential mV	-92.5	1.38	-152	-151	-160
Salinity ppt	0.98	1.08	0.98	1.12	1.13
Specific Conductivity µS/cm	1987	1.41	1293	2169	2195
Temperature °C	10.9	7.54	7.91	11.2	10.4
Total Dissolved Solids	1246	184600	1248	1410	1426
Turbidity NTU	0	1	-2.4	1.4	1.4
Physical Tests					
Acidity to pH 8.3 (as CaCO3)					
Alkalinity (Total as CaCO3)	41.2	42.4	27.8	39.7	39.9
Bicarbonate Alkalinity	41.2	42.4	27.8	39.7	39.9
Carbonate Alkalinity	<2	<2	<2	<1	<1
Color TCU	<5				
Hardness as CaCO3 (Dissolved)	557	638	544	652	653
Hydroxide Alkalinity	<2	<2	<2	<1	<1
pH (unitless)	7.67	7.86	7.9	7.81	7.77
Specific Conductivity µS/cm	2020	2140	1900	2170	2210
Total Dissolved Solids	1560	1720	1530	1750	1740
Total Suspended Solids	<3		4.5	<3	<3
Turbidity NTU	0.51		0.35	0.34	0.57
Dissolved Anions					
Bromide	<1	<1	<1	<1	<1
Chloride	11	14	17	12	11
Fluoride	0.51	<0.4	<0.4	0.28	0.251
Sulphate	1080	1190	1000	1220	1230
Nutrients					
Ammonia (Total)	0.071	0.0904	0.08	0.0892	0.0961
Nitrate (as N)	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite (as N)	<0.02	0.024	<0.02	<0.02	<0.02
Nitrogen (Dissolved)					
Nitrogen (Total)	0.17				
Nitrogen Kjeldahl (Total)	0.165	0.167	0.146	0.205	0.169
Orthophosphate (Dissolved)		0.0072	0.0067	0.0052	0.0038
Phosphorus - Dissolved	0.0085	0.007	0.0105	0.0056	
Phosphorus - Total	0.0093	0.0089	0.0081	0.0057	0.0055
Cyanide					
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals					
Aluminum	0.0039	0.0034	0.0046	0.0046	0.0033
Antimony	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0135	0.0137	0.0138	0.0134	0.013
Barium	0.0214	0.0242	0.0229	0.0232	0.0218
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.493	0.555	0.507	0.424	0.49
Cadmium	<0.00002	<0.00003	<0.00006	<0.00005	<0.00001
Calcium	153	167	143	171	169
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	<0.0002	<0.0002	0.00059	<0.0002	<0.0002
Dissolved Cadmium (by saltwater ext			<0.00002	<0.00002	
Iron	0.074	0.104	0.078	0.089	0.103
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.012	0.0137	0.0113	0.0142	0.0117
Magnesium	42.7	53.6	45.2	54.6	56.3
Manganese	0.0543	0.0668	0.056	0.0553	0.0558
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0769	0.0825	0.0809	0.0779	0.0809
Nickel	<0.0005	<0.0005	<0.0005	0.00149	<0.0005
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	1.82	2.05	1.96	2.15	2.2
Selenium	<0.0001	<0.0001	<0.0001	0.0001	<0.0001
Silicon	3.69	3.82	3.99	3.85	3.79
Silver	<0.00001	0.00005	<0.00001	<0.00001	<0.00001
Sodium	240	256	242	253	264
Strontium	7.59	7.45	7.25	8.06	8.28
Sulphur	333	370	345	377	389
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.000017	0.000024	0.000023	0.000021	0.000022
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	<0.001	<0.001	<0.001	0.0024	<0.001
Total Metals					
Aluminum	0.0067	0.0066	0.0234	0.0098	0.0227
Antimony	0.00012	0.00013	0.0001	<0.0001	0.00014
Arsenic	0.0135	0.0141	0.015	0.0145	0.0135
Barium	0.0226	0.0239	0.0233	0.0237	0.0209
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.515	0.584	0.563	0.445	0.498
Cadmium	<0.00002	<0.00003	<0.00006	<0.00005	<0.00001
Calcium	151	165	136	170	159
Chromium	0.00017	0.00011	0.00022	<0.0001	0.00016
Cobalt	<0.0001	<0.0001	0.00013	<0.0001	<0.0001
Copper	<0.0005	<0.0005	<0.0015	0.0005	<0.0005
Iron	0.082	0.113	0.368	0.124	0.605
Lead	<0.00005	<0.00005	0.000062	<0.00005	<0.00005
Lithium	0.0138	0.0142	0.0121	0.0149	0.0116
Magnesium	42.4	53.4	43.6	56.3	54.6
Manganese	0.0565	0.0691	0.0587	0.0589	0.0559
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0814	0.0874	0.0832	0.0855	0.0778
Nickel	<0.0005	<0.0005	<0.0005	0.00204	<0.0005
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	1.84	2.15	1.84	2.14	2.12
Selenium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Silicon	3.72	3.87	3.86	3.95	3.66
Silver	<0.00001	0.000049	<0.00001	<0.00001	<0.00001
Sodium	244	267	241	265	250
Strontium	7.78	7.75	7.45	8.45	8
Sulphur	333	377	344	393	374
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extracti			<0.00002	<0.00002	
Uranium	0.000022	0.000025	0.000025	0.000021	0.000021
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	0.0046	<0.003	0.0711	0.0062	0.0387
Organics					
Carbon Organic (Dissolved)	1.99	1.97	1.52		
Carbon Organic (Total)	1.87	1.75	1.52	1.49	1.6
Nitrogen Organic (Dissolved)					
Nitrogen Organic (Total)					
ALS LAB ID	**L1346553**	**L1392959**	**L1441050**	**L1473868**	**L1516193**

Site ID	MW11-06S											
Site ID	MW11-06S	MW11-06S	MW11-06S	MW11-06S	MW11-06S	MW11-06S	MW11-06S	MW11-06S	MW11-06S	MW11-06S	MW11-06S	MW11-06S
Analytes	Jul-11	Oct-11	Jun-12	Aug-12	Dec-12	Mar-13	May-13	Aug-13	Nov-13	Apr-14	Jun-14	Sep-14
In Situ Parameters												
Conductivity µS/cm	17	1664	2633	2330	1574	1545	1793	1816	2.29	1616	1758	1629
Oxygen Dissolved %	16.5		24.8		19.9	3.8	3	66.2	1.9	66.2	4.5	9.9
Oxygen Dissolved	1.92	39.6	2.08	2.1	2.35	0.44	0.35	7.19	0.236	7.75	0.49	1.14
pH (unitless)	7.75	7.84	7.97		8.04	8.3	7.66	7.91	7.86	7.92	8	8.02
Redox Potential mV				63	-55.4	-106	-144	26.9	-69	-92.4	-96.4	-76.9
Salinity ppt				1.2	1.23	1.22	1.36	1.26	1.18	1.23	1.21	1.21
Specific Conductivity µS/cm	2509	2429	2011		2384	2369	2640	2426	1.51	2382	2348	2341
Temperature °C	8.11	8.53	12.6	12.5	7.3	6.73	8.06	11.9	7.21	8.16	11.7	9.07
Total Dissolved Solids				1490	1553	1540	1780	1576	1486	1548	1526	1521
Turbidity NTU	2.5	4	23.6	18.5	5.6	10.7	0	2.3	2.2	-0.5	10.4	9.1
Physical Tests												
Acidity to pH 8.3 (as CaCO3)	6.1			4.6			2.6					
Alkalinity (Total as CaCO3)	83.9	78.4	59.5	77.2	77.4	75.3	72.8	74.4	76.8	104	54.7	56.2
Bicarbonate Alkalinity	83.9		59.5		77.4	75.3	72.8	74.4	76.8	104	54.7	56.2
Carbonate Alkalinity	<2		<1		<2	<2	<2	<2	<2	<2	<1	<1
Color TCU	9.8	6.7	<5	<5	<5	<5	<5	<5				
Hardness as CaCO3 (Dissolved)	787	815	807	789	729	750	814	793	803	834	823	807
Hydroxide Alkalinity	<2		<1		<2	<2	<2	<2	<2	<2	<1	<1
pH (unitless)	7.56	7.93	7.69	7.9	7.88	7.83	7.97	7.95	7.84	7.82	7.91	7.81
Specific Conductivity µS/cm	2360	2310	2280	2230	2310	2400	2290	2360	2320	2400	2350	2330
Total Dissolved Solids	1960	1950	1960	1970	1970	1750	1990	1910	1910	2020	1980	1830
Total Suspended Solids	<3	4.2	25.3	3.9	4	11.4	9.7	7.1		8.3	33.2	5.4
Turbidity NTU	2.61	4.97	21.2	5.18	3.7	7.74	6.95	3.76		1.91	9.04	6.11
Dissolved Anions												
Bromide	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloride	38	33	29	31	29	28	31	28	30	34	28	29
Fluoride	<0.4	<0.4	<0.4	<0.4	<0.4	0.56	<0.4	0.58	<0.4	<0.4	0.237	0.228
Sulphate	1290	1290	1270	1280	1310	1320	1340	1300	1300	1320	1330	1310
Nutrients												
Ammonia (Total)	0.125	0.14	0.13	0.129	0.102	0.143	0.124	0.096	0.067	0.11	0.0572	0.116
Nitrate (as N)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1
Nitrite (as N)	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nitrogen (Dissolved)	0.41	0.24	0.99		0.188	0.175						
Nitrogen (Total)	0.48	0.273	0.324	0.21	0.19	0.18	0.213	0.2				
Nitrogen Kjeldahl (Total)	0.48	0.273	0.324	0.208	0.192	0.181	0.202	0.203	0.165	0.215	0.194	0.308
Orthophosphate (Dissolved)				0.0503					0.0532	0.0382	0.0433	0.0312
Phosphorus - Dissolved	0.0134	0.0305	0.0245		0.0504	0.048	0.0494	0.0528	0.0525	0.0591	0.0442	
Phosphorus - Total	0.0329	0.0511	0.0982	0.0732	0.0735	0.0828	0.0765	0.0656	0.0712	0.0416	0.032	0.0362
Cyanide												
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals												
Aluminum	<0.025	0.0061	0.013	<0.01	0.0063	0.0046	0.0043	0.0038	0.0038	0.0039	0.0054	0.0023
Antimony	<0.0025	<0.0002	<0.001	<0.001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00016	<0.0001
Arsenic	<0.0025	0.00146	0.0014	0.0014	0.00149	0.00165	0.00144	0.00138	0.00151	0.00136	0.00137	0.00114
Barium	0.063	0.0514	0.042	0.035	0.0353	0.0278	0.0284	0.0253	0.0282	0.0259	0.0248	0.0245
Beryllium	<0.005	<0.0002	<0.002	<0.002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.2	<0.001	<0.2	<0.2	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.27	0.269	0.3	0.28	0.279	0.292	0.253	0.245	0.294	0.286	0.238	0.257
Cadmium	<0.000085	0.00003	0.000124	<0.000034	0.000043	<0.00005	<0.00002	<0.00004	<0.00006	<0.00009	<0.00005	0.000011
Calcium	176	168	164	167	170	175	171	170	169	175	175	170
Chromium	<0.005	<0.0002	<0.002	<0.002	0.00543	<0.0001	<0.0001	<0.0001	0.00023	0.00033	0.00012	0.0017
Cobalt	0.003	0.00176	0.00148	0.00098	0.00088	0.00066	0.00061	0.00059	0.00063	0.00059	0.00046	0.00055
Copper	<0.005	<0.001	0.0051	<0.002	0.00089	<0.0002	<0.0002	<0.0002	<0.0002	0.00162	0.00034	<0.0002
Dissolved Cadmium (by saltwater ext										<0.00002	<0.00002	
Iron	0.063	0.083	0.212	0.1	0.054	0.136	0.136	0.054	0.047	0.099	0.035	0.041
Lead	<0.0025	<0.0001	<0.001	<0.001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	<0.025	0.0092	0.011	<0.01	0.0139	0.0132	0.0131	0.0152	0.0155	0.016	0.0192	0.0131
Magnesium	84.3	96.2	96.6	90.4	74.2	75.9	94.1	89.4	92.9	96.8	94.1	93
Manganese	1.46	1.14	0.541	0.498	0.497	0.405	0.372	0.344	0.353	0.304	0.232	0.319
Mercury	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0753	0.0964	0.102	0.11	0.115	0.11	0.106	0.0984	0.111	0.107	0.105	0.105
Nickel	<0.005	0.0026	<0.002	<0.002	0.0057	0.001	0.00083	0.00086	0.00165	0.00122	0.00091	0.00109
Phosphorus	<0.3	<0.3	<0.3	<0.3	0.061	0.08	0.066	0.068	0.073	0.061	<0.05	<0.05
Potassium	8.9	8.67	8.3	9	8.71	7.91	8.34	8.09	8.19	8.73	8.87	7.94
Selenium	<0.005	<0.0002	<0.002	<0.002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Silicon	4.51	4.5	4.48	4.5	4.52	4.36	4.46	4.26	4.38	4.59	4.37	4.44
Silver	<0.0001	<0.00002	<0.00004	<0.00004	<0.00002	<0.00001	<0.00001	<0.00001	0.000035	<0.00001	<0.00001	<0.00001
Sodium	288	275	272	275	261	255	255	253	257	269	264	262
Strontium	5.03	5.77	6.25	5.87	6.61	6.33	5.89	5.57	5.53	6.47	6.09	6.24
Sulphur					340	361	392	397	405	436	408	418
Thallium	<0.001	0.000036	<0.0004	<0.0004	0.000024	0.000015	0.000012	0.000014	0.000017	0.000015	<0.00001	0.000015
Tin	<0.0025	<0.0002	<0.001	<0.001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.0012	0.000749	0.0005	0.00053	0.000547	0.000378	0.000348	0.000351	0.000377	0.000341	0.000248	0.000335
Vanadium	<0.005	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	<0.005	<0.006	1.66	0.0529	0.0214	0.101	0.0815	0.038	0.0284	0.146	0.0236	0.323
Total Metals												
Aluminum	0.071	0.164	0.305	0.176	0.198	0.275	0.279	0.15	0.0402	0.0439	0.67	0.0805
Antimony	<0.0025	<0.0002	<0.001	<0.001	<0.0002	0.00013	<0.0001	0.00012	0.00012	<0.0001	0.00024	0.00015
Arsenic	<0.0025	0.003	0.0015	0.0016	0.00156	0.00193	0.0016	0.00155	0.00156	0.00143	0.00186	0.00137
Barium	0.063	0.0518	0.049	0.036	0.0373	0.0313	0.0313	0.0279	0.0281	0.0253	0.031	0.0237
Beryllium	<0.005	<0.0002	<0.002	<0.002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.2	<0.001	<0.2	<0.2	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.27	0.273	0.31	0.28	0.288	0.298	0.275	0.251	0.313	0.271	0.252	0.259
Cadmium	0.000125	0.000067	0.000155	0.000038	0.000063	<0.00005	<0.00004	<0.00005	<0.00009	<0.00009	<0.0001	0.000018
Calcium	168	170	170	164	165	171	167	168	166	165	176	157
Chromium	<0.005	0.00051	<0.002	<0.002	0.00852	0.00066	0.00052	0.00049	0.00059	0.00057	0.00092	0.00293
Cobalt	0.0032	0.00189	0.00366	0.00116	0.0011	0.00095	0.00087	0.00072	0.00067	0.00062	0.00106	0.00067
Copper	<0.005	0.0017	0.0086	<0.002	0.0029	0.00551	0.00221	0.00109	0.00165	<0.0015	0.00435	0.00114
Iron	0.138	0.266	2.24	0.353	0.322	0.631	0.501	0.228	0.135	0.295	0.972	0.851
Lead	<0.0025	0.00011	0.0013	<0.001	0.00013	0.000136	0.000098	0.000054	0.000095	0.000091	0.000305	0.000221
Lithium	<0.025	0.0089	0.01	0.011	0.0142	0.013	0.0133	0.015	0.0154	0.0149	0.02	0.0124
Magnesium	82.2	95.2	96.4	90.9	75.3	76.1	92.9	89	91.8	92	97.2	86.2
Manganese	1.55	1.17	0.505	0.514	0.506	0.423	0.378	0.36	0.35	0.304	0.257	0.321
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0828	0.0951	0.0919	0.112	0.118	0.109	0.105	0.102	0.114	0.11	0.112	0.101
Nickel	<0.005	0.0031	0.0027	0.0021	0.0071	0.00157	0.00137	0.00122	0.00187	0.00127	0.00219	0.00141
Phosphorus	<0.3	<0.3	<0.3	<0.3	0.069	0.058	0.081	0.077	0.071	0.06	0.099	0.054
Potassium	8.7	8.68	8.6	8.8	8.49	7.9	8.08	7.94	8.43	8.25	9	7.56
Selenium	<0.005	<0.0002	<0.002	<0.002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Silicon	4.52	4.86	5.5	4.94	5.02	4.99	5.02	4.59	4.52	4.57	6.02	4.42
Silver	<0.0001	<0.00002	<0.00004	0.000053	<0.00002	<0.00001	<0.00001	<0.00001	0.000035	<0.00001	0.000017	<0.00001
Sodium	281	277	281	271	260	250	253	271	260	264	262	252
Strontium	4.85	5.7	6.52	5.76	6.89	6.21	6.01	5.86	5.48	6.23	6.36	5.99
Sulphur					351	352	392	405	411	430	429	391
Thallium	<0.001	0.000038	<0.0004	<0.0004	0.00003	0.000018	0.000017	0.000016	0.000018	0.000019	0.000019	0.000013
Tin	<0.0025	0.00031	<0.001	<0.001	<0.0002	<0.0001	<0.0001	<0.0001	0.00013	<0.0001	0.0001	<0.0001
Titanium	0.012	<0.01	0.024	0.018	<0.02	0.015	0.013	<0.01	<0.01	<0.01	0.032	<0.01
Total Cadmium (by saltwater extracti										<0.00002	0.000034	
Uranium	0.0013	0.000762	0.00046	0.00055	0.000543	0.000403	0.00036	0.000369	0.000392	0.000346	0.000289	0.000346
Vanadium	<0.005	<0.002	<0.002	<0.002	<0.002	0.0012	0.0011	<0.001	<0.001	<0.001	0.0025	<0.001
Zinc	<0.005	<0.006	2.28	0.0628	0.0317	0.153	0.127	0.0522	0.04	0.16	0.0989	0.617
Organics												
Carbon Organic (Dissolved)	5.97	4.04	9.08	3.06	2.99	2.55	2.03	2.55	2.11	1.9		
Carbon Organic (Total)	5.73	3.81	5.08	2.94	2.76	2.28	2	2.4	2.02	2.05	1.83	1.99
Nitrogen Organic (Dissolved)	0.285	0.1	0.86		0.085	<0.05						
Nitrogen Organic (Total)	0.355	0.09	0.194		0.089	<0.08						
ALS LAB ID	**L1037497**	**L1079375**	**L1160966**	**L1201474**	**L1246516**	**L1277099**	**L1306577**	**L1346553**	**L1392959**	**L1441050**	**L1473868**	**L1516193**

Site ID						
Site ID	MW11-07D	MW11-07D	MW11-07D	MW11-07D	MW11-07D	MW11-07D
Analytes	Jul-11	Oct-11	Feb-12	Jun-12	Aug-12	Dec-12
In Situ Parameters						
Conductivity µS/cm	1167	945	1078	1803	1670	954
Oxygen Dissolved %	3.9	0.2	19.1	20.8		2.4
Oxygen Dissolved	0.4	0.02	2.21	2.03	0.09	0.29
pH (unitless)		7.8	7.92	7.9	8.36	8.06
Redox Potential mV			-199		-230	-260
Salinity ppt			0.84		0.8	0.73
Specific Conductivity µS/cm	1510	1466	1657	1254		1454
Temperature °C	13.1	6.39	6.71	8.89	10.5	6.99
Total Dissolved Solids			1079		1070	947
Turbidity NTU	9.9	18.2	0.001	8.6	10.1	-1.3
Physical Tests						
Acidity to pH 8.3 (as CaCO3)	5.8	4.6			2.6	
Alkalinity (Total as CaCO3)	126	124	132	120	128	126
Bicarbonate Alkalinity	126	124	132	120		126
Carbonate Alkalinity	<2	<2	<2	<1		<2
Color TCU	10.7	7.4	11.1	9.6	8.2	7
Hardness as CaCO3 (Dissolved)	310	300	290	285	279	268
Hydroxide Alkalinity	<2	<2	<2	<1		<2
pH (unitless)	7.97	8.09	8.07	8.01	8.12	8.14
Specific Conductivity µS/cm	1640	1640	1600	1560	1580	1420
Total Dissolved Solids	1160	1110	1120	1160	1160	1150
Total Suspended Solids	7.1	7.1	3.3	<3	<3	<3
Turbidity NTU	4.27	5.05	2.3	1.47	2.25	2.76
Dissolved Anions						
Bromide	<0.5	<1	<0.5	<1	<1	<1
Chloride	16.5	17	19.9	21	19	17
Fluoride	0.47	0.47	0.44	0.45	0.47	0.46
Sulphate	695	714	688	711	700	683
Nutrients						
Ammonia (Total)	0.11	0.067	0.0564	0.0398	0.0561	0.0475
Nitrate (as N)	<0.05	<0.1	<0.05	<0.1	<0.1	<0.1
Nitrite (as N)	<0.01	0.028	<0.01	<0.02	<0.02	<0.02
Nitrogen (Dissolved)	0.41	0.2	0.21	0.17		0.182
Nitrogen (Total)	0.41	0.26	0.211	0.253	<0.27	0.149
Nitrogen Kjeldahl (Total)	0.41	0.233	0.211	0.25	<0.25	0.154
Orthophosphate (Dissolved)		0.0321			0.0982	
Phosphorus - Dissolved	0.0409	0.0306	0.0668	0.0914		0.082
Phosphorus - Total	0.0559	0.0743	0.111	0.162	0.129	0.136
Cyanide						
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.0054	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals						
Aluminum	<0.025	0.0087	0.0107	0.0098	0.0112	0.0076
Antimony	<0.0025	<0.0002	<0.0002	<0.0002	0.00022	<0.0002
Arsenic	<0.0025	0.00368	0.00425	0.00536	0.00606	0.00574
Barium	0.041	0.0386	0.0468	0.0438	0.0456	0.0432
Beryllium	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Bismuth	<0.2	<0.001	<0.001	<0.001	<0.001	<0.001
Boron	0.3	0.314	0.305	0.29	0.281	0.288
Cadmium	0.000147	<0.00002	0.000025	<0.00002	<0.00002	<0.00002
Calcium	71.1	69.8	68.2	68		63.7
Chromium	<0.005	<0.0002	0.00064	0.00021	<0.0002	0.00023
Cobalt	<0.0015	0.00114	0.00109	0.0007	0.00057	0.00047
Copper	<0.005	<0.001	<0.001	<0.0004	<0.0004	<0.0004
Dissolved Cadmium (by saltwater ext						
Iron	0.054	0.111	0.25	0.201	0.205	0.245
Lead	<0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Lithium	<0.025	0.0246	0.0241	0.0273	0.0222	0.0289
Magnesium	32.1	30.4	29	27.9		26.5
Manganese	0.65	0.777	1.16	0.908	0.97	0.855
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0354	0.0292	0.0264	0.0231	0.024	0.0228
Nickel	<0.005	0.002	0.0023	0.0012	0.0014	<0.001
Phosphorus	<0.3	<0.3	<0.3	<0.3		0.15
Potassium	4.7	3.32	3.23	2.5	4.85	3.5
Selenium	<0.005	<0.0002	0.0003	<0.0002	<0.0002	<0.0002
Silicon	4.15	4.83	4.92	5.01		4.58
Silver	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	255	237	261	241	260	243
Strontium	7.4	7.53	7.78	7.65	7.26	7.8
Sulphur						222
Thallium	<0.001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Tin	<0.0025	0.00026	0.0002	<0.0002	<0.0002	<0.0002
Titanium	<0.01	0.01	<0.01	<0.01		<0.02
Uranium	0.0022	0.000993	0.000968	0.000769	0.000735	0.000673
Vanadium	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002
Zinc	<0.005	<0.006	<0.006	<0.002	<0.002	<0.002
Total Metals						
Aluminum	0.189	0.117	0.0147	0.0156	0.018	0.0138
Antimony	<0.0025	<0.0002	<0.0002	0.0002	0.00029	<0.0002
Arsenic	0.0026	0.00362	0.00474	0.00588	0.00597	0.00591
Barium	0.049	0.0432	0.0458	0.0457	0.0423	0.0446
Beryllium	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Bismuth	<0.2	<0.001	<0.001	<0.001	<0.001	<0.001
Boron	0.31	0.326	0.302	0.316	0.288	0.301
Cadmium	0.000228	0.000073	0.000022	<0.00002	<0.00002	<0.00002
Calcium	72.4	70	67.2	73.3		66.6
Chromium	<0.005	0.00296	0.00095	0.00057	0.00111	0.00071
Cobalt	0.0018	0.00123	0.00118	0.00081	0.0006	0.00054
Copper	<0.005	0.0014	<0.001	<0.001	<0.001	<0.001
Iron	0.175	0.229	0.295	0.247	0.263	0.289
Lead	<0.0025	0.00012	<0.0001	<0.0001	<0.0001	<0.0001
Lithium	<0.025	0.0239	0.0223	0.0272	0.0231	0.0298
Magnesium	33.1	30.3	28.6	28.2		27
Manganese	0.695	0.81	1.17	0.962	0.931	0.881
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0384	0.0294	0.0268	0.0251	0.0251	0.0238
Nickel	<0.005	0.0025	0.0025	0.0014	0.0016	0.0011
Phosphorus	<0.3	<0.3	<0.3	<0.3		0.151
Potassium	4.9	3.44	3.21	2.56	3.96	3.6
Selenium	<0.005	0.00032	0.00022	<0.0002	<0.0002	<0.0002
Silicon	4.75	5.05	4.8	5.28		4.78
Silver	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	264	243	257	245	240	255
Strontium	7.68	7.5	7.72	7.85	7.36	8.13
Sulphur						225
Thallium	<0.001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Tin	<0.0025	0.00077	0.0002	<0.0002	<0.0002	<0.0002
Titanium	0.011	0.015	<0.01	<0.01		<0.02
Total Cadmium (by saltwater extracti						
Uranium	0.0023	0.00107	0.000998	0.000834	0.000766	0.00069
Vanadium	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002
Zinc	<0.005	<0.006	<0.006	<0.006	<0.006	<0.006
Organics						
Carbon Organic (Dissolved)	5.69	8.5	16.6	13.1	12.8	10
Carbon Organic (Total)	5.26	8.68	17.1	13.8	13.5	9.54
Nitrogen Organic (Dissolved)	0.3	0.105	0.154	0.13		0.134
Nitrogen Organic (Total)	0.3	0.135	0.154	<0.3		
ALS LAB ID	**L1038606**	**L1077032**	**L1113106**	**L1159973**	**L1200094**	**L1247928**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D2.2 - GROUNDWATER QUALITY DATA

Site ID	MW11-07D						
Site ID	MW11-07D	MW11-07D	MW11-07D	MW11-07D	MW11-07D	MW11-07D	MW11-07D
Analytes	Mar-13	May-13	Aug-13	Nov-13	Mar-14	Jun-14	Sep-14
In Situ Parameters							
Conductivity µS/cm	968	1720	1083	1.56	1514	1106	2217
Oxygen Dissolved %	1.5	1.4	6.3	1.3	68.9	1.7	22.4
Oxygen Dissolved	0.18	0.17	0.78	0.16	8.41	0.21	2.46
pH (unitless)	7.91	8.04	7.94	8.01	7.83	7.83	7.68
Redox Potential mV	-189	-159	-107	254	-93.9	-163	-130
Salinity ppt	0.77	0.81	0.73	0.79	0.76	0.8	1.6
Specific Conductivity µS/cm	1528	1593	1436	1.05	980	1577	3050
Temperature °C	5.82	7.88	12.2	7.7	6.54	9.42	10.7
Total Dissolved Solids	993	1036	934	1015	984	1025	1983
Turbidity NTU	179	0	0	8.5	9.8	0.7	4.2
Physical Tests							
Acidity to pH 8.3 (as CaCO3)	7.1	1.6					
Alkalinity (Total as CaCO3)	195	112	119	134	128	131	134
Bicarbonate Alkalinity	195	112	119	134	128	131	134
Carbonate Alkalinity	<2	<2	<2	<2	<2	<1	<1
Color TCU	<5	<5	<5		10.2		
Hardness as CaCO3 (Dissolved)	278	273	266	255	263	270	272
Hydroxide Alkalinity	<2	<2	<2	<2	<2	<1	<1
pH (unitless)	8.02	8.23	8.18	8.18	8.14	8.12	8.15
Specific Conductivity µS/cm	1560	1530	1530	1590	1540	1610	1610
Total Dissolved Solids	1030	1160	1100	872	1130	1150	1160
Total Suspended Solids	3.9	6.6	<3		6.7	<3	3.6
Turbidity NTU	6.43	5.26	1.22		7.83	3.09	3.82
Dissolved Anions							
Bromide	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5
Chloride	15.5	18.4	14.7	17	15.5	16	15.5
Fluoride	0.65	0.5	0.62	0.48	0.74	0.114	0.484
Sulphate	676	722	678	673	670	708	673
Nutrients							
Ammonia (Total)	0.0372	0.0331	0.026	0.0986	0.0891	<0.005	0.158
Nitrate (as N)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05
Nitrite (as N)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
Nitrogen (Dissolved)	0.076						
Nitrogen (Total)	0.144	0.139	0.108				
Nitrogen Kjeldahl (Total)	0.144	0.136	0.108	0.37	0.296	0.324	0.306
Orthophosphate (Dissolved)				0.103	0.0825	0.0748	0.0764
Phosphorus - Dissolved	0.0943	0.11	0.0993	0.12	0.0806	0.075	0.081
Phosphorus - Total	0.138	0.165	0.129	0.206	0.197	0.185	0.169
Cyanide							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals							
Aluminum	0.0066	0.0062	0.0075	0.0052	0.004	0.0117	0.0171
Antimony	0.00012	<0.0001	<0.0001	0.00049	0.00049	0.00072	0.00051
Arsenic	0.00562	0.00542	0.00622	0.00354	0.00395	0.00448	0.0042
Barium	0.0408	0.0432	0.0387	0.0439	0.0485	0.0496	0.047
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.283	0.293	0.285	0.308	0.298	0.279	0.304
Cadmium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00003	<0.00001
Calcium	64.9	65.1	62.5	58.9	62.5	63.6	64.6
Chromium	<0.0001	<0.0001	<0.0001	0.00024	0.0002	0.00057	0.00034
Cobalt	0.0004	0.00041	0.00033	0.00024	0.00036	0.0005	0.00037
Copper	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00035	0.00026
Dissolved Cadmium (by saltwater ext						<0.00002	
Iron	0.257	0.302	0.255	0.207	0.392	0.579	0.504
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.029	0.028	0.0299	0.0213	0.0186	0.027	0.0271
Magnesium	28.1	26.8	26.8	26.2	25.9	26.9	26.9
Manganese	0.712	0.737	0.547	1.1	1.24	0.908	0.831
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0216	0.0214	0.0211	0.0211	0.0222	0.0253	0.0212
Nickel	0.00091	0.00232	<0.0005	0.00111	0.00134	0.00212	0.00159
Phosphorus	0.172	0.16	0.125	0.167	0.161	0.174	0.177
Potassium	2.74	2.39	2.31	7.49	8.11	10	8.7
Selenium	0.00012	<0.0001	<0.0001	0.00025	<0.0001	0.00011	<0.0001
Silicon	4.78	4.75	4.79	4.45	4.42	4.41	4.48
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	214	223	217	220	249	228	232
Strontium	7.59	7.29	6.98	7.42	7.61	7.8	7.51
Sulphur	219	213	210	211	214	227	220
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0001	<0.0001	<0.0001	0.00011	0.00018	0.00019	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.000489	0.000465	0.000325	0.000726	0.000693	0.000703	0.000724
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	<0.001	<0.001	<0.001	0.0011	0.0011	0.0021	0.0015
Total Metals							
Aluminum	0.027	0.0288	0.0114	0.136	0.0256	0.0048	0.0211
Antimony	0.00053	0.00022	0.00011	0.00164	0.00059	0.00065	0.00074
Arsenic	0.00582	0.00553	0.00621	0.00421	0.00419	0.00444	0.00439
Barium	0.042	0.0436	0.0397	0.0543	0.0507	0.0477	0.0483
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.312	0.319	0.331	0.331	0.318	0.288	0.321
Cadmium	0.000023	0.000037	<0.00001	0.000168	<0.00005	<0.00003	0.00003
Calcium	66.5	67.1	62.8	65.8	64.4	61.7	65.2
Chromium	0.00067	0.00104	0.00021	0.00506	0.00102	0.00052	0.00083
Cobalt	0.00046	0.00048	0.00037	0.00061	0.00049	0.00047	0.00045
Copper	0.00096	0.00076	<0.0005	0.00402	0.001	<0.0005	0.00052
Iron	0.304	0.363	0.281	0.659	0.56	0.54	0.538
Lead	0.000053	0.00006	<0.00005	0.00029	0.000058	<0.00005	<0.00005
Lithium	0.032	0.0285	0.0322	0.0217	0.0189	0.0261	0.0272
Magnesium	27.8	27.4	26.9	27.5	26.4	26.2	27.2
Manganese	0.756	0.794	0.588	1.21	1.26	0.893	0.875
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0235	0.0235	0.0225	0.0284	0.0261	0.0319	0.0223
Nickel	0.00122	0.00279	<0.0005	0.00348	0.00184	0.00167	0.00192
Phosphorus	0.182	0.158	0.132	0.209	0.18	0.184	0.202
Potassium	2.56	2.48	2.29	7.69	8.05	9.48	9.07
Selenium	<0.0001	<0.0001	<0.0001	<0.0001	0.00012	<0.0001	<0.0001
Silicon	4.94	4.97	4.86	4.89	4.6	4.32	4.54
Silver	0.000052	<0.00001	<0.00001	0.00001	<0.00001	<0.00001	<0.00001
Sodium	219	231	225	221	249	229	240
Strontium	8.34	7.88	7.37	7.68	7.98	7.71	7.56
Sulphur	226	216	214	218	222	223	218
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.00033	0.00018	0.00012	0.00101	0.00038	0.00013	0.00022
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extracti						<0.00002	
Uranium	0.000531	0.000495	0.000329	0.000816	0.00076	0.000724	0.000759
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	0.0042	<0.003	<0.003	0.0086	0.0036	<0.003	0.0036
Organics							
Carbon Organic (Dissolved)	7.95	7.04	5.01	7.57			
Carbon Organic (Total)	7.75	7.31	5.09	8.27	9.11	6.88	4.8
Nitrogen Organic (Dissolved)	<0.05						
Nitrogen Organic (Total)	0.107						
ALS LAB ID	**L1275064**	**L1306577**	**L1345714**	**L1392288**	**L1432458**	**L1473868**	**L1513822**

Site ID						MW11-07S							
Site ID	MW11-07S	MW11-07S	MW11-07S	MW11-07S	MW11-07S	MW11-07S	MW11-07S	MW11-07S	MW11-07S	MW11-07S	MW11-07S	MW11-07S	MW11-07S
Analytes	Aug-11	Oct-11	Feb-12	Jun-12	Aug-12	Dec-12	Mar-13	May-13	Aug-13	Nov-13	Mar-14	Jun-14	Sep-14
In Situ Parameters													
Conductivity µS/cm	928	958	867	1603	1480	935	786	876	1011	1.44	1506	940	2008
Oxygen Dissolved %	17.3	79.4	40.9	25.3		14.3	28.6	12.3	12	3.5	63.4	23.4	61.2
Oxygen Dissolved	1.98	9.08	5.36	2.46	1.06	1.71	3.61	1.45	1.24	0.4	7.74	2.72	6.47
pH (unitless)	7.7	7.96	8.06	7.87	7.73	7.83	7.9	7.9	7.87	7.83	8.04	7.86	7.7
Redox Potential mV			-292		-131	52.4	27.2	-57.2	119	0.933	91.4	21	20.1
Salinity ppt			0.75		0.7	0.71	0.63	0.66	0.64	0.72	0.76	0.69	1.37
Specific Conductivity µS/cm	1294	1369	1498	1107		1410	1273	1307	1281	974	941	1370	2639
Temperature °C	10.2	9.27	2.94	8.15	11.4	7.35	4.95	7.71	14	8.17	5.35	8.57	12.5
Total Dissolved Solids			973		944	916	828	850	833	123700	979	890	1716
Turbidity NTU	0	1.5	7.5	16.1	2.6	2	16.8	0	0	1.6	1.3	1.8	1.2
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1.7	3.2			3			<1					
Alkalinity (Total as CaCO3)	170	167	182	161	167	155	177	204	284	170	163	183	194
Bicarbonate Alkalinity	170	167	182	161		155	177	204	284	170	163	183	194
Carbonate Alkalinity	<2	<2	<2	<1		<2	<2	<1	<2	<2	<2	<1	<1
Color TCU	5.8	6.4	7.1	5.2	5.9	5.8	<5	<5	<5		<5		
Hardness as CaCO3 (Dissolved)	278	279	288	273	290	287	246	253	422	274	288	274	272
Hydroxide Alkalinity	<2	<2	<2	<1		<2	<2	<1	<2	<2	<2	<1	<1
pH (unitless)	8.17	8.19	8.26	8.1	8.11	8.03	8.14	8.34	8.24	8.25	8.22	8.2	8.26
Specific Conductivity µS/cm	1360	1430	1410	1350	1420	1400	1280	1260	897	1450	1410	1370	1370
Total Dissolved Solids	940	999	1010	962	1040	1020	853	896	610	997	985	958	946
Total Suspended Solids	3.8	<3	7.3	4	5.3	6.4	3.3	<3	12.4		<3	<3	<3
Turbidity NTU	0.62	0.35	4.09	1.36	4.27	4.86	1.83	0.15	0.64		0.53	0.38	0.26
Dissolved Anions													
Bromide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	10.9	10.5	11.2	10.8	12	11.3	9	10.7	<5	12.9	11.2	10.9	10
Fluoride	0.47	0.32	0.3	0.3	0.33	0.33	0.44	0.29	0.33	0.31	0.45	0.321	0.313
Sulphate	530	578	579	551	598	616	494	480	243	594	587	539	519
Nutrients													
Ammonia (Total)	0.0123	0.0281	<0.05	0.0157	0.0249	0.0271	0.0155	0.0161	<0.005	0.0212	0.0124	<0.005	0.0189
Nitrate (as N)	0.05	<0.05	<0.05	<0.05	<0.05	0.074	0.1	<0.05	<0.05	<0.05	<0.05	0.066	<0.05
Nitrite (as N)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen (Dissolved)	0.17	0.21	0.07	0.3		0.268	0.239						
Nitrogen (Total)	0.14	0.2	<0.043	0.261	0.151	0.26	0.314	0.13	0.075				
Nitrogen Kjeldahl (Total)	0.09	0.185	<0.2	0.261	0.151	0.25	0.259	0.095	0.075	0.118	0.128	0.176	0.123
Orthophosphate (Dissolved)		0.0355			0.0216					0.039	0.0493	0.0391	0.046
Phosphorus - Dissolved	0.0304	0.036	0.0219	0.0277		0.0399	0.0298	0.0354	0.0362	0.0418	0.0454	0.0374	0.0459
Phosphorus - Total	0.036	0.0375	0.0389	0.0383	0.0444	0.0538	0.0434	0.0397	0.0344	0.053	0.0502	0.0431	0.0466
Cyanide													
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	<0.025	0.0108	0.023	0.02	0.0082	0.0184	0.0114	0.0062	0.0012	0.0072	0.0048	0.0082	0.0063
Antimony	<0.0025	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	0.00012	<0.0001	0.00024	<0.0001	0.0001	0.00012	<0.0001
Arsenic	0.0045	0.00531	0.00383	0.0041	0.00412	0.00386	0.0054	0.00622	0.00499	0.00494	0.00373	0.00555	0.00654
Barium	0.041	0.0418	0.0431	0.041	0.041	0.0428	0.03	0.0293	0.0372	0.0372	0.037	0.036	0.0322
Beryllium	<0.005	<0.0002	<0.0002	<0.002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.2	<0.001	<0.001	<0.2	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.29	0.308	0.241	0.28	0.244	0.258	0.208	0.2	0.063	0.297	0.272	0.281	0.262
Cadmium	0.000194	0.000063	0.000119	0.000471	0.000026	0.000224	0.000098	0.000034	<0.00004	<0.00001	0.00005	0.000039	0.000023
Calcium	46.5	48.7	49.3	42.3		48.6	38.9	40.3	89.7	44.2	49.7	44.4	43.5
Chromium	<0.005	<0.0002	<0.0002	<0.002	<0.0002	0.00026	0.00029	<0.0001	0.00032	<0.0001	0.00013	0.00011	<0.0001
Cobalt	<0.0015	0.00087	0.00108	0.00098	0.001	0.00087	0.0005	0.0005	<0.0001	0.00062	0.00022	0.00062	0.00057
Copper	<0.005	<0.001	0.0013	0.0069	0.00045	0.00321	0.00199	0.00081	0.00173	0.00028	0.00235	0.00081	0.00047
Dissolved Cadmium (by saltwater ext													
Iron	<0.03	<0.03	<0.03	<0.03	0.081	<0.01	<0.01	0.03	<0.01	0.115	<0.01	0.021	0.031
Lead	<0.0025	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.028	0.0327	0.025	0.025	0.0228	0.0229	0.0263	0.0278	0.00386	0.0303	0.0217	0.0311	0.0283
Magnesium	39.3	38.2	40	40.7		40.3	36.2	36.9	48.2	39.8	39.8	39.7	39.8
Manganese	0.19	0.342	0.573	0.584	0.713	0.792	0.488	0.433	0.0167	0.646	0.212	0.766	0.552
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000012	<0.00001	<0.00001
Molybdenum	0.0184	0.0172	0.0155	0.0167	0.0179	0.016	0.0178	0.0161	0.127	0.0176	0.0159	0.0166	0.0166
Nickel	<0.005	0.0026	0.0041	0.0024	0.0024	0.0029	0.00172	0.00098	<0.0005	0.00103	0.00109	0.00172	0.00086
Phosphorus	<0.3	<0.3	<0.3	<0.3		<0.05	<0.05	<0.05	<0.05	0.061	0.056	<0.05	0.057
Potassium	2.7	2.03	5.79	2.2	1.65	2.2	1.41	1.25	7.61	1.44	1.72	1.63	1.31
Selenium	<0.005	<0.0002	<0.0002	<0.002	<0.0002	<0.0002	0.00024	0.0002	0.0271	<0.0001	0.00014	<0.0001	0.00012
Silicon	4.71	5.07	4.62	4.73		4.79	4.5	4.51	7.07	4.9	4.89	4.84	5.05
Silver	<0.0001	<0.00002	<0.00002	<0.00004	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	0.000019	<0.00001	<0.00001	<0.00001
Sodium	206	210	214	207	220	215	188	187	40.6	204	219	206	197
Strontium	8.11	8.4	8.55	9.48	9.19	8.68	8.9	9.11	0.68	9.71	10.3	9.68	9.21
Sulphur						197	156	142	75.8	183	194	166	166
Thallium	<0.001	0.000026	0.000025	<0.0004	<0.00002	0.000026	0.000027	0.000026	<0.00001	0.000013	0.000037	0.000025	0.00003
Tin	<0.0025	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01		<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.0046	0.00435	0.00477	0.00443	0.00402	0.00348	0.00448	0.00474	0.00403	0.00364	0.004	0.0045	0.00419
Vanadium	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	0.0033	<0.001	<0.001	<0.001	<0.001
Zinc	<0.005	<0.006	<0.006	0.0212	0.0033	0.0131	0.0035	0.0037	<0.001	0.0022	0.0062	0.004	0.0095
Total Metals													
Aluminum	0.026	0.0314	0.154	0.118	0.165	0.106	0.0627	0.0106	0.0538	0.0096	0.0145	0.0199	0.009
Antimony	<0.0025	<0.0002	0.00029	<0.001	<0.0002	0.00026	0.00035	<0.0001	0.00024	<0.0001	0.00015	0.00017	<0.0001
Arsenic	0.0045	0.00478	0.00405	0.0047	0.00475	0.00423	0.00568	0.00626	0.00466	0.0048	0.00395	0.00555	0.00654
Barium	0.042	0.0418	0.0451	0.04	0.0423	0.0458	0.0314	0.0288	0.0362	0.0373	0.0381	0.0359	0.0316
Beryllium	<0.005	<0.0002	<0.0002	<0.002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.2	<0.001	<0.001	<0.2	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.3	0.332	0.24	0.29	0.263	0.253	0.223	0.234	0.071	0.305	0.285	0.263	0.278
Cadmium	0.000097	0.000107	0.00017	0.000526	0.000065	0.000263	0.000153	0.000032	<0.00005	0.000014	0.000086	0.000107	0.000027
Calcium	46.2	47.5	48.1	44.6		48.3	39.4	39.9	88.2	44.8	48.7	43	43.3
Chromium	<0.005	0.0005	0.00137	<0.002	0.00059	0.0019	0.00251	0.00019	0.00049	0.00025	0.00031	0.00027	<0.0001
Cobalt	<0.0015	0.00098	0.00121	0.00114	0.00118	0.00101	0.00064	0.00054	0.00012	0.00066	0.00036	0.00068	0.00057
Copper	<0.005	0.0016	0.0039	0.0087	0.0033	0.0068	0.00487	0.00142	0.00325	<0.0005	0.00296	0.00174	0.00066
Iron	<0.03	0.036	0.188	0.131	0.268	0.135	0.064	0.034	0.069	0.133	0.022	0.039	0.034
Lead	<0.0025	<0.0001	0.0002	<0.001	<0.0001	0.0002	0.000149	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.029	0.0308	0.0255	0.028	0.023	0.0239	0.0286	0.0256	0.00446	0.0297	0.0228	0.0293	0.0287
Magnesium	39.8	37.2	40.5	41.2		39.5	36.4	36.1	47.2	39.5	39.5	39.1	40
Manganese	0.186	0.328	0.608	0.608	0.782	0.816	0.515	0.474	0.0499	0.688	0.363	0.796	0.555
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000013	<0.00001
Molybdenum	0.0183	0.0173	0.0156	0.0179	0.0184	0.0165	0.0186	0.0164	0.13	0.0189	0.0173	0.0181	0.0174
Nickel	<0.005	0.003	0.0059	0.003	0.004	0.004	0.00276	0.00099	0.0005	0.00124	0.00141	0.00197	0.00093
Phosphorus	<0.3	<0.3	<0.3	<0.3		0.061	<0.05	<0.05	<0.05	0.062	<0.05	0.059	<0.05
Potassium	2.2	2.08	6.94	2.1	1.7	2.19	1.53	1.21	7.82	1.53	1.66	1.59	1.36
Selenium	<0.005	<0.0002	<0.0002	<0.002	<0.0002	<0.0002	0.00025	0.00018	0.0227	<0.0001	0.00017	0.00011	0.00012
Silicon	4.82	4.91	5.07	5.08		4.89	4.68	4.49	7.14	5.03	4.91	4.87	5.11
Silver	<0.0001	<0.00002	<0.00002	<0.00004	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	0.000029	<0.00001	<0.00001	<0.00001
Sodium	212	204	212	218	220	221	195	183	42.1	220	226	205	197
Strontium	8.48	8.19	8.38	10.1	9.61	8.77	8.9	8.97	0.659	10.1	10.3	10.1	9.21
Sulphur						200	162	141	76.5	189	195	170	169
Thallium	<0.001	0.000027	0.00003	<0.0004	<0.00002	0.000027	0.000026	0.000026	<0.00001	0.000017	0.000041	0.000028	0.000031
Tin	<0.0025	0.00026	0.00021	<0.001	<0.0002	0.0003	0.00018	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	0.013	<0.01		<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extracti													
Uranium	0.0046	0.00419	0.00488	0.00466	0.00429	0.0036	0.00456	0.00471	0.00408	0.00385	0.00426	0.0047	0.00441
Vanadium	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	0.0012	<0.001	0.0036	<0.001	<0.001	<0.001	<0.001
Zinc	<0.005	<0.006	0.008	0.0319	<0.006	0.0155	0.007	0.0042	<0.003	<0.003	0.0067	0.0046	0.0037
Organics													
Carbon Organic (Dissolved)	3.58	4.1	4.24	4.48	4.51	3.9	3.38	3.49	1.59	2.98			
Carbon Organic (Total)	3.22	3.93	4.22	4.01	4.68	3.64	3.25	3.23	1.39	2.91	3.2	3.16	3.58
Nitrogen Organic (Dissolved)	0.107	0.182	0.05	0.284		0.167							
Nitrogen Organic (Total)	0.077	0.172	<0.3	0.246			0.244						
ALS LAB ID	**L1041015**	**L1076555**	**L1115490**	**L1160966**	**L1200094**	**L1247921**	**L1275748**	**L1306577**	**L1345714**	**L1392288**	**L1432458**	**L1473868**	**L1513822**

Site ID	MW11-08D	MW11-08D	MW11-08D
Analytes	Aug-11	Nov-11	Feb-12
In Situ Parameters			
Conductivity µS/cm	1448	1141	992
Oxygen Dissolved %	8.8		12.8
Oxygen Dissolved	0.89	60.7	1.69
pH (unitless)	8.18	7.66	7.8
Redox Potential mV			-298
Salinity ppt			0.84
Specific Conductivity µS/cm	1812	1720	1683
Temperature °C	14.5	7.34	3.51
Total Dissolved Solids			1093
Turbidity NTU	8.7	4	4
Physical Tests			
Acidity to pH 8.3 (as CaCO3)	2.6		
Alkalinity (Total as CaCO3)	204	219	234
Bicarbonate Alkalinity	204		237
Carbonate Alkalinity	<2		<2
Color TCU	17.2	15.1	16.4
Hardness as CaCO3 (Dissolved)	192	181	180
Hydroxide Alkalinity	<2		<2
pH (unitless)	8.22	8.08	8.12
Specific Conductivity µS/cm	1790	1600	1610
Total Dissolved Solids	1240	1130	1110
Total Suspended Solids	13.3	13.6	6.5
Turbidity NTU	6.68	8.28	6.43
Dissolved Anions			
Bromide	<1	<1	<1
Chloride	15	12	15
Fluoride	0.49	<0.4	<0.4
Sulphate	696	626	626
Nutrients			
Ammonia (Total)	0.0585	0.0245	<0.05
Nitrate (as N)	<0.1	<0.1	<0.1
Nitrite (as N)	<0.02	<0.02	<0.02
Nitrogen (Dissolved)	0.46	0.66	0.32
Nitrogen (Total)	0.45	0.3	0.348
Nitrogen Kjeldahl (Total)	0.45	0.303	0.35
Orthophosphate (Dissolved)			
Phosphorus - Dissolved	0.0682	0.0745	0.112
Phosphorus - Total	0.099	0.119	0.153
Cyanide			
Cyanide (Free)	<0.005	<0.005	<0.005
Cyanide (Total)	0.0054	0.0053	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005
Dissolved Metals			
Aluminum	<0.025	0.0103	0.0103
Antimony	<0.0025	0.00042	0.00027
Arsenic	0.0028	0.00312	0.00338
Barium	0.053	0.0576	0.0591
Beryllium	<0.005	<0.0002	<0.0002
Bismuth	<0.2	<0.001	<0.001
Boron	2.69	2.55	2.51
Cadmium	<0.000085	0.000023	<0.00002
Calcium	32.1	30.6	30.9
Chromium	<0.005	0.00032	0.00053
Cobalt	<0.0015	0.00128	0.00102
Copper	<0.005	<0.001	<0.001
Dissolved Cadmium (by saltwater ext			
Iron	<0.03	0.241	0.269
Lead	<0.0025	<0.0001	<0.0001
Lithium	<0.025	0.0011	0.0011
Magnesium	27.1	25.5	24.9
Manganese	0.391	1.1	1.23
Mercury	<0.00001	<0.00001	<0.00001
Molybdenum	0.0676	0.0604	0.061
Nickel	<0.005	0.0066	0.0062
Phosphorus	<0.3	<0.3	<0.3
Potassium	26.1	13.2	12.6
Selenium	<0.005	0.00023	0.00039
Silicon	3.48	4.04	4.01
Silver	<0.0001	<0.00002	<0.00002
Sodium	341	296	300
Strontium	1.24	1.1	1.16
Sulphur			
Thallium	<0.001	<0.00002	<0.00002
Tin	<0.0025	0.00067	0.00043
Titanium	<0.01	<0.01	<0.01
Uranium	0.0057	0.00529	0.00454
Vanadium	<0.005	<0.002	<0.002
Zinc	<0.005	<0.006	<0.006
Total Metals			
Aluminum	0.389	0.286	0.179
Antimony	<0.0025	0.00033	0.0004
Arsenic	0.0031	0.00309	0.00341
Barium	0.055	0.0586	0.0627
Beryllium	<0.005	<0.0002	<0.0002
Bismuth	<0.2	<0.001	<0.001
Boron	2.64	2.38	2.6
Cadmium	0.000119	0.000068	0.000068
Calcium	31.9	28.6	31
Chromium	<0.005	0.00145	0.00171
Cobalt	<0.0015	0.00152	0.00122
Copper	<0.005	0.0047	0.0013
Iron	0.21	0.51	0.43
Lead	<0.0025	0.00019	0.00017
Lithium	<0.025	0.0012	0.0013
Magnesium	26.9	23.9	25.5
Manganese	0.449	1.15	1.28
Mercury	<0.00001	<0.00001	<0.00001
Molybdenum	0.0737	0.0602	0.064
Nickel	0.0055	0.0069	0.0093
Phosphorus	<0.3	<0.3	<0.3
Potassium	23.8	12.8	13.5
Selenium	<0.005	0.00037	0.0003
Silicon	4.25	4.28	4.47
Silver	<0.0001	<0.00002	<0.00002
Sodium	333	286	317
Strontium	1.24	1.06	1.23
Sulphur			
Thallium	<0.001	<0.00002	<0.00002
Tin	<0.0025	0.00113	0.00097
Titanium	0.012	0.012	<0.01
Total Cadmium (by saltwater extracti			
Uranium	0.0061	0.00505	0.00489
Vanadium	<0.005	<0.002	0.002
Zinc	<0.005	<0.006	<0.006
Organics			
Carbon Organic (Dissolved)	29.6	19.8	21.8
Carbon Organic (Total)	30.1	21.2	22.3
Nitrogen Organic (Dissolved)	0.401	0.635	0.291
Nitrogen Organic (Total)	0.391	0.275	0.35
ALS LAB ID	**L1039843**	**L1080651**	**L1114498**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D2.2 - GROUNDWATER QUALITY DATA

Site ID				MW11-08D													MW11-09D						
Site ID	MW11-08D	MW11-08D	MW11-08D	MW11-08D	MW11-08D	MW11-08D	MW11-08D	MW11-08D	MW11-08D	MW11-08D	MW11-09D	MW11-09D	MW11-09D	MW11-09D	MW11-09D	MW11-09D	MW11-09D	MW11-09D	MW11-09D	MW11-09D	MW11-09D	MW11-09D	MW11-09S
Analytes	Jun-12	Aug-12	Dec-12	Mar-13	May-13	Aug-13	Nov-13	Apr-14	Jun-14	Sep-14	Aug-11	Oct-11	Feb-12	Jun-12	Aug-12	Dec-12	Mar-13	May-13	Aug-13	Mar-14	Jun-14	Sep-14	Aug-11
In Situ Parameters																							
Conductivity µS/cm	1776	1530	1050	992	1114	1104	1.48	998	1019	1076	1296	1340	1084	1882	1660	1020	999	1172	1289	1722	1030	1022	1486
Oxygen Dissolved %	10.2		7.3	2.4	6.8	3.7	1.6	13.9	1.1	5.6	19.2		36.6	12.1		12.3	18.4	33.4	28	12.8	8.3	9.9	4.5
Oxygen Dissolved	0.98	7.24	0.82	0.28	0.79	0.4	0.16	1.64	0.12	0.62	2.14	65.1	4.6	1.18	1.53	1.5	2.26	4.03	3.29	1.57	0.98	1.17	0.54
pH (unitless)	7.8		7.99	7.92	8.11	7.9	8.13	8.38	8.12	8.02	8.1	8.12	8.34	8.07		8.19	8.1	8.06	8.13	8.08	8.27	8.22	7.99
Redox Potential mV		-45	-220	-161	-179	-106	0.96	-174	-162	-147			-293		-42	-248	-146	-206	34.3	-157	-126	-182	
Salinity ppt		0.8	0.74	0.75	0.83	0.76	0.74	0.75	0.74	0.75			0.88		0.8	0.8	0.79	0.91	0.98	0.87	0.78	0.77	
Specific Conductivity µS/cm	1232		1462	1493	1630	1504	0.976	1483	1461	1492	1807	2133	1735	1323		1593	1565	1791	1913	1109	1549	1564	2247
Temperature °C	8.89	14	10.3	7.41	8.45	11.1	7.19	7.88	9.19	10.4	10.1	5.53	5.34	9.22	8.66	6.17	6.07	6.88	7.92	6.36	7.48	7.75	7.22
Total Dissolved Solids		979	948	970	1060	979	-155400	964	950	970			1129		1060	1035000	1016	1165	1244	1119	1006	991	
Turbidity NTU	0	9.9	-1.4	-1.9	0	0.5	1.2	1.7	1.8	2.1	3.3	26.1	6.9	1.7	10.1		1.4	0	1.8	1.6	2.6	1.5	4.1
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)		2.3									<1				2.6								2.3
Alkalinity (Total as CaCO3)	233	237	235	225	216	213	231	223	219	232	116	163	134	143	145	144	137	142	143	185	173	171	153
Bicarbonate Alkalinity	233		235	214	216	213	231	223	219	232	116		134	143		144	137	142	143	185	173	169	153
Carbonate Alkalinity	<1		<2	11.7	<1	<1	<2	<1	<1	<1	<1		<2	<1		<2	<1	<2	<2	<2	<2	1.9	<2
Color TCU	20.8	9	11.1	9.8	<5	5.8					13.8	<5	12.5	17	15.2	14.7	12.1	11.4	10.1				6.6
Hardness as CaCO3 (Dissolved)	177	164	158	160	162	158	159	165	164	158	85.8	112	66.8	76	64.6	59	59.5	58.9	59.3	64.2	55.3	56.4	137
Hydroxide Alkalinity	<1		<2	<1	<1	<1	<2	<1	<1	<1	<1		<2	<1		<2	<1	<2	<2	<2	<2	<1	<2
pH (unitless)	7.93	8.18	8.23	8.33	8.3	8.32	8.2	8.37	8.38	8.23	8.34	8.16	8.19	7.97	8.06	8.18	8.32	8.2	8.23	8.03	8.27	8.3	8.19
Specific Conductivity µS/cm	1540	1470	1470	1540	1470	1480	1400	1460	1480	1480	1770	2040	1660	1720	1610	1600	1680	1650	1630	1610	1550	1550	2240
Total Dissolved Solids	1150	1070	1040	1020	971	1010	965	1010	984	1030	1150	1470	980	1220	1110	1120	1140	1120	1140	1100	1060	1040	1490
Total Suspended Solids	<3	3.2	<3	<3	7.3	4.4		<3	<3	<3	<3	32.2	11.8	13.3	8.5	<3	4.1	<3	<3		<3	<3	3.3
Turbidity NTU	1.66	3.68	2.84	2.06	2.53	1.68		0.62	0.66	0.81	1.82	37.9	6.92	4.95	4.92	2.4	1.27	1.57	1.98		1.41	0.97	3.12
Dissolved Anions																							
Bromide	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	<0.5	<1
Chloride	14	11	9.2	8.8	8.4	8	9.6	14.6	8.7	8.8	32	41	21	30	20	17	17	20	15	16	14	13.5	36
Fluoride	<0.4	0.42	0.4	0.53	0.31	0.51	0.35	0.36	0.34	0.306	0.55	<0.4	<0.4	<0.4	0.44	0.41	0.75	0.41	0.87	0.75	0.398	0.375	0.46
Sulphate	578	553	538	530	535	530	528	535	526	535	705	830	672	713	662	650	673	657	636	624	599	571	979
Nutrients																							
Ammonia (Total)	0.0256	0.0238	0.0311	0.0367	0.0292	0.0349	0.037	0.0423	0.0305	0.0432	<0.005	<0.005	<0.05	0.0188	<0.005	0.0311	<0.005	<0.005	<0.005	0.0228	<0.005	0.0221	0.0112
Nitrate (as N)	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.12	<0.1	<0.1	<0.1	0.17	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.1
Nitrite (as N)	<0.02	<0.02	<0.01	0.014	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	0.056	<0.02	<0.02	<0.02	<0.02	<0.02	0.01	<0.01	0.027
Nitrogen (Dissolved)	0.24		0.217	0.136							0.29	0.25	0.15	0.24		0.247	0.113						0.28
Nitrogen (Total)	<0.26	0.18	0.195	0.153	0.134	0.153					0.27	0.488	0.256	1.24	0.51	0.237	0.15	0.17	0.148				0.33
Nitrogen Kjeldahl (Total)	<0.5	0.18	0.202	0.193	0.162	0.153	0.202	0.203	0.199	0.2	0.146	0.488	0.26	1.24	0.28	0.244	0.154	0.174	0.187	0.234	0.177	0.169	0.303
Orthophosphate (Dissolved)		0.18					0.218	0.238	0.226	0.222					0.325					0.398	0.375	0.287	
Phosphorus - Dissolved	0.17		0.191	0.196	0.194	0.201	0.229	0.251	0.249		0.116	0.147	0.22	0.253		0.391	0.352	0.375	0.377	0.42	0.401	0.367	0.0549
Phosphorus - Total	0.227	0.208	0.224	0.217		0.239	0.257	0.274	0.242	0.303	0.124	0.234	0.29	0.352	0.365	0.396	0.4	0.43	0.445	0.467	0.429	0.437	0.0618
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0086	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																							
Aluminum	0.01	0.0108	0.0095	0.01	0.0098	0.0092	0.0091	0.0087	0.011	0.0081	<0.025	0.0178	0.0232	0.0193	0.0184	0.0194	0.012	0.0168	0.01	0.0095	0.0096	0.0097	<0.025
Antimony	0.00025	<0.0002	<0.0002	0.0002	0.00019	0.00018	0.00018	0.00014	<0.0002	0.00012	<0.0025	0.00049	0.00025	<0.0002	0.00022	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0025
Arsenic	0.00321	0.00289	0.00294	0.00288	0.0035	0.00285	0.00284	0.00299	0.00274	0.00324	0.0042	0.00639	0.00464	0.00492	0.0053	0.00542	0.00534	0.00573	0.00619	0.00641	0.00588	0.00624	0.0039
Barium	0.059	0.0548	0.0515	0.0497	0.0491	0.0452	0.0456	0.0441	0.0422	0.043	0.038	0.0527	0.0355	0.0445	0.0401	0.0399	0.0403	0.0429	0.0442	0.049	0.0411	0.0452	0.047
Beryllium	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005
Bismuth	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.2
Boron	2.28	2.36	2.35	2.14	2.34	2.42	2.42	2.31	2.5	2.33	0.49	0.461	0.518	0.481	0.415	0.456	0.441	0.441	0.447	0.472	0.471	0.461	0.49
Cadmium	0.000051	<0.00002	<0.00002	<0.00005	<0.00005	<0.00002	<0.00003	<0.00002	<0.00002	<0.00001	0.00019	0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	0.000157
Calcium	28.7	25.1	23.7	23.2	22.2	21.5	21.3	22.4	22.2	21.3	25.8	33.3	19.5	22	18.6	17	17.1	16.7	17.1	18.4	15.8	16.2	39.9
Chromium	0.00034	0.00091	0.00107	0.00022	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.005	0.00033	0.00069	0.00144	0.00343	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005
Cobalt	0.00106	0.00077	0.00075	0.0006	0.00067	0.00048	0.00043	0.00046	0.00037	0.0004	<0.0015	0.00104	0.00059	0.00058	0.00055	0.00025	0.00043	0.00031	0.00029	0.00023	<0.0002	<0.0002	<0.0015
Copper	<0.0004	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0002	<0.005	<0.001	<0.001	0.00067	<0.0004	<0.0004	0.00076	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.005
Dissolved Cadmium (by saltwater ext								<0.00002	<0.00002														
Iron	0.286	0.28	0.272	0.246	0.141	0.165	0.16	0.189	0.168	0.186	<0.03	0.131	0.163	0.386	0.305	0.296	0.214	0.239	0.3	0.389	0.159	0.43	<0.03
Lead	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0025
Lithium	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	0.00067	<0.0005	<0.001	<0.0005	<0.025	0.0118	0.0146	0.0145	0.0158	0.0152	0.0155	0.0197	0.0191	0.0198	0.0199	0.023	0.033
Magnesium	25.5	24.6	23.9	24.7	25.9	25.4	25.6	26.4	26.2	25.3	5.21	7.02	4.37	5.13	4.39	4.01	4.05	4.17	4.05	4.44	3.82	3.87	9.05
Manganese	1.29	1.05	1.08	0.954	0.778	0.73	0.676	0.71	0.599	0.629	0.0629	0.8	0.691	0.945	0.787	0.817	0.795	0.831	0.912	0.955	0.682	0.862	0.201
Mercury	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0605	0.059	0.0578	0.0545	0.0558	0.0559	0.0525	0.0528	0.0546	0.0504	0.0404	0.0537	0.028	0.0279	0.0247	0.0191	0.0295	0.0162	0.0162	0.0149	0.0136	0.0128	0.0162
Nickel	0.0038	0.0029	0.0026	0.00209	0.00309	0.00156	0.00166	0.00113	0.0011	0.00107	<0.005	0.0056	0.0063	0.0034	0.0071	0.0028	0.0055	0.0034	0.0025	0.0014	0.0018	0.0017	<0.005
Phosphorus	<0.3	0.24	0.273	0.271	0.21	0.219	0.237	0.269	0.241	0.261	<0.3	<0.3	<0.3	0.41	0.387	0.413	0.434	0.399	0.391	0.452	0.422	0.41	<0.3
Potassium	11.4	10	9.91	10.4	10.2	9.89	11.2	9.87	10.4	9.84	3.8	3.82	1.75	1.68	1.69	1.44	1.34	1.33	1.24	1.3	1.1	1.11	<2
Selenium	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.005	0.00107	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005
Silicon	3.91	4.29	3.98	4.25	4.15	4.08	4.31	4.12	4.25	3.92	2.86	3.43	3.4	3.88	3.69	3.41	3.57	3.6	3.59	3.89	3.9	4.03	4.06
Silver	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.0001
Sodium	281	271	284	274	274	264	254	251	243	256	381	432	331	352	320	327	318	340	325	335	303	319	456
Strontium	1.22	1.17	1.18	1.17	1.19	1.19	1.14	1.29	1.23	1.25	0.775	1.02	0.697	0.854	0.745	0.739	0.747	0.793	0.764	0.815	0.701	0.683	1.59
Sulphur			172	177	170	162	169	166	169	171						208	213	211	202	202	189	204	
Thallium	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.001
Tin	0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0025	0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0025
Titanium	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01
Uranium	0.00457	0.00304	0.00302	0.0027	0.00255	0.00243	0.00251	0.00263	0.00252	0.00257	0.0049	0.00722	0.00324	0.0035	0.00244	0.00199	0.00175	0.0014	0.00117	0.00136	0.00121	0.000757	0.0019
Vanadium	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005
Zinc	<0.002	0.0021	0.0023	0.0013	0.0012	<0.001	<0.001	0.0012	<0.002	0.0012	<0.005	<0.006	0.0114	0.0025	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005
Total Metals																							
Aluminum	0.0507	0.209	0.0637	0.0405	0.183	0.103	0.0435	0.0233	0.0302	0.0241	0.084	0.632	0.117	0.143	0.181	0.0547	0.0369	0.0413	0.0244	0.0374	0.0258	0.0291	0.166
Antimony	0.00036	0.00027	0.0002	0.00028	0.00023	0.0002	0.00019	0.00015	<0.0002	0.00019	<0.0025	0.00055	0.00044	0.00029	0.00037	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0025
Arsenic	0.00359	0.00294	0.00294	0.00287	0.00359	0.0027	0.00282	0.00295	0.00282	0.00318	0.0044	0.00805	0.00476	0.00534	0.00563	0.00539	0.0055	0.00571	0.00635	0.00639	0.00605	0.00618	0.0039
Barium	0.0594	0.053	0.0509	0.0499	0.0496	0.041	0.0432	0.0435	0.0425	0.0413	0.04	0.0654	0.0421	0.0482	0.044	0.0422	0.0434	0.0429	0.0465	0.0485	0.0433	0.0434	0.05
Beryllium	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005
Bismuth	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.2
Boron	2.34	2.51	2.26	2.45	2.38	2.33	2.42	2.29	2.57	2.38	0.51	0.451	0.543	0.504	0.496	0.411	0.461	0.449	0.459	0.47	0.498	0.516	0.5
Cadmium	0.000081	0.000022	0.000023	<0.00005	<0.00005	<0.00002	<0.00003	<0.00002	<0.00002	<0.00001	0.000239	0.000147	0.000129	0.000059	0.000058	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	0.00002	<0.00002	0.000182
Calcium	28.7	25.2	23.3	23.5	22	21	20.7	21.4	21.6	20.6	25.8	39.9	20.7	22.6	18.9	17.4	16.9	16.1	17.3	17.2	15.7	17	40.2
Chromium	0.00069	0.00456	0.00309	0.00057	0.00051	0.00037	0.00018	0.0002	<0.0002	0.00026	<0.005	0.00209	0.00389	0.00429	0.0113	0.00059	0.00035	0.00122	0.00043	0.00071	0.00043	0.00045	<0.005
Cobalt	0.00119	0.00097	0.00081	0.00061	0.00079	0.00048	0.00043	0.00047	0.00041	0.00041	<0.0015	0.00152	0.00077	0.00096	0.00085	0.00036	0.0005	0.0004	0.00033	0.00029	0.00024	0.00023	<0.0015
Copper	0.0011	<0.001	<0.001	0.00083	0.0009	<0.0005	<0.0005	0.00146	<0.001	<0.0005	<0.005	0.0041	0.0079	0.0025	0.0032	0.0011	0.0011	0.002	<0.001	<0.001	0.001	0.001	<0.005
Iron	0.368	0.442	0.309	0.278	0.272	0.219	0.187	0.209	0.189	0.207	0.056	0.781	0.441	0.541	0.564	0.371	0.37	0.358	0.44	0.458	0.342	0.55	0.128
Lead	0.00013	0.00011	0.00026	0.000064	0.000105	0.000052	<0.00005	<0.00005	<0.0001	<0.00005	<0.0025	0.00054	0.00029	0.00023	0.00028	0.00013	0.0001	0.00013	0.00015	0.00014	0.00014	0.00016	<0.0025
Lithium	<0.001	<0.001	<0.001	<0.0005	0.00059	0.00079	0.00055	<0.0005	<0.001	<0.0005	<0.025	0.0118	0.0148	0.0151	0.0169	0.0135	0.0164	0.0195	0.0194	0.0192	0.021	0.0256	0.034
Magnesium	24.9	24.5	24	24.8	26	24.6	25.4	25.1	25.7	24.7	5.27	7.16	4.4	5.21	4.46	4.06	4.07	4.05	4.11	4.15	3.79	4.13	9.21
Manganese	1.38	1.13	1.06	0.948	0.793	0.689	0.672	0.69	0.632	0.623	0.0745	0.84	0.713	0.973	0.863	0.795	0.789	0.812	0.93	0.933	0.691	0.854	0.226
Mercury	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0664	0.0616	0.0585	0.0615	0.0592	0.0532	0.0549	0.0538	0.0559	0.0501	0.0462	0.0534	0.0291	0.0302	0.0267	0.0175	0.0307	0.0168	0.0172	0.0157	0.014	0.0145	0.0171
Nickel	0.0046	0.0047	0.0035	0.00232	0.00381	0.00157	0.00148	0.00129	0.0012	0.00126	<0.005	0.0072	0.0081	0.0061	0.0112	0.0035	0.0058	0.0038	0.0026	0.0021	0.0022	0.0012	<0.005
Phosphorus	<0.3	0.24	0.246	0.262	0.212	0.225	0.239	0.271	0.273	0.257	<0.3	<0.3	0.31	0.39	0.406	0.406	0.426	0.415	0.422	0.445	0.434	0.4	<0.3
Potassium	11.1	9.96	9.86	10.4	10.2	9.48	11.2	9.34	10.1	9.61	3.8	3.63	1.77	1.74	1.68	1.49	1.37	1.31	1.16	1.21	1.08	1.18	<2
Selenium	0.00027	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.005	0.0008	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005
Silicon	3.95	4.97	4.04	4.29	4.71	4.33	4.32	4.07	4.26	3.87	3.02	4.62	3.61	3.98	4.02	3.5	3.6	3.56	3.6	3.78	3.89	4.34	4.35
Silver	<0.00002	0.000074	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.0001	<0.00002	<0.00002	<0.00002	0.000053	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.0001
Sodium	283	274	276	272	267	247	245	250	255	251	385	420	336	357	335	336	322	325	322	334	309	306	461
Strontium	1.25	1.2	1.17	1.29	1.23	1.13	1.16	1.29	1.25	1.23	0.791	1.07	0.721	0.886	0.778	0.657	0.77	0.781	0.785	0.809	0.728	0.747	1.6
Sulphur			169	179	172	162	170	166	174	167						212	215	210	204	198	188	176	
Thallium	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.001
Tin	0.00054	<0.0002	<0.0002	0.00015	0.00012	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0025	0.00175	0.00054	0.00032	0.00033	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0025
Titanium	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	0.029	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01
Total Cadmium (by saltwater extracti								<0.00002	<0.00002														
Uranium	0.00486	0.00318	0.00309	0.00307	0.00272	0.00232	0.00257	0.00256	0.00256	0.00257	0.0055	0.0071	0.00328	0.00363	0.00253	0.00179	0.00179	0.00141	0.00125	0.00142	0.00125	0.000835	0.0021
Vanadium	<0.002	<0.002	<0.002	<0.001	0.0011	<0.001	<0.001	<0.001	<0.002	<0.001	<0.005	0.0025	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005
Zinc	<0.006	<0.006	0.0063	<0.003	<0.003	<0.003	<0.003	<0.003	<0.006	<0.003	<0.005	0.0082	0.0186	0.0067	0.0068	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.005
Organics																							
Carbon Organic (Dissolved)	27.5	15.6	14.1	7.28	5.26	8.57	9.72				26.3	33.4	17.7	18.7	14.1	11.7	13.3	13.2	12.5				5.9
Carbon Organic (Total)	27.1	16.7	14.8	13.1	5.28	9.41	10.5	12.1	9	12	26.1	33.4	18.2	17.8	14.4	11.4	13	12.7	12.8	13.2	10.5	11.1	5.84
Nitrogen Organic (Dissolved)	0.214		0.185	0.085							0.161	0.246	0.144	0.221		0.216	0.11						0.242
Nitrogen Organic (Total)	<0.5			0.102							0.141	0.496	<0.3	1.22			0.154						0.292
ALS LAB ID	**L1159542**	**L1202478**	**L1247928**	**L1277798**	**L1308855**	**L1346553**	**L1394557**	**L1439433**	**L1475661**	**L1516193**	**L1039844**	**L1079375**	**L1115110**	**L1159973**	**L1202478**	**L1247921**	**L1277099**	**L1307601**	**L1348177**	**L1434002**	**L1475117**	**L1514758**	**L1039843**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D2.2 - GROUNDWATER QUALITY DATA

Site ID	MW11-09S										
Site ID	MW11-09S	MW11-09S	MW11-09S	MW11-09S	MW11-09S	MW11-09S	MW11-09S	MW11-09S	MW11-09S	MW11-09S	MW11-09S
Analytes	Oct-11	Feb-12	Jun-12	Aug-12	Dec-12	Mar-13	May-13	Aug-13	Mar-14	Jun-14	Sep-14
In Situ Parameters											
Conductivity µS/cm	1371	1197	2273	2160	1238	1242	1440	1695	2074	1301	1299
Oxygen Dissolved %		46.1	20.8		2.9	6	19.2	18.3	67.3	38.7	11.5
Oxygen Dissolved	58.5	6.18	2.03	1.38	0.36	0.74	2.36	2.12	8.41	4.66	1.36
pH (unitless)	8.11	8.25	8.11	7.78	8.1	8.04	7.98	8.11	8.11	8.21	8.28
Redox Potential mV		-296		-153		81.8	117	135	8.3	75.4	77.2
Salinity ppt		1.06		1.1		0.99	1.14	1.24	1.06	1.01	1
Specific Conductivity µS/cm	2116	2108	1506		1931	1955	2219	2392	1312	1980	1963
Temperature °C	6.56	2.39	7.23	8.27	6.21	5.89	6.66	9.94	5.76	7.03	7.3
Total Dissolved Solids		1361		1380		1270	1442	1557	1348	1288	1276
Turbidity NTU	2.3	8.6	0	2.1	-1.5	1.2	0	2.3	1.5	2.8	2.8
Physical Tests											
Acidity to pH 8.3 (as CaCO3)				2.6							
Alkalinity (Total as CaCO3)	134	139	121	152	117	124	123	111	110	129	122
Bicarbonate Alkalinity		139	121		117	124	123	111	110	129	122
Carbonate Alkalinity		<2	<1		<2	<1	<2	<2	<1	<2	<1
Color TCU	8.5	8.9	<5	11.1	6.4	7.1	6.1	6			
Hardness as CaCO3 (Dissolved)	126	110	104	110	102	104	106	103	102	106	105
Hydroxide Alkalinity		<2	<1		<2	<1	<2	<2	<1	<2	<1
pH (unitless)	8.24	8.22	8.1	8.14	8.13	8.33	8.18	8.19	8.3	8.16	8.23
Specific Conductivity µS/cm	2050	2000	2010	2000	1920	2040	2010	2020	1960	2000	2010
Total Dissolved Solids	1430	1220	1440	1410	1330	1380	1400	1330	1260	1320	1370
Total Suspended Solids	8.2	6.4	<3	<3	<3	<3	<3	5		<3	<3
Turbidity NTU	5.87	5.79	0.79	1.46	2.18	0.8	0.7	3.45		1.28	0.64
Dissolved Anions											
Bromide	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloride	23	23	24	23	19	19	20	19	20	21	21
Fluoride	<0.4	<0.4	<0.4	<0.4	<0.4	0.6	<0.4	0.63	0.71	0.301	0.294
Sulphate	881	859	874	879	841	876	866	865	872	881	852
Nutrients											
Ammonia (Total)	0.029	<0.05	0.0219	0.0326	0.0217	0.0209	0.0186	0.0208	0.0187	0.0175	0.0118
Nitrate (as N)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite (as N)	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.024
Nitrogen (Dissolved)	0.21	0.17	0.16		0.173	0.152					
Nitrogen (Total)	0.287	0.276	0.169	<0.27	0.178	0.16	0.18	0.168			
Nitrogen Kjeldahl (Total)	0.287	0.28	0.169	<0.25	0.184	0.16	0.177	0.184	0.223	0.198	0.174
Orthophosphate (Dissolved)				0.098					0.107	0.111	0.111
Phosphorus - Dissolved	0.061	0.086	0.0727		0.092		0.104	0.12	0.125	0.122	0.147
Phosphorus - Total	0.0804	0.104	0.0825	0.11	0.101	0.107	0.114	0.129	0.134	0.139	0.161
Cyanide											
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals											
Aluminum	0.0144	0.0124	0.043	0.0109	0.0115	0.0144	0.0106	0.01	0.0092	0.0099	0.015
Antimony	0.00031	<0.0002	<0.0025	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Arsenic	0.00637	0.00379	0.0045	0.00433	0.00475	0.00449	0.00485	0.00487	0.00506	0.00479	0.00481
Barium	0.0405	0.0338	0.037	0.0345	0.0288	0.0281	0.0267	0.0273	0.0258	0.0266	0.0265
Beryllium	<0.0002	<0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Bismuth	<0.001	<0.001	<0.2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Boron	0.465	0.529	0.52	0.423	0.441	0.45	0.45	0.446	0.466	0.452	0.467
Cadmium	0.000061	0.000089	<0.000085	<0.00002	<0.00002	0.000039	0.000067	0.000067	0.000052	0.000029	0.000034
Calcium	37.5	32.5	29.8		29.8	30.2	30.6	29.9	29.5	30.5	30.4
Chromium	<0.0002	0.00031	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Cobalt	0.00056	0.00026	<0.0015	0.00059	0.00033	0.00023	0.00029	0.00025	0.00024	0.00029	0.00026
Copper	<0.001	0.0074	0.02	0.00045	<0.0004	0.00147	0.00042	<0.0004	0.00074	<0.0004	0.00087
Dissolved Cadmium (by saltwater ext											
Iron	0.042	<0.03	<0.03	0.083	0.021	0.031	<0.01	<0.01	0.016	0.016	0.033
Lead	<0.0001	<0.0001	<0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Lithium	0.0258	0.0238	0.031	0.0158	0.0254	0.0234	0.0273	0.0253	0.0273	0.0239	0.0268
Magnesium	7.95	7.04	7.16		6.78	7.01	7.12	7.01	6.88	7.2	7.14
Manganese	0.26	0.17	0.207	0.327	0.224	0.168	0.214	0.218	0.179	0.227	0.207
Mercury	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0184	0.0188	0.0186	0.0209	0.0182	0.0367	0.021	0.0206	0.0207	0.0201	0.0224
Nickel	0.003	0.0037	<0.005	0.0024	0.0011	0.0016	0.0012	0.0011	0.0011	0.0012	0.0013
Phosphorus	<0.3	<0.3	<0.3		0.096	0.113	0.108	0.111	0.11	0.117	0.124
Potassium	1.59	1.25	<2	1.15	1.03	1.14	1.03	0.99	1	1.02	1.04
Selenium	0.00022	<0.0002	<0.005	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Silicon	4.09	3.79	4.19		3.89	3.95	3.96	3.88	3.95	4.06	3.88
Silver	<0.00002	<0.00002	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	418	399	397	428	394	387	407	398	387	374	398
Strontium	1.28	1.18	1.32	1.31	1.25	1.34	1.35	1.35	1.37	1.32	1.35
Sulphur					270	275	283	274	271	269	274
Thallium	<0.00002	0.000023	<0.001	<0.00002	<0.00002	0.000025	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Tin	0.00026	0.00021	<0.0025	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Titanium	<0.01	<0.01	<0.01		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Uranium	0.0016	0.00145	<0.001	0.00155	0.000739	0.000917	0.000789	0.000765	0.000657	0.000692	0.000705
Vanadium	<0.002	<0.002	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Zinc	<0.006	0.0174	<0.005	<0.002	<0.002	0.0034	0.0035	<0.002	0.0026	0.0021	0.0058
Total Metals											
Aluminum	0.195	0.24	0.072	0.0519	0.0276	0.055	0.0474	0.0372	0.043	0.0436	0.0696
Antimony	0.00031	0.00033	<0.0025	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00023
Arsenic	0.00559	0.00385	0.0046	0.0043	0.00508	0.00466	0.00516	0.00534	0.00501	0.00501	0.00537
Barium	0.0428	0.0412	0.032	0.0358	0.0293	0.0292	0.0276	0.028	0.0254	0.0265	0.029
Beryllium	<0.0002	<0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Bismuth	<0.001	<0.001	<0.2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Boron	0.473	0.56	0.53	0.44	0.441	0.458	0.48	0.46	0.459	0.459	0.497
Cadmium	0.000082	0.000137	<0.000085	0.00005	<0.00002	0.000048	0.00009	0.000053	0.000088	0.000041	0.000046
Calcium	37.9	32.8	31.8		29.6	30.6	30	29.7	28.9	29.7	30.8
Chromium	0.00078	0.0021	<0.005	0.00022	<0.0002	0.00033	0.00025	0.00028	0.00039	0.00032	0.00056
Cobalt	0.00069	0.00047	<0.0015	0.00062	0.00038	0.00026	0.00035	0.00033	0.00024	0.00034	0.00036
Copper	0.0019	0.0163	0.021	<0.001	<0.001	0.0024	0.0019	<0.001	0.0019	0.0012	0.002
Iron	0.284	0.298	0.059	0.135	0.063	0.077	0.067	0.075	0.083	0.09	0.122
Lead	0.00012	0.00022	<0.0025	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Lithium	0.0261	0.0244	0.031	0.0156	0.0262	0.0238	0.0287	0.0258	0.0263	0.0254	0.0282
Magnesium	8.04	7.15	7.61		6.91	7.24	7.06	6.95	6.79	7.05	7.34
Manganese	0.283	0.214	0.22	0.34	0.241	0.171	0.232	0.236	0.175	0.242	0.239
Mercury	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0189	0.0194	0.0184	0.0213	0.019	0.0325	0.0218	0.021	0.021	0.0204	0.0231
Nickel	0.0039	0.0053	<0.005	0.0026	0.0012	0.0019	0.0014	0.0013	0.0014	0.0013	0.0016
Phosphorus	<0.3	<0.3	<0.3		0.101	0.11	0.109	0.105	0.111	0.13	0.14
Potassium	1.59	1.31	<2	1.14	1.06	1.15	1.03	1.02	0.98	1.01	1.09
Selenium	0.00027	0.00023	<0.005	0.00023	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Silicon	4.45	4.41	4.34		3.93	4.05	4.02	3.9	3.98	4.06	4.11
Silver	<0.00002	<0.00002	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	420	408	421	408	399	387	418	394	384	384	428
Strontium	1.31	1.2	1.43	1.34	1.27	1.39	1.44	1.35	1.35	1.31	1.41
Sulphur					276	279	282	275	268	270	281
Thallium	<0.00002	0.000026	<0.001	<0.00002	<0.00002	0.000028	<0.00002	<0.00002	<0.00002	0.000029	0.000024
Tin	0.00137	0.0078	<0.0025	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Titanium	<0.01	0.017	<0.01		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Total Cadmium (by saltwater extracti											
Uranium	0.00165	0.00149	<0.001	0.00163	0.000751	0.000963	0.000823	0.000767	0.000679	0.000702	0.000782
Vanadium	<0.002	<0.002	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Zinc	<0.006	0.0221	<0.005	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	0.0144
Organics											
Carbon Organic (Dissolved)	5.65	6.6	5.28	7.55	4.3	5.27	5.22	5.88			
Carbon Organic (Total)	5.76	6.58	4.76	8	4.17	5.16	4.88	5.35	4.96	5	5.42
Nitrogen Organic (Dissolved)	0.181	0.146	0.138		0.152	0.131					
Nitrogen Organic (Total)	0.258	<0.3	0.148			0.139					
ALS LAB ID	**L1079375**	**L1115110**	**L1160966**	**L1200094**	**L1247921**	**L1277099**	**L1307601**	**L1348177**	**L1434002**	**L1475117**	**L1514758**

Site ID	MW11-10D											
Site ID	MW11-10D	MW11-10D	MW11-10D	MW11-10D	MW11-10D	MW11-10D	MW11-10D	MW11-10D	MW11-10D	MW11-10D	MW11-10D	MW11-10D
Analytes	Dec-11	Feb-12	Jun-12	Aug-12	Dec-12	Mar-13	May-13	Aug-13	Nov-13	Mar-14	Jun-14	Sep-14
In Situ Parameters												
Conductivity µS/cm	1961	1856	2642	2920	2016	1946	2228	2561	2.88	3019	2057	1941
Oxygen Dissolved %	5	1.9	11.7		2.9	2	1.7	8.7	1.4	7	1.9	16.3
Oxygen Dissolved	0.56	0.22	1.03	0.05	0.33	0.23	0.19	0.94	0.16	0.84	0.21	1.87
pH (unitless)	7.91	9.07	9.01		7.65	7.5	7.5	7.4	7.54	7.48	7.53	8.35
Redox Potential mV	-338			-137	-198	82.7	-189	-96.3	-140	-132	-137	-195
Salinity ppt	1.45			1.5	1.49	1.51	1.68	1.83	1.5	1.58	1.5	1.46
Specific Conductivity µS/cm	2778	2747	1981		2844	2898	3200	3469	1.94	2083	2876	2795
Temperature °C	9.52	8.03	12.2	11.9	9.72	7.81	9.12	11.3	7.96	8.82	10.1	9.01
Total Dissolved Solids	1.81			1870	1850000	1884	2081	2252	1871	1963	1870	1817
Turbidity NTU	68.1	44.7	3.8	2.8	-2.1	82.7	0	3.2	2.4	1.8	1.8	4.8
Physical Tests												
Acidity to pH 8.3 (as CaCO3)				3.1								
Alkalinity (Total as CaCO3)	208	152	174	228	243	245	230	247	266	245	256	245
Bicarbonate Alkalinity		152	174		243	245	230	247	266	245	256	245
Carbonate Alkalinity		<2	<1		<2	<2	<2	<2	<2	<2	<2	<1
Color TCU	<5	<5	<5	<5	<5	<5	<5	<5	<5			
Hardness as CaCO3 (Dissolved)	1530	1410	1540	1580	1480	1630	1610	1620		1590	1620	1520
Hydroxide Alkalinity		<2	<1		<2	<2	<2	<2	<2	<2	<2	<1
pH (unitless)	8.12	8.24	8.09	8.22	7.96	7.93	8	8.04	8.07	7.89	7.99	8.01
Specific Conductivity µS/cm	2790	2680	2680	2690	2780	2870	2920	2900	2920	2870	2880	2820
Total Dissolved Solids	2830	2490	2580	2740	2730	2710	2820	2860	2750	2690	2790	2640
Total Suspended Solids	<3	163	98.7	3.2	<3	11.3	10	11			8.9	6.6
Turbidity NTU	2.57	97	90.8	2.89	8.88	11.9	12.3	11.7			10.8	8.84
Dissolved Anions												
Bromide	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloride	<10	<10	<10	<10	<10	<10	<10	<10	10	<10	<10	<10
Fluoride	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	0.67	<0.4	<0.4	0.213	0.185
Sulphate	1720	1640	1660	1740	1700	1740	1730	1720	1760	1730	1770	1720
Nutrients												
Ammonia (Total)	0.0632	0.148	0.103	0.0659	0.0547	0.0518	0.0558	0.0574	0.0721	0.0546	0.0618	0.0809
Nitrate (as N)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite (as N)	<0.02	<0.02	<0.02	<0.02	0.042	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nitrogen (Dissolved)		0.34	0.21		0.271	0.182						
Nitrogen (Total)	0.13	0.357	0.274	0.21	0.174	0.182	0.22	0.205				
Nitrogen Kjeldahl (Total)	0.264	0.357	0.274	0.211	0.225	0.21	0.224	0.208	0.219	0.262	0.223	0.298
Orthophosphate (Dissolved)				<0.001					0.0011	0.001	0.0014	0.0035
Phosphorus - Dissolved	0.0082	0.0058	0.0021		0.0025	<0.002	<0.002	<0.002	<0.002	<0.002	0.0024	
Phosphorus - Total	0.0105	0.0196	0.0212	0.0192	0.0215	0.0235	0.021	0.0243	0.0209	0.0219	0.022	0.0153
Cyanide												
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals												
Aluminum	<0.006	<0.006	<0.01	<0.01	<0.002	0.0011	0.0022	<0.002	0.0017	0.0016	<0.001	0.0025
Antimony	0.00737	0.00045	<0.001	<0.001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	0.00035
Arsenic	0.0056	0.00453	0.0051	0.0051	0.00543	0.00547	0.00558	0.00554	0.0056	0.00577	0.00581	0.00544
Barium	0.0214	0.0589	0.034	<0.02	0.00934	0.00832	0.00876	0.00752	0.00769	0.00813	0.00723	0.0102
Beryllium	<0.0002	<0.0002	<0.002	<0.002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.001	<0.001	<0.2	<0.2	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.078	0.088	0.1	<0.1	0.082	0.088	0.089	0.09	0.093	0.089	0.089	0.083
Cadmium	<0.00002	<0.00002	<0.000034	<0.000034	<0.00002	<0.00001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	262	244	265	262	272	280	284	288	299	281	291	278
Chromium	0.00021	<0.0002	<0.002	<0.002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.00214	<0.0002	<0.0006	<0.0006	<0.0002	0.00017	<0.0002	<0.0002	0.00013	0.00012	0.00011	0.00011
Copper	<0.001	<0.001	<0.002	<0.002	<0.0004	0.00029	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002
Dissolved Cadmium (by saltwater ext												
Iron	0.148	<0.03	0.347	0.805	0.978	0.982	0.994	1.02	1.02	1.03	1.03	0.947
Lead	<0.0001	<0.0001	<0.001	<0.001	<0.0001	<0.00005	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0097	0.0125	0.012	0.011	0.0091	0.0118	0.0114	0.0098	0.0109	0.0102	0.0102	0.00909
Magnesium	213	195	214	224	195	226	219	218	223	217	218	201
Manganese	0.282	0.153	0.33	0.319	0.34	0.343	0.368	0.356	0.358	0.367	0.357	0.34
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0296	0.0262	0.0255	0.0272	0.0222	0.027	0.0255	0.0248	0.0249	0.0237	0.0245	0.0253
Nickel	0.0111	0.0023	<0.002	<0.002	<0.001	0.00138	<0.001	<0.001	0.00052	<0.0005	<0.0005	0.00089
Phosphorus	<0.3	<0.3	<0.3	<0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	14.8	17.9	15.2	14.3	14.4	13.9	14.3	14.4	13.8	14.4	13.7	14.1
Selenium	0.00951	<0.0002	<0.002	<0.002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001
Silicon	11	12.9	13.8	13.6	14.3	14.7	14.4	14.9	14.6	14.4	14.9	14.6
Silver	<0.00002	<0.00002	<0.00004	<0.00004	<0.00002	<0.00001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	161	183	163	167	169	163	166	163	161	156	159	174
Strontium	2.67	4.16	3.64	3.04	2.86	3.58	3.26	3.16	3.2	3.12	3.22	3.44
Sulphur					493	539	546	552	520	541	543	534
Thallium	<0.00002	<0.00002	<0.0004	<0.0004	<0.00002	<0.00001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0002	<0.0002	<0.001	<0.001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.017	0.012	<0.01	<0.01	<0.02	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01
Uranium		0.00301	0.00277	0.00235	0.00236	0.00291	0.00276	0.00274	0.00274	0.00275	0.00281	0.00275
Vanadium	0.0027	<0.002	<0.002	<0.002	<0.002	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001
Zinc	<0.006	<0.006	<0.005	<0.005	0.0043	0.0011	<0.002	<0.002	0.0014	<0.001	<0.001	0.0027
Total Metals												
Aluminum	0.0086	0.01	0.055	0.018	<0.006	0.0049	0.0103	<0.006	0.0035	0.0046	<0.003	0.0154
Antimony	0.00683	0.00043	<0.001	<0.001	<0.0002	<0.0001	<0.0002	<0.0002	0.00017	<0.0001	<0.0001	0.00048
Arsenic	0.00541	0.00479	0.0056	0.0053	0.00541	0.00581	0.00552	0.0056	0.00592	0.00602	0.00546	0.00519
Barium	0.0246	0.0502	0.063	0.054	0.00983	0.0102	0.0203	0.0146	0.0117	0.0103	0.00807	0.0224
Beryllium	<0.0002	<0.0002	<0.002	<0.002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.001	<0.001	<0.2	<0.2	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.084	0.092	0.11	<0.1	0.093	0.096	0.095	0.11	0.099	0.101	0.099	0.091
Cadmium	<0.00002	<0.00002	<0.000034	<0.000034	<0.00002	<0.00001	<0.00002	<0.00002	<0.00001	<0.00002	<0.00001	<0.00001
Calcium	252	259	278	272	278	288	275	276	291	275	275	263
Chromium	0.00114	0.00108	<0.002	0.0025	0.00053	0.0001	0.00089	<0.0002	0.00019	0.00011	0.00014	0.00022
Cobalt	0.00229	0.0003	<0.0006	<0.0006	0.0002	0.00017	<0.0002	<0.0002	0.00013	0.00013	0.00011	0.00011
Copper	<0.001	<0.001	<0.002	0.0024	<0.001	0.00082	0.0015	<0.001	<0.0005	<0.0005	0.00059	0.00061
Iron	0.166	0.489	0.834	1.04	1.02	1.02	1	1	1.03	1.03	1.01	0.954
Lead	<0.0001	<0.0001	<0.001	<0.001	0.00021	<0.00005	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	0.000119
Lithium	0.0102	0.0126	0.012	0.013	0.0108	0.0122	0.0118	0.0112	0.0104	0.011	0.0105	0.00979
Magnesium	210	201	216	223	202	230	219	211	221	212	213	194
Manganese	0.289	0.285	0.346	0.331	0.36	0.356	0.369	0.365	0.379	0.368	0.349	0.337
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0295	0.0268	0.0268	0.0286	0.026	0.0278	0.0267	0.028	0.0253	0.0251	0.0247	0.0245
Nickel	0.0111	0.0024	0.0021	0.0027	<0.001	0.00156	<0.001	<0.001	0.00055	<0.0005	<0.0005	0.00113
Phosphorus	<0.3	<0.3	<0.3	<0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	14.7	17.1	16.4	18	14.7	14.2	14	13.5	14.1	14.3	13.3	13.6
Selenium	0.00843	<0.0002	<0.002	<0.002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001
Silicon	10.8	13	14.4	13.7	14.7	15.2	14.3	14.4	14.8	14.4	14.1	13.9
Silver	0.000022	<0.00002	<0.00004	0.000106	<0.00002	<0.00001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	162	183	175	179	175	173	167	163	163	157	155	165
Strontium	2.68	4.12	3.89	3.41	3.31	3.66	3.45	3.6	3.08	3.23	3.13	3.35
Sulphur					526	570	552	547	540	550	529	518
Thallium	<0.00002	<0.00002	<0.0004	<0.0004	<0.00002	<0.00001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0002	<0.0002	<0.001	<0.001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	0.00011
Titanium	0.017	0.012	0.011	0.01	<0.02	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extracti										<0.00002		
Uranium	0.0263	0.00315	0.00284	0.00253	0.00269	0.00312	0.00286	0.00288	0.00285	0.00286	0.00279	0.00265
Vanadium	0.0025	<0.002	<0.002	<0.002	<0.002	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001
Zinc	<0.006	0.0108	<0.005	<0.005	<0.006	<0.003	<0.006	<0.006	<0.003	<0.003	<0.003	0.0044
Organics												
Carbon Organic (Dissolved)	5.09	15.4	8.26	5.15	3.96	4.66	4.17	3.85	3.38			
Carbon Organic (Total)	4.8	14.1	8.11	4.6	3.96	4.22	3.57	3.8	3.39	3.25	3.27	5.24
Nitrogen Organic (Dissolved)		0.193	0.107		0.174							
Nitrogen Organic (Total)	0.067	0.209	0.172			0.159						
ALS LAB ID	**L1092874**	**L1113319**	**L1160966**	**L1201474**	**L1247459**	**L1275748**	**L1307601**	**L1348177**	**L1393344**	**L1431355**	**L1475117**	**L1516193**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D2.2 - GROUNDWATER QUALITY DATA

Site ID	MW12-01							
Site ID	MW12-01	MW12-01	MW12-01	MW12-01	MW12-01	MW12-01	MW12-01	MW12-01
Analytes	Dec-12	Mar-13	May-13	Aug-13	Nov-13	Mar-14	Jun-14	Sep-14
In Situ Parameters								
Conductivity µS/cm		2229	2558	2855	3.33	3431	2379	2406
Oxygen Dissolved %		1.5	2	29.3	2.9	79.9	12	6.1
Oxygen Dissolved	1.8	0.21	0.22	3.24	0.34	9.15	1.35	0.68
pH (unitless)	7.25	7.22	7.38	7.48	7.49	7.64	7.47	7.49
Redox Potential mV	130	191	224	236	2.17	71.4	99.3	101
Salinity ppt		1.71	1.95	2.11	1.75	1.81	1.78	1.78
Specific Conductivity µS/cm	3229	3265	3695	3976	2.27	2343	3385	3376
Temperature °C	8.5	8.4	8.9	10.3	8.22	8.42	9.44	9.96
Total Dissolved Solids		2121	2403	2582	38200	2230	2201	2196
Turbidity NTU		-1.8	0	1.5	-2.2	1.9	2	1.6
Physical Tests								
Acidity to pH 8.3 (as CaCO3)				<1				
Alkalinity (Total as CaCO3)	175	178	173	177	189	183	185	179
Bicarbonate Alkalinity		178	173	177	189	183	185	179
Carbonate Alkalinity		<2	<2	<2	<2	<2	<2	<1
Color TCU		<5	<5	<5				
Hardness as CaCO3 (Dissolved)	1760	1620	1810		1870	1950	1860	1920
Hydroxide Alkalinity		<2	<2	<2	<2	<2	<2	<1
pH (unitless)	8.05	7.98	7.98	8.06	7.88	8.07	8.1	8.08
Specific Conductivity µS/cm	3190	3340	3280	3260	3290	3350	3440	3410
Total Dissolved Solids	3160	3070	3350	3270	3200	3290	3420	3300
Total Suspended Solids	<3	<3	8.7	7.3			7.3	3
Turbidity NTU	0.46	0.43	0.19	0.19			0.5	0.15
Dissolved Anions								
Bromide	<1	<1	<1	<1	<1	<1	<1	<1
Chloride	18	17	19	17	20	17	19	17
Fluoride	<0.4	0.47	<0.4	0.46	<0.4	<0.4	0.189	0.165
Sulphate	1670	1660	1700	1720	1730	1790	1790	1800
Nutrients								
Ammonia (Total)	<0.005	0.0213	0.0058	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrate (as N)	88.2	80.6	88.4	89.4	88.5	90.3	88	87.1
Nitrite (as N)	0.334	0.429	0.318	0.204	0.163	0.194	0.097	0.168
Nitrogen (Dissolved)		85.9						
Nitrogen (Total)	88.5	110	83.5	83.5				
Nitrogen Kjeldahl (Total)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Orthophosphate (Dissolved)	0.0037				0.0154	0.0165	0.0183	0.0164
Phosphorus - Dissolved	0.0047	0.0153	0.0183	0.0192	0.0194	0.0185	0.0191	0.0191
Phosphorus - Total		0.0153		0.0182	0.0193	0.0186	0.0202	0.0169
Cyanide								
Cyanide (Free)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals								
Aluminum	0.0022	0.0042	0.0031	0.0021	0.0023	0.0031	0.0041	0.0044
Antimony	0.00398	0.00372	0.00412	0.00353	0.00372	0.00371	0.00396	0.00364
Arsenic	0.00578	0.0043	0.00521	0.00503	0.00488	0.00472	0.00525	0.00494
Barium	0.0315	0.0487	0.0404	0.0347	0.0364	0.0326	0.0297	0.031
Beryllium	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002
Bismuth	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001
Boron	0.115	0.098	0.109	0.101	0.12	0.115	0.105	0.117
Cadmium	<0.0007	<0.001	0.000712	<0.0008	<0.0015	<0.0012	<0.001	<0.0001
Calcium	245	243	238	242	240	258	254	245
Chromium	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002
Cobalt	0.00192	0.00122	0.00092	0.00088	0.00081	0.00074	0.00073	0.00071
Copper	0.00712	0.003	0.00311	0.00335	0.00301	0.00271	0.00312	0.00479
Dissolved Cadmium (by saltwater ex						<0.00015	<0.00015	<0.00012
Iron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.0001
Lithium	0.0296	0.0328	0.0294	0.0282	0.033	0.0331	0.028	0.0318
Magnesium	279	247	295	296	310	317	298	318
Manganese	0.0875	0.0879	0.068	0.0598	0.0545	0.0529	0.0458	0.0461
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	3.42	3.37	3.26	3.1	3.41	3.59	3.62	3.55
Nickel	0.0148	0.01	0.00999	0.0124	0.0128	0.0123	0.0142	0.0136
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	41.7	41.2	41.3	44.1	49.5	46.8	45.8	46.6
Selenium	0.0405	0.0425	0.0423	0.0414	0.0437	0.044	0.0463	0.0394
Silicon	7.35	6.93	6.92	7.23	7.36	7.33	7.19	7.27
Silver	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002
Sodium	151	147	145	144	150	151	132	148
Strontium	3.51	3.58	3.35	3.01	3.4	3.44	3.51	3.45
Sulphur	541	448	532	538	553	553	561	587
Thallium	<0.00002	0.000019	0.000015	0.000017	0.000012	0.000012	<0.00002	<0.00002
Tin	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002
Titanium	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
Uranium	0.0146	0.0141	0.0138	0.0138	0.0142	0.0145	0.0153	0.0152
Vanadium	0.004	0.0026	0.0031	0.003	0.0028	0.0027	0.0029	0.0029
Zinc	<0.002	0.0024	0.0022	0.0024	0.0027	0.0038	<0.002	0.0032
Total Metals								
Aluminum	0.0154	0.0084	0.0072	0.0036	0.0045	0.0056	0.0168	0.0166
Antimony	0.00401	0.00392	0.00434	0.00354	0.00389	0.00377	0.00412	0.00395
Arsenic	0.00586	0.00434	0.0053	0.00494	0.00506	0.00486	0.00531	0.00564
Barium	0.0312	0.0497	0.0422	0.0365	0.0359	0.0314	0.0284	0.0335
Beryllium	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002
Bismuth	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001
Boron	0.117	0.104	0.124	0.108	0.132	0.127	0.112	0.132
Cadmium	<0.0007	<0.001	<0.0009	<0.0008	0.0016	<0.0012	<0.001	<0.0002
Calcium	240	247	236	242	234	254	242	257
Chromium	<0.0002	0.00016	<0.0002	0.00023	0.00012	<0.0002	0.00024	<0.0002
Cobalt	0.0019	0.0013	0.00101	0.00093	0.00084	0.00081	0.00091	0.00081
Copper	0.0094	0.00371	0.00486	0.0035	0.00346	0.00309	0.004	0.0055
Iron	0.028	0.045	0.029	0.016	0.014	0.033	0.102	0.036
Lead	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00015	0.00034	<0.0001
Lithium	0.0299	0.0352	0.0336	0.0279	0.0341	0.0338	0.0287	0.0345
Magnesium	275	255	300	298	308	314	297	340
Manganese	0.0871	0.0934	0.0751	0.0606	0.0563	0.0539	0.0499	0.0519
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	3.36	3.62	3.54	3.13	3.64	3.57	3.71	3.95
Nickel	0.0148	0.0105	0.0114	0.0122	0.0131	0.0129	0.0139	0.0154
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	40.7	40.7	42.3	43.5	50.3	45.7	44.1	49.7
Selenium	0.0395	0.0437	0.0447	0.0413	0.0443	0.0431	0.0454	0.0437
Silicon	7.33	7.13	6.99	7.25	7.39	7.31	7.13	7.7
Silver	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002
Sodium	146	153	152	144	154	145	131	161
Strontium	3.46	3.71	3.62	2.98	3.57	3.41	3.62	3.74
Sulphur	543	473	540	552	564	561	563	633
Thallium	0.00002	0.000019	0.000023	0.000021	0.000014	0.000015	<0.00002	<0.00002
Tin	<0.0002	0.00026	0.00019	0.00018	0.00011	0.00046	0.00148	0.00051
Titanium	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
Total Cadmium (by saltwater extracti						<0.00015	<0.00015	<0.0001
Uranium	0.0142	0.0148	0.0146	0.0141	0.0153	0.0148	0.016	0.0166
Vanadium	0.004	0.0027	0.0033	0.0033	0.0032	0.003	0.0032	0.0034
Zinc	<0.006	0.0035	<0.003	0.0032	0.0031	<0.003	<0.006	0.0065
Organics								
Carbon Organic (Dissolved)	2.69	2.72	2.51	2.72	2.59			
Carbon Organic (Total)	2.69	2.45	2.42	2.82	2.41	2.34	2.25	2.48
Nitrogen Organic (Dissolved)		<17						
Nitrogen Organic (Total)		29						
ALS LAB ID	L1245169	L1277798	L1308855	L1348395	L1394557	L1435486	L1475661	L1514758

Site ID	MW12-02							
Site ID	MW12-02	MW12-02	MW12-02	MW12-02	MW12-02	MW12-02	MW12-02	MW12-02
Analytes	Dec-12	Mar-13	May-13	Aug-13	Nov-13	Mar-14	Jun-14	Sep-14
In Situ Parameters								
Conductivity µS/cm		2122	2540	3924	3.25	3401	2469	2435
Oxygen Dissolved %		11.2	28.3	35.8	2.4	24.1	17.1	2
Oxygen Dissolved	3.56	1.25	3.29	4.09	0.27	2.84	1.85	0.22
pH (unitless)	7.36	7.29	7.33	7.59	7.53	7.79	7.56	7.58
Redox Potential mV	167	165	171	221	63.7	30.4	119	87.8
Salinity ppt		1.62	1.92	2.08	1.7	1.79	1.76	1.76
Specific Conductivity µS/cm	3156	3090	3640	3924	2.18	2281	3340	3343
Temperature °C	7.36	8.54	9.17	9.56	7.94	7.76	11.4	10.8
Total Dissolved Solids		2011	2366	2550	2100	2212	2172	2171
Turbidity NTU		-3.9	0	2.5	-1.9	2.1	2.7	2
Physical Tests								
Acidity to pH 8.3 (as CaCO3)				4.7				
Alkalinity (Total as CaCO3)	171	171	176	174	186	169	188	181
Bicarbonate Alkalinity		171	176	174	186	169	188	181
Carbonate Alkalinity		<2	<2	<2	<2	<2	<2	<1
Color TCU		<5	<5	<5				
Hardness as CaCO3 (Dissolved)	1730	1740	1780		1830	1890	1810	1880
Hydroxide Alkalinity		<2	<2	<2	<2	<2	<2	<1
pH (unitless)	8.1	8.05	7.95	8.09	7.92	8.1	8.13	8.09
Specific Conductivity µS/cm	3120	3290	3260	3240	3260	3340	3360	3370
Total Dissolved Solids	3390	1470	2890	3240	3130	3190	3160	3150
Total Suspended Solids	<3	<3	10	8.6			5.2	<3
Turbidity NTU	0.72	0.78	0.28	0.74			0.78	0.19
Dissolved Anions								
Bromide	<1	<1	<1	<1	<1	<1	<1	<1
Chloride	15	15	17	15	19	15	16	17
Fluoride	<0.4	0.49	<0.4	<0.4	<0.4	<0.4	0.186	0.175
Sulphate	1650	1710	1720	1740	1720	1800	1790	1760
Nutrients								
Ammonia (Total)	0.0055	0.0203	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrate (as N)	76.3	69.6	83.4	82.6	77.7	77.7	83.3	87.2
Nitrite (as N)	0.527	0.426	0.545	0.533	0.37	0.28	0.451	0.533
Nitrogen (Dissolved)		73.5						
Nitrogen (Total)	76.8	70.1	77.5	73.6				
Nitrogen Kjeldahl (Total)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Orthophosphate (Dissolved)	0.0079				0.018	0.0277	0.0269	0.0225
Phosphorus - Dissolved	0.0075	0.019	0.023	0.0185	0.0213	0.0317	0.0253	0.0248
Phosphorus - Total		0.0212		0.0206	0.0216	0.0321	0.0274	0.0195
Cyanide								
Cyanide (Free)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals								
Aluminum	<0.002	0.0017	0.0015	0.0017	0.0016	0.002	0.0041	0.0024
Antimony	0.0169	0.0108	0.0107	0.00953	0.00821	0.0075	0.0196	0.017
Arsenic	0.0229	0.0104	0.0139	0.0159	0.0138	0.011	0.0224	0.0261
Barium	0.0212	0.0334	0.0304	0.023	0.026	0.0275	0.0217	0.0224
Beryllium	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
Bismuth	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005
Boron	0.117	0.094	0.116	0.102	0.12	0.116	0.114	0.12
Cadmium	<0.00068	<0.001	<0.001	<0.0008	<0.0014	<0.0012	<0.001	<0.0002
Calcium	233	235	232	243	235	230	238	237
Chromium	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
Cobalt	0.00275	0.00187	0.00171	0.00179	0.00166	0.00098	0.00159	0.0021
Copper	0.0173	0.00744	0.00654	0.00851	0.00798	0.00331	0.00579	0.0094
Dissolved Cadmium (by saltwater ex						<0.00015	<0.00015	<0.00012
Iron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005
Lithium	0.0301	0.0341	0.0311	0.0288	0.0336	0.0343	0.0305	0.036
Magnesium	278	279	291	291	303	321	296	312
Manganese	0.11	0.121	0.109	0.101	0.1	0.0752	0.0845	0.0991
Mercury	0.000022	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	3.33	3.33	3.32	3.03	3.32	3.39	3.48	3.44
Nickel	0.0282	0.0265	0.0224	0.0232	0.0214	0.0271	0.0235	0.0218
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	38.1	44.8	39.4	37.9	42.4	56.9	44.2	41
Selenium	0.04	0.0396	0.0395	0.0371	0.0401	0.0418	0.0414	0.0409
Silicon	7.29	6.97	7.13	7.45	7.52	7.98	7.31	7.31
Silver	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001
Sodium	153	160	159	145	154	154	135	152
Strontium	3.65	3.46	3.63	3.28	3.61	3.47	3.69	3.72
Sulphur	539	510	529	531	553	562	550	571
Thallium	0.000042	0.000037	0.000031	0.000025	0.000025	0.00003	0.000021	0.000021
Tin	<0.0002	0.00012	0.00017	<0.0001	<0.0001	0.00015	<0.0002	<0.0001
Titanium	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
Uranium	0.0117	0.0109	0.0131	0.0127	0.0131	0.0103	0.0135	0.0147
Vanadium	0.0039	0.0018	0.0023	0.0032	0.0031	0.0022	0.0023	0.0029
Zinc	<0.002	0.001	0.0021	0.0014	0.0011	0.0016	0.0044	0.0041
Total Metals								
Aluminum	0.0264	0.0294	0.017	0.0151	0.004	0.0201	0.0406	0.009
Antimony	0.0163	0.0107	0.0109	0.00938	0.00865	0.00753	0.0191	0.0171
Arsenic	0.0226	0.0102	0.0135	0.016	0.0138	0.0112	0.0227	0.0259
Barium	0.0221	0.0328	0.0298	0.0239	0.026	0.0273	0.0225	0.0224
Beryllium	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
Bismuth	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005
Boron	0.11	0.094	0.127	0.108	0.132	0.125	0.14	0.127
Cadmium	<0.00068	<0.001	<0.001	<0.00085	<0.0015	<0.0012	<0.001	<0.0001
Calcium	225	222	228	241	228	224	233	246
Chromium	0.00037	0.00035	0.00023	0.00034	0.00015	0.00021	0.00043	0.00011
Cobalt	0.00283	0.002	0.0018	0.00182	0.0017	0.00102	0.00165	0.00215
Copper	0.0205	0.00945	0.00734	0.0102	0.00838	0.00451	0.0083	0.0105
Iron	0.036	0.043	0.026	0.024	0.012	0.029	0.082	0.011
Lead	<0.0001	<0.00005	0.000062	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005
Lithium	0.0277	0.0343	0.0342	0.0296	0.0345	0.0343	0.0325	0.0337
Magnesium	270	275	284	294	302	317	300	326
Manganese	0.111	0.123	0.114	0.103	0.101	0.0767	0.0892	0.101
Mercury	0.000056	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	3.12	3.26	3.44	3.05	3.44	3.42	3.46	3.67
Nickel	0.0293	0.0283	0.0228	0.0241	0.0222	0.028	0.0247	0.0227
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	36.4	42.5	38.6	38.2	43.2	55.4	43.3	42.9
Selenium	0.0388	0.038	0.0376	0.0377	0.0396	0.0418	0.0406	0.041
Silicon	7.16	6.9	7.12	7.67	7.55	7.96	7.43	7.69
Silver	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001
Sodium	154	162	157	150	160	156	142	161
Strontium	3.36	3.49	3.74	3.11	3.73	3.47	3.7	3.91
Sulphur	533	518	526	553	572	571	569	602
Thallium	0.000039	0.000036	0.000035	0.000026	0.000023	0.00003	0.000022	0.000021
Tin	<0.0002	0.00017	0.00027	<0.0001	<0.0001	0.00024	<0.0002	<0.0001
Titanium	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
Total Cadmium (by saltwater extracti						<0.00015	<0.00015	<0.0001
Uranium	0.0112	0.0106	0.0139	0.0129	0.0132	0.0101	0.0134	0.0153
Vanadium	0.0041	0.0019	0.0025	0.0036	0.0034	0.0026	0.0028	0.003
Zinc	<0.006	0.0039	<0.003	<0.003	<0.003	<0.003	<0.006	0.0049
Organics								
Carbon Organic (Dissolved)	2.49	2.71	2.72	2.58	2.6			
Carbon Organic (Total)	2.44	2.5	2.57	2.63	2.48	2.24	2.28	2.38
Nitrogen Organic (Dissolved)		<15						
Nitrogen Organic (Total)		<14						
ALS LAB ID	L1245169	L1277798	L1308855	L1348395	L1394557	L1435486	L1475661	L1514758

Site ID	MW12-04						
Site ID	MW12-04	MW12-04	MW12-04	MW12-04	MW12-04	MW12-04	MW12-04
Analytes	Dec-12	Mar-13	May-13	Aug-13	Nov-13	Apr-14	Jun-14
In Situ Parameters							
Conductivity µS/cm		823	914	1023	1.18	840	847
Oxygen Dissolved %		0.4	1	56.2	1.2	48.9	16.9
Oxygen Dissolved	0.48	0.05	0.12	6.38	0.15	5.74	1.8
pH (unitless)	7.78	7.72	7.77	7.83	7.94	7.97	7.96
Redox Potential mV	51.6	-76.1	-116	151	-143	-160	-124
Salinity ppt		0.61	0.67	0.73	0.59	0.62	0.59
Specific Conductivity µS/cm	1159	1217	1333	1447	0.787	1237	1186
Temperature °C	7	7.93	8.54	9.67	7.66	8.16	10.1
Total Dissolved Solids		791	866	941	764	806	770
Turbidity NTU		3.4	0	6.4	2.7	-0.4	15.7
Physical Tests							
Acidity to pH 8.3 (as CaCO3)							
Alkalinity (Total as CaCO3)	219	222	193	182	202	185	186
Bicarbonate Alkalinity		222	193	182	202	185	186
Carbonate Alkalinity		<2	<2	<2	<2	<2	<1
Color TCU		7.1	<5	<5	<5		
Hardness as CaCO3 (Dissolved)	405	422	359	395		460	415
Hydroxide Alkalinity		<2	<2	<2	<2	<2	<1
pH (unitless)	8.28	8.24	8.24	8.13	8.25	8.29	8.18
Specific Conductivity µS/cm	1150	1260	1210	1220	1260	1250	1200
Total Dissolved Solids	823	772	770	851	838	899	825
Total Suspended Solids	7.7	16.2	16	8.1		3.3	24.8
Turbidity NTU	2.27	7.27	3.03	3.92		1	7.71
Dissolved Anions							
Bromide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	6.5	5.6	14.6	18.5	23.1	28.2	24.6
Fluoride	<0.2	0.35	0.23	0.37	<0.2	<0.2	0.203
Sulphate	436	457	436	443	471	484	436
Nutrients							
Ammonia (Total)	0.243	0.211	0.306	0.316	0.321	0.377	0.372
Nitrate (as N)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrite (as N)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen (Dissolved)		0.356					
Nitrogen (Total)	0.333	0.355	0.418	0.417			
Nitrogen Kjeldahl (Total)	0.333	0.4	0.449	0.443	0.43	0.446	0.582
Orthophosphate (Dissolved)	0.0688				0.14	0.126	0.127
Phosphorus - Dissolved	0.082	0.0816	0.168	0.181	0.16	0.143	0.138
Phosphorus - Total		0.0951		0.198	0.17	0.143	0.18
Cyanide							
Cyanide (Free)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals							
Aluminum	0.0068	0.0043	0.0034	0.0025	0.0025	0.0032	0.0024
Antimony	0.00063	0.00016	0.00012	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0118	0.00711	0.00426	0.00473	0.00461	0.00375	0.00433
Barium	0.0696	0.0983	0.0801	0.0746	0.0703	0.0627	0.0558
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.098	0.087	0.097	0.096	0.102	0.098	0.092
Cadmium	<0.00005	<0.00005	<0.00005	<0.00005	<0.00004	<0.00003	<0.00005
Calcium	43.4	51.4	40.3	41.7	45.4	47.6	45.7
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.00045	0.00084	0.00064	0.00048	0.00043	0.00041	0.00045
Copper	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Dissolved Cadmium (by saltwater ex						<0.00002	<0.00002
Iron	0.012	0.024	0.03	0.024	0.026	0.024	0.078
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.00255	0.00119	0.00166	0.00238	0.0035	0.0028	0.00278
Magnesium	72	71.4	62.8	70.6	79.4	82.7	73.1
Manganese	0.092	0.394	0.346	0.3	0.272	0.24	0.256
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.204	0.181	0.166	0.148	0.145	0.12	0.125
Nickel	0.00123	0.00331	0.00188	0.00137	0.00149	0.00162	0.00146
Phosphorus	0.067	0.088	0.165	0.17	0.162	0.135	0.153
Potassium	43.7	42.3	37.5	36.9	40.8	39	39.7
Selenium	0.00017	0.00012	0.00042	0.00015	<0.0001	<0.0001	<0.0001
Silicon	12.4	11.3	10.8	11.6	12.3	12.8	12.3
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	92.2	101	116	106	97.8	91.3	92.4
Strontium	0.276	0.272	0.257	0.287	0.318	0.351	0.341
Sulphur	143	150	136	144	149	153	142
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0001	0.00025	<0.0001	<0.0001	<0.0001	<0.0001	0.00017
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.000847	0.00128	0.00133	0.00105	0.000958	0.00099	0.0011
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	<0.001	<0.001	<0.001	<0.001	<0.001	0.0015	0.0012
Total Metals							
Aluminum	0.216	0.352	0.299	0.175	0.0656	0.0861	0.434
Antimony	0.00061	0.00019	0.00014	<0.0001	<0.0001	0.00013	0.00019
Arsenic	0.0113	0.00733	0.00436	0.00436	0.00463	0.00379	0.00445
Barium	0.0695	0.106	0.0849	0.0737	0.0711	0.0616	0.0588
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.1	0.089	0.1	0.1	0.119	0.102	0.096
Cadmium	<0.00006	<0.00005	<0.00005	<0.00005	<0.00005	<0.00003	<0.0001
Calcium	42.2	52.6	39.6	40.1	45.3	46.1	42.9
Chromium	0.00062	0.0011	0.00078	0.00054	0.00027	0.00041	0.00139
Cobalt	0.00061	0.00112	0.00089	0.00059	0.00051	0.0005	0.00083
Copper	0.00216	0.00254	0.00222	0.00089	0.00085	0.00114	0.00362
Iron	0.304	0.516	0.415	0.261	0.104	0.145	0.697
Lead	<0.00005	0.000132	0.000127	0.000052	<0.00005	0.000161	0.000188
Lithium	0.00263	0.00157	0.00168	0.0025	0.00365	0.00285	0.00282
Magnesium	70.4	72.2	64.6	67.4	78.5	76.8	68.8
Manganese	0.0996	0.418	0.364	0.292	0.287	0.251	0.269
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.208	0.194	0.172	0.149	0.154	0.127	0.124
Nickel	0.00192	0.00489	0.00311	0.00201	0.00197	0.00208	0.00344
Phosphorus	0.077	0.114	0.186	0.178	0.161	0.155	0.179
Potassium	41.4	43.3	38.9	36.6	43.3	37.2	36.8
Selenium	0.00018	0.00015	0.0004	0.00017	<0.0001	<0.0001	0.0001
Silicon	12.5	12.5	11.7	11.7	12.4	12.5	12.5
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	91.4	104	115	101	102	90.7	88.7
Strontium	0.287	0.286	0.266	0.292	0.336	0.344	0.337
Sulphur	142	156	140	141	155	152	139
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.00013	0.00047	0.0002	0.00011	<0.0001	0.00056	0.00057
Titanium	0.012	0.024	0.02	0.011	<0.01	<0.01	0.026
Total Cadmium (by saltwater extracti						<0.00002	<0.00002
Uranium	0.000862	0.00137	0.0014	0.00104	0.00101	0.000998	0.00105
Vanadium	0.0013	0.0019	0.0015	<0.001	<0.001	<0.001	0.0023
Zinc	<0.003	<0.003	0.0079	<0.003	<0.003	<0.003	0.0034
Organics							
Carbon Organic (Dissolved)	2.6	3.81	2.6	2.5	2.48		
Carbon Organic (Total)	2	3.6	2.52	2.49	2.26	2.32	2.16
Nitrogen Organic (Dissolved)		0.144					
Nitrogen Organic (Total)		0.143					
ALS LAB ID	L1245169	L1277798	L1308855	L1348177	L1393344	L1439433	L1478436

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D2.2 - GROUNDWATER QUALITY DATA

Site ID					Residential Wells					Pumping Well	
Site ID	MW12-04	RES-4	RES-4	RES-6	RES-2	RES-3	RES-5	RES-1	RES-1	PW01	PW01
Analytes	Sep-14	Mar-13	Oct-14	Oct-14	Oct-14	Oct-14	Oct-14	Mar-13	Oct-14	Oct-14	Oct-14
In Situ Parameters											
Conductivity µS/cm	832		901	2403	1555	911	2935		2445		
Oxygen Dissolved %			6.2	24.6	47.8	61.3	65.8		42.2		
Oxygen Dissolved			0.69	2.67	4.83	6.63	7.18		4.46		
pH (unitless)	8.01		7.45	7.59	7.54	7.78	7.94		7.8		
Redox Potential mV	55.6		167	-28.6	21.2	143	103		56.3		
Salinity ppt	0.58		0.62	1.71	0.99	0.61	2.13		1.76		
Specific Conductivity µS/cm	1164		1230	3254	1941	1226	4004		3342		
Temperature °C	10.1		11	11.3	14.6	11.6	11.1		10.9		
Total Dissolved Solids	756		0.8	2.11	1.26	0.797	2.6		2.17		
Turbidity NTU	3.1										
Physical Tests											
Acidity to pH 8.3 (as CaCO3)											
Alkalinity (Total as CaCO3)	189	495	427	243	285	488	24.9	450	671	63	57.1
Bicarbonate Alkalinity	189		427	243	285	488	24.9		671	63	57.1
Carbonate Alkalinity	<1	5.1	<2	<2	<2	<1	<2	<5	<20	<1	<1
Color TCU											
Hardness as CaCO3 (Dissolved)	419		489	1600	1100	606	437	2580	1340	1080	1700
Hydroxide Alkalinity	<1		<2	<2	<2	<1	<2		<20	<1	<1
pH (unitless)	8.28	7.73	8.15	8.03	7.99	8.35	7.33	7.89	8.23	7.92	7.77
Specific Conductivity µS/cm	1180	1910	1200	3160	1910	1260	4080	4650	3260	2460	3580
Total Dissolved Solids	791	1290	815	3110	1790	805	3150	4380	2510	2050	3520
Total Suspended Solids	3.7		<3	<3	<3	<3	<3		20.7	<3	<3
Turbidity NTU	0.56	0.19	0.23	5.66	1.09	1.16	0.5	151	11.2	1.38	2.18
Dissolved Anions											
Bromide	<0.5		<0.5	<1	<1	<0.5	<1		<1	<1	<1
Chloride	26.6	136	76.1	32	14	44.2	98	253	133	37	64
Fluoride	0.038	0.44	0.293	0.098	0.317	0.28	<0.4	0.44	0.168	0.108	0.116
Sulphate	423	524	200	1960	1010	209	2090	2440	1230	1440	2290
Nutrients											
Ammonia (Total)	0.397	0.0058	0.0058	0.945	<0.005	0.0073	0.106	0.0292	0.009	0.0214	0.0114
Nitrate (as N)	<0.05	2.18	0.317	<0.1	<0.1	0.071	0.24	21.1	43.3	<0.1	<0.1
Nitrite (as N)	<0.01	<0.02	<0.01	<0.02	<0.02	<0.01	<0.02	0.123	0.028	<0.02	<0.02
Nitrogen (Dissolved)											
Nitrogen (Total)											
Nitrogen Kjeldahl (Total)	0.536	0.37	0.502	1.05	0.12	0.602	0.169	<0.05	<0.05	0.098	0.068
Orthophosphate (Dissolved)	0.111		0.124	<0.001	0.0021	0.0656	<0.001		0.0092	<0.001	<0.001
Phosphorus - Dissolved	0.131		0.164	<0.002	0.0025	0.066	<0.002		0.0121	<0.002	<0.002
Phosphorus - Total	0.154		0.16	0.0037	0.006	0.0638	<0.002		0.0581	<0.002	<0.002
Cyanide											
Cyanide (Free)	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005
Cyanide (Total)	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005
Dissolved Metals											
Aluminum	0.0193									<0.001	<0.002
Antimony	<0.0001									<0.0001	<0.0002
Arsenic	0.0046									0.0185	0.0289
Barium	0.0506									0.0117	0.0105
Beryllium	<0.0001									<0.0001	<0.0002
Bismuth	<0.0005									<0.0005	<0.001
Boron	0.09									0.512	0.391
Cadmium	<0.00001									<0.00001	<0.00002
Calcium	45.7									238	377
Chromium	<0.0001									<0.0001	<0.0002
Cobalt	0.00039									<0.0001	<0.0002
Copper	0.00043									<0.0002	<0.0004
Dissolved Cadmium (by saltwater ext											
Iron	0.081									0.386	0.632
Lead	<0.00005									<0.00005	<0.0001
Lithium	0.0029									0.035	0.0563
Magnesium	74.1									118	184
Manganese	0.206									0.0319	0.0575
Mercury	<0.00001									<0.00001	<0.00001
Molybdenum	0.101									0.278	0.188
Nickel	0.00129									0.00133	<0.001
Phosphorus	0.121									<0.05	<0.05
Potassium	38									22.3	15.3
Selenium	<0.0001									<0.0001	<0.0002
Silicon	12.1									13.7	16.9
Silver	<0.00001									<0.00001	<0.00002
Sodium	89.9									176	281
Strontium	0.324									4.09	6.8
Sulphur	137									447	720
Thallium	<0.00001									<0.00001	<0.00002
Tin	0.00019									<0.0001	<0.0002
Titanium	<0.01									<0.01	<0.02
Uranium	0.000998									0.000015	<0.00002
Vanadium	<0.001									<0.001	<0.002
Zinc	0.0016									0.0063	0.0037
Total Metals											
Aluminum	0.0036	<0.01	<0.003	<0.003	<0.003	0.0034	<0.015	0.011	<0.006	0.0039	<0.006
Antimony	<0.0001	<0.0005	0.00018	<0.0001	0.00011	0.0002	<0.0005	<0.0005	0.00035	<0.0001	<0.0002
Arsenic	0.00474	0.00375	0.0052	<0.0001	0.00093	0.00312	<0.0005	0.0129	0.00459	0.019	0.0289
Barium	0.0515	0.063	0.0365	0.00798	0.0294	0.0601	0.00507	<0.02	0.00626	0.0116	0.0103
Beryllium	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0005		<0.0002	<0.0001	<0.0002
Bismuth	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0025		<0.001	<0.0005	<0.001
Boron	0.101	0.11	0.068	0.385	0.172	0.049	0.466	0.22	0.227	0.542	0.394
Cadmium	<0.00001	<0.0002	0.000014	<0.00001	0.000015	<0.00001	<0.00005	<0.0002	0.000034	<0.00001	<0.00002
Calcium	46.5	119	65.1	257	242	94.8	173	276	154	237	360
Chromium	<0.0001	<0.002	0.00019	0.00032	0.00011	0.00028	<0.0005	<0.002	0.00159	0.00026	<0.0002
Cobalt	0.0004		<0.0001	<0.0001	0.00012	<0.0001	<0.0005		0.00072	<0.0001	<0.0002
Copper	<0.0005	0.0066	0.0125	0.00075	0.0913	0.0207	0.0063	0.0156	0.0259	0.00098	0.0016
Iron	0.056	<0.03	<0.01	0.353	0.314	0.17	0.059	22.3	0.353	0.416	0.639
Lead	<0.00005	<0.0005	0.000243	0.000103	0.000519	0.000439	0.00272	0.00369	0.00578	0.000102	<0.0001
Lithium	0.00303		0.00799	0.0886	0.0109	0.00785	0.0066		0.0146	0.0358	0.0567
Magnesium	75.8	150	79.3	234	121	89.6	1.4	459	233	119	180
Manganese	0.211	<0.002	0.00987	0.158	0.037	0.0231	0.0136	0.31	0.0158	0.0329	0.0575
Mercury	<0.00001	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	<0.00001	<0.00001	<0.00001
Molybdenum	0.111		0.0236	0.0037	0.0156	0.021	0.02		0.0159	0.285	0.185
Nickel	0.00123		0.00397	<0.0005	0.00191	0.0013	0.004		0.0348	0.00141	<0.001
Phosphorus	0.127		0.138	<0.05	<0.05				<0.05	<0.05	<0.05
Potassium	39	21.4	21.6	20.7	13.9	14.5	84.4	39.3	30.5	22.6	14.8
Selenium	<0.0001	0.0029	0.00038	<0.0001	0.00011	0.00081	<0.0005	0.044	0.0246	<0.0001	<0.0002
Silicon	12.3		9.08	15.1	11.4	10.3	0.933		7.78	13.8	16.2
Silver	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00005		<0.00002	<0.00001	<0.00002
Sodium	93.1	128	86	239	81.8	62.9	751	385	349	178	283
Strontium	0.346		0.703	6.71	2.98	0.974	4.24		2.37	4.16	6.57
Sulphur	143		67.5	624	327	67.7	648		411	453	702
Thallium	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00005		<0.00002	<0.00001	<0.00002
Tin	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0005		0.00042	<0.0001	<0.0002
Titanium	<0.01		<0.01	<0.01	<0.01	<0.01	<0.05		<0.02	<0.01	<0.02
Total Cadmium (by saltwater extracti											
Uranium	0.00111	0.0046	0.00297	0.000091	0.00179	0.00282	<0.00005	0.0225	0.0146	0.000018	<0.00002
Vanadium	<0.001		0.0066	<0.001	0.0018	0.0046	<0.005		0.0034	<0.001	<0.002
Zinc	<0.003	<0.05	0.0094	0.02	0.0484	0.405	0.242	<0.05	0.167	0.0099	<0.006
Organics											
Carbon Organic (Dissolved)										1.81	1.88
Carbon Organic (Total)	2.29	7.11	9.33	2.45	2	11.3	0.77	5.9	3.28	1.74	1.93
Nitrogen Organic (Dissolved)											
Nitrogen Organic (Total)											
ALS LAB ID	**L1514758**	**L1281919**	**L1527496**	**L1527496**	**L1527496**	**L1528012**	**L1528012**	**L1280813**	**L1531115**	**L1537086**	**L1540210**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D2.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

APPENDIX D3

GWQ SUMMARY GUIDELINE DRINKING WATER

(Pages D3-1 to D3-19)

TABLE D3.1 -DRINKING WATER GUIDELINES
PAGE 1 OF 1

Analytes	BCWQG [2]	HC [3]
In Situ Parameters		
pH		6.5 to 8.5
Temperature °C	15	15
Total Dissolved Solids		500
Turbidity NTU		0.1
Physical Tests		
Color TCU	15	15
pH		6.5 to 8.5
Total Dissolved Solids		500
Dissolved Anions		
Bromide	0.05	0.01
Chloride	250	
Fluoride	1.5	1.5
Sulphate	*500*	*500*
Nutrients		
Nitrate (as N)	10	10
Nitrite (as N)		1
Cyanide		
Cyanide		0.2
Metals		
Aluminum	*0.2*	*0.2*
Antimony		0.006
Arsenic	0.025	0.01
Barium		1
Beryllium	0.004	
Boron	5	5
Cadmium		0.005
Chromium		0.05
Copper	*0.5*	*1*
Iron		*0.3*
Lead	0.05	0.01
Manganese		*0.05*
Mercury	0.001	0.001
Molybdenum	0.25	
Selenium	0.01	0.05
Sodium		*200*
Uranium		0.02
Zinc	*5*	*5*
Organics		
Total Organic Carbon	4	

M:\1\01\00246\31\A\Report\3 - Baseline Water Quality - GW SW\Rev0\Appendix\Appendix D - GWQ Data Tables\[Appendix D2 D3 D4 D5 - GWQ Data Compared with Guidelines Rev0.xlsx]D3.1 -DRINKIN(

NOTES:

1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. BCWQG - BC WATER QUALITY GUIDELINES FOR RAW DRINKING WATER (WORKING AND APPROVED).
3. HC - HEALTH CANADA - GUIDELINES FOR CANADIAN DRINKING WATER QUALITY - FTP COMMITTEE ON DRINKING WATER (DECEMBER 2010).
4. THIS SHADING INDICATED THAT THE VALUE EXCEEDS THE LIMITS OF THE BCWQG.
5. THIS SHADING INDICATED THAT THE VALUE EXCEED THE LIMITS OF THE HC - DRINKING WATER GUIDELINES.
6. THIS SHADING INDICATES THAT THE VALUE EXCEEDS THE BCWQG AND HC GUIDELINES FOR DRINKING WATER QUALITY.
7. GUIDELINES IN ITALICS ARE AESTHETIC OR OPERATIONAL GUIDELINES - NOT HEALTH-BASED.

NOTES:

1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE B1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D3.2 - GROUNDWATER QUALITY DATA

PAGE 1 OF 18

Site ID	MDL	AJGW01-D		AJGW02-D		AJGW02-S		AJGW03-D															
Site ID		AJGW01-D	AJGW01-D	AJGW02-D	AJGW02-D	AJGW02-S	AJGW02-S	AJGW03-D	AJGW03-D	AJGW03-D	AJGW03-D	AJGW03-D	AJGW03-D	AJGW03-D	AJGW03-D	AJGW03-D	AJGW03-D	AJGW03-D	AJGW03-D	AJGW03-D	AJGW03-D	AJGW03-D	AJGW03-D
Analytes		**Mar-08**	**Jun-10**	**Jul-08**	**Jun-10**	**Jul-08**	**Sep-08**	**Jul-08**	**Sep-08**	**Jun-10**	**Aug-10**	**Nov-10**	**Mar-11**	**May-11**	**Jul-11**	**Nov-11**	**Feb-12**	**Jun-12**	**Aug-12**	**Dec-12**	**Mar-13**	**May-13**	**Aug-13**
In Situ Parameters																							
Conductivity µS/cm	...	2081	1483	732	810	3651	2317	916	893	934	930	907	913	883	1040	887	843	1325	1220	895	853	941	1113
Oxygen Dissolved %	...	51.7	39.7	50.4	36	39.5	30.2	31.6	6.5	0.8	0.4	4.7	2.7	2.4	29.3		28.5	3.7		2.3	1.1	5.4	1.6
Oxygen Dissolved	...	5.95	4.37	5.44	4.03	4.02	3.35	3.48	0.73	0.09	0.04	0.53	0.31	0.27	3.14		3.16	0.37	0.1	0.27	0.13	0.61	0.18
pH (unitless)	...	8.57	7.74	9.33	10.5	6.81	7.38	7.46	7.56	7.61	6.57	7.74	7.57	7.32	7.83	7.62	7.93	7.75	6.16	7.75	7.65	7.03	7.54
Redox Potential mV	...		-28.2	-172	-17.8	-29.7	-49.7	-67	-57.8	-82.3	-1.7	-68.6	-44.5	-61.5			-287		-54	-100	-114	36.9	79.5
Salinity ppt	...													0.602			0.64		0.6		0.62	0.66	0.77
Specific Conductivity µS/cm	...	1434	2034	976	1134	4442	3185	1263	1245	1288	1260	1290	1278	1234	1379	1262	1273	928		1281	1241	1310	1517
Temperature °C	...		10.8	11.7	10	12.8	10.7	10.6	10.3	10.6	11.3	9.44	10.1	10.1	12.1	9.43	7.29	9.24	12.2	9.26	8.63	10.2	11
Total Dissolved Solids	...										819	839	831	803			927		779	832	807	852	987
Turbidity NTU	...														0	-5.8	1.6	0	3.7	2	18.6	0	1.2
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)	1	9.2	4.6	<1	<1	24	41.1	5.3	5.8	2	5.3	4.6	5.8	4.3	6.1				4.8		6.3	<1	
Alkalinity (Total as CaCO3)	1 to 2	293	254	59.8	<1	469	688	292	281	277	275	275	276	286	287	272	282	272	284	279	275	257	293
Bicarbonate Alkalinity	1 to 2	293	254	23.4	<1	469	688	292	281	277	275	275	276	286	287		282	272		279	275	257	293
Carbonate Alkalinity	1 to 2	<2	<2	36.4	<1	<1	<1	<2	<2	<2	<2	<1	<2	<2	<2		<2	<1		<1	<2	<2	<2
Color TCU	5	<5	<5	<5	<5	23	63.7	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	1080	1120	243	292	1090		586	588	647	633	596	599	613	619	609	596	594	629	607	617	558	607
Hydroxide Alkalinity	1 to 2	<2	<2	<1	<1	<1	<1	<2	<2	<2	<2	<1	<2	<2	<2		<2	<1		<1	<2	<2	<2
pH (unitless)	0.01 to 0.1	8.04	8.14	9.14	9.38	7.57	7.63	8.04	8.04	8.21	8.1	8.11	8.05	8.1	8.1	8.12	8.19	8.1	8.08	8.33	8.11	8.3	8.23
Specific Conductivity µS/cm	2	2150	1990	920	1030	4120	3190	1250	1240	1250	1270	1280	1270	1280	1320	1230	1210	1200	1220	1240	1250	1150	1300
Total Dissolved Solids	1 to 2	1630	1640	661	768	4180	2970	881	881	896	944	891	922	928	974	916	879	913	984	926	854	853	940
Total Suspended Solids	3	338	86.5	144	24.3	151	39.3	1280	<3	4.7	8	4	<3	<3	<3	3	3.3	<3	11.9	10	<5	<3	<3
Turbidity NTU	0.1	191	53.7	160	19.2	89.4	25.3	128	2.24	1.23	0.58	1.04	0.75	0.8	0.65	1.29	3.72	0.66	2.83	1.85	2.07	0.67	0.96
Dissolved Anions																							
Bromide	0.05 to 2.4	<2.5	<0.5	<0.05	<0.5	<2.5	<5	<0.05	<0.05	<0.5	<0.5	<0.5	<2.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	0.5 to 1	62	41.6	3.38	<5	152	104	8.29	7.25	7.3	9.1	8.1	9.9	11.1	10.7	8.3	8.5	8.7	9.6	9.1	8.4	8.9	9.2
Fluoride	0.02 to 0.4	<1	<0.2		<0.2	1.7	8.1	0.183	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.38	0.22	0.22	0.21	<0.2	<0.2	0.35	0.2	0.31
Sulphate	0.5 to 1	763	835	367	484	2020	1260	415	414	446	458	459	457	465	496	463	428	448	460	466	451	419	464
Nutrients																							
Ammonia (Total)	0.005 to 0.	0.108	<0.01	0.122	0.265	0.603	0.064		<0.02	0.015	<0.005	0.0087	0.0075	<0.005	0.0065	0.0153	0.0315	0.0698	0.0171	0.0127	0.0182	0.0473	0.0068
Nitrate (as N)	0.005 to 0.	35.3	25.7	<0.005	0.063	0.35	<0.5	<0.005	<0.005	<0.05	<0.05	<0.05	<0.05	<0.05	0.078	0.074	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrite (as N)	0.001 to 0.	0.185	0.022	<0.001	<0.01	0.132	0.23	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	0.012	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen (Dissolved)	0.05 to 0.1													0.15	0.17	0.07	0.05	0.26		0.132	0.093		
Nitrogen (Total)	0.0025 to 0.11																						
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.87	<0.5	0.35	0.348	8.41	7.77		0.092	0.087	0.105	0.116	0.134	0.153	0.08	0.146	0.163	0.295	0.146	0.128	0.158	0.173	0.128
Orthophosphate (Dissolved)	0.001 to 0.	0.0421	0.0455	0.0182	0.0033	0.0605	0.0489	0.0175	0.0161		0.0165	0.0145	0.0152	0.0165					0.0161				
Phosphorus - Dissolved	0.002 to 0.		0.148		0.0352						0.0169			0.0156	0.0152	0.0197	0.0288	0.0219		0.0148	0.0188	0.0275	0.0175
Phosphorus - Total	0.002 to 0.	0.0996		0.213		0.337	0.288	0.701	0.0204	0.0214	0.0217	0.0195	0.02	0.0271	0.0188	0.0289	0.0424	0.0305	0.0388	0.0237	0.0273	0.0335	0.0232
Cyanide																							
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	0.007	<0.005	<0.005	<0.005	0.0352		<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																							
Aluminum	0.001 to 0.	<0.025	<0.025	0.016	<0.01	<0.05		0.197	<0.01	<0.01	<0.01	<0.01		<0.01	<0.005	<0.003	<0.003	0.0016	<0.005	0.0013	0.0012	0.0024	0.0011
Antimony	0.0001 to (	<0.0025	<0.0025	<0.001	<0.001	<0.005		<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.0005	<0.0001	0.00014	0.00019	<0.0005	<0.0001	<0.0001	0.00016	<0.0001
Arsenic	0.0001 to (	0.0046	0.0062	0.0026	<0.001	<0.005		0.0062	0.0064	0.0066	0.0058	0.0064		0.0057	0.00554	0.00552	0.00591	0.00558	0.00592	0.00565	0.0054	0.00551	0.00532
Barium	5E-005 to	0.175	0.062	0.213	0.169	0.058		0.037	0.028	0.029	0.029	0.03		0.028	0.027	0.0275	0.0299	0.031	0.034	0.0281	0.0278	0.0304	0.0253
Beryllium	0.0001 to (	<0.005	<0.005	<0.002	<0.002	<0.01		<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	<0.001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to (													<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.2	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	0.26		<0.1	<0.1	<0.1	<0.1	<0.1		<0.1	<0.1	0.031	0.032	0.042	<0.1	0.031	0.033	0.033	0.026
Cadmium	1E-005 to	<0.000085	0.000119	<0.00085	<0.001	<0.00017		0.000481	<0.000034	0.000055	<0.00015	<0.0002		<0.000034	<0.0003	0.000013	0.000015	0.000033	<0.000017	0.000012	<0.00001	0.000013	<0.00001
Calcium	0.05 to 0.1	135	139	53.2	96.1	177		73.3	73.8	79.3	78	74.8		77.7	76.1	76	73	75.1	77.8	73.9	75.2	70	78.9
Chromium	0.0001 to (	<0.005	<0.005	<0.002	<0.002	<0.01		<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	<0.001	0.00013	<0.0001	0.00043	<0.001	0.00027	<0.0001	0.00021	<0.0001
Cobalt	0.0001 to (	0.0036	<0.0015	<0.0006	<0.0006	0.0192		<0.0006	<0.0006	<0.0006	<0.0006	<0.0006		<0.0006	<0.0003	0.00012	0.00066	0.00018	<0.0003	0.00013	0.00014	0.00043	0.00011
Copper	0.0002 to (	<0.005	<0.005	<0.002	<0.002	0.093		<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	<0.002	<0.0005	<0.0005	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002
Dissolved Cadmium (by saltwater	0.00002																						
Iron	0.01 to 0.0	0.041	<0.03	<0.03	<0.03	0.231		0.085	0.074	0.089	0.082	0.088		0.106	0.097	0.136	0.156	0.124	0.134	0.125	0.14	0.079	0.119
Lead	5E-005 to	<0.0025	<0.0025	<0.001	<0.001	<0.005		<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.0005	<0.00005	<0.00005	<0.00005	<0.0005	0.00008	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to (	<0.025	<0.025	0.013	0.011	<0.05		<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.005	0.00479	0.00503	0.00484	0.0052	0.00496	0.00463	0.00442	0.00377
Magnesium	0.1	180	188	26.7	12.7	157		97.8	97.9	109	106	99.4		102	104	102	100	98.8	106	103	104	93.1	99.6
Manganese	5E-005 to	1.04	0.12	0.00335	<0.0006	1.71		0.287	0.268	0.325	0.269	0.287		0.292	0.249	0.327	0.321	0.296	0.317	0.316	0.284	0.271	0.284
Mercury	1E-005 to	<0.00002	<0.00001	<0.00002	<0.00001	0.000032		<0.00002	<0.00002	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to	0.556	0.593	0.492	0.377	0.231		0.0452	0.0472	0.0551	0.0437	0.0455		0.0458	0.043	0.0388	0.0467	0.0449	0.0513	0.0497	0.0478	0.0529	0.047
Nickel	0.0005 to (	0.0235	0.0128	<0.002	<0.002	0.028		<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	<0.001	0.00114	0.00108	0.00098	<0.001	0.00075	0.00157	0.00627	0.00058
Phosphorus	0.05 to 0.3													<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.05	<0.05	<0.05	<0.05
Potassium	0.05 to 2	47.5	50.1	29.5	29.2	30.7		17.6	17.7	19.4	19.1	18.1		17.6	17.6	20.2	18.7	16.9	20.5	18.8	18.7	17.2	18.4
Selenium	0.0001 to (	0.0317	0.0416	<0.002	<0.002	<0.01		<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	<0.001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001
Silicon	0.05													9.82	9.44	9.88	9.61	9.8	9.86	9.52	9.62	9.33	9.35
Silver	1E-005 to	<0.0001	<0.0001	<0.00004	<0.00004	<0.0002		0.000086	<0.00004	<0.00004	<0.00004	<0.00004		<0.00004	<0.00002	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	64.2	63.3	72.1	116	280		64.6	64.2	69.1	68.8	66.8		67.6	62.9	69.5	63.5	57.4	67.1	62.3	57.8	55.6	62.6
Strontium	0.0001 to (													0.86	0.809	0.922	0.838	0.782	0.888	0.845	0.782	0.767	0.789
Sulphur	0.5																			150	146	131	145
Thallium	1E-005 to	<0.001	<0.001	<0.0004	<0.0004	<0.002		<0.0004	<0.0004	<0.0004	<0.0004	<0.0004		<0.0004	<0.0002	<0.00001	<0.00001	<0.00001	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to (	<0.0025	<0.0025	<0.001	<0.001	<0.005		<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.02		<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to	0.0077	0.0065	<0.0004	<0.0004	0.0077		0.00284	0.00294	0.00287	0.00266	0.0025		0.00262	0.00261	0.00242	0.00265	0.00263	0.00278	0.00284	0.00271	0.00254	0.00271
Vanadium	0.001 to 0.	<0.005	<0.005	<0.002	0.0034	<0.01		<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	0.001 to 0.	<0.005	<0.005	<0.005	<0.005	<0.01		<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.003	<0.003	<0.001	<0.005	0.0017	<0.001	0.0018	0.0016
Total Metals																							
Aluminum	0.003 to 0.	8.22	1.98	19.5	0.712	2.63	0.245	14.3	0.143	0.055	0.019	0.03	<0.005	0.027	0.0068	0.0294	0.0173	0.0092	0.171	0.0785	0.0351	0.0118	0.021
Antimony	0.0001 to (	<0.0025	<0.0025	<0.001	<0.001	<0.005	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.0005	0.00013	0.00014	0.00032	<0.0005	0.00013	0.00011	0.00035	0.00011
Arsenic	0.0001 to (	0.0145	0.0094	0.02	0.0018	0.0055	0.0067	0.0269	0.0064	0.0067	0.0054	0.0054	0.0046	0.0054	0.00535	0.00533	0.00552	0.00574	0.00631	0.00536	0.00565	0.00559	0.00528
Barium	5E-005 to	0.236	0.082	0.643	0.237	0.147	0.067	0.216	0.029	0.029	0.029	0.031	0.029	0.028	0.029	0.0279	0.0306	0.0323	0.033	0.0287	0.0291	0.0329	0.0249
Beryllium	0.0001 to (	<0.005	<0.005	<0.002	<0.002	<0.01	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.002	<0.001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to (												<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.2	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	0.46	0.25	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.037	0.036	0.054	<0.1	0.035	0.036	0.039	0.029
Cadmium	1E-005 to	0.0006	0.000156	<0.00094	<0.0012	0.00055	<0.0004	0.000626	0.000051	0.000082	<0.0002	<0.0002	<0.0002	<0.000034	<0.0003	0.000644	0.000134	0.000092	0.00018	0.00004	0.000022	0.000046	0.000018
Calcium	0.05 to 0.1	164	138	98.4	100	241	203	128	71.9	76.3	77.4	75.8	75.8	77.6	76.9	77.5	74	74.1	75.5	72.2	75.3	68.1	77.1
Chromium	0.0001 to (	0.0729	0.0205	0.0579	0.0032	0.016	<0.005	0.038	0.0067	<0.002	<0.002	<0.002	<0.001	<0.002	<0.001	0.00048	0.00033	0.0009	0.0015	0.0015	0.00027	0.00042	0.00037
Cobalt	0.0001 to (	0.029	0.005	0.0236	0.00114	0.0296	0.0121	0.0166	<0.0006	<0.0006	<0.0006	<0.0006	0.00052	<0.0006	<0.0003	0.00017	0.00018	0.00026	0.00039	0.00026	0.0002	0.00071	0.00014
Copper	0.0005 to (	0.145	0.0212	0.214	0.0132	0.607	0.363	0.0847	0.0023	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0005	<0.0005	0.00061	0.0023	0.00319	<0.0005	0.00081	<0.0005
Iron	0.01 to 0.0	12.4	3.05	26.8	0.974	3.46	4.36	24.5	0.324	0.168	0.122	0.145	0.096	0.141	0.109	0.181	0.173	0.155	0.416	0.249	0.172	0.067	0.151
Lead	5E-005 to	<0.0025	<0.0025	0.0054	<0.001	<0.005	<0.0025	0.0049	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.00005	<0.00005	<0.00005	<0.0005	0.000153	<0.00005	<0.00005	<0.00005
Lithium	0.0005 to (	<0.025	<0.025	0.024	0.011	<0.05	<0.025	0.012	<0.01	<0.01	<0.01	<0.01	<0.005	<0.01	<0.005	0.00454	0.00488	0.00508	0.0056	0.00522	0.00469	0.0045	0.00341
Magnesium	0.1	191	187	63.6	14.7	253	211	114	96.5	104	105	103	100	105	109	102	101	99.4	104	98	103	91.4	99.3
Manganese	5E-005 to	1.54	0.228	0.902	0.041	2.23	2.99	1.08	0.288	0.349	0.283	0.29	0.25	0.306	0.269	0.343	0.326	0.29	0.326	0.296	0.291	0.278	0.298
Mercury	1E-005 to	0.000048	<0.00001	<0.00002	<0.00001	0.00028	0.000057	0.000354	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to	0.485	0.598	0.499	0.399	0.279	0.293	0.0456	0.0475	0.0594	0.0469	0.0458	0.0431	0.049	0.0482	0.0408	0.0479	0.0457	0.0551	0.0506	0.0494	0.0566	0.0461
Nickel	0.0005 to (	0.215	0.0535	0.0947	0.0046	0.055	0.0224	0.0786	0.0042	0.0021	<0.002	<0.002	0.0012	<0.002	<0.001	0.00101	0.00098	0.00206	0.0036	0.00231	0.00198	0.0136	0.0008
Phosphorus	0.05 to 0.3												<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.05	<0.05	<0.05	<0.05
Potassium	0.05 to 2	47.7	48.8	34.2	28.4	54.9	25.8	20.2	17.4	18.6	18.9	19	17.8	17.4	18.6	17.4	18.5	16.6	20	18	18.2	17.5	18.3
Selenium	0.0001 to (	0.0318	0.0412	<0.002	<0.002	<0.01	<0.005	0.0049	<0.002	<0.002	<0.002	<0.002	<0.001	<0.002	<0.001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	0.00011
Silicon	0.05												9.87	9.77	9.7	10.1	9.86	9.98	10.2	9.37	9.68	9.42	9.29
Silver	1E-005 to	<0.0001	<0.0001	0.00015	<0.00004	0.0008	0.00011	0.000234	<0.00004	<0.00004	<0.00004	<0.00004	<0.00002	<0.00004	<0.00002	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	63	61.8	73.4	113	475	279	65.8	62.7	66.3	68	69.4	67.6	67	65.3	71.1	63.3	56.5	65.6	60.1	59.5	56.6	61.3
Strontium	0.0001 to (												0.847	0.852	0.848	0.891	0.834	0.789	0.87	0.861	0.807	0.795	0.771
Sulphur	0.5																			147	151	130	149
Thallium	1E-005 to	<0.001	<0.001	<0.0004	<0.0004	<0.002	<0.001	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0002	<0.0004	<0.0002	<0.00001	<0.00001	<0.00001	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0001 to (	<0.0025	<0.0025	0.0015	0.0011	<0.005	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.01	0.271	0.096	1.19	0.047	0.121	0.022	0.832	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	0.014	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extra	0.00002																						
Uranium	1E-005 to	0.0077	0.0066	0.00149	<0.0004	0.0094	0.007	0.00367	0.00301	0.00294	0.00283	0.00267	0.00252	0.00279	0.00252	0.00236	0.00266	0.00254	0.00277	0.00277	0.00277	0.00253	0.00282
Vanadium	0.001 to 0.	0.0293	0.0107	0.0827	0.0069	0.017	0.0056	0.0605	<0.002	<0.002	<0.002	<0.002	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	0.003 to 0.	0.0194	0.0058	0.0489	<0.005	0.043	<0.005	0.0447	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.003	<0.003	<0.003	<0.005	<0.003	0.0045	0.0038	<0.003
Organics																							
Carbon Organic (Dissolved)	0.5 to 5	3.63	2.67	2.93	2.51	114		2.51	2.54	2.38	2.42	2.57	2.68	1.9	2.64	2.49	2.44	4.4	2.64	2.69	2.95	2.47	2.81
Carbon Organic (Total)	0.5 to 5													1.97	2.53	2.38	2.41	3.72	2.56	2.74	2.73	2.37	2.41
Nitrogen Organic (Dissolved)	0.05 to 0.2													0.147	0.073	<0.05	<0.05	0.19		0.119	0.075		
Nitrogen Organic (Total)	0.05 to 0.3													0.157	0.073	0.131	0.131	0.226		0.115	0.14		
ALS LAB ID		**L613954**	**L894378**	**L655020**	**L894378**	**L653846**	**L678833**	**L655304**	**L678594**	**L893847**	**L924086**	**L957406**	**L990458**	**L1007006**	**L1036787**	**L1081224**	**L1113319**	**L1159542**	**L1201474**	**L1246516**	**L1275064**	**L1306577**	**L1346553**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D3.2 - GROUNDWATER QUALITY DATA

Site ID						AJGW04-D		AJGW05-S														AJGW06-D			
Site ID	AJGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW04-DA	JGW04-DA	JGW05-SA	JGW05-SA	JGW05-SA	JGW05-SA	JGW06-DA	JGW06-DA	JGW06-DA	JGW06-DA	JGW06-DA	JGW06-DA	JGW06-DA	JGW06-DA	JGW06-DA	JGW06-DA	JGW06-DA	JGW06-DA	JGW06-D
Analytes	Nov-13	Mar-14	May-14	Jun-14	Sep-14	Sep-08	Nov-08	Apr-08	Sep-08	Nov-08	Jun-10	Apr-08	Jul-08	Sep-08	Nov-08	May-10	Aug-10	Nov-10	Mar-11	May-11	Jul-11	Dec-12	Mar-13
In Situ Parameters																							
Conductivity µS/cm	1.22	1126	902	852	872	1573	1247		2007	1217	1701		480	671	996	530	521	497	530	545	583	447	448
Oxygen Dissolved %	10.6	2.7	-1.3	27	7.5	43.2	14.3		43.9	16.1	30.4		17.2		10.5	12.7	1	6.8	9	11	8.4	1.2	14.5
Oxygen Dissolved	1.22	0.32	-0.14	3.04	0.84	4.6	1.78		5.05	1.91	3.35		1.94		1.25	1.38	0.11	0.79	1.02	1.17	0.92	0.15	1.71
pH (unitless)	7.74	7.72	6.49	7.68	7.72	7.68	8.6		7.97	8.12	7.94		8.66	8.22	8.64	7.97	7.12	7.55	7.99	7.14	8.14	8.04	8.18
Redox Potential mV	101	-77.1	-55.3	-59.9	-3.8	-64.4	-91.5		-71.2	-75.6	-79.6		-139	-93.3	-93.8		-66	151	-33.2	-16.4		177	-91.3
Salinity ppt	0.63	0.63	0.63	0.6	0.62															0.36		0.33	0.34
Specific Conductivity µS/cm	0.851	879	1259	1197	1239	2246	1985		2854	1807	2351		673		1476	721	698	723	753	736	796	677	688
Temperature °C	9.01	9.16	10.1	9.91	9.51	9.28	5.63		9.45	7.99	10.7		9.95	9.88	7.98	11.1	11.7	8.65	9.49	11.3	11	7.07	6.68
Total Dissolved Solids	810	820	819	778	805												453	470	490			440	446
Turbidity NTU	1.2	2.1	-2.1	-2.3	0.9															20.8	0	-1.8	113
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)			3			11	4	4.4	7.3	7.5	5	<1	<1	2.2	1.1	2	2.5	1.7	3.9	1.5	4.8	2.7	3.1
Alkalinity (Total as CaCO3)	289	279	288	294	278	523	384	82.1	141	155	174	84.9	79.9	91.8	94.9	109	109	107	123	126	125	112	159
Bicarbonate Alkalinity	289	279	288	294	278	523	384	82.1	141	155	174	84.9	72.2	91.8	94.9	109	109	107	123	126	125	112	159
Carbonate Alkalinity	<2	<2	<2	<2	<2	<1	<2	<2	<2	<2	<2	<1	7.7	<2	<2	<2	<2	<1	<2	<2	<2	<2	<2
Color TCU						11.4	11	21.1	6.9	6.5	6	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hardness as CaCO3 (Dissolved)	615	625	602	618	610	435	345	1080	990	976	963	150	129	152	149	160	173	166	181	194	191	176	177
Hydroxide Alkalinity	<2	<2	<2	<2	<2	<1	<2	<2	<2	<2	<2	<1	<1	<2	<2	<2	<2	<1	<2	<2	<2	<2	<2
pH (unitless)	8.27	8.27	8.14	8.23	8.26	7.95	8	7.84	7.71	7.62	8.07	8.48	8.55	8.13	8.14	8.2	8.17	8.21	7.94	8.14	8.03	8.24	8.21
Specific Conductivity µS/cm	1250	1260	1230	1240	1280	2300	2190	2650	2940	2390	2410	685	665	690	676	686	695	700	741	761	785	727	727
Total Dissolved Solids	906	907	943	960	959	1680	1610	2220	2340	2020	2060	447	434	456	449	472	468	464	497	517	521	495	476
Total Suspended Solids			<3	<3	<3	73.1	93.3	105	27.1	828	218	114	18.8	<3	79	13.5	17	12.5	<3	4.6	<3	<3	<3
Turbidity NTU			0.93	1.48	0.76	93.4		91.4	27		110	41.5	15.5	1.74		4.96	2.72	7.89	2.7	1.91	0.61	0.62	0.39
Dissolved Anions																							
Bromide	<0.5	<0.5	<0.5	<0.5	<0.5	<2.5	<2.5	<0.5	<5	<2.5	<1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.05	<1.2	<0.25	<0.25	<0.5	<0.05
Chloride	9.2	8.9	9.4	11	9.7	41	40	31	<50	30	20	1.51	1.55	1.56	1.39	1.72	<5	1.96	<5	4.1	3.5	<5	2.13
Fluoride	0.22	0.33	<0.2	0.22	0.229	57	<1	0.37	<2	<1	<0.4	0.369	0.38	0.328	0.326	0.303	0.26	0.306	<0.2	0.24	0.4	0.26	0.309
Sulphate	462	462	466	468	471	642	751	1450	1570	1260	1290	241	235	247	234	239	252	237	249	259	278	265	258
Nutrients																							
Ammonia (Total)	0.0166	0.0091	0.0083	0.0165	0.0071	0.03	0.0652	<0.02	0.029	<0.005	0.156	<0.02		0.031	<0.005	<0.02	0.0123	0.022	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrate (as N)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.25	0.675	<0.5	<0.25	<0.1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.05	<0.025	<0.025	<0.05	<0.005
Nitrite (as N)	<0.01	<0.01	<0.01	<0.01	<0.01	0.111	1.02	0.111	0.14	0.959	<0.02	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.01	<0.005	0.006	0.012	<0.001
Nitrogen (Dissolved)																				0.12	0.13	0.143	0.06
Nitrogen (Total)																							
Nitrogen Kjeldahl (Total)	0.189	0.138	0.136	0.168	0.133	0.637		1.34	0.244		0.38	0.175		0.094		0.125	0.459	0.084	0.129	0.15	0.114	0.081	0.082
Orthophosphate (Dissolved)	0.017	0.0181	0.0159	0.0188	0.0158	0.267	0.519	<0.001	<0.001	0.0054	0.0339	0.0136	0.0236	0.0105	0.0109	0.005	0.0076	0.0041	<0.001				
Phosphorus - Dissolved	0.0164	0.018	0.0183	0.0188	0.015		0.497			0.0108	0.372				0.0189		0.0076			0.0046	0.0111	0.0096	0.0082
Phosphorus - Total	0.0236	0.0252	0.0239	0.0295	0.0191	0.59	0.67	0.0993	0.0549	1.08		0.0949	0.0523	0.0178	0.09	0.0249	0.0129	0.0329	0.023	0.0086	0.0156	0.0143	0.0109
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005		<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	0.0074		<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005		<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																							
Aluminum	0.0016	0.0011	0.0022	0.0023	0.0016	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.0125	0.0399	<0.005	0.0056	<0.005	<0.005	<0.005	<0.01	<0.01	0.0056	0.0026	0.0021
Antimony	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.00131	0.0007	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.0001	<0.0001
Arsenic	0.00574	0.00545	0.00557	0.00577	0.00569	0.0085	0.0221	<0.0025	<0.0025	<0.0025	<0.0025	0.0159	0.0271	0.0334	0.025	0.0241	0.0223	0.0213	0.0215	0.0199	0.0202	0.0141	0.0176
Barium	0.0276	0.0282	0.0279	0.0282	0.0281	0.173	0.147	0.138	0.088	0.077	0.078	0.033	0.021	0.021	0.032	<0.02	0.024	0.023	<0.02	<0.02	0.024	0.0228	0.0184
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005														<0.2	<0.2	<0.2	<0.0005	<0.0005
Boron	0.033	0.032	0.031	0.035	0.029	0.13	0.11	<0.1	0.13	0.11	0.11	0.21	0.2	0.22	0.22	0.23	0.24	0.25	0.24	0.25	0.25	0.221	0.217
Cadmium	<0.00002	<0.00002	<0.00002	0.000018	0.000021	<0.000085	0.000135	<0.000085	<0.000085	<0.000085	<0.000085	<0.000017	<0.0002	<0.000017	<0.00041	<0.0002	<0.00015	<0.00015	<0.00018	<0.000034	<0.0002	0.000013	<0.00001
Calcium	75.1	76.5	71.6	77.6	75.7	96.8	77.2	251	205	196	186	35.7	29.9	34.8	34	37.1	39.7	37.7	41.3	44	44.1	40.7	40.6
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0013	<0.001	<0.001	<0.001	0.0011	<0.001	0.0017	<0.002	<0.002	<0.001	<0.0001	<0.0001
Cobalt	0.00014	0.00012	0.00013	0.00015	0.00012	<0.0015	<0.0015	<0.0015	0.0083	0.0043	0.0033	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0006	<0.0006	<0.0003	<0.0001	<0.0001
Copper	<0.0002	<0.0002	0.00026	0.00034	<0.0002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.002	<0.002	<0.003	<0.0002	<0.0002
Dissolved Cadmium (by saltwater		<0.00002																					
Iron	0.119	0.107	0.106	0.114	0.129	<0.03	<0.03	<0.03	0.191	0.063	<0.03	<0.03	<0.03	<0.03	0.033	0.045	0.036	0.04	0.043	0.039	0.064	0.062	0.07
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.00005	<0.00005
Lithium	0.00516	0.00447	0.00455	0.0051	0.00502	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	0.00308	0.00324
Magnesium	104	105	103	103	102	46.9	36.9	109	116	118	121	14.7	13.1	15.9	15.6	16.4	18.1	17.5	19	20.4	19.6	18.1	18.3
Manganese	0.306	0.292	0.303	0.283	0.291		0.656	0.242	3.87	2.19	1.5	0.0117	0.0319	0.0758	0.107	0.0704	0.0743	0.0822	0.0592	0.072	0.103	0.0832	0.08
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0492	0.0464	0.0465	0.0505	0.0464	0.0152	0.0376	0.0703	0.0726	0.0862	0.102	0.0494	0.0511	0.0468	0.0478	0.0422	0.0385	0.04	0.0409	0.0394	0.0393	0.0426	0.0413
Nickel	0.00099	0.00068	0.00069	0.00122	0.00129	<0.005	<0.005	0.0565	0.0435	0.016	0.0189	<0.001	<0.001	<0.001	<0.001	0.0011	<0.001	0.0013	<0.002	<0.002	<0.001	0.00076	<0.0005
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05														<0.3	<0.3	<0.3	<0.05	<0.05
Potassium	18.5	18.3	17.1	19.1	18.4	42.4	39.3	26	36.6	29.8	32.4	2.1	2	<2	<2	<2	<2	<2	<2	<2	<2	1.36	1.38
Selenium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0056	0.004	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.0001	<0.0001
Silicon	9.6	9.68	9.47	9.66	10.1														5.15	5.14	5.08	4.97	5
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00004	<0.00004	<0.00002	<0.00001	<0.00001
Sodium	63.3	58.9	61.5	60.8	64.6	379	341	217	344	218	208	91.6	90	87.2	83.7	91.2	97	97.3	100	102	95.6	93.3	87.5
Strontium	0.708	0.798	0.826	0.895	0.852														1.03	1.11	1.03	1.06	0.917
Sulphur	142	152	150	149	156																	89.5	86.5
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0004	<0.0002	<0.00001	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.00283	0.00269	0.00271	0.00301	0.0028	<0.001	0.0021	0.0017	0.0057	0.0046	0.0037	0.00414	0.00257	0.00191	0.00188	0.00106	0.00104	0.00096	0.00108	0.00104	0.00092	0.000514	0.000564
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0012	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001
Zinc	0.0018	0.0018	<0.001	0.0064	0.0018	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0083	<0.005	<0.005	<0.005	<0.001	<0.001
Total Metals																							
Aluminum	0.013	0.0129	0.0182	0.0513	0.0218	1.6	0.678	3.43	1.68	17.3	7.27	1.77	0.24	0.0236	1.02	0.199	0.179	0.0603	0.011	0.268	0.0073	0.01	0.0053
Antimony	0.00016	<0.0001	<0.0001	0.00018	0.00016	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.0012	0.0007	<0.0005	0.00105	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	0.00013	0.00018
Arsenic	0.00576	0.00563	0.00555	0.00577	0.00579	0.012	0.0226	0.0029	0.0035	0.0096	0.0061	0.0154	0.029	0.036	0.024	0.0231	0.0205	0.0215	0.0208	0.0194	0.0187	0.0147	0.0175
Barium	0.0274	0.0275	0.0262	0.0288	0.0282	0.195	0.159	0.223	0.112	0.439	0.211	0.098	0.032	0.022	0.065	0.027	0.027	0.02	<0.02	0.02	0.024	0.023	0.019
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005														<0.2	<0.2	<0.2	<0.0005	<0.0005
Boron	0.042	0.034	0.038	0.038	0.034	0.13	0.11	<0.1	0.12	0.12	0.12	0.2	0.2	0.22	0.22	0.23	0.24	0.24	0.24	0.26	0.26	0.232	0.228
Cadmium	<0.00004	<0.00003	<0.00004	0.00005	0.000049	0.000162	0.000197	0.000136	0.000159	0.00123	0.00055	0.000046	<0.0003	0.000041	<0.00041	<0.0002	<0.0002	<0.00016	<0.00024	0.000051	<0.0003	0.000026	0.000016
Calcium	74.6	76	71.1	74.9	73.9	96.8	82.6	267	198	224	194	38.6	31.5	35.3	41.8	37.7	39.7	36.6	40.9	45.4	43.3	41.4	40.4
Chromium	0.00021	0.00012	0.00027	0.00067	0.00028	0.02	0.0604	0.017	0.0052	0.0648	0.0257	0.0029	0.0012	0.0066	0.0922	0.0045	0.0018	0.0027	<0.002	<0.002	<0.001	0.00022	0.00012
Cobalt	0.00017	0.00016	0.00015	0.0002	0.00018	0.0027	<0.0015	0.0056	0.0104	0.0294	0.0161	0.00128	0.00067	0.00039	0.00184	0.00036	<0.0003	0.00031	0.00398	<0.0006	<0.0003	<0.0001	<0.0001
Copper	<0.0005	0.00055	0.0009	0.00238	0.00081	0.0124	0.0052	0.0406	0.0217	0.213	0.0913	0.0166	0.0011	<0.001	0.0119	<0.02	<0.004	<0.001	<0.002	<0.002	<0.002	0.00055	<0.0005
Iron	0.137	0.136	0.145	0.207	0.176	2.45	1.26	6.41	2.97	27.7	11.1	2.58	0.461	0.08	1.65	0.26	0.216	0.122	0.065	0.191	0.092	0.103	0.092
Lead	<0.00005	<0.00005	<0.00005	0.000057	<0.00005	<0.0025	<0.0025	<0.0025	<0.0025	0.0064	0.0028	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.00005	<0.00005
Lithium	0.00523	0.0052	0.00487	0.00477	0.00516	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	0.00366	0.00317
Magnesium	105	101	98.7	102	101	48.6	37.4	107	115	134	129	15.2	13.6	16.3	16.4	16.2	17.8	17.5	18.7	20.8	19.7	18.6	18.3
Manganese	0.313	0.303	0.299	0.292	0.303	2.94	0.702	0.357	3.84	2.8	1.93	0.0652	0.051	0.0773	0.157	0.0984	0.0922	0.0612	0.0604	0.0761	0.107	0.096	0.0858
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	0.000052	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0516	0.0491	0.049	0.0503	0.0498	0.0394	0.0459	0.0591	0.0727	0.0948	0.101	0.0463	0.0509	0.0488	0.0487	0.0444	0.0426	0.0395	0.0425	0.0437	0.0425	0.0443	0.0442
Nickel	0.00121	0.00084	0.00088	0.00176	0.00124	0.0239	0.0308	0.0784	0.0506	0.0921	0.0579	0.0029	0.0013	0.0039	0.0472	0.0037	0.0017	0.0024	<0.002	<0.002	<0.001	0.0011	0.00052
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05														<0.3	<0.3	<0.3	<0.05	<0.05
Potassium	19.2	18.5	17.3	18.6	18.2	40.3	37.5	25.7	34	30.3	33.9	2.3	2.1	<2	<2	<2	<2	<2	<2	<2	<2	1.41	1.41
Selenium	<0.0001	0.00013	<0.0001	<0.0001	<0.0001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0047	0.0046	0.0011	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.0001	<0.0001
Silicon	9.75	9.74	9.36	9.83	10.1														5.13	6.13	5.07	5.03	5.01
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0001	<0.0001	<0.0001	<0.0001	0.00015	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	0.000087	<0.00004	<0.00002	<0.00001	<0.00001
Sodium	64.2	63.2	63.1	62.3	64.2	368	333	222	325	204	216	86.3	91	89.4	82.4	89.6	95.2	97.9	99.1	103	96	95.1	87.8
Strontium	0.717	0.838	0.83	0.85	0.898														1.02	1.13	1.05	1.06	0.958
Sulphur	151	157	154	155	157																	91.5	88.5
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0004	<0.0002	<0.00001	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0025	<0.0025	0.0035	<0.0025	<0.0025	<0.0025	<0.0005	<0.0005	<0.0005	0.00069	0.00093	0.00095	<0.0005	<0.001	<0.001	<0.0005	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	0.078	0.036	0.238	0.134	1.22	0.545	0.116	0.017	<0.01	0.053	<0.01	<0.01	<0.01	<0.01	0.011	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extra		<0.00002																					
Uranium	0.00287	0.00271	0.00273	0.00283	0.00285	<0.001	0.0021	0.0021	0.0058	0.0054	0.0041	0.00407	0.0028	0.00198	0.00213	0.00121	0.0012	0.00104	0.00114	0.00121	0.00087	0.00052	0.000608
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	0.0066	<0.005	0.0161	0.0093	0.0907	0.039	0.0095	0.0029	0.0011	0.0042	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001
Zinc	<0.003	<0.003	<0.003	0.0087	0.0036	<0.005	<0.005	0.0142	<0.005	0.0612	0.0243	<0.005	<0.005	<0.005	<0.005	<0.005	0.0099	0.007	<0.005	<0.005	<0.005	<0.003	<0.003
Organics																							
Carbon Organic (Dissolved)	2.39					123	14.1	10.3	26.4	9.22	8.88	3.73	2.75	4.12	2.91	2.66	2.66	4.19	4.6	4.14	2.87	2.94	2.93
Carbon Organic (Total)	2.18	2.16	2.37	2.18	2.26															3.43	2.79	2.54	2.81
Nitrogen Organic (Dissolved)																				0.12	0.123	0.128	0.055
Nitrogen Organic (Total)																				0.15	0.113	0.081	0.082
ALS LAB ID	L1392959	L1430651	L1452371	L1470495	L1517413	L678833	L710078	L623639	L678833	L710078	L894378	L623639	L655304	L679955	L710078	L892818	L924086	L957406	L990459	L1007395	L1036787	L1249108	L1275064

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D3.2 - GROUNDWATER QUALITY DATA

Site ID																		AJGW07-D					
Site ID	AJGW06-D	AJGW06-D	AJGW06-D	AJGW06-D	AJGW06-D	AJGW06-D	AJGW06-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D
Analytes	May-13	Aug-13	Nov-13	Mar-14	May-14	Jun-14	Sep-14	Apr-08	Jul-08	Sep-08	Nov-08	Jun-10	Aug-10	Nov-10	Mar-11	May-11	Jul-11	Oct-11	Feb-12	Jun-12	Aug-12	Dec-12	Mar-13
In Situ Parameters																							
Conductivity µS/cm	567	613	0.681	706	515	522	535		733		1052	688	659	629	626	615	689	864	631	975	887	605	541
Oxygen Dissolved %	3.9	2.3	2.3	5.6	3.7	4.9			56.4		20.7	7.5	1.6	32.2	10	2.6		1.6	3.4	21.9		4.4	1.6
Oxygen Dissolved	0.45	0.25	0.28	0.65	0.42	0.59			5.92		2.36	0.79	0.18	3.6	1.11	0.29		0.18	0.39	2	2.12	0.48	0.18
pH (unitless)	8.01	7.97	8.11	8.07	8.22	8.06	8.01		7.68	7.58	8.34	7.59	7.24	7.81	7.62	7.68	8.16	7.92	8.04	7.98	7.89	7.94	8.33
Redox Potential mV	-178	52.2	0.443	-89.9	-103	-141	-134		-79.1	-60.4	-83.7	-97.5	-130	-113	-71.6	144			-294		-165	-232	-213
Salinity ppt	0.4	0.4	0.33	0.35	0.37	0.36	0.37									0.42			0.45		0.4	0.41	0.38
Specific Conductivity µS/cm	815	818	0.438	481	748	744	790		966	911	1493	903	886	902	868	841	961	875	911	729		847	770
Temperature °C	9.02	11.9	6.21	8.44	8.74	9.35	10		12.4	10.6	9.58	12.5	11.6	9.19	10.4	10.9	10.3	9.98	8.91	11.4	14.8	10.5	9.24
Total Dissolved Solids	530	532	-140000	459	486	483	487						757	586	575	546			592		568	544	501
Turbidity NTU	0	1	1.3	1.6	6.2	1.5	2									2.5		-1.4	2	0	0	-1	2.1
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)								4.2	2	3.8	3.9	1.8	4.2	3.9	5.7	4.1	1.8	2			2.8		
Alkalinity (Total as CaCO3)	115	122	117	106	108	112	113	217	208	214	224	228	218	211	227	230	220	232	225	219	218	222	231
Bicarbonate Alkalinity	115	122	117	106	108	112	113	217	208	214	224	228	218	211	227	230	220	232	225	219		222	231
Carbonate Alkalinity	<2	<2	<2	<2	<1	<1	<1	<2	<2	<2	<2	<2	<2	<1	<2	<2	<2	<2	<2	<1		<2	<2
Color TCU	<5	<5						<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hardness as CaCO3 (Dissolved)	183	178	172	177	181	179	172	449	426	443	423	416	436	408	407	413	415	413	410	398	374	403	402
Hydroxide Alkalinity	<2	<2	<2	<2	<1	<1	<1	<2	<2	<2	<2	<2	<2	<1	<2	<2	<2	<2	<2	<1		<2	<2
pH (unitless)	8.21	8.1	8.17	8.25	7.88	8.14	8.18	8.09	8.18	8.1	7.87	8.19	8.12	8.1	8.01	8.08	8.2	8.27	8.22	8.07	8.18	8.13	8.28
Specific Conductivity µS/cm	736	748	731	728	735	739	756	935	918	910	919	857	888	890	859	865	899	910	908	855	861	835	868
Total Dissolved Solids	486	518	495	509	486	500	508	641	653	645	641	623	641	612	609	611	645	587	661	611	619	597	598
Total Suspended Solids	<3	<3			<3	<3	<3	79.5	7.3	<3	71	6	4	<3	<3	<3	<3	<3	3.3	<3	<3	<3	4.3
Turbidity NTU	0.26	0.37			0.31	0.44	0.53	84	7.21	3.14		4.6	6.44	8.67	3.86	7.16	10.5	22.1	8.11	5.57	8.24	5.31	15.3
Dissolved Anions																							
Bromide	<0.5	<0.25	<0.25	<0.5	<0.05	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.25		<0.5	<1.3	<0.25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	<5	<2.5	3.3	<5	2.51	2.67	<5	5.85	5.94	5.7	5.86	4.3		<5	6.8	5.8	5.6	<5	5.3	5.2	13.8	<5	<5
Fluoride	0.25	0.34	0.28	0.45	0.299	0.3	0.041	0.21	0.167	0.174	0.151	0.16		<0.2	<0.2	0.15	0.25	<0.2	<0.2	<0.2	2.67	<0.2	0.29
Sulphate	270	265	278	274	258	260	277	288	289	283	273	258		264	251	262	291	274	297	269	274	258	271
Nutrients																							
Ammonia (Total)	<0.005	<0.005	0.0105	<0.005	<0.005	<0.005	<0.005	0.03		<0.02	0.0131	<0.02	<0.005	<0.005	<0.005	<0.005	<0.005	0.0139	0.019	0.0064	0.0072	0.0067	0.0114
Nitrate (as N)	<0.05	<0.025	<0.025	<0.05	<0.005	0.0102	<0.05	0.0724	0.0264	0.0413	<0.005	<0.025		<0.05	<0.05	<0.025	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrite (as N)	<0.01	<0.005	<0.005	<0.01	<0.001	<0.001	<0.01	<0.001	0.0021	<0.001	0.0012	<0.005		<0.01	<0.01	<0.005	<0.01	0.014	<0.01	<0.01	0.01	0.015	<0.01
Nitrogen (Dissolved)																0.11	0.11	0.14	0.05	1.8		0.07	<0.05
Nitrogen (Total)																							
Nitrogen Kjeldahl (Total)	0.085	0.082	0.087	0.085	0.075	0.109	0.117	0.159		<0.05		<0.05	<0.05	<0.05	0.065	0.091	0.11	0.153	0.121	0.082	0.066	0.077	0.078
Orthophosphate (Dissolved)			0.0076	0.0079	0.0093	0.0093	0.0103	0.0075	0.005	0.0029	<0.001	0.0015	0.0012	0.0021	0.0017	<0.001	<0.001	0.0026			<0.001		
Phosphorus - Dissolved	0.0101	0.0113	0.0094	0.0095	0.0087	0.0107	0.0115				<0.002		0.0025			0.0022	<0.002	0.0036	0.0141	0.0047		0.0053	<0.002
Phosphorus - Total		0.0124	0.0119	0.0116	0.0106	0.0129	0.0136	0.0909	0.0189	0.0085	0.11	0.0168	0.0108	0.0127	0.0095	0.0129	0.0108	0.0378	0.0447	0.035	0.0237	0.0228	0.0271
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																							
Aluminum	0.0019	0.0023	0.002	0.0013	0.0023	0.0015	0.0018	<0.01	<0.01	<0.005	<0.005	<0.01	<0.005	<0.01		<0.01	<0.005	<0.003	<0.003	0.0012	0.0012	<0.001	0.0034
Antimony	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.0005	<0.001		<0.001	<0.0005	0.00014	0.00025	0.00021	<0.0001	0.00019	<0.0001
Arsenic	0.0152	0.0161	0.0148	0.0152	0.0153	0.0152	0.0142	0.0016	0.0021	0.00193	0.00114	<0.001	0.00129	0.0013		0.0013	0.0012	0.00047	0.00129	0.00117	0.00071	0.00121	0.0005
Barium	0.0201	0.0201	0.02	0.0179	0.0175	0.019	0.0201	0.05	0.051	0.037	0.044	0.036	0.037	0.038		0.033	0.034	0.0433	0.0509	0.0441	0.0403	0.0405	0.0386
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.002	<0.002	<0.001	<0.001	<0.002	<0.001	<0.002		<0.002	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005									<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.209	0.184	0.206	0.186	0.227	0.213	0.217	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1	<0.1	0.092	0.108	0.095	0.079	0.095	0.103
Cadmium	<0.00001	0.000013	<0.00001	<0.00002	0.000011	<0.00005	<0.00001	<0.000034	<0.000034	<0.000017	<0.00031	<0.0004	<0.00025	<0.000034		<0.000034	<0.000017	<0.000015	<0.00003	<0.00005	<0.00005	0.000015	<0.00005
Calcium	42.1	41.2	40.1	41.6	41.5	41.1	40	100	92.3	97.7	92.4	90.5	94.2	88.8		89.6	90.2	86.1	86.6	83.3		84.1	83.6
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.002	<0.002	<0.001	<0.001	<0.002	<0.001	<0.002		<0.002	<0.001	0.00014	0.00023	0.00015	<0.0001	<0.0001	<0.0001
Cobalt	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0006	0.00076	<0.0003	<0.0003	<0.0006	<0.0003	<0.0006		<0.0006	<0.0003	<0.0001	0.00013	0.00018	<0.0001	0.00011	<0.0001
Copper	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.002	<0.002	<0.001	<0.001	<0.002	<0.001	<0.002		<0.002	<0.001	<0.0005	<0.0005	0.00028	0.00022	<0.0002	<0.0002
Dissolved Cadmium (by saltwater				<0.00002		<0.00002																	
Iron	0.066	0.059	0.083	0.066	0.064	0.075	0.081	0.094	0.229	0.219	0.787	0.339	0.581	0.328		0.613	0.835	0.841	0.42	0.545	1.19	0.612	1.45
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.0005	<0.001		<0.001	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.00294	0.00287	0.00309	0.00316	0.00277	0.00297	0.00297	<0.01	<0.01	0.0056	0.0053	<0.01	<0.005	<0.01		<0.01	<0.005	0.00525	0.00598	0.0057	0.0045	0.00544	0.0058
Magnesium	18.8	18.2	17.4	17.8	18.7	18.6	17.4	48.1	47.6	48.2	46.8	46.1	48.8	45.2		45.9	46.1	48	47.1	46.1		46.9	46.8
Manganese	0.0904	0.101	0.0971	0.0809	0.0852	0.0978	0.102	0.0874	0.209	0.0931	0.138	0.0867	0.0979	0.0839		0.079	0.104	0.159	0.19	0.127	0.144	0.107	0.141
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0421	0.0431	0.0427	0.0398	0.0411	0.0407	0.0405	0.11	0.0794	0.0722	0.0682	0.0797	0.0667	0.0715		0.0693	0.0718	0.0537	0.0746	0.0771	0.0617	0.0772	0.0676
Nickel	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0049	0.0048	0.0031	0.0028	0.0042	0.0015	<0.002		<0.002	<0.001	<0.0005	0.00095	0.00218	0.001	0.00091	0.00071
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05									<0.3	<0.3	<0.3	<0.3	<0.3		<0.05	<0.05
Potassium	1.45	1.35	1.36	1.39	1.34	1.38	1.21	7.9	8	8.2	8.9	7.7	8.5	8.4		7.6	8	8.65	8.9	8.04	7.94	8.45	8.59
Selenium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0234	0.0227	0.0312	0.0255	0.0301	0.0061	0.0203		0.0058	0.0033	0.0169	0.0236	0.0163	0.00039	0.0205	0.00012
Silicon	5.08	4.89	5.13	5.12	5.1	5.04	4.73									6.99	6.52	6.57	6.92	6.96		6.99	5.78
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00004	<0.00004	<0.00002	<0.00002	<0.00004	<0.00002	<0.00004		<0.00004	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	84.7	89.7	87.6	89.4	90.4	86.7	94.5	40.6	41.7	39.3	41.6	39.5	42.3	42.5		41.5	38.6	42.2	46.6	42.3	42.5	41.8	42.9
Strontium	0.933	0.958	0.96	0.937	0.968	1.01	0.972									0.591	0.586	0.63	0.674	0.621	0.604	0.585	0.609
Sulphur	86.6	82.7	93.8	91.9	90.2	88.4	94.3															84	87.5
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0004	<0.0004	<0.0002	<0.0002	<0.0004	<0.0002	<0.0004		<0.0004	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.0005	<0.001		<0.001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01	0.012	<0.01	<0.01		<0.01	<0.01
Uranium	0.00053	0.000522	0.000478	0.000441	0.0005	0.000514	0.00043	0.00206	0.00144	0.00141	0.00138	0.00138	0.00088	0.00107		0.00091	0.00079	0.000663	0.000999	0.000997	0.00027	0.00105	0.000245
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0027	0.0022	0.003	0.0019	<0.002	0.0013	<0.002		<0.002	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	<0.001	<0.001	0.0012	<0.001	<0.001	0.0017	0.0023	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0102		<0.005	<0.005	<0.003	<0.003	<0.001	<0.001	0.0018	<0.001
Total Metals																							
Aluminum	0.0033	0.0048	0.0043	<0.003	0.0072	0.0052	0.0138	1.65	0.073	<0.022	0.182	0.065	0.0063	<0.01	0.0076	<0.01	<0.005	0.0118	0.0059	0.0061	0.0075	<0.003	0.0109
Antimony	0.00012	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	0.00012	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	0.00025	0.00028	0.00024	0.00013	0.0002	0.00011
Arsenic	0.016	0.0158	0.0153	0.0152	0.0154	0.0155	0.0148	0.0033	0.0023	0.00191	0.00291	0.0013	0.00128	0.0014	0.00122	0.0014	0.00132	0.00076	0.00142	0.00139	0.00073	0.00127	0.00058
Barium	0.0211	0.0203	0.0189	0.0181	0.0179	0.0193	0.0211	0.072	0.054	0.037	0.056	0.037	0.037	0.036	0.034	0.035	0.036	0.0449	0.0517	0.047	0.0393	0.0414	0.0405
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.002	<0.002	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005								<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.225	0.207	0.22	0.199	0.213	0.232	0.225	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.1	0.116	0.105	0.087	0.094	0.108
Cadmium	0.000017	0.000017	<0.00002	<0.00003	0.000014	<0.00005	0.00002	0.000067	<0.000034	0.000019	<0.00041	<0.0004	<0.0003	<0.000034	0.000035	<0.000034	<0.00004	<0.00006	<0.00006	<0.00005	<0.00005	0.000022	<0.00005
Calcium	41	41.8	40.5	41.5	41.7	40.7	43.5	97	92.4	94.8	86.1	88.1	92.1	84.7	88.1	92.9	92.9	86.3	86.4	91.3		85.1	84.4
Chromium	0.00012	0.0002	<0.0001	<0.0001	0.00013	<0.0001	0.00019	0.0059	<0.002	<0.002	0.0097	0.0052	<0.001	<0.002	<0.001	<0.002	<0.001	0.00055	0.00098	0.0011	0.00087	0.00042	0.00028
Cobalt	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00215	0.00094	<0.0003	0.00065	0.0007	<0.0003	<0.0006	<0.0003	<0.0006	<0.0003	0.00012	0.00016	0.00021	0.00011	0.00011	<0.0001
Copper	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0225	0.0059	0.0069	0.0303	0.0051	0.0045	0.0054	<0.0045	0.0036	0.0033	0.00226	0.00185	0.00311	0.00527	0.00265	0.00363
Iron	0.076	0.084	0.092	0.076	0.089	0.087	0.123	3.15	0.703	0.38	8.88	0.606	0.665	0.84	0.497	0.769	1.03	1.32	0.647	0.775	1.24	0.768	1.58
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	0.000072	<0.00005
Lithium	0.00303	0.00309	0.00319	0.00325	0.0025	0.00311	0.00281	<0.01	<0.01	0.0058	0.0052	<0.01	<0.005	<0.01	<0.005	<0.01	<0.005	0.00536	0.0056	0.00588	0.0044	0.00549	0.00581
Magnesium	18.9	18.6	17.9	17.9	18.6	18.7	19.7	48	47.7	47.7	46.2	45.5	48	44.3	44.6	48.3	48.3	48.7	47.6	45.7		46.6	46.9
Manganese	0.0974	0.103	0.0987	0.0903	0.0925	0.0988	0.113	0.156	0.215	0.1	0.212	0.102	0.107	0.0819	0.0622	0.0826	0.112	0.174	0.203	0.137	0.145	0.11	0.149
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0468	0.0466	0.0462	0.0422	0.0407	0.0412	0.0429	0.104	0.0789	0.0749	0.0655	0.0835	0.0723	0.0699	0.0729	0.0758	0.0722	0.0641	0.0785	0.0805	0.0639	0.0819	0.0686
Nickel	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0131	0.0058	0.0048	0.0096	0.0061	0.002	<0.002	0.0019	<0.002	<0.001	0.00068	0.00143	0.00243	0.00135	0.00114	0.00137
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05								<0.3	<0.3	<0.3	<0.3	<0.3	<0.3		<0.05	<0.05
Potassium	1.56	1.4	1.44	1.41	1.31	1.39	1.39	8.1	8.1	8.2	9.1	7.6	8.3	8.2	7.7	7.9	8.3	9.04	9.06	8.53	7.87	8.86	8.8
Selenium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0218	0.0236	0.0241	0.0113	0.0206	0.0046	0.0205	0.0148	0.0055	0.0032	0.0149	0.0191	0.0155	0.00063	0.0185	0.00024
Silicon	5.09	5.01	5.15	5.1	5.13	5.08	5.36								7.23	7.22	6.75	6.56	6.75	7.33		7.16	5.77
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00004	<0.00004	<0.00002	<0.00002	<0.00004	0.000028	<0.00004	<0.00002	<0.00004	0.000021	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	88.1	89.9	90.1	93.3	92.2	90	94	39.2	42	39.6	43.1	39.2	41.8	41.4	41.4	43.3	40.8	43.9	49.2	44.5	41.4	42.2	43.3
Strontium	0.96	1.03	0.974	0.963	0.958	1.01	0.987								0.586	0.62	0.615	0.629	0.735	0.637	0.608	0.61	0.62
Sulphur	87.5	87	97.9	93.8	89.6	89.2	96.6															87.9	89.3
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0004	<0.0004	<0.0002	<0.0002	<0.0004	<0.0002	<0.0004	<0.0002	<0.0004	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.119	<0.01	<0.01	0.019	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.013	<0.01	<0.01		<0.01	<0.01
Total Cadmium (by saltwater extra				<0.00002		<0.00002																	
Uranium	0.000564	0.000543	0.000495	0.000469	0.000499	0.000521	0.000457	0.00215	0.00143	0.00145	0.00099	0.00153	0.00103	0.00105	0.00117	0.00101	0.00078	0.000626	0.001	0.00101	0.000276	0.0011	0.000235
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0111	0.0028	0.0036	0.0094	<0.002	0.0016	<0.002	0.0016	<0.002	0.0012	<0.001	<0.001	0.0012	<0.001	0.0011	<0.001
Zinc	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0064	<0.005	<0.005	<0.005	<0.005	<0.005	0.0098	<0.005	<0.005	<0.005	<0.003	0.0159	<0.003	<0.003	<0.003	<0.003
Organics																							
Carbon Organic (Dissolved)	2.52	2.91	2.75					2.1	1.95	1.59	1.93	1.51	1.51	1.22	1.53	0.97	1.26	2.4	1.87	16.3	3.85	1.52	1.74
Carbon Organic (Total)	2.47	2.8	2.35	2.18	2.51	2.46	2.83									0.85	1.1	2.44	2.13	1.78	1.86	1.5	1.58
Nitrogen Organic (Dissolved)																0.11	0.105	0.112	<0.05	1.79		<0.05	<0.05
Nitrogen Organic (Total)																0.11	0.105	0.122	0.102	0.075			<0.05
ALS LAB ID	**L1308855**	**L1346553**	**L1394041**	**L1430651**	**L1461077**	**L1478436**	**L1514758**	**L623639**	**L655304**	**L678594**	**L710078**	**L892818**	**L924086**	**L957406**	**L990458**	**L1007006**	**L1035635**	**L1077032**	**L1113319**	**L1159973**	**L1200094**	**L1247459**	**L1276505**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D3.2 - GROUNDWATER QUALITY DATA

Site ID																							
Site ID	AJGW07-DA	JGW07-DA	JGW07-DA	JGW07-DA	JGW07-DA	JGW07-SA	JGW07-SA	JGW07-SA	JGW07-SA	JGW07-SA	JGW07-SA	JGW07-SA	JGW07-SA	JGW07-SA	JGW07-SA	JGW07-SA	JGW07-SA	JGW07-SA	JGW07-SA	JGW07-SA	JGW07-SA	JGW07-SA	JGW07-S
Analytes	May-13	Nov-13	Mar-14	May-14	Jun-14	Apr-08	Jul-08	Sep-08	Nov-08	Jun-10	Aug-10	3/Nov/201(	Mar-11	May-11	Jul-11	Oct-11	Feb-12	Jun-12	Aug-12	Mar-13	May-13	Aug-13	Nov-13
In Situ Parameters																							
Conductivity µS/cm	639	0.902	903	609	583		714	659	1255	713	662	644	674	615	695	662	636	1001	921	638	664	681	0.9
Oxygen Dissolved %	1.6	2.6	1.2	17.7	0.2		25.7	29	23	5.8	6.1	11.8	7.3	4.3	0	14.7	7.1	15.5		5.3	34.6	28.5	56.2
Oxygen Dissolved	0.18	0.3	0.14	1.98	0.02		2.69	3.2	2.69	0.62	0.67	1.27	0.81	0.47	0	1.69	0.83	1.41	1.62	0.61	3.92	3.07	6.5
pH (unitless)	8.17	8.19	8.17	6.93	8.29		7.43	7.56	8.23	7.51	7.66	7.66	7.57		7.35	7.76	7.87	7.84	8.68	8.08	7.72	7.61	7.81
Redox Potential mV	-240	239	-106	-183	-213		-65.6	-59	-79.9	-3.3	-30.1	94.5	-32				609		-132	-104	90.4	165	0.587
Salinity ppt	0.44	0.45	0.45	0.42	0.39										0.49		0.46		0.5	0.45	0.46	0.45	0.45
Specific Conductivity µS/cm	894	0.604	631	847	791		938	910	1763	947	901	924	931	848	990	939	937	722		915	930	918	0.637
Temperature °C	10.1	9.81	9.31	10.3	11.3		12.5	10.6	9.2	12.1	11.1	9.12	10.5	10.6	9.4	9.6	8.19	10.3	13.9	9.14	10	11.5	9.69
Total Dissolved Solids	581	538	585	551	515						586	600	605				12.8		591	595	606	597	425
Turbidity NTU	0	6.3	5.6	-1.7	-3.6										48	8.2	11.8	6.4	1	4.4	35.9	1	6.2
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)	<1			1.6		4.7	3.2	5.1	1.6	2.7	4.6	3.1	5.9	4.1	2.8	<1			4		<1		
Alkalinity (Total as CaCO3)	207	216	211	209	182	230	268	240	254	266	270	256	256	268	274	265	259	254	260	265	258		286
Bicarbonate Alkalinity	207	216	211	209	178	230	268	240	254	266	270	256	256	268	274	265	259	246		265	258		286
Carbonate Alkalinity	<1	<2	<1	<2	4.7	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	8.7		<1	<1		<2
Color TCU	<5					<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
Hardness as CaCO3 (Dissolved)	408	420	412	363	374	463	427	451	433	436	452	430	429	441	441	441	426	425	409	437	430		444
Hydroxide Alkalinity	<1	<2	<1	<2	<1	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1		<1	<1		<2
pH (unitless)	8.33	8.25	8.36	8.2	8.34	8.05	8.16	8.06	7.9	8.16	8.12	8.15	8.01	8.03	8.15	8.28	8.23	8.34	8.13	8.32	8.34		8.21
Specific Conductivity µS/cm	864	918	881	812	830	933	917	921	913	893	913	910	896	903	924	934	897	881	902	915	881		903
Total Dissolved Solids	646	623	621	592	583	649	650	650	640	645	637	637	634	632	646	590	640	630	641	628	650		608
Total Suspended Solids	5.6			6.8	5	92	38.3	12.6	247	3.5	3	5.2	6	6.4	42.9	13.7	8.7	3.2	3.3	3	<3		
Turbidity NTU	19.4			22.3	15.4	54.3	21.4	37.2		1.17	0.36	6.24	6.57	6.66	43.3	9.74	7.64	0.65	1.08	1.98	0.97		
Dissolved Anions																							
Bromide	<0.5	<0.5	<0.5	<0.5	<0.25	<0.05	<0.05	<0.05	<0.05	<0.25	<0.5	<0.5	<1.3	<0.25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5
Chloride	6.8	6.3	<5	5.3	7.4	6.63	4.92	5.18	4.89	3.8	5.7	<5	6	5.3	<5	<5	5.9	7.9	14.5	<5	5.2		5.3
Fluoride	<0.2	<0.2	0.38	<0.2	0.16	0.167	0.199	0.194	0.187	0.2	<0.2	<0.2	<0.2	0.18	0.35	0.22	0.22	0.21	3.82	0.31	<0.2		0.2
Sulphate	296	314	290	272	260	281	252	258	249	255	256	251	252	254	264	263	259	260	257	264	262		246
Nutrients																							
Ammonia (Total)	0.0085	0.0136	0.0101	0.0059	0.0064	<0.02		<0.02	<0.005	<0.02	<0.005	<0.005	<0.005	<0.005	0.0098	0.0077	0.0056	<0.005	<0.005	<0.005	<0.005		<0.005
Nitrate (as N)	<0.05	<0.05	<0.05	<0.05	<0.025	0.0383	<0.005	0.017	0.0174	0.025	<0.05	<0.05	<0.05	<0.025	0.078	<0.05	<0.05	<0.05	0.074	<0.05	<0.05		<0.05
Nitrite (as N)	<0.01	<0.01	<0.01	<0.01	<0.005	0.003	<0.001	<0.001	<0.001	<0.005	<0.01	<0.01	<0.01	<0.005	<0.01	0.012	<0.01	<0.01	0.01	<0.01	<0.01		<0.01
Nitrogen (Dissolved)														0.09	0.17	0.08	0.05	0.05		0.055			
Nitrogen (Total)																							
Nitrogen Kjeldahl (Total)	0.062	0.077	0.066	0.069	0.092	0.101		0.063		<0.05	0.051	0.055	0.057	0.076	0.092	0.071	0.051	0.076	0.061	0.071	0.06		0.071
Orthophosphate (Dissolved)		<0.001	0.0021	<0.001	<0.001	0.017	0.0196	0.0173	0.0194	0.0281	0.0292	0.0263	0.0279	0.0283	0.03	0.0312			0.0302				0.0301
Phosphorus - Dissolved	<0.002	<0.002	0.0038	0.0026	<0.002				0.0186		0.029			0.029	0.0332	0.0359	0.031	0.0292		0.032	0.0341		0.0313
Phosphorus - Total	0.0326	0.0297	0.0347	0.0298	0.0293	0.0973	0.0686	0.0369	0.282	0.033	0.0294	0.0349	0.0388	0.0449	0.087	0.0537	0.0457	0.0322	0.0329	0.0349	0.0368		0.0343
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005
Dissolved Metals																							
Aluminum	<0.001	0.0016	0.001	0.0015	0.0015	<0.01	<0.01	<0.01	0.0778	<0.01	<0.005	<0.01	<0.005	<0.01	<0.005	<0.003	<0.003	0.0015	0.0013	0.0034	0.0015		0.002
Antimony	<0.0001	<0.0001	0.00011	<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	0.00022	0.00024	0.00024	0.00023	0.00026	0.00022		0.00024
Arsenic	0.00057	0.00052	0.0006	0.0006	0.00069	0.0024	0.0028	0.0036	0.00407	0.0043	0.00394	0.0036	0.00385	0.004	0.00454	0.00436	0.00473	0.00393	0.00455	0.00483	0.00454		0.00481
Barium	0.0414	0.0418	0.0408	0.0382	0.0376	0.043	0.052	0.048	0.085	0.04	0.043	0.046	0.042	0.042	0.042	0.0388	0.0373	0.0361	0.037	0.0359	0.0369		0.0347
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.002	<0.002	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005								<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005
Boron	0.084	0.103	0.098	0.092	0.089	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.066	0.07	0.066	0.062	0.076	0.06		0.071
Cadmium	<0.00005	<0.00002	<0.00003	<0.00003	<0.00005	<0.000034	<0.000034	<0.000034	<0.00051	<0.0004	<0.000017	<0.000034	0.000029	<0.000034	<0.00005	<0.00004	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00004
Calcium	84	86.1	83.4	67.1	71.5	105	92.3	99.8	94.2	91.7	95.3	90.8	92.5	94.3	94.3	93.5	89.4	90.8		93	90.5		91.7
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.002	<0.002	<0.002	<0.001	<0.004	<0.001	<0.002	0.0012	<0.002	<0.001	0.00015	0.00014	0.00022	0.00021	0.00018	0.00028		0.00025
Cobalt	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0006	0.00115	0.00117	0.00133	<0.0006	<0.0003	<0.0006	<0.0003	<0.0006	<0.0003	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001
Copper	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0022	0.0027	<0.002	0.0027	0.0022		0.0024	<0.0035	0.0026	0.0012	<0.0005	0.00119	0.00174	0.00166	0.00122	0.00145		0.00179
Dissolved Cadmium (by saltwater			<0.00002		<0.00002																		
Iron	2.05	2.05	1.33	2.13	1.93	<0.03	<0.03	0.053	0.227	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.01	<0.01	<0.01	<0.01		0.013
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005
Lithium	0.00442	0.00539	0.00613	0.00418	0.00454	<0.01	<0.01	<0.01	<0.005	<0.01	<0.005	<0.01	<0.005	<0.01	<0.005	0.00406	0.00415	0.00402	0.00348	0.00464	0.00376		0.00419
Magnesium	48.2	49.8	49.5	47.5	47.5	48.8	47.6	49.1	48.1	50.2	52	49.3	48.1	49.9	49.9	50.5	49.2	48.2		49.8	49.5		52.1
Manganese	0.234	0.237	0.189	0.21	0.215	0.0501	0.241	0.257	0.368	0.0375	0.0415	0.0573	0.0626	0.0748	0.0516	0.0614	0.0602	0.02	0.0336	0.0373	0.0188		0.0166
Mercury	<0.00001	<0.00001	<0.00001	0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001
Molybdenum	0.0724	0.0733	0.0758	0.0804	0.0952	0.0981	0.12	0.109	0.106	0.135	0.124	0.121	0.107	0.127	0.136	0.132	0.141	0.129	0.138	0.145	0.136		0.125
Nickel	0.00074	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.002	0.0023	0.004	<0.002	0.001	<0.002	0.001	<0.002	<0.001	<0.0005	0.00064	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05								<0.3	<0.3	<0.3	<0.3	<0.3	<0.3		<0.05	<0.05		<0.05
Potassium	8.2	8.68	9.02	7.75	8.67	6.9	7.5	7.5	8	7.6	8.6	7.7	7.6	7.6	8	7.52	7.68	7.07	7.32	7.82	7.76		8.02
Selenium	<0.0001	0.00322	0.00876	0.0001	<0.0001	0.0179	0.0179	0.022	0.0266	0.0396	0.0326	0.0317	0.0305	0.0286	0.0248	0.0269	0.0252	0.0221	0.0238	0.025	0.0234		0.0266
Silicon	5.24	5.87	6.05	4.54	4.54								7.6	7.51	7.31	7.53	7.32	7.68		7.23	7.19		7.51
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00004	<0.00004	<0.00004	<0.00002	<0.00004	<0.00002	<0.00004	<0.00002	<0.00004	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001
Sodium	42.1	42.8	46.6	42.8	38.4	34.5	42.9	41.2	41.9	44	46.9	43.7	44.7	45.8	43.5	42.8	45.2	40.8	42.5	43.3	41.4		41.2
Strontium	0.664	0.647	0.676	0.582	0.597								0.702	0.72	0.705	0.679	0.728	0.667	0.694	0.724	0.699		0.682
Sulphur	88.6	95.9	98.2	89.5	87.8															86	78.6		77.7
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0004	<0.0004	<0.0004	<0.0002	<0.0004	<0.0002	<0.0004	<0.0002	<0.0004	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.013	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.013	<0.01	<0.01		<0.01	<0.01		<0.01
Uranium	0.000179	0.000472	0.000471	0.000146	0.000123	0.00243	0.00308	0.00288	0.00327	0.00422	0.00405	0.00345	0.00325	0.00363	0.00399	0.00399	0.00397	0.00343	0.0038	0.0044	0.00391		0.00386
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	0.0023	0.0026	0.0029	0.0027	0.0032	0.003	0.0029	0.0025	0.0028	0.0031	0.0032	0.0033	0.003	0.0031	0.0031	0.0029		0.003
Zinc	<0.001	<0.001	0.0013	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.003	<0.003	<0.001	0.001	<0.001	0.0011		<0.001
Total Metals																							
Aluminum	0.0092	0.009	0.0049	0.0068	0.011	2.16	0.71	0.79	2.58	0.03	0.0076	0.281	0.261	0.256	1.84	0.517	0.268	0.0369	0.0442	0.0714	0.0408		0.0089
Antimony	0.00011	0.00014	0.00014	<0.0001	0.00011	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	0.00025	0.00023	0.00025	0.00025	0.00029	0.00022		0.00029
Arsenic	0.00065	0.00056	0.00082	0.00062	0.00077	0.0037	0.003	0.0041	0.0045	0.0039	0.00359	0.0038	0.00317	0.0039	0.00557	0.00445	0.00458	0.00399	0.00442	0.00491	0.0047		0.00465
Barium	0.0422	0.0432	0.0414	0.0369	0.0382	0.07	0.058	0.058	0.093	0.04	0.043	0.047	0.046	0.047	0.062	0.0449	0.04	0.037	0.0378	0.0388	0.0378		0.0352
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.002	<0.002	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005								<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005
Boron	0.094	0.113	0.102	0.094	0.097	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.071	0.073	0.073	0.083	0.08	0.065		0.08
Cadmium	<0.00005	<0.00003	<0.00005	<0.00003	<0.00005	0.00009	0.00006	0.000039	<0.00051	<0.0004	<0.000017	<0.000034	0.000038	<0.000034	<0.00008	<0.00005	<0.00007	<0.00005	<0.00005	<0.00005	<0.00005		<0.00004
Calcium	83.7	86.1	83.4	70.3	69.5	103	91.1	103	93.2	88.9	93.1	90.4	92	96.2	97.8	91	90.2	98.5		95.9	91		91.5
Chromium	0.00025	0.00031	0.00017	0.00014	0.00017	0.0055	<0.002	0.0068	0.0115	<0.002	<0.001	0.0021	0.0012	<0.002	0.0042	0.00137	0.0009	0.00042	0.00052	0.00043	0.00045		0.00041
Cobalt	<0.0001	0.00012	<0.0001	<0.0001	<0.0001	0.00245	0.00196	0.00239	0.00408	<0.0006	<0.0003	<0.0006	0.00046	<0.0006	0.00211	0.00061	0.0004	<0.0001	0.00011	0.00017	0.0001		<0.0001
Copper	0.00189	0.00212	0.00182	0.00126	0.00085	0.0306	0.0169	0.0172	0.0404	0.004		0.0072	0.0066	0.0063	0.0217	0.00776	0.00683	0.00332	0.00275	0.00351	0.00287		0.00201
Iron	2.13	2.18	1.86	2.37	2.08	3.28	0.963	0.919	4.02	0.049	<0.03	0.404	0.369	0.352	2.09	0.602	0.36	0.053	0.06	0.099	0.057		0.022
Lead	<0.00005	0.000062	<0.00005	<0.00005	<0.00005	<0.001	<0.001	<0.001	0.0006	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	0.000108	0.000072	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005
Lithium	0.00474	0.00561	0.00606	0.00428	0.0045	<0.01	<0.01	<0.01	0.0057	<0.01	<0.005	<0.01	<0.005	<0.01	<0.005	0.00435	0.00401	0.00419	0.00371	0.00468	0.00388		0.00448
Magnesium	47.9	50	47.1	46.4	46.7	49.4	46.9	49.3	49.5	48.7	50.6	49.3	48.7	51.5	52.1	49.9	49.6	48.6		50.5	49		51
Manganese	0.245	0.251	0.19	0.217	0.221	0.126	0.268	0.304	0.303	0.0854	0.0542	0.152	0.0786	0.0925	0.154	0.129	0.0946	0.0302	0.0447	0.0899	0.039		0.0182
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001
Molybdenum	0.0766	0.0807	0.0799	0.0849	0.102	0.0958	0.121	0.108	0.107	0.138	0.134	0.124	0.116	0.137	0.138	0.131	0.145	0.137	0.142	0.157	0.14		0.137
Nickel	0.00129	0.00082	0.00076	0.00062	<0.0005	0.0078	0.0038	0.008	0.012	<0.002	<0.001	0.0023	0.0019	<0.002	0.0053	0.00164	0.00129	0.00053	0.00051	0.00059	<0.0005		<0.0005
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05								<0.3	<0.3	<0.3	<0.3	<0.3	<0.3		<0.05	<0.05		<0.05
Potassium	8.32	9.53	8.81	7.99	8.33	7.5	7.4	7.4	8.6	7.6	8.5	7.8	7.8	7.9	8.5	7.67	7.72	7.27	7.29	8.1	7.98		8.6
Selenium	0.00012	0.00276	0.00873	0.00018	<0.0001	0.0168	0.0167	0.0218	0.0206	0.029	0.0255	0.029	0.0211	0.0243	0.0253	0.0244	0.022	0.0216	0.0213	0.0231	0.0226		0.0248
Silicon	5.3	5.93	6.15	4.65	4.5								8.31	8.31	11.2	8.51	8.01	8.05		7.54	7.44		7.59
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00004	<0.00004	<0.00004	0.000048	<0.00004	0.000021	<0.00004	<0.00002	<0.00004	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001
Sodium	43.3	45.9	46.7	43.5	39.7	34.9	41.9	40.4	41.2	43.2	45.9	44.5	44.9	47.1	45.5	43.4	45.6	42.3	42.3	45	42.3		43.4
Strontium	0.698	0.67	0.677	0.598	0.631								0.716	0.743	0.746	0.673	0.748	0.697	0.704	0.733	0.71		0.694
Sulphur	91.2	99.4	97.9	91.4	89.5															88.5	80.4		81.8
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0004	<0.0004	<0.0004	<0.0002	<0.0004	<0.0002	<0.0004	<0.0002	<0.0004	<0.0002	0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	0.185	0.054	0.047	0.228	<0.01	<0.01	0.026	0.027	0.024	0.121	0.047	0.028	<0.01		<0.01	<0.01		<0.01
Total Cadmium (by saltwater extra			<0.00002		<0.00002																		
Uranium	0.000188	0.000511	0.000533	0.000169	0.000127	0.00252	0.00312	0.00296	0.00352	0.00443	0.00451	0.00355	0.00341	0.00388	0.00425	0.00396	0.004	0.00361	0.004	0.00444	0.00401		0.0041
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	0.0126	0.0056	0.0064	0.0149	0.0034	0.0032	0.0044	0.0038	0.004	0.0102	0.0053	0.0045	0.0035	0.0033	0.0037	0.0035		0.0033
Zinc	<0.003	0.003	<0.003	<0.003	<0.003	0.0066	<0.005	<0.005	0.0083	<0.005	<0.005	0.0089	<0.005	<0.005	0.0055	<0.003	0.0033	<0.003	<0.003	<0.003	<0.003		<0.003
Organics																							
Carbon Organic (Dissolved)	1.67	1.62				2.18	2.12	1.85	2.01	1.78	1.74	2.28	1.84	1.04	1.86	1.82	1.79	2.16	1.78	1.7	1.41		1.46
Carbon Organic (Total)	1.44	1.58	1.62	1.45	1.67									1.08	1.9	1.75	1.34	1.55	1.7	1.52	1.29		1.29
Nitrogen Organic (Dissolved)														0.088	0.082	0.06	<0.05	<0.05		0.05			
Nitrogen Organic (Total)														0.108	0.082	0.09	<0.06	0.076		0.055			
ALS LAB ID	L1306577	L1392288	L1430651	L1452371	L1469742	L623639	L655304	L678594	L710078	L892818	L924086	L956921	L990458	L1007006	L1035437	L1077032	L1113319	L1159973	L1200094	L1276505	L1306577	L1345714	L1392288

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D3.2 - GROUNDWATER QUALITY DATA

Site ID				BGC14-001D					BGC14-002D					BGC14-002S					BGC14-003D				
Site ID	AJGW07-S	AJGW07-S	AJGW07-S	BGC14-001	BGC14-001	BGC14-001	BGC14-001	BGC14-001	BGC14-002	BGC14-002	BGC14-002	BGC14-002	BGC14-002	BGC14-002	BGC14-002	BGC14-002	BGC14-002	BGC14-002	BGC14-003	BGC14-003	BGC14-003	BGC14-003	BGC14-003
Analytes	**Mar-14**	**May-14**	**Jun-14**	**Mar-14**	**May-14**	**Jun-14**	**Jul-14**	**Aug-14**	**Mar-14**	**May-14**	**Jun-14**	**Jul-14**	**Aug-14**	**Mar-14**	**May-14**	**Jun-14**	**Jul-14**	**Aug-14**	**Jun-14**	**Jul-14**	**Aug-14**	**Mar-14**	**May-14**
In Situ Parameters																							
Conductivity µS/cm	931	605	689	1060	719	677	699	719	1297	842	822	862	832	1419	876	873	943	920	570	632	1128	699	491
Oxygen Dissolved %	2.5	7.77	14.7	73.3	4.4	4.2	16.3	3.9	32.5	0	2.1	1.1	1.1	45	-0.3	2.9	2.7	9.8	0.6	2.4	5.5	43.3	12
Oxygen Dissolved	0.29	41.6	1.61	8.65	0.52	0.47	1.88	0.48	3.79	0	0.25	0.12	0.12	5.27	-0.001	0.32	0.23	1.04	0.07	0.26	0.0006	5.28	1.41
pH (unitless)	7.75	8.7	7.89	7.68	7.41	7.5	6.55	6.96	7.43	7.71	7.26	9.32	7.11	7.32	7.64	7.44	9.13	7.51	9.41	9.14	9.14	8.35	8.25
Redox Potential mV	57.6	51.2	-13	76	11.2	-39.4	22.9	-31.4	53.7	-44.5	-44.8	-158	-68.9	-37.9	-84.1	-83	-155	-97.6	-88.2	36.1	-4.9	37.8	38.4
Salinity ppt	0.46	0.42	0.47	0.53	0.52	0.48	0.49	0.52	0.65	0.61	0.6	0.59	0.59	0.72	0.62	0.62	0.6	0.6	0.4	0.42	8E-07	0.35	0.35
Specific Conductivity µS/cm	657	892	939	716	1047	960	994	1052	889	1212	1189	1193	1169	965	1240	1240	1209	1200	806	850	1588	458	722
Temperature °C	9.59	10.3	11.1	8	8.57	9.45	9.45	8.39	8.45	9.05	8.83	10.6	9.83	8.37	9.49	9.49	13.9	12.7	9.7	11.8	9.84	6.8	8.27
Total Dissolved Solids	605	546	610	689	681	624	646	684	843	788	773	772	761	923	806	805	781	780	525	553	0.00103	454	469
Turbidity NTU	1.6	5.73	8.7	4.8	6.5	-3.4	0	0	2.9	-2.4	-3.2	0	0	1.8	-2.6	-3.1	0	0	0.7	0	2.5	10.5	12.4
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)		2.8								4.8					4.6								<1
Alkalinity (Total as CaCO3)	271	293	271	424	437	451	449	457	288	291	287	287	290	266	262	279	260	263	138	135	136	200	196
Bicarbonate Alkalinity	271	293	263	424	437	451	449	457	288	291	287	287	290	266	262	279	259	263	94.2	110	98.6	198	196
Carbonate Alkalinity	<1	<2	7.9	<2	<1	<1	<1	<2	<2	<2	<1	<1	<2	<2	<2	<2	<1	<2	43.4	24.7	37.8	2.4	<1
Color TCU									<5	5.8				6.2	8.6								<5
Hardness as CaCO3 (Dissolved)	439	438	455	445	404	439	422	429	409	385	399	393	399	512	443	459	437	445	22.1	21.5	20.2	125	118
Hydroxide Alkalinity	<1	<2	<1	<2	<1	<1	<1	<2	<2	<2	<1	<1	<2	<2	<2	<2	<1	<2	<1	<1	<1	<1	<1
pH (unitless)	8.31	8.15	8.34	8.2	8.31	8.19	8.01	8.23	8.16	8.02	8.14	8.29	8.08	8.09	8.02	8.1	8.28	8.08	8.97	8.86	8.9	8.3	8.38
Specific Conductivity µS/cm	905	879	908	1050	1030	1020	1010	1010	1260	1230	1270	1240	1230	1330	1270	1270	1260	1240	848	856	844	703	694
Total Dissolved Solids	611	632	640	653	618	635	604	614	854	862	795	856	843	963	921	929	887	852	569	575	573	463	455
Total Suspended Solids		3.5	3.6		<3	<3	<3	<3	<3	3	<3	3.2	4	<3	<3	<3	<3	3.6	4	<3	<3	7.9	<3
Turbidity NTU		1.81	1.33		0.47	0.54	0.65	0.8	1.99	0.61	0.56	0.78	0.81	1.29	0.75	1.98	1.83	1.67	3.33	2.71	1.31	6.68	4.1
Dissolved Anions																							
Bromide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.117	<0.5	<0.5	<0.25	0.064
Chloride	<5	<5	9.4	<5	<5	<5	<5	<5	6.3	7.1	6	5.5	5.4	8.4	9.2	8.5	6.8	6.8	9.33	9.2	8.4	3	2.61
Fluoride	0.37	0.2	0.22	0.34	0.22	0.255	0.232	0.216	0.43	0.31	0.338	0.31	0.356	0.44	0.33	0.34	0.33	0.361	0.121	0.148	0.117	0.57	0.423
Sulphate	247	248	254	185	154	150	147	142	419	405	418	399	416	494	468	484	448	457	254	268	255	172	165
Nutrients																							
Ammonia (Total)	<0.005	<0.005	<0.005	0.0757	0.0542	0.0547	0.0625	0.0523	0.199	0.211	0.205	0.199	0.199	0.128	0.125	0.145	0.139	0.146	0.101	0.0819	0.0828	0.0215	0.0457
Nitrate (as N)	<0.05	<0.05	0.056	0.282	0.27	0.301	0.313	0.299	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.005	<0.05	<0.05	<0.025	<0.005
Nitrite (as N)	<0.01	<0.01	<0.01	0.021	0.015	<0.01	<0.01	0.014	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.031	<0.01	<0.001	<0.01	<0.01	<0.005	<0.001
Nitrogen (Dissolved)																							
Nitrogen (Total)																							
Nitrogen Kjeldahl (Total)	0.066	0.079	0.101	0.249	0.178	0.186	0.137	0.189	0.371	0.349	0.383	0.355	0.348	0.345	0.331	0.387	0.139	0.363	0.222	0.247	0.209	0.177	0.178
Orthophosphate (Dissolved)	0.034	0.035	0.0371	0.0058	0.0151	0.0151	0.0168	0.0175	0.0128	0.0212	0.0209	0.022	0.0258	0.017	0.0234	0.0157	0.0228	0.0296	0.176	0.267	0.27	0.0286	0.0591
Phosphorus - Dissolved	0.0328	0.0354	0.0367	0.014	0.0163	0.0144	0.0203	0.0173	0.0215	0.0241	0.0194	0.0255	0.0241	0.026	0.0242	0.0151	0.0256	0.025	0.189	0.28	0.259	0.0502	0.0661
Phosphorus - Total	0.0328	0.0396	0.0412	0.0069	0.0179	0.0204	0.0246	0.0223	0.014	0.0264	0.0354	0.0406	0.0448	0.0193	0.0359	0.0703	0.0679	0.0661	0.187	0.302	0.295		0.0787
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																							
Aluminum	0.0012	0.0027	0.0013	0.0052	0.0038	0.003	0.003	0.003	0.0042	0.0043	0.0029	0.0045	0.0034	0.0062	0.0054	0.0059	0.0054	0.0054	0.0465	0.0511	0.0592	0.0062	0.0068
Antimony	0.00025	0.00027	0.00024	0.00025	0.00022	0.0002	0.00015	0.00014	0.00024	0.00031	0.00022	0.00017	<0.0001	0.00024	0.00022	0.00016	0.00012	0.00015	<0.0002	0.00023	0.00021	0.00028	0.00017
Arsenic	0.00475	0.00481	0.00478	0.00044	0.00047	0.00065	0.00068	0.00057	0.00077	0.00136	0.00247	0.00233	0.00242	0.00071	0.00129	0.00288	0.00256	0.00251	0.00535	0.00496	0.00547	0.00436	0.0048
Barium	0.0331	0.0356	0.0363	0.0329	0.0299	0.0299	0.0305	0.0294	0.027	0.0245	0.0237	0.0237	0.0224	0.024	0.0217	0.0207	0.0198	0.0193	0.00979	0.00997	0.00906	0.0302	0.0266
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.0005
Boron	0.063	0.068	0.061	0.122	0.122	0.116	0.106	0.114	0.504	0.58	0.482	0.492	0.528	0.395	0.438	0.367	0.396	0.398	8.13	8.9	10.1	1.73	1.89
Cadmium	<0.00006	<0.00005	<0.0001	0.000072	0.000025	0.000023	0.000023	0.000017	0.000035	0.000021	<0.00002	<0.00001	<0.00001	0.000019	0.00001	0.000013	0.000013	0.000018	<0.00002	<0.00002	<0.00002	0.000019	0.000015
Calcium	93	92	97.4	60.6	57.1	60.2	58.6	57.7	64.4	63.1	62.6	59.9	59.4	86.7	73.3	73.7	67.8	67.7	5.15	5.09	4.73	21.3	19.8
Chromium	0.00016	0.00027	0.00023	0.00047	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00028	0.00017	0.00014	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	0.00021	<0.0001
Cobalt	<0.0001	<0.0001	<0.0001	0.00117	0.00125	0.00132	0.00121	0.00105	0.0017	0.00217	0.00284	0.00244	0.00194	0.00247	0.00226	0.00276	0.00214	0.00182	<0.0002	0.00022	<0.0002	0.00029	0.00016
Copper	0.00181	0.00228	0.00163	0.00219	0.00058	0.00043	0.00043	0.00045	0.00064	0.00033	<0.0002	<0.0002	<0.0002	0.0002	0.00022	0.00064	0.00033	0.00059	<0.0004	<0.0004	<0.0004	0.00102	0.00042
Dissolved Cadmium (by saltwater	<0.00002		<0.00002								<0.00002								<0.00002	<0.00002	<0.00002		
Iron	<0.01	<0.01	<0.01	<0.01	0.012	0.038	0.051	0.057	<0.01	0.023	0.125	0.142	0.211	0.065	0.111	0.449	0.335	0.363	<0.01	0.013	0.014	<0.01	<0.01
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000076	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005
Lithium	0.00456	0.00392	0.00359	0.0158	0.0141	0.0148	0.0147	0.015	0.00946	0.00826	0.00656	0.0073	0.00731	0.00589	0.00619	0.00576	0.00607	0.00585	0.0086	0.0064	0.0075	0.00915	0.0103
Magnesium	50.2	50.6	51.3	71.3	63.6	70.2	66.9	69.3	60.4	55.3	58.9	59	60.9	71.8	63.1	66.8	65	67	2.24	2.13	2.04	17.5	16.7
Manganese	0.0222	0.00946	0.00973	0.208	0.296	0.345	0.334	0.313	0.408	0.672	1.09	0.94	0.823	0.731	0.981	1.31	1.14	1.03	0.0281	0.0348	0.0336	0.107	0.107
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.124	0.128	0.128	0.0101	0.00984	0.00978	0.00814	0.00943	0.0116	0.0122	0.0116	0.0119	0.0125	0.0147	0.0163	0.0155	0.0164	0.0171	0.0172	0.0175	0.0178	0.0167	0.0168
Nickel	<0.0005	<0.0005	<0.0005	0.00405	0.00282	0.0026	0.00229	0.00184	0.00507	0.00518	0.00512	0.00414	0.00327	0.00615	0.00471	0.00449	0.00347	0.00338	<0.001	0.0017	0.0013	0.00157	0.00127
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.072	<0.05	<0.05	0.051	0.067	0.133	0.079	0.182	0.284	0.292	<0.05	0.071
Potassium	8.05	7.59	8.32	7.35	6.51	7.57	7.72	7.46	8.9	8.31	9.26	8.91	9.55	13.3	12.7	14.4	13.2	13.9	10.2	9.95	9.45	9.95	9.58
Selenium	0.0273	0.0223	0.0229	0.0038	0.00344	0.00314	0.00291	0.00281	0.00019	0.00022	0.00028	0.00013	0.00015	0.00026	0.00015	0.00015	0.00016	0.00013	<0.0002	0.00026	0.00027	0.00128	0.001
Silicon	7.42	7.4	7.44	4.74	4.74	4.82	4.69	4.65	6.27	6.07	6.34	6.19	6.18	6.57	6.33	6.69	6.52	6.44	4.29	3.97	4.12	5.56	6.04
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001
Sodium	42.4	42.4	40.1	99.9	85.3	81.3	81.4	76.8	148	148	131	132	136	126	128	122	116	121	163	166	161	110	110
Strontium	0.685	0.706	0.716	1.18	1.13	1.26	1.13	1.3	1.52	1.33	1.34	1.36	1.41	1.39	1.19	1.32	1.25	1.28	0.168	0.155	0.159	0.66	0.645
Sulphur	81.3	77.3	80.6	57.1	51.4	47.7	47.7	48.9	135	129	135	136	132	163	144	149	147	146	86.9	88	85.6	57.1	56.8
Thallium	<0.00001	<0.00001	<0.00001	0.000034	0.000031	0.000029	0.000027	0.000027	0.000041	0.000027	0.000026	0.000027	0.000017	0.000016	0.000012	0.000011	0.000013	0.000011	<0.00002	<0.00002	<0.00002	0.000018	<0.00001
Tin	<0.0001	<0.0001	<0.0001	0.00017	<0.0001	<0.0001	<0.0001	<0.0001	0.00017	0.00013	<0.0001	<0.0001	<0.0001	0.00021	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	0.00014	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.01	<0.01
Uranium	0.00387	0.00405	0.00398	0.00336	0.00327	0.00312	0.00247	0.00299	0.00267	0.00319	0.00274	0.00272	0.0026	0.0032	0.00306	0.00255	0.00261	0.00271	0.000532	0.00101	0.000812	0.00142	0.00128
Vanadium	0.0033	0.003	0.0029	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	0.002	0.0014
Zinc	0.001	0.0041	0.0106	0.005	0.0016	0.007	0.0061	0.0055	0.003	0.0032	0.017	0.0042	0.005	0.0015	0.0021	0.0132	0.0074	0.0571	0.0025	0.0023	<0.002	0.0017	<0.001
Total Metals																							
Aluminum	<0.003	0.0886	0.0632	0.134	0.016	0.0198	0.0233	0.0278	0.102	0.0305	0.0249	0.0365	0.0347	0.0426	0.0236	0.0108	0.0143	0.021	0.202	0.309	0.111	0.308	0.132
Antimony	0.00024	0.00029	0.00029	0.00027	0.00024	0.0002	0.00021	0.00015	0.00027	0.00035	0.00025	0.0002	0.00012	0.00026	0.0003	0.00016	0.00012	0.00018	<0.0002	0.0003	0.0003	0.00035	0.00022
Arsenic	0.00448	0.00487	0.0048	<0.0005	0.00045	0.00074	0.00078	0.00057	0.00084	0.00151	0.0025	0.00237	0.00242	0.00072	0.00137	0.00299	0.00268	0.00249	0.00533	0.00517	0.00509	0.00447	0.00456
Barium	0.0331	0.0371	0.0384	0.0352	0.0303	0.0311	0.031	0.0294	0.0285	0.0269	0.0246	0.0241	0.0234	0.0251	0.0221	0.0201	0.0203	0.0196	0.0107	0.0116	0.00952	0.0337	0.0288
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.0005
Boron	0.066	0.077	0.064	0.129	0.127	0.126	0.131	0.119	0.534	0.614	0.464	0.478	0.586	0.423	0.448	0.372	0.398	0.43	8.74	10.5	10.4	1.77	1.97
Cadmium	<0.00006	<0.00006	<0.0001	0.000074	0.000027	0.000025	0.000025	0.000022	0.000044	0.000028	<0.00003	0.000029	0.000018	0.000025	0.000014	0.000014	0.000019	0.000034	<0.00002	0.000028	0.000023	0.000029	0.00003
Calcium	88.9	91	93.5	61.9	57.5	58.7	56.7	57.4	64	62.8	61.7	59.8	59.5	86.4	73.9	70.2	68.2	67	5.1	5.28	4.72	20.9	20
Chromium	0.00026	0.00053	0.00066	<0.0009	0.00013	0.00016	0.00014	<0.0001	0.00063	0.00022	0.00019	0.00026	0.00024	0.00058	0.00027	0.0002	0.00018	0.00018	0.00119	0.00244	0.00035	<0.0013	0.00056
Cobalt	<0.0001	0.00022	0.00016	0.00125	0.00131	0.00135	0.00128	0.00105	0.00194	0.00234	0.00298	0.00256	0.00206	0.00265	0.00249	0.00286	0.00228	0.0019	0.0003	0.00053	0.00024	0.00062	0.00035
Copper	0.00185	0.00459	0.00404	0.00331	0.0008	0.00089	0.00097	0.00101	0.00148	0.00067	0.0007	0.00102	0.0007	0.00062	<0.0005	0.00098	0.00081	0.00121	<0.001	0.0017	<0.001	0.00326	0.00272
Iron	<0.01	0.12	0.091	0.146	0.027	0.06	0.072	0.09	0.129	0.055	0.152	0.179	0.248	0.128	0.147	0.462	0.387	0.417	0.248	0.419	0.096	0.432	0.216
Lead	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000098	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	0.00011	<0.0001	0.000129	0.000066
Lithium	0.00444	0.00416	0.0033	0.016	0.0145	0.0147	0.016	0.0148	0.00973	0.00837	0.00552	0.00726	0.0077	0.00635	0.00593	0.00558	0.00641	0.00602	0.0089	0.0082	0.0075	0.00929	0.0102
Magnesium	46.7	48	50.5	68.1	64.9	69.8	67.2	69.1	60.8	53.4	59	57.8	63	70.9	62.2	64.9	64.2	67.1	2.54	2.72	2.1	17.1	16.9
Manganese	0.0213	0.12	0.0607	0.203	0.303	0.354	0.364	0.33	0.429	0.72	1.11	0.953	0.849	0.766	1.07	1.36	1.18	1.08	0.0338	0.0449	0.0357	0.115	0.135
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.127	0.135	0.127	0.011	0.01	0.0101	0.00999	0.00997	0.0126	0.0123	0.0117	0.0125	0.0135	0.0163	0.0157	0.0162	0.0172	0.0179	0.0179	0.0209	0.0184	0.0173	0.0173
Nickel	<0.0005	0.0007	0.0007	0.00406	0.00305	0.00288	0.00244	0.00195	0.00598	0.00574	0.00557	0.00441	0.00356	0.00636	0.00522	0.00454	0.00386	0.00355	0.0026	0.005	0.0019	0.0032	0.00201
Phosphorus	<0.05	0.051	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.053	0.056	<0.05	<0.05	0.068	0.091	0.091	0.186	0.305	0.294	0.053	0.08
Potassium	7.73	7.32	8.15	7.44	6.68	7.42	7.75	7.49	8.8	8.14	9	8.93	9.8	13.2	12.6	13.6	13.3	13.7	9.73	9.97	9.28	9.58	9.61
Selenium	0.0236	0.0219	0.022	0.00325	0.00294	0.00282	0.00255	0.00245	0.00021	0.00016	0.00024	0.00017	0.00011	0.00031	0.00019	0.00017	0.00015	0.00015	0.00021	0.00029	0.0003	0.00124	0.00096
Silicon	7.16	7.41	7.5	5.13	4.79	4.87	4.8	4.68	6.42	6.03	6.4	6.26	6.38	6.7	6.32	6.65	6.62	6.49	4.73	4.81	4.21	6.2	6.31
Silver	<0.00001	<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001
Sodium	41.9	41.8	41.5	101	86.2	82.5	82.9	77.1	151	156	134	132	141	131	130	125	120	123	161	171	161	107	109
Strontium	0.681	0.727	0.716	1.23	1.15	1.24	1.3	1.28	1.55	1.32	1.33	1.42	1.48	1.45	1.17	1.35	1.3	1.31	0.174	0.182	0.161	0.676	0.661
Sulphur	80.9	80.4	83.4	61.1	52.4	50.7	50.1	48.9	141	128	142	136	139	169	144	153	149	149	87.4	90.4	85.1	56.2	57.7
Thallium	<0.00001	<0.00001	<0.00001	0.000036	0.000035	0.000032	0.000031	0.000032	0.00004	0.000026	0.000027	0.000026	0.000019	0.000018	0.000012	0.000013	0.000013	0.000013	<0.00002	<0.00002	<0.00002	0.000018	0.000013
Tin	<0.0001	<0.0001	<0.0001	0.00035	0.0001	<0.0001	<0.0001	<0.0001	0.00023	0.00023	0.00017	0.0002	0.00015	0.00027	0.00016	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	0.00035	0.00015
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	0.012	<0.01
Total Cadmium (by saltwater extra	<0.00002		0.000029								<0.00002								<0.00002				
Uranium	0.00395	0.00421	0.00401	0.00364	0.00346	0.00322	0.0031	0.003	0.00295	0.00328	0.00289	0.00285	0.00276	0.00342	0.0032	0.00267	0.00271	0.0028	0.00058	0.00112	0.00085	0.00156	0.00132
Vanadium	0.0033	0.0037	0.0034	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0021	0.0025	<0.002	0.0032	0.002
Zinc	<0.003	<0.003	0.0122	0.0038	<0.003	0.0087	0.0083	0.0067	<0.003	<0.003	0.0188	0.0078	0.0104	<0.003	<0.003	0.0096	0.0087	0.0577	<0.006	<0.006	<0.006	<0.003	<0.003
Organics																							
Carbon Organic (Dissolved)																							
Carbon Organic (Total)	1.39	1.39	1.6	2.19	1.54	1.51	1.31	1.08	2.76	2.84	2.62	3.04	2.39	4.16	3.8	3.69	3.58	3.45	3.03	3.68	3.36	2.64	1.78
Nitrogen Organic (Dissolved)																							
Nitrogen Organic (Total)																							
ALS LAB ID	**L1430651**	**L1452371**	**L1469742**	**L1435486**	**L1455485**	**L1473799**	**L1486405**	**L1507004**	**L1432458**	**L1453027**	**L1471871**	**L1485034**	**L1503481**	**L1432458**	**L1453027**	**L1470495**	**L1485034**	**L1503481**	**L1478436**	**L1488139**	**L1508557**	**L1435549**	**L1456126**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D3.2 - GROUNDWATER QUALITY DATA

Site ID	3GC14-003I			BGC14-003S					BGC14-005					BGC14-006D				BGC14-009					
Site ID	3GC14-003	BGC14-003	BGC14-003	BGC14-003	BGC14-003	BGC14-003	BGC14-003	BGC14-003	BGC14-005	BGC14-005	BGC14-005	BGC14-005	BGC14-005	BGC14-006	BGC14-006	BGC14-006	BGC14-006	BGC14-009	BGC14-009	BGC14-009	BGC14-009	BGC14-009	BGC14-01(
Analytes	**Jun-14**	**Jul-14**	**Aug-14**	**Mar-14**	**May-14**	**Jun-14**	**Jul-14**	**Aug-14**	**Apr-14**	**May-14**	**Jun-14**	**Jul-14**	**Aug-14**	**May-14**	**Jul-14**	**Aug-14**	**Sep-14**	**Apr-14**	**May-14**	**Jul-14**	**Jul-14**	**Aug-14**	**Mar-14**
In Situ Parameters																							
Conductivity µS/cm	449	447	481	732	533	464	464	479	2100	2155	2010	2534	2095		2774	2592	2623	728	706	641	788	1289	1586
Oxygen Dissolved %	1.3	8.3	8.1	53.3	3	1.4	1.4	101	0.31	4	1.7	2.9	4.8		6.3	20.2	15	7.6	2.2	0.6	4	7.3	6.3
Oxygen Dissolved	0.16	0.58	0.91	7.27	0.35	0.17	0.17	11.6	0.03	0.42	0.19	0.33	0.52		0.69	2.11	1.74	0.89	0.25	0.07	0.44	0.79	0.76
pH (unitless)	8.22	7.6	8.23	7.99	7.88	7.99	7.99	8	8.86	8.16	9.83	10.2	8.45		7.32	6.97	7.01	7.64	7.56	9.41	7.81	7.54	6.93
Redox Potential mV	-19.7	87.7	13.4	68.3	82.9	-31.3	-31.3	95.3	-182	-170	-274	-301	-216		-87.9	-31.7	-47	-53.1	-101	-189	-103	-67.1	-9.6
Salinity ppt	0.33	0.34	0.34	0.36	0.39	0.34	0.34	0.33	1.53	1.6	1.46	1.88	1.54		2.02	1.89	2.03	0.36	0.51	0.45	0.54	0.88	0.8
Specific Conductivity µS/cm	674	703	699	470	785	689	689	683	2923	3058	2807	3558	2946		3817	3576	3833	489	1016	909	1074	1724	1044
Temperature °C	7.52	8.32	8.67	6.25	8.16	7.88	7.88	9.35	10.9	9.49	10.1	9.89	9.87		10.7	10.6	8.48	7.85	9	9.58	11.1	11.8	7.1
Total Dissolved Solids	438	456	455	476	510	448	443	444	1899	1988	1824	2312	1915		2477	2322	2942	473	661	591	698	1121	1031
Turbidity NTU	2.8	2	3.2	4	7.4	-3.6	0	4.2	11.6	7.3	-1.7	-3.1	0		5.2	0	0	-2	6.5	-2.3	-4.4	2.2	6.7
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)					<1				2.7	4.4									4				
Alkalinity (Total as CaCO3)	202	199	202	182	182	183	174	173	159	177	163	171	172	137	108	131	135	121	125	136	146	150	383
Bicarbonate Alkalinity	197	189	199	182	182	183	174	173	159	177	163	171	172	137	108	131	135	121	125	136	146	150	383
Carbonate Alkalinity	4.4	10	3.5	<2	<2	<2	<1	<1	<2	<2	<1	<2	<2	<2	<1	<2	<2	<2	<2	<1	<2	<2	<2
Color TCU					6.6																		
Hardness as CaCO3 (Dissolved)	115	117	117	204	199	189	191	188	1580	1560	1530	1590	1540	2460	2360	2360	2450	175	248	236	233	232	896
Hydroxide Alkalinity	<1	<1	<1	<2	<2	<2	<1	<1	<2	<2	<1	<2	<2	<2	<1	<2	<2	<2	<2	<1	<2	<2	<2
pH (unitless)	8.32	8.41	8.4	8.17	8.27	8.19	8.15	8.35	8.17	8.09	8.24	8.22	8.24	7.73	7.93	7.71	7.68	8.03	7.96	8.08	7.96	8.1	7.88
Specific Conductivity µS/cm	721	715	719	697	733	712	692	686	2860	2890	2970	2880	2990	3700	3840	3700	3700	715	975	954	907	917	1520
Total Dissolved Solids	472	459	495	464	492	451	454	454	2920	2810	2830	2820	2880	4010	4020	3910	4020	524	619	689	625	642	1240
Total Suspended Solids	5.5	4.7	<3	<3	<3	<3	<3	<3	8.4	5.9	9.4	4.3	7.6	33.4	9.4	5.4	5.8	<3	<3	<3	<3	18.2	
Turbidity NTU	4.31	2.94	0.62	1.59	1.17	0.46	0.41	0.38	1.83	4.06	2.53	3.28	2.47	28.8	16.7	11	10.4	0.62	2.09	1.31	1.04	7.57	
Dissolved Anions																							
Bromide	<0.25	<0.5	0.051	<0.25	<0.25	<0.25	<0.5	0.068	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.25	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	2.6	<5	2.5	4.1	4.9	3.7	<5	3	13	10	<10	<10	<10	12	11	<10	10	7.5	11.2	7.8	6.7	6.2	8.2
Fluoride	0.35	0.313	0.317	0.36	0.27	0.29	0.258	0.288	<0.4	0.197	0.183	0.195	0.175	<0.4	0.24	0.226	0.232	0.19	0.21	0.28	0.165	0.166	0.28
Sulphate	169	158	164	200	212	196	186	180	1840	1870	1850	1880	1890	2740	2710	2720	2730	250	374	368	329	324	573
Nutrients																							
Ammonia (Total)	0.0448	0.0627	0.043	0.0505	0.0617	0.0591	0.0678	0.0686	0.0676	0.0663	0.0683	0.0659	0.0798	0.238	0.248	0.247	0.267	0.131	0.146	0.162	0.156	0.185	0.054
Nitrate (as N)	<0.025	<0.05	<0.005	<0.025	<0.025	<0.025	<0.05	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.025	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrite (as N)	<0.005	<0.01	0.0037	<0.005	<0.005	<0.005	<0.01	<0.001	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.0054	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen (Dissolved)																							
Nitrogen (Total)																							
Nitrogen Kjeldahl (Total)	0.156	0.176	0.165	0.19	0.195	0.186	0.192	0.176	0.143	0.171	0.16	0.162	0.153	0.391	0.323	0.258	0.29	0.298	0.416	0.368	0.406	0.352	0.216
Orthophosphate (Dissolved)	0.0657	0.0679	0.065	0.0374	0.0498	0.0513	0.0522	0.0526	0.0149	0.001	0.0035	0.0075	0.0012	<0.001	<0.001	<0.001	<0.001	0.0027	0.0078	0.0384	0.0394	0.0602	0.0016
Phosphorus - Dissolved	0.0674	0.0768	0.0627	0.0464	0.0507	0.0498	0.0566	0.0565	0.0139	<0.002	0.0029	0.0084	<0.002	<0.002	<0.002	<0.002	<0.002	0.0339	0.017	0.0415	0.0402	0.0538	0.0021
Phosphorus - Total	0.0791	0.0821	0.0672	0.0425	0.0525	0.0511	0.0562	0.0577	0.0276	0.0272	0.0283	0.0224	0.0218	0.0137	<0.002	0.0034	0.004	0.0041	0.0666	0.075	0.0694	0.0567	0.016
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																							
Aluminum	0.0059	0.0066	0.0053	0.0052	0.006	0.0058	0.0086	0.0063	0.0037	0.0021	0.0025	0.0024	0.0013	<0.002	<0.002	<0.002	<0.002	0.008	0.0048	0.0051	0.0058	0.0056	0.0024
Antimony	0.00013	0.00013	0.00011	0.00029	0.00029	0.00028	0.00027	0.00034	<0.0001	<0.0002	<0.0001	0.00017	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	0.00317	0.00077	0.00038	0.00044	0.00029	0.00031
Arsenic	0.00487	0.00511	0.00531	0.00141	0.00145	0.00145	0.00151	0.00158	0.00135	0.00123	0.00113	0.00119	0.00114	<0.0002	0.00598	0.00644	0.00662	0.00431	0.0051	0.00498	0.00503	0.0053	0.00096
Barium	0.0251	0.0254	0.0246	0.0338	0.0294	0.0273	0.0277	0.0277	0.0234	0.0229	0.0295	0.0322	0.0339	0.00773	0.00849	0.00787	0.00738	0.023	0.0259	0.024	0.0215	0.0208	0.0247
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	1.66	1.83	1.69	0.997	1.01	0.896	1.04	0.838	0.08	0.075	0.07	0.076	0.074	0.123	0.144	0.151	0.138	0.122	0.122	0.131	0.125	0.149	0.02
Cadmium	<0.00001	0.000011	0.00001	<0.00005	<0.00006	<0.00005	<0.00003	<0.00001	<0.00002	<0.00002	0.000011	<0.00001	<0.00001	<0.00002	0.000024	<0.00002	0.00002	0.000012	<0.00001	<0.00002	<0.00002	<0.00001	0.000052
Calcium	19.1	19.1	19.2	38.4	37.9	35.2	34.5	34.3	297	294	283	301	293	453	446	461	477	52.8	74.5	70.4	69.6	69.8	166
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00033	0.0003	0.00017	0.00011	0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.00011	0.00012	0.00012	0.00058	0.00048	0.00044	0.00049	0.00051	0.00091	0.00092	0.00081	0.00083	0.00078	0.00076	0.00096	0.00082	0.00071	0.00167	0.00257	0.00182	0.00154	0.00125	0.00154
Copper	0.00046	0.00039	0.00038	0.00148	0.00063	0.00094	0.00053	0.00061	0.00047	<0.0004	<0.0002	0.00073	<0.0002	<0.0004	<0.0004	<0.0004	<0.0004	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Dissolved Cadmium (by saltwater				0.00004	0.000029	0.000029	<0.00002		<0.00002	<0.00002				<0.00002		0.000022				<0.00002	<0.00002		
Iron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.485	0.578	0.575	0.597	0.572	1.19	1.49	1.6	1.88	<0.01	0.31	0.251	0.221	0.238	0.507
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.00005	<0.00005	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.00979	0.0103	0.0115	0.00113	0.00094	0.00115	0.00099	0.00089	0.0145	0.0122	0.0138	0.0147	0.0149	0.0235	0.0275	0.0283	0.0256	0.00469	0.00495	0.0051	0.00477	0.00581	0.0396
Magnesium	16.4	16.7	16.8	26.2	25.4	24.5	25.4	24.9	204	201	200	202	197	322	304	294	306	10.6	15	14.7	14.4	14.1	117
Manganese	0.0744	0.1	0.0915	0.111	0.158	0.166	0.184	0.199	0.496	0.493	0.461	0.457	0.465	0.323	0.384	0.355	0.362	0.471	1.27	1.11	0.92	0.727	0.287
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0165	0.0171	0.0174	0.0284	0.0287	0.0301	0.0313	0.0333	0.0353	0.0312	0.03	0.0302	0.0309	0.00464	0.00485	0.00467	0.00483	0.0247	0.0236	0.0227	0.0213	0.0213	0.00297
Nickel	0.00069	0.00069	0.00052	0.0024	0.0022	0.00171	0.00141	0.00143	0.0022	0.0017	0.00111	0.00092	0.00102	<0.001	0.0013	0.0011	<0.001	0.00399	0.00453	0.00365	0.00314	0.00262	0.00224
Phosphorus	0.065	0.083	0.066	<0.05	<0.05	<0.05	0.06	0.061	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.3	<0.05	0.07	0.073	0.075	0.102	<0.05
Potassium	9.59	9.85	9.72	8.95	8.57	8.45	9.16	8.66	11.1	12.1	12.1	13.7	13.7	6.15	6.05	5.95	6.38	0.79	0.98	0.93	0.91	0.83	11.5
Selenium	0.00084	0.00066	0.00046	0.00088	0.00067	0.00054	0.00045	0.00042	<0.0001	<0.0002	0.00012	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	0.00026	0.00023	0.00021	0.00017	0.00026	<0.0001
Silicon	6.22	6.27	6.54	5.77	6.29	6.19	6.26	6.24	9.23	9.44	9.76	9.86	9.82	8.74	8.25	8.28	8.4	8.53	7.96	8.08	8.5	8.64	24.7
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	105	110	105	81.8	82.6	74	76	74.6	192	171	169	187	181	131	145	154	155	97.1	111	115	103	108	41.1
Strontium	0.638	0.663	0.677	0.603	0.547	0.533	0.569	0.565	2.53	2.21	2.17	2.32	2.37	8.31	8.57	8.54	8.65	0.0857	0.131	0.139	0.121	0.128	1.76
Sulphur	55.2	57.7	56.9	66.8	69.4	62.2	61.2	61.2	596	592	564	567	570	879	854	773		79.6	129	117	106	107	174
Thallium	<0.00001	0.000011	<0.00001	0.000026	0.000025	0.000021	0.000019	0.000019	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	0.00002	<0.00001	0.000013	0.000015	0.000013	0.000024
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	0.00085	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00017
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	0.016	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.00111	0.00108	0.00105	0.00306	0.00327	0.00309	0.00297	0.00317	0.00151	0.00162	0.0016	0.00164	0.00166	0.000616	0.00127	0.000984	0.000939	0.00251	0.0027	0.00249	0.00231	0.00262	0.00242
Vanadium	0.0015	0.0014	0.0014	0.0016	0.0012	0.0013	0.0013	0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	0.0021	0.0077	0.0019	0.0015	<0.001	0.0044	0.0067	0.0037	0.0029	<0.002	0.001	<0.001	<0.001	<0.002	0.0025	0.0052	0.0033	<0.001	0.0018	0.0079	0.0026	0.0033	0.0023
Total Metals																							
Aluminum	0.144	0.0815	0.0325	0.0958	0.0354	0.0326	0.0227	0.0618	0.0068	0.0071	0.01	0.0057	0.0071	0.282	0.0165	0.0148	0.0205	0.0335	0.0217	0.0247	0.0489	0.185	0.439
Antimony	0.00018	0.00016	0.00014	0.00028	0.00031	0.00034	0.0003	0.00042	<0.0001	<0.0002	0.0001	0.00021	0.00015	0.00024	<0.0002	<0.0002	<0.0002	0.00315	0.00083	0.00046	0.00049	0.00059	0.00057
Arsenic	0.00493	0.0053	0.00558	0.00142	0.00146	0.0015	0.00156	0.00156	0.00132	0.0012	0.00119	0.00123	0.00117	0.00358	0.00636	0.00694	0.00765	0.00425	0.00521	0.00528	0.00516	0.00533	0.00106
Barium	0.0272	0.0273	0.0252	0.0343	0.0306	0.0288	0.0275	0.0268	0.0235	0.0237	0.031	0.0333	0.0336	0.0107	0.00927	0.0083	0.00751	0.022	0.0264	0.0255	0.0216	0.022	0.0271
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	1.77	2.02	1.77	1.03	1.06	0.974	1.02	0.84	0.081	0.083	0.066	0.083	0.08	0.133	0.155	0.155	0.146	0.127	0.123	0.147	0.128	0.159	0.022
Cadmium	0.000019	0.000025	0.000011	<0.00008	<0.00006	<0.0001	<0.00003	0.000017	<0.00002	<0.00002	0.000014	0.00001	<0.00001	0.000032	0.00003	0.000027	0.000028	0.00002	0.000012	<0.00003	<0.00002	0.000032	0.00006
Calcium	19	19	19.6	36.6	37.9	36.3	33.6	33	291	289	289	306	293	437	460	475	483	52.4	74.3	73.3	66.9	66	166
Chromium	0.00063	0.00034	0.00016	<0.00037	0.00016	0.00026	0.00014	0.00035	0.00302	0.00167	0.00072	0.00058	0.00081	0.00083	<0.0002	<0.0002	<0.0002	0.00011	0.00015	0.00023	0.00022	0.00054	0.00031
Cobalt	0.00036	0.00029	0.0002	0.00063	0.00053	0.0005	0.00052	0.00053	0.0009	0.00101	0.00088	0.00091	0.0009	0.00089	0.00106	0.00091	0.00075	0.00171	0.00275	0.00196	0.00161	0.00144	0.00173
Copper	0.00231	0.00139	0.00115	0.00172	0.00124	0.00179	0.00094	0.00195	<0.0005	<0.001	<0.0005	0.00106	<0.0005	0.0017	<0.001	<0.001	<0.001	<0.001	<0.0005	0.00052	0.00073	0.00205	0.00052
Iron	0.233	0.136	0.046	0.107	0.038	0.035	0.02	0.073	0.522	0.607	0.648	0.668	0.697	2.06	1.68	1.77	2.23	0.035	0.341	0.298	0.267	0.405	0.844
Lead	0.000059	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000053	<0.00005	<0.0001	<0.00005	<0.00005	<0.00005	0.00016	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	0.000099	0.000198
Lithium	0.0102	0.011	0.0118	0.00129	0.00107	0.00141	0.00108	0.00096	0.0137	0.0131	0.012	0.0156	0.015	0.0258	0.0282	0.0281	0.0261	0.00448	0.00463	0.0052	0.00468	0.00605	0.0406
Magnesium	16.3	16.7	16.9	25.3	25.6	25.2	25.1	24.2	204	200	198	217	196	316	312	319	313	10.8	14.7	15.5	13.9	13.5	115
Manganese	0.133	0.151	0.129	0.114	0.164	0.181	0.185	0.193	0.479	0.502	0.483	0.469	0.483	0.341	0.398	0.381	0.358	0.464	1.34	1.12	0.926	0.736	0.299
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.018	0.0185	0.0184	0.03	0.0307	0.0329	0.0324	0.0328	0.035	0.0328	0.0283	0.0314	0.0322	0.00471	0.00522	0.00489	0.00499	0.0265	0.0241	0.0252	0.0215	0.0222	0.00319
Nickel	0.00155	0.00119	0.00074	0.00281	0.00254	0.00205	0.00159	0.00162	0.00307	0.0022	0.00136	0.0014	0.00137	0.0015	0.0015	0.0012	<0.001	0.0041	0.00478	0.00391	0.0034	0.0032	0.00245
Phosphorus	0.079	0.079	0.073	0.056	0.062	<0.05	0.062	0.059	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.3	<0.05	0.074	0.081	0.078	0.105	<0.05
Potassium	9.39	9.77	10.1	8.59	8.66	8.63	9.15	8.49	10.9	11.5	12.3	14	13.5	6.17	6.34	6.24	6.37	0.83	0.94	0.99	0.89	0.81	11.5
Selenium	0.00084	0.00067	0.00048	0.00087	0.00063	0.00061	0.00045	0.0004	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	0.00027	0.00024	0.00022	0.00025	0.00045	<0.0001
Silicon	6.46	6.44	6.66	5.91	6.31	6.36	6.28	6.13	9.12	9.42	9.99	10.1	9.93	9.15	8.6	8.64	8.69	8.74	7.73	8.6	8.35	8.73	26.6
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	103	112	105	80.4	84	79.4	77.9	70.8	187	178	170	186	187	132	153	164	154	92.2	114	123	104	110	42.7
Strontium	0.664	0.716	0.693	0.605	0.571	0.553	0.575	0.566	2.46	2.38	1.97	2.39	2.38	8.35	8.78	8.79	8.94	0.0881	0.134	0.149	0.121	0.129	1.8
Sulphur	55.3	58.8	58.1	65.9	70.9	64.8	62.1	59	590	611	561	613	577	851	869	825		80.8	130	126	104	106	186
Thallium	0.000012	0.000012	<0.00001	0.000025	0.000034	0.000022	0.000021	0.000017	<0.00001	<0.00002	0.00002	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	0.00002	0.00001	0.000015	0.000014	0.000018	0.000027
Tin	0.00011	<0.0001	<0.0001	0.00014	<0.0001	0.0001	<0.0001	0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	0.00458	0.00026	<0.0002	<0.0002	0.00019	0.00011	0.00016	0.00015	0.00041	0.00052
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	0.017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extra				0.000063	0.000038	0.000037	0.000022		<0.00002	<0.00002										<0.00002	<0.00002		
Uranium	0.00118	0.00112	0.0011	0.00318	0.00355	0.0034	0.00319	0.00318	0.00146	0.00169	0.00154	0.00169	0.00175	0.000635	0.00137	0.0011	0.000945	0.00246	0.00273	0.00272	0.00231	0.00275	0.00258
Vanadium	0.0025	0.0018	0.0015	0.002	0.0015	0.0017	0.0014	0.0013	<0.001	<0.002	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	<0.003	0.0092	0.0031	<0.003	<0.003	0.0068	0.0044	0.0067	<0.003	<0.006	0.0045	<0.003	<0.003	<0.006	<0.006	0.0073	<0.006	<0.003	<0.003	0.0099	0.0035	0.0081	<0.003
Organics																							
Carbon Organic (Dissolved)									1.62									4.02					
Carbon Organic (Total)	1.64	1.84	1.66	2.94	2.89	2.45	2.05	2.16	2.34	1.91	2.11	2	1.88	4.19	1.41	1.13	1.22	4.92	6.96	6.46	5.97	6.82	3.17
Nitrogen Organic (Dissolved)																							
Nitrogen Organic (Total)																							
ALS LAB ID	**L1475118**	**L1488139**	**L1507004**	**L1435549**	**L1456126**	**L1475118**	**L1486405**	**L1505010**	**L1447261**	**L1463124**	**L1478887**	**L1496084**	**L1510175**	**L1459725**	**L1485034**	**L1497579**	**L1512652**	**L1440275**	**L1463124**	**L1481825**	**L1494504**	**L1508557**	**L1434993**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D3.2 - GROUNDWATER QUALITY DATA

Site ID	BGC14-010				BGC14-011D					BGC14-011S					BGC14-012D					BGC14-012S			
Site ID	BGC14-010	BGC14-010	BGC14-010	BGC14-010	BGC14-011	BGC14-011	BGC14-011	BGC14-011	BGC14-011	BGC14-011	BGC14-011	BGC14-011	BGC14-011	BGC14-011	BGC14-012	BGC14-012	BGC14-012	BGC14-012	BGC14-012	BGC14-012	BGC14-012	BGC14-012	BGC14-012
Analytes	**May-14**	**Jun-14**	**Jul-14**	**Aug-14**	**Mar-14**	**May-14**	**Jun-14**	**Jul-14**	**Aug-14**	**Mar-14**	**May-14**	**Jun-14**	**Jul-14**	**Aug-14**	**Mar-14**	**May-14**	**Jun-14**	**Jul-14**	**Aug-14**	**Mar-14**	**May-14**	**Jun-14**	**Jul-14**
In Situ Parameters																							
Conductivity µS/cm	1079	1026	1108	1176	966	1000	660	754	653	714	834	453	532	528	2029	1408	1314	1581	1446	796	1047	1368	1507
Oxygen Dissolved %	5.5	17.6	2.7	14.3	13.4	0	0.8	4.3	2.1	14.4	0	0.5	18.6	2.8	75.5	3.7	5.7	25	7.4	18.1	5.1	2.3	34.8
Oxygen Dissolved	0.64	2.02	0.3	1.66	1.64	0	0.1	0.48	0.28	1.75	0	0.06	2.13	0.31	9.51	0.43	0.66	2.62	0.85	133	0.63	0.28	4
pH (unitless)	7.03	7.06	8.78	6.97	8.57	8.07	8.1	7.97	7.65	9.36	8.28	8.92	8.4	7.83	7.81	7.72	7.68	7.55	7.32	8	7.61	7.43	7.39
Redox Potential mV	-36.3	-20.7	-128	-47.6	-108	-134	-77.5	-32.1	-99.6	-2.3	-199	-215	-144	-218	-84.2	-97.2	-86.3	-62.4	-81.8	58.9	-28.1	33.1	-35.4
Salinity ppt	0.79	0.75	0.76	0.86	0.48	0.5	0.48	0.51	0.48	0.35	0.4	0.33	0.37	0.36	1.03	1.06	0.97	1.06	1.08	0.39	0.85	1.09	1.11
Specific Conductivity µS/cm	1561	1482	1504	1678	629		967	1030	965	459		671	759	739	1267	2072	1910	12055	2092	461	1683	2121	2164
Temperature °C	8.8	8.95	11.1	9.52	6.7	10.5	8.35	10.6	8.07	6.28	10.7	8.03	9.37	9.92	5.36	8.25	8.72	13.1	8.82	2.97	5.23	6.38	9.06
Total Dissolved Solids	1013	964	980	1096	628	640	628	670	627	464	539	436	493	431	1320	1345	1241	1340	1362	517	1093	1380	1140
Turbidity NTU	7.1	-1.3	0	0	6.7		-2.6	1.5	0	2.4		-2.9	3.1	0	2.3	6.3	-3.6	0.9	0	2.3	1.09	-3.6	1.9
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)	16.5					<1					<1												
Alkalinity (Total as CaCO3)	392	377	371	386	321	318	331	323	328	194	179	157	174	178	219	220	213	212	221	190	286	406	411
Bicarbonate Alkalinity	392	377	371	386	312	310	311	307	319	164	174	150	168	178	219	220	213	212	221	190	286	406	411
Carbonate Alkalinity	<2	<1	<1	<2	9.4	8.1	19.6	16.4	8.8	29.6	5	6.9	5.7	<1	<2	<2	<1	<1	<2	<2	<2	<1	<1
Color TCU																							
Hardness as CaCO3 (Dissolved)	856	885	892	907	58.4	65.4	70.4	71.6	66.5	73.1	78	69.4	79.8	82.8	718	666	734	699	718	289	698	1090	985
Hydroxide Alkalinity	<2	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2	<2	<1	<1	<2	<2	<2	<1	<1
pH (unitless)	7.75	8	8.1	7.95	8.56	8.39	8.53	8.53	8.42	8.99	8.48	8.46	8.42	8.32	8.04	8.28	8.2	8.03	8.18	8.17	8.21	8.16	8
Specific Conductivity µS/cm	1510	1580	1570	1590	974	968	1010	1020	1000	659	760	703	746	752	1970	2010	2010	2030	2020	771	1630	2230	2140
Total Dissolved Solids	1240	1270	1330	1290	621	636	648	658	656	438	505	456	489	502	1550	1600	1580	1540	1690	512	1260	1840	1810
Total Suspended Solids	<3	4.3	4	6.4		5.5	<3	<3	<3		<3	<3	4.6	7.2	<3	<3	<3	3.3	7.1	<3	<3	<3	<3
Turbidity NTU	2.34	4.3	6.4	5.69		2.76	1	0.82	0.54		0.75	0.6	1.18	1.81	1.35	0.9	1.09	1.14	2.1	0.58	0.27	0.28	0.29
Dissolved Anions																							
Bromide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.25	0.153	0.149	<0.25	<0.5	<1	<1	<1	<1	<1	<0.5	<0.5	<1	<1
Chloride	9.5	8.8	7.7	7.9	20.2	18.6	19.5	19.1	19.5	11.9	11.9	11.9	12.7	13.5	<10	12	<10	<10	<10	<5	14.1	16	13
Fluoride	0.27	0.307	0.28	0.286	0.66	0.63	0.656	0.62	0.674	0.49	0.584	0.583	0.52	0.539	0.72	<0.4	0.301	0.281	0.258	0.45	0.2	0.232	0.228
Sulphate	579	593	607	619	172	173	182	185	189	158	185	178	181	194	993	995	995	974	985	237	671	1030	939
Nutrients																							
Ammonia (Total)	0.0553	0.0726	0.0705	0.0868	0.0096	0.0216	0.025	0.0237	0.031	0.0225	0.0184	0.0106	0.0055	0.0088	0.0992	0.0932	0.0901	0.0936	0.084	<0.005	0.0126	0.0182	0.022
Nitrate (as N)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.025	<0.005	<0.005	<0.025	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.1	<0.1
Nitrite (as N)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.005	<0.001	<0.001	<0.005	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.01	<0.02	<0.02
Nitrogen (Dissolved)																							
Nitrogen (Total)																							
Nitrogen Kjeldahl (Total)	0.201	0.22	0.789	0.26	0.096	0.151	0.224	0.181	0.201	0.182	0.214	0.303	0.337	0.349	0.248	0.226	0.244	0.257	0.246	0.39	0.495	0.871	0.717
Orthophosphate (Dissolved)	0.002	0.0013	0.0021	<0.001	0.009	0.0278	0.0309	0.039	0.0379	0.0641	0.0588	0.0825	0.141	0.13	0.0046	0.0089	0.0088	0.0125	0.0089	0.0384	0.0351	0.0389	0.0398
Phosphorus - Dissolved	0.0031	<0.002	<0.002	<0.002	0.0111	0.0302	0.0345	0.0432	0.0398	0.0708	0.0666	0.086	0.165	0.14	0.0059	0.0087	0.0081	0.0127	0.0086	0.0531	0.0392	0.0416	0.0456
Phosphorus - Total	0.0182	0.0181	0.0221	0.0489	0.0207	0.0502	0.0384	0.0451	0.0406	0.071	0.0752	0.0985	0.177	0.169	0.0134	0.0205	0.0162	0.0243	0.0257	0.0613	0.0415	0.0466	0.0457
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																							
Aluminum	0.0033	0.003	0.0029	0.0024	0.0083	0.0105	0.0097	0.0092	0.0082	0.0449	0.034	0.0501	0.033	0.0286	0.0043	0.0055	0.0055	0.005	0.0038	0.0052	0.0042	0.0038	0.0062
Antimony	0.00023	0.0001	<0.0001	<0.0001	0.00016	0.00026	0.00019	0.00012	<0.0001	0.00018	0.00024	0.00026	0.00027	0.00024	<0.0002	0.00012	0.00011	0.00015	<0.0001	0.0009	0.00024	0.00017	0.00013
Arsenic	0.00072	0.00081	0.00074	0.00087	0.00037	0.00062	0.00069	0.00068	0.00061	0.00105	0.00086	0.00124	0.00183	0.00197	0.0371	0.0379	0.0387	0.036	0.0401	0.0038	0.00265	0.00295	0.00265
Barium	0.0244	0.0279	0.0275	0.0268	0.0207	0.0231	0.0242	0.0251	0.0218	0.015	0.0172	0.0162	0.0242	0.0263	0.016	0.0187	0.0173	0.0183	0.0152	0.0225	0.0287	0.0386	0.0365
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.019	0.022	0.022	0.018	0.029	0.028	0.03	0.03	0.033	0.017	0.016	0.014	0.017	0.017	0.626	0.586	0.602	0.592	0.571	0.068	0.149	0.176	0.179
Cadmium	0.00004	0.000027	0.000028	0.000026	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	0.000027	<0.00001	<0.00001	<0.00001	<0.00001	0.000033	0.000017	0.000017	0.000011	0.000013	0.000024	0.000025	0.000021	0.000013
Calcium	160	163	164	168	7.44	9.78	10.7	10.9	9.49	9.85	10.2	9.09	10.5	11.1	71.6	66.6	71.3	70.9	70.1	39.1	98	152	140
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	<0.0001
Cobalt	0.00159	0.00256	0.00232	0.00226	0.00014	0.00052	0.00057	0.00061	0.00041	0.00017	0.00052	0.00034	0.00034	0.00025	0.00122	0.002	0.00146	0.00152	0.00093	0.00044	0.00099	0.00067	0.00061
Copper	0.00034	0.00028	<0.0002	0.00023	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0005	0.00023	<0.0002	0.00067	<0.0002	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	0.00847	0.00394	0.00485	0.00349
Dissolved Cadmium (by saltwater																							
Iron	0.626	0.745	0.803	0.719	<0.01	0.023	0.023	0.025	0.032	<0.01	<0.01	0.035	0.111	0.105	0.134	0.184	0.227	0.191	0.256	<0.01	0.013	0.032	0.044
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0427	0.0424	0.0433	0.0387	0.0196	0.0158	0.0155	0.0125	0.0158	0.0147	0.0151	0.013	0.0136	0.0133	0.0465	0.0452	0.0495	0.0448	0.0493	0.00762	0.0127	0.0172	0.0167
Magnesium	111	116	117	118	9.67	9.95	10.6	10.8	10.4	11.8	12.7	11.3	13	13.4	131	121	135	127	132	46.5	110	174	155
Manganese	0.327	0.699	0.557	0.67	0.0288	0.119	0.155	0.17	0.123	0.0175	0.108	0.163	0.324	0.386	0.173	0.442	0.365	0.381	0.248	0.0489	0.0847	0.0743	0.0696
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.00306	0.00333	0.00324	0.00326	0.00477	0.00617	0.00614	0.0059	0.00597	0.0183	0.0225	0.0228	0.0238	0.0217	0.0168	0.0162	0.0163	0.0164	0.0167	0.0105	0.00965	0.0102	0.00957
Nickel	0.00268	0.00434	0.00356	0.00374	<0.0005	0.00173	0.00199	0.00259	0.00144	0.00094	0.00162	0.00105	0.00154	0.00088	0.002	0.00244	0.00186	0.00204	0.00116	0.00168	0.0022	0.00275	0.0026
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.084	<0.05	0.084	0.062	0.103	0.211	0.164	<0.05	<0.05	<0.05	<0.05	<0.05	0.056	<0.05	<0.05	0.063
Potassium	11.3	12	11.8	12.3	5.17	5.95	6.18	6.14	5.81	6.19	6.26	5.69	5.9	5.89	6.71	5.97	6.76	6.74	6.66	12	17.3	24.9	25.3
Selenium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00012	0.00011	<0.0001	0.00012	0.00061	0.0006	0.0003	0.00025	0.00033	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	0.00225	0.00028	0.00029	0.00022
Silicon	24.2	22.1	23.5	23	4.11	4.31	4.44	4.43	4.31	3.21	3.09	3.07	3.19	3.37	7.32	7.12	7.36	7.16	7.36	5.29	6.48	7.68	8.04
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	40.4	47.9	42.7	44.4	200	191	191	197	203	130	127	112	125	124	226	207	218	217	208	63.5	115	162	155
Strontium	2.02	1.93	2.02	2.05	0.297	0.286	0.293	0.254	0.296	0.28	0.322	0.25	0.323	0.336	10.5	10	9.92	9.62	10.1	0.596	1.46	2.24	2.13
Sulphur	174	192	198	199	53.9	55.3	60	62	59.4	50.9	59	61.4	64.6	70.6	308	313	311	316	321	77.8	220	315	296
Thallium	0.000021	0.000028	0.000027	0.000025	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	0.000014	0.000017	0.000017	0.000015	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.00011	<0.0001	<0.0001	<0.0001	0.00018	0.00021	0.00012	0.00011	0.00014	0.00015	0.00025	0.00032	0.00019	0.00028	0.00022	0.00018	0.00014	0.00016	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.00228	0.00295	0.00265	0.00269	0.000359	0.00138	0.00152	0.00156	0.0013	0.00161	0.00209	0.00128	0.00151	0.00123	0.000745	0.000961	0.000848	0.00113	0.000827	0.0012	0.00205	0.00343	0.0031
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0013	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	0.0337	0.0096	0.0089	0.0072
Zinc	0.003	0.0105	0.0057	0.015	<0.001	<0.001	0.0025	0.0013	0.0071	0.0022	0.0017	0.0014	0.0059	<0.001	<0.002	0.0017	0.0033	0.0019	0.0024	0.0011	0.002	0.0052	0.0021
Total Metals																							
Aluminum	0.0437	0.0149	0.0407	0.145	0.241	0.144	0.0864	0.046	0.064	0.0771	0.0554	0.0697	0.122	0.0999	0.0362	0.0218	0.0195	0.0247	0.0807	0.0163	0.0116	0.0151	0.0106
Antimony	0.00028	0.00014	0.00013	0.00019	0.00038	0.00037	0.00029	0.00017	0.00019	0.00019	0.00027	0.00035	0.00035	0.00036	<0.0002	0.00019	0.00016	0.00026	0.00014	0.00095	0.00025	0.00023	0.00017
Arsenic	0.00072	0.00084	0.00077	0.00091	0.0004	0.00061	0.00071	0.00073	0.00068	0.00106	0.00087	0.00126	0.0019	0.0021	0.0379	0.0386	0.0411	0.0367	0.0431	0.00391	0.00264	0.00297	0.00287
Barium	0.0244	0.0288	0.0284	0.0298	0.0242	0.0257	0.0291	0.0255	0.0237	0.0151	0.018	0.0168	0.0236	0.0282	0.0172	0.0204	0.0178	0.0187	0.0164	0.0226	0.029	0.0399	0.0373
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.02	0.027	0.03	0.022	0.031	0.029	0.032	0.035	0.047	0.017	0.016	0.018	0.022	0.024	0.629	0.608	0.642	0.614	0.612	0.071	0.152	0.196	0.212
Cadmium	0.000042	0.000032	0.000033	0.000035	0.000014	0.000013	0.00001	0.000011	<0.00001	0.000024	0.000021	0.000014	0.000023	0.00002	0.000027	0.000029	0.000016	0.000023	0.000023	0.000021	0.00003	0.000024	0.000019
Calcium	156	165	164	162	7.71	9.89	10.8	10.7	9.96	9.81	10.2	9.12	10.1	11.3	70.2	66.5	69.5	69.6	70.7	38.6	97.4	153	138
Chromium	0.00012	0.00015	0.00026	0.00072	0.00031	0.00029	0.00019	0.00022	0.00021	0.00016	0.00014	0.00017	0.00047	0.00027	<0.0002	0.00016	0.00019	0.00018	0.00029	<0.00026	0.00015	0.00027	0.00024
Cobalt	0.00164	0.0027	0.00237	0.00245	0.00026	0.00058	0.0007	0.00064	0.0005	0.0002	0.00055	0.00068	0.00059	0.00049	0.00124	0.002	0.00151	0.00156	0.00106	0.00046	0.00104	0.00071	0.00068
Copper	<0.0005	<0.0005	<0.0005	0.00179	0.00059	0.00065	<0.0005	<0.0005	0.00061	0.0006	0.00066	0.00059	0.00118	0.00073	<0.001	0.00051	0.00059	<0.0005	0.00119	0.00956	0.00516	0.0062	0.00462
Iron	0.677	0.803	0.854	1.08	0.252	0.173	0.104	0.061	0.088	0.046	0.031	0.067	0.25	0.243	0.193	0.239	0.253	0.234	0.374	0.021	0.022	0.043	0.049
Lead	<0.00005	<0.00005	<0.00005	0.000131	0.000065	<0.00005	0.000105	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000187	0.000054	<0.0001	0.000228	<0.00005	0.000101	0.000063	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0416	0.0437	0.0442	0.0388	0.019	0.015	0.0143	0.0139	0.0162	0.0141	0.014	0.015	0.0134	0.0136	0.0469	0.0471	0.0502	0.0451	0.0505	0.00763	0.0122	0.0178	0.0188
Magnesium	110	120	119	118	9.89	9.96	10.5	10.6	10.8	11.7	12.6	11.4	12.3	13.5	135	125	134	128	134	44.2	110	178	157
Manganese	0.331	0.708	0.582	0.71	0.0352	0.122	0.168	0.169	0.141	0.0182	0.114	0.168	0.315	0.398	0.171	0.433	0.375	0.4	0.262	0.0496	0.088	0.0771	0.0723
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.00321	0.00353	0.00343	0.00338	0.00502	0.00712	0.00709	0.00692	0.00677	0.0196	0.0243	0.0283	0.0237	0.0234	0.0174	0.0176	0.018	0.0171	0.0179	0.0111	0.0102	0.0114	0.0108
Nickel	0.00287	0.00454	0.00387	0.00452	0.00066	0.002	0.00239	0.00281	0.00181	0.00098	0.00177	0.00131	0.00244	0.00129	0.0019	0.00265	0.00188	0.00228	0.00147	0.00179	0.0023	0.00294	0.00275
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.075	<0.05	0.093	0.077	0.11	0.186	0.185	<0.05	<0.05	<0.05	<0.05	<0.05	0.072	<0.05	0.057	0.054
Potassium	10.8	12.6	11.8	12.2	5.22	5.96	6.06	6.05	6.16	6.18	6.13	5.73	5.48	5.96	6.59	6.36	6.62	6.62	6.83	11.7	17.1	24.3	24.4
Selenium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00012	0.00014	0.00013	0.00011	0.00057	0.00054	0.00033	0.00027	0.00022	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	0.00241	0.00023	0.00031	0.00037
Silicon	23.9	24.2	23.6	22.7	4.71	4.61	4.61	4.45	4.61	3.32	3.14	3.14	3.23	3.58	7.36	7.32	7.51	7.31	7.68	5.25	6.44	7.93	8.15
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	0.000015	<0.00001	<0.00001	0.000013	<0.00001	0.000012	<0.00001
Sodium	40.7	50.8	43.2	44.5	206	191	189	190	210	128	128	112	115	126	222	210	221	218	215	65.3	104	168	167
Strontium	2	2.06	2.09	2	0.304	0.305	0.312	0.294	0.315	0.285	0.333	0.299	0.311	0.35	10.8	10.5	10.2	9.84	10.4	0.585	1.51	2.37	2.28
Sulphur	174	204	203	200	56.7	57	61.9	61.8	62.6	53.6	59.4	62.3	61.6	66	321	319	321	327	329	78.9	215	334	310
Thallium	0.00002	0.000029	0.000028	0.000024	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000012	<0.00001	<0.00001	<0.00001	<0.00001	0.000024	0.000015	0.000019	0.000019	0.000015	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.00027	0.00012	0.00016	0.00023	0.00043	0.00044	0.00025	0.00017	0.00033	0.00017	0.0003	0.00047	0.00069	0.0006	0.00037	0.00038	0.00026	0.00031	0.00029	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	0.012	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extra																							
Uranium	0.00231	0.00298	0.00272	0.0027	0.000391	0.00146	0.00176	0.00189	0.0016	0.0017	0.00211	0.00153	0.00146	0.00132	0.000737	0.000987	0.00091	0.0012	0.000898	0.00128	0.00204	0.00377	0.00339
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0016	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	0.0346	0.0102	0.0098	0.0079
Zinc	<0.003	0.0117	0.0066	0.0206	<0.003	<0.003	0.0032	<0.003	0.0083	<0.003	<0.003	<0.003	0.0053	0.0045	<0.006	<0.003	0.0038	0.0042	0.0046	<0.003	<0.003	0.0069	0.0033
Organics																							
Carbon Organic (Dissolved)																							
Carbon Organic (Total)	3.24	3.35	3.53	4.02	2.09	3.13	3.79	4.58	3.42	22.6	23.1	30.7	24.4	14.5	2.41	2.45	2.73	2.68	2.58	6.9	9.15	13.1	11.5
Nitrogen Organic (Dissolved)																							
Nitrogen Organic (Total)																							
ALS LAB ID	**L1454698**	**L1471871**	**L1485034**	**L1505010**	**L1434993**	**L1454698**	**L1472814**	**L1485034**	**L1503481**	**L1434993**	**L1454698**	**L1472814**	**L1485034**	**L1503481**	**L1435549**	**L1455485**	**L1473799**	**L1486405**	**L1507004**	**L1435549**	**L1455485**	**L1473799**	**L1486405**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D3.2 - GROUNDWATER QUALITY DATA

Site ID		BGC14-013					BGC14-014D			BGC14-015D				BGC14-015S				BGC14-016					B
Site ID	BGC14-012	BGC14-013	BGC14-013	BGC14-013	BGC14-013	BGC14-013	BGC14-014	BGC14-014	BGC14-014	BGC14-015	BGC14-015	BGC14-015	BGC14-015	BGC14-015	BGC14-015	BGC14-015	BGC14-015	BGC14-016	BGC14-016	BGC14-016	BGC14-016	BGC14-016	BGC14-017
Analytes	Aug-14	Mar-14	Jun-14	Jul-14	Jul-14	Aug-14	May-14	Jul-14	Aug-14	May-14	Jul-14	Jul-14	Aug-14	May-14	Jun-14	Jul-14	Aug-14	Mar-14	May-14	Jun-14	Jul-14	Aug-14	May-14
In Situ Parameters																							
Conductivity µS/cm	1522	280	327	285	370	289		2100	3281	433	419	456	429	550	507	526	567	535	621	572	15	1179	457
Oxygen Dissolved %	51.1	6.3	60.7	1.8	4.8	1.1		51.9	73.8	-0.3	0.8	8.2	30.9	2.4	1.2	2	10.7	26	2.7	0.9	-7.4	14.9	11
Oxygen Dissolved	5.82	0.8	7.27	0.21	0.55	0.13		5.47	7.75	-0.04	0.09	0.87	3.52	0.27	0.13	0.22	1.18	3.28	0.31	0.1	-0.32	1.72	1.29
pH (unitless)	6.9	8.45	8.23	9.64	9.54	8.03		10.3	7.61	8.31	8.64	8.18	7.95	7.76	8.06	7.72	7.26	7.59	7.32	7.58	7.35	7.28	8.23
Redox Potential mV	0.8	3.8	49.4	-81	-81.2	-32.8		-196	-2.2	-147	-114	-101	-10.1	8.5	-104	-103	-83.3	30.9	-135	-74.2	-63.6	-32.4	39
Salinity ppt	1.12	0.21	0.24	0.2	0.26	0.21		1.51	2.49	0.29	0.28	0.29	0.3	0.37	0.34	0.35	0.38	0.42	0.44	0.41	0.42	0.84	0.33
Specific Conductivity µS/cm	2169	444	490	419	535	434		2881	45.3	604	576	601	607	756	693	716	771	855	892	826	854	1649	669
Temperature °C	9.39	5.68	7.53	8.25	8.9	7.47		10.8	10.7	10.2	10.7	12.3	9.73	10.7	11	11.1	11.3	5.43	9.11	9.08	10.4	10.1	8.38
Total Dissolved Solids	1410	289	320	272	347	282		1876	3013	392	374	391	394	491	450	455	504	556	579	536	585	1070	436
Turbidity NTU	0	2.4	8.1	-2.4	51.2	0		-2.6	2.5	12.4	0.3	26	4	9.1	-0.3	2.6	0	2.3	6.6	-3.2	2.3	0.7	60.1
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)							10.2																<1
Alkalinity (Total as CaCO3)	455	142	141	132	131	130	131	109	123	167	179	180	176	299	296	296	298	387	388	383	395	380	205
Bicarbonate Alkalinity	455	142	141	131	131	130	131	109	123	167	177	177	176	299	296	296	297	387	388	383	395	380	205
Carbonate Alkalinity	<2	<2	<2	<1	<1	<2	<2	<1	<2	<1	2.6	3.5	<1	<2	<1	<1	<1	<2	<2	<1	<2	<2	<2
Color TCU																							
Hardness as CaCO3 (Dissolved)	927	56.3	55.6	42.2	46	42.6	1120	1230	1240	64.2	68.7	71.2	68.7	355	343	351	353	477	479	455	475	468	61.2
Hydroxide Alkalinity	<2	<2	<2	<1	<1	<2	<2	<1	<2	<1	<1	<1	<1	<2	<1	<1	<1	<2	<2	<1	<2	<2	<2
pH (unitless)	8.12	8.18	8.27	8.28	8.33	8.25	7.45	7.84	7.69	8.36	8.41	8.34	8.4	8.17	8.16	8.2	8.27	8.13	7.98	8.06	7.97	7.79	8.27
Specific Conductivity µS/cm	2070	438	453	440	430	434	2200	2380	2330	572	593	615	611	707	710	734	728	844	858	854	833	854	635
Total Dissolved Solids	1730	294	284	299	293	283	1820	2200	2170	380	386	399	403	440	408	443	452	510	517	522	527	568	426
Total Suspended Solids	<3	3.1	<3	<3	<3	<3	25.2	5.4	10.3	20.8	9.4	45.4	14.5	6.5	3.6	<3	<3	<3	<3	<3	<3	<3	27
Turbidity NTU	0.46	1.65	1	0.93	0.25	0.22	16.8	3.9	3.99	5.15	3.26	18.7	4.87	1.37	0.97	1.12	0.87	1.16	0.85	0.77	2.07	0.92	46.9
Dissolved Anions																							
Bromide	<1	0.073	0.077	0.079	0.061	0.063	<1	<1	<1	0.062	0.053	0.065	<0.05	<0.25	<0.5	<0.25	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.25
Chloride	11	5.11	5.3	4.98	4.77	4.69	18	<10	<10	2.6	2.68	2.83	2.73	2.7	<5	<2.5	2.03	<5	<5	<5	<5	<5	8.6
Fluoride	0.231	0.249	0.271	0.275	0.277	0.27	<0.4	0.204	0.48	0.391	0.394	0.437	0.406	0.24	0.233	0.242	0.26	<0.2	<0.2	0.126	0.134	0.136	0.27
Sulphate	860	82.7	88.3	86.1	83.8	82.6	1370	1410	1420	127	128	131	130	121	119	120	118	135	123	134	134	145	134
Nutrients																							
Ammonia (Total)	0.0206	0.0711	0.054	0.0712	0.0651	0.0824	<0.005	0.222	0.441	0.0582	0.0838	0.0819	0.122	0.0332	0.039	0.0491	0.0554	<0.005	<0.005	<0.005	0.0089	0.0104	<0.005
Nitrate (as N)	<0.1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.005	<0.005	<0.005	<0.005	<0.025	<0.05	<0.025	<0.005	<0.05	<0.05	<0.05	<0.05	<0.05	<0.025
Nitrite (as N)	<0.02	0.001	<0.001	<0.001	0.0012	<0.001	<0.02	<0.02	<0.02	<0.001	<0.001	<0.001	<0.001	<0.005	<0.01	<0.005	0.0013	<0.01	<0.01	<0.01	<0.01	<0.01	<0.005
Nitrogen (Dissolved)																							
Nitrogen (Total)																							
Nitrogen Kjeldahl (Total)	0.637	0.152	0.157	0.143	0.126	0.158	0.528	0.516	0.551	0.203	0.228	0.275	0.244	0.155	0.169	0.168	0.18	0.114	0.147	0.143	0.142	0.155	0.121
Orthophosphate (Dissolved)	0.0428	0.0193	0.0185	0.0259	0.0285	0.031	0.0024	0.0017	0.0017	0.0382	0.057	0.0672	0.0641	0.0533	0.0628	0.0619	0.0648	0.014	0.0169	0.0209	0.0107	0.0155	0.0518
Phosphorus - Dissolved	0.0432	0.0233	0.0188	0.0294	0.0311	0.0305	0.0068	<0.002	<0.02	0.0441	0.0579	0.0687	0.0646	0.0607	0.0643	0.0649	0.0654	0.0178	0.0159	0.0188	0.0132	0.0136	0.0605
Phosphorus - Total	0.049	0.0261	0.0269	0.0325	0.0315	0.0311	0.0861	0.0449	0.0449	0.0535	0.0643	0.0778	0.0588	0.0654	0.0704		0.0776	0.0208	0.0311	0.0344	0.0333	0.0369	0.0925
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																							
Aluminum	0.0035	0.0127	0.0123	0.0116	0.0119	0.0113	0.0075	0.0029	0.0034	0.0108	0.0097	0.0086	0.0094	0.0056	0.0044	0.0047	0.0046	0.0055	0.0049	0.0041	0.0042	0.0045	0.0074
Antimony	0.00012	<0.0001	0.00012	<0.0001	<0.0001	<0.0001	0.00043	0.00024	0.00044	0.00011	0.00011	0.00017	0.00017	0.00015	0.00012	0.00011	<0.0001	0.00035	0.00037	0.00016	0.00012	<0.0001	0.0002
Arsenic	0.00283	0.00311	0.00317	0.00337	0.00356	0.00369	0.00159	0.00208	0.00228	0.00406	0.00398	0.0034	0.00402	0.00259	0.00253	0.00275	0.00279	0.00177	0.00207	0.00228	0.00248	0.00275	0.00126
Barium	0.0367	0.0193	0.0173	0.0147	0.0145	0.0139	0.0416	0.0379	0.0372	0.0164	0.0156	0.0172	0.0169	0.0368	0.0372	0.0367	0.0353	0.0393	0.0397	0.0397	0.038	0.0368	0.0258
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.184	0.241	0.257	0.278	0.281	0.239	0.09	0.072	0.077	0.122	0.114	0.116	0.129	0.063	0.063	0.062	0.067	0.031	0.027	0.031	0.031	0.027	0.096
Cadmium	0.000012	0.000014	0.000017	0.000014	<0.00001	<0.00001	0.000013	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		0.000013	<0.00001	<0.00001	0.000043	<0.00001	<0.00001	<0.00001	<0.00001	0.000011
Calcium	128	12.9	12.8	9.62	10.6	9.65	208	216	220	9.05	9.41	10.4	9.86	42.4	42.6	43.3	43.2	61.3	64.4	60.2	60.7	60.6	13.8
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	<0.0001	0.00089	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00035	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.00066	0.00026	0.0004	0.0003	0.0003	0.0002	0.00112	0.0068	0.00633	0.00049	0.00051	0.00064	0.00052	0.00098	0.00112	0.00147	0.00136	0.00174	0.00319	0.00291	0.00256	0.00241	0.00036
Copper	0.0028	0.00085	0.00055	0.00038	0.00063	0.00028	<0.0002	0.00022	0.00029	0.00099	<0.0002	<0.0002	0.00047	0.00079	0.00029	<0.0002	<0.0002	0.00072	<0.0002	<0.0002	<0.0002	<0.0002	0.00039
Dissolved Cadmium (by saltwater																							
Iron	0.058	<0.01	<0.01	<0.01	<0.01	<0.01	0.318	0.765	0.768	0.012	0.013	0.024	0.029	0.011	<0.01	0.038	0.081	<0.01	0.205	0.165	0.231	0.303	<0.01
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0179	0.0148	0.0146	0.0142	0.014	0.0145	0.00459	0.00382	0.0037	0.0453	0.043	0.0382	0.043	0.00494	0.00438	0.00435	0.00396	0.0223	0.0189	0.0196	0.0218	0.0207	0.0442
Magnesium	148	5.86	5.73	4.41	4.76	4.49	145	168	168	10.1	11	11	10.7	60.4	57.5	59	59.5	78.8	77.4	74.1	78.6	76.9	6.5
Manganese	0.0777	0.0447	0.122	0.119	0.101	0.0829	4.2	2.9	2.78	0.122	0.133	0.197	0.154	0.249	0.294	0.374	0.371	0.3	1	0.886	0.731	0.924	0.0785
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.00823	0.00597	0.00648	0.00639	0.00618	0.00571	0.0196	0.0312	0.0353	0.0156	0.0152	0.0159	0.0158	0.0173	0.0159	0.0164	0.0161	0.00321	0.00374	0.0038	0.00372	0.00443	0.0069
Nickel	0.00268	0.00098	0.00112	0.0008	0.00071	0.00054	0.00582	0.0096	0.00935	0.00168	0.00139	0.00208	0.00164	0.0028	0.0025	0.0025	0.00232	0.00345	0.00399	0.00374	0.00337	0.00321	0.00161
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.054	0.051	0.06	0.081	0.082	0.071	0.076	0.076	0.071	<0.05	<0.05	<0.05	<0.05	<0.05	0.064
Potassium	25.4	2.85	2.7	2.25	2.62	2.49	16.6	18.4	17.9	1.26	1.29	1.34	1.26	7.68	7.38	8.05	7.72	2.16	2.33	2.25	2.24	2.33	1.27
Selenium	0.00021	0.00013	0.00011	<0.0001	<0.0001	<0.0001			0.00067	<0.0001	0.00011	0.00015	0.00015	0.00013	0.00011	<0.0001	<0.0001	0.00039	0.00047	0.00017	0.00013	0.00012	0.00018
Silicon	9.09	6.47	6.33	5.56	6.48	6.3	6.29	5.94	5.8	8.31	7.82	7.36	7.46	9.22	9.2	8.98	8.85	8.01	8.28	8.27	8.1	8.09	7
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	155	75.1	73.2	72.8	77.6	75.9	131	127	131	98.6	99.2	109	107	33.4	35.3	36.1	34.4	22.1	20.9	23.3	24.2	28.9	119
Strontium	2.05	0.31	0.312	0.302	0.282	0.272	3.92	4.13	4.44	0.515	0.566	0.595	0.598	0.671	0.683	0.688	0.676	2.58	2.92	2.68	2.73	2.66	0.835
Sulphur	279	27.8	29.6	29.6	28.7	26.5	401	449	472	45	44.3	44.2	44.4	40.7	38.8	39.1	40.7	43.7	44.7	41.9	44	46.3	42.6
Thallium	<0.00001	0.000022	0.000011	0.000012	<0.00001	<0.00001	<0.00001	<0.00001	0.000014	<0.00001	<0.00001	<0.00001	<0.00001	0.000016	0.000019	0.000012	<0.00001	0.000018	<0.00001	0.000017	<0.00001	0.000013	0.000014
Tin	<0.0001	0.00012	0.00029	<0.0001	<0.0001	<0.0001	0.00131	<0.0001	0.00013	0.00018	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00021	0.00016	0.00013	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.00288	0.000596	0.000639	0.000517	0.000487	0.000448	0.00326	0.0026	0.00276	0.000507	0.000547	0.000898	0.000731	0.00367	0.00346	0.00369	0.00358	0.00131	0.00182	0.00161	0.00132	0.00156	0.00347
Vanadium	0.0061	0.0012	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	0.0095	0.0032	0.0094	0.0079	0.0045	0.0022	<0.001	0.0094	0.0106	0.0059	0.0093	0.0025	0.0083	0.0059	0.0039	0.0021	0.0015	0.0035	<0.001	0.0049	0.0025	0.0029	<0.001
Total Metals																							
Aluminum	0.009	0.0658	0.0683	0.0609	0.0162	0.025	0.271	0.0205	0.0246	0.943	0.417	0.79	0.72	0.271	0.101	0.0344	0.0308	0.0307	0.0146	0.0292	0.0421	0.0069	2.93
Antimony	0.00013	<0.0001	0.00015	0.00013	<0.0001	<0.0001	0.00045	0.00035	0.00046	0.00014	0.00019	0.00024	0.00021	0.00016	0.00013	0.00012	0.00011	0.00038	0.00041	0.0002	0.00019	0.00012	0.00026
Arsenic	0.00287	0.00312	0.00323	0.00362	0.00357	0.00359	0.00169	0.00226	0.0025	0.00399	0.00435	0.00298	0.0041	0.00264	0.00275	0.00293	0.00276	0.0018	0.00203	0.00221	0.00266	0.00265	0.0017
Barium	0.037	0.02	0.0184	0.0163	0.0138	0.0138	0.045	0.0375	0.0369	0.018	0.0187	0.0179	0.0192	0.0393	0.0409	0.0385	0.0358	0.04	0.0399	0.0394	0.0406	0.0365	0.0383
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00023
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.197	0.268	0.262	0.298	0.278	0.276	0.101	0.081	0.083	0.127	0.125	0.113	0.133	0.062	0.067	0.072	0.096	0.031	0.03	0.034	0.035	0.032	0.099
Cadmium	0.000015	0.000018	0.000033	0.000019	<0.00001	0.000011	0.000146	0.000053	0.000035	0.000012	0.000013	0.000019	0.000023		0.000021	0.000013	<0.00001	0.000063	0.000015	0.000013	0.000019	<0.00001	0.000057
Calcium	128	12.4	12.9	10.9	10.2	9.57	200	212	212	8.76	9.84	9.84	9.8	41.5	41.3	44.2	42.5	61	63.4	59.8	64.3	59.4	14.3
Chromium	0.00021	0.00021	0.00032	0.0002	<0.0001	0.00011	0.00127	0.00025	0.00066	0.00033	0.00031	0.00028	0.00046	0.00087	0.00036	0.00018	0.0002	0.00058	0.00013	0.00021	0.0003	0.00012	0.00104
Cobalt	0.00063	0.00023	0.00046	0.00038	0.0003	0.00023	0.00608	0.00684	0.00626	0.0007	0.00071	0.00074	0.00068	0.00121	0.00129	0.00156	0.00145	0.00181	0.00331	0.00299	0.0028	0.00245	0.00125
Copper	0.00334	0.00069	0.00148	0.00077	<0.0005	0.00089	<0.0015	0.00137	0.00092	0.00055	0.00051	0.00072	0.00177	0.0029	0.00113	<0.0005	0.00063	<0.001	<0.0005	0.00057	0.00073	<0.0005	0.00294
Iron	0.054	0.071	0.074	0.056	0.011	0.023	0.971	0.866	0.905	0.356	0.211	0.361	0.305	0.36	0.119	0.072	0.108	0.063	0.216	0.179	0.29	0.295	2.03
Lead	<0.00005	0.000055	0.000059	<0.00005	<0.00005	<0.00005	0.000234	<0.00005	0.000091	0.000384	0.000141	0.000482	0.000277	0.000126	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000051	<0.00005	<0.00005	0.00111
Lithium	0.0183	0.0148	0.0143	0.0139	0.0133	0.0159	0.00463	0.00404	0.00358	0.0442	0.0424	0.0347	0.0413	0.00472	0.00427	0.00451	0.00407	0.0211	0.0188	0.0191	0.0225	0.0206	0.0422
Magnesium	147	5.74	5.74	5	4.7	4.47	144	168	175	10.1	11.5	10.6	11	58.2	55.5	60.9	58.2	75.6	78	73.5	80.2	76.5	7.46
Manganese	0.075	0.044	0.122	0.131	0.103	0.0828	4.24	2.94	2.73	0.13	0.163	0.179	0.164	0.262	0.319	0.397	0.371	0.314	1.01	0.867	0.769	0.91	0.107
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000021	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.00879	0.00628	0.00644	0.00655	0.00649	0.00645	0.0241	0.0353	0.0355	0.0162	0.0167	0.0147	0.0157	0.0169	0.0167	0.0173	0.0169	0.00336	0.00377	0.00405	0.00412	0.00459	0.00685
Nickel	0.00253	0.00095	0.00134	0.00101	0.00066	0.0006	0.0114	0.00985	0.00922	0.00175	0.00194	0.00216	0.00201	0.00378	0.00306	0.00286	0.00249	0.00372	0.00437	0.00369	0.00373	0.00312	0.00289
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.07	0.064	0.067	0.051	0.064	0.078	0.081	0.074	0.075	0.07	0.089	<0.05	<0.05	<0.05	<0.05	<0.05	0.102
Potassium	24.7	2.79	2.68	2.59	2.6	2.49	16	18.3	18.9	1.31	1.38	1.43	1.34	7.5	7.23	8.26	7.34	2.38	2.35	2.26	2.44	2.29	1.67
Selenium	0.00021	0.00013	0.00013	<0.0001	<0.0001	<0.0001			0.00147	<0.0001	0.00013	0.00016	0.00012	0.00012	0.00011	0.00012	<0.0001	0.00036	0.00055	0.0002	0.00014	0.00013	0.00021
Silicon	9.06	6.57	6.37	6.39	6.45	6.34	6.63	5.93	5.87	11.1	9.52	9.39	9.84	9.52	9.17	9.39	8.73	8.3	8.24	8.29	8.68	7.97	16.5
Silver	<0.00001	<0.00001	0.000021	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000016
Sodium	157	75.3	75.2	79	74.9	75.1	128	124	131	96.8	107	95.3	108	34	37.7	38.6	33.6	21.9	20.9	22.8	25.2	28.2	117
Strontium	2.02	0.332	0.306	0.296	0.291	0.293	3.76	4.57	4.39	0.556	0.603	0.561	0.585	0.653	0.679	0.722	0.687	2.59	2.92	2.67	2.92	2.66	0.868
Sulphur	284	27.9	30.3	29.9	28.6	26.4	391	447	469	43.5	47.9	42.5	43.6	40.6	38.7	43.2	40.8	45.8	44.1	41.9	47.2	47.4	41.3
Thallium	<0.00001	0.000015	0.000012	0.000011	<0.00001	0.00001	0.000015	0.000015	0.000016	0.000016	0.000016	0.000022	0.000015	0.00002	0.000018	0.000014	<0.00001	0.000019	<0.00001	0.00002	0.000012	0.000014	0.000045
Tin	<0.0001	0.00026	0.00047	0.00021	<0.0001	<0.0001	0.00275	0.0002	0.00019	0.00027	0.00014	0.00012	0.00017	0.00011	0.0001	<0.0001	0.0001	0.00024	0.0003	0.00029	0.0002	<0.0001	0.00034
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.015	<0.01	0.011	0.013	0.013	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.059
Total Cadmium (by saltwater extra																							
Uranium	0.00299	0.000597	0.000665	0.000546	0.000513	0.000475	0.00301	0.00283	0.00279	0.000612	0.000724	0.000971	0.000781	0.00379	0.00361	0.00394	0.00372	0.00139	0.00193	0.00159	0.00147	0.00164	0.00358
Vanadium	0.0064	0.0015	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0015	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0046
Zinc	0.0092	<0.003	0.0127	0.0102	<0.003	0.0034	0.0041	0.0464	0.0202	<0.003	0.0206	0.0046	0.0204	<0.003	0.0059	<0.003	0.0051	<0.003	<0.003	0.0066	0.0037	0.0031	0.0053
Organics																							
Carbon Organic (Dissolved)				1.21																			
Carbon Organic (Total)	9.41	1.24	1.74	1.41	1.07	0.89	8.1	6.5	5.76	2.19	2.77	3.11	3.06	1.99	1.9	2.02	1.94	3.5	2.31	2.31	2.95	2.88	3.27
Nitrogen Organic (Dissolved)																							
Nitrogen Organic (Total)																							
ALS LAB ID	L1507004	L1438371	L1464552	L1483419	L1496084	L1510175	L1459061	L1496798	L1510761	L1459725	L1481200	L1494491	L1508557	L1459725	L1478887	L1491785	L1507004	L1437641	L1458341	L1478887	L1490937	L1509422	L1459061

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D3.2 - GROUNDWATER QUALITY DATA

Site ID	3GC14-017D		BGC14-017S				KAX-14-107S			KAX-14-108S			KAX-14-114S				KAX-14-128						
Site ID	3GC14-017	3GC14-017	3GC14-017	3GC14-017	3GC14-017	3GC14-017	AX-14-107	AX-14-107	AX-14-107	AX-14-108	AX-14-108	AX-14-108	AX-14-114	AX-14-114	AX-14-114	AX-14-114	AX-14-128	MW11-01S	MW11-01S	MW11-01S	MW11-01S	MW11-01S	MW11-01S
Analytes	Jul-14	Jul-14	May-14	Jun-14	Jul-14	Aug-14	Jul-14	May-14	Sep-14	Jul-14	Aug-14	Sep-14	Jun-14	Jul-14	Aug-14	Sep-14	Sep-14	Jul-11	Oct-11	Feb-12	Jun-12	Aug-12	Dec-12
In Situ Parameters																							
Conductivity µS/cm	414	483	474	445	495	491	767	738	769	1425	1347	1314		809	35	824	765	725	741	625	1071	951	680
Oxygen Dissolved %	42.6	26.5	84.5	27.1	83.6	9.5	12.8	0.8	8.3	3.8	0.3	46.9		7.3	21.7	9.7	0.9		9.3	8.1	20.2		3.8
Oxygen Dissolved	4.61	3.03	9.7	3.16	9.3	1.06	1.42	0.08	0.94	0.4	0.03	5.31		0.81	1.97	1.07	0.26		1.01	0.97	1.96	1.03	0.43
pH (unitless)	10.2	8.61	8.26	8.04	5.4	7.55	5.5	7.41	5.91	5.95	7.62	5.88		10.5	7.12	6.05	5.57	8.37	8.4	8.85	9.05	6.31	9.03
Redox Potential mV	-15.9	-18.1	111	68.6	208	70.6	-134	-267	-163	-41	-125	19		-250	167	-45.8	-196			36.5		179	19.3
Salinity ppt	0.27	0.34	0.33	0.31	0.34	0.34	0.53	0.51	0.54	0.96	0.93	0.95		0.56	0.02	0.58	0.53			0.46		0.5	0.49
Specific Conductivity µS/cm	556	692	675	644	684	689	1062	1017	1076	1867	1819	1866		1118	39	1166	1055	936	529	934	775		979
Temperature °C	11.7	9.12	9.4	8.85	10.6	10.1	10.4	10.6	10.1	12.6	11.4	9.52		10.5	20.1	9.64	10.6	13.2	10.1		10.1	13.5	8.99
Total Dissolved Solids	362	450	439	419	444	448	688	661	701	1220	1183	1207		725	25	758	686			7.67		608	635
Turbidity NTU	-3	0.3	56.8	3.9	0	0	-0.7	0	0	-0.6	0	0		17.8	1.1	0	0	9.8	9.1	21.8	1.4	9.1	3.8
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)			<1															1.6				<1	
Alkalinity (Total as CaCO3)	210	200	350	392	391	401	424	441	437	194	201	195	287	334	328	320	209	129	232	124	148	141	159
Bicarbonate Alkalinity	203	195	342	392	391	401	405	441	437	194	201	195	281	315	315	317	209	129		110	132		143
Carbonate Alkalinity	6.9	4.1	8.2	<1	<1	<2	19.2	<2	<1	<1	<2	<1	5.8	18.6	13	2.5	<1	<2		13	15.4		15.5
Color TCU																		13.5	<5	5.9	<5	<5	<5
Hardness as CaCO3 (Dissolved)	58.8	59.2	387	396	401	396	257	256	250	484	477	471	285	273	281	273	325	297	232	313	351	367	382
Hydroxide Alkalinity	<1	<1	<1	<1	<1	<2	<1	<2	<1	<1	<2	<1	<1	<1	<1	<1	<1	<2		<1	<1		<1
pH (unitless)	8.5	8.36	8.31	8.17	8.22	8.08	8.46	8.28	8.24	8.27	8.15	8.12	8.42	8.53	8.45	8.31	8.57	8.19	8.3	8.54	8.63	8.59	8.67
Specific Conductivity µS/cm	579	580	641	673	679	659	1090	1070	1060	1890	1880	1810	1190	1190	1170	1150	1030	895	443	928	950	941	975
Total Dissolved Solids	371	366	356	366	398	366	690	759	688	1400	1420	1340	778	788	796	749	856	600	241	630	672	697	697
Total Suspended Solids	<3	<3	62	8.4	<3	<3	5.2	5.2	<3	6	13.8	5.6	7.7	12.6	8.3	3	<3	10.3	3.2	4	4.7	8.5	3.7
Turbidity NTU	0.98	2	24.8	4.47	0.96	0.17	8.19	7.78	11.6	3.84	5.93	3.4	5.07	5	3.78	2.79	106	5.5	3.64	3.94	1.33	4.62	7.33
Dissolved Anions																							
Bromide	0.062	0.059	<0.25	<0.05	<0.25	<0.05	<0.5	<0.5	<0.5	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
Chloride	4.43	4.08	<2.5	0.8	<2.5	0.81	8.2	8.3	8.2	22	24	18	17.4	15	20.2	14.8	13.1	<5	1	<5	<5	19.6	<5
Fluoride	0.295	0.297	0.14	0.153	0.148	0.156	0.283	0.31	0.297	0.252	0.288	0.252	0.3	0.37	0.301	0.269	0.072	0.42	0.239	<0.2	<0.2	0.33	<0.2
Sulphate	100	98.1	13.9	13	12.9	12.8	175	162	172	835	873	762	340	313	310	310	291	351	17.3	345	344	390	356
Nutrients																							
Ammonia (Total)	0.0062	0.0052	<0.005	<0.005	0.024	<0.005	0.0375	0.0587	0.0788	0.128	0.163	0.175	1.01	1.02	1.11	1.09	0.0561	0.345	0.0565	0.089	0.119	0.103	0.11
Nitrate (as N)	<0.005	<0.005	0.277	0.245	0.248	0.259	<0.05	<0.05	<0.05	<0.1	<0.1	<0.1	<0.05	<0.05	0.064	<0.05	<0.05	<0.05	<0.005	8.81	9.01	10.8	9.42
Nitrite (as N)	<0.001	<0.001	<0.005	<0.001	0.0085	0.0061	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	0.155	0.167	0.635	0.069
Nitrogen (Dissolved)																		0.67	0.16	15.2	10.9		9.98
Nitrogen (Total)																		0.67	0.139	9.17	9.18	11.7	8.72
Nitrogen Kjeldahl (Total)	0.107	0.133	0.155	0.123	0.128	0.102	0.554	0.627	0.552	0.388	0.491	0.404	2.17	2.35	2.87	2.25	0.521	0.67	0.139	0.21	<0.05	0.249	<0.05
Orthophosphate (Dissolved)	0.0593	0.0591	0.023	0.0194	0.0184	0.0231	0.135	0.115	0.119	0.043	0.0643	0.0756	0.152	0.176	0.246	0.229	0.0724	0.0668				0.0762	
Phosphorus - Dissolved	0.0612	0.0604	0.0291	0.0205	0.0251	0.025	0.148	0.112	0.16	0.0423	0.0652	0.077	0.167	0.228	0.251	0.273	0.0821	0.0707	0.0192	0.115	0.0717		0.0507
Phosphorus - Total	0.0611	0.0628	0.109	0.037		0.025	0.202	0.184	0.21	0.165	0.181	0.196	0.201	0.301	0.339	0.356	0.0831	0.0869	0.0272	0.116	0.0751	0.0923	0.0568
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																							
Aluminum	0.0079		0.0039	0.0045	0.0034	0.0034	0.0072	0.0059	0.0058	0.0081	0.0071	0.0068	0.005	0.0045	0.0048	0.0079	0.0113	0.0092	0.0048	0.0131	0.0116	0.0105	0.0075
Antimony	0.00017	0.00017	0.00012	<0.0001	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00031	0.00026	<0.0001	0.00019	0.00012	<0.0005	0.00288	0.00021	<0.0005	0.0002	0.00014
Arsenic	0.00131	0.00133	0.00085	0.00097	0.0009	0.00093	0.00536	0.00534	0.00534	0.00621	0.00615	0.00637	0.00526	0.00599	0.00666	0.00583	0.00165	0.00252	0.00339	0.00349	0.00288	0.00302	0.00271
Barium	0.0248	0.0244	0.126	0.15	0.137	0.137	0.0322	0.0339	0.0317	0.0238	0.0256	0.0223	0.0565	0.0691	0.0835	0.0729	0.0501	<0.02	0.09	0.0187	0.022	0.0202	0.019
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.0005	<0.0005	<0.2	<0.0005	<0.0005
Boron	0.095	0.088	0.015	0.015	0.015	0.014	0.642	0.701	0.67	0.182	0.193	0.183	0.352	0.346	0.402	0.368	2.61	<0.1	0.014	0.057	<0.1	0.074	0.073
Cadmium	0.000018	0.000014	0.000037	<0.00005	0.00002	0.00002	<0.00001	<0.00001	<0.00001	<0.00006	<0.00001	0.000021	<0.00003	<0.00003	<0.00001	<0.00001	<0.00001	<0.00004	0.00004	0.000042	0.000044	0.000011	<0.00001
Calcium	12	11.9	65	65.8	67	65.3	30.3	29.7	28.6	57.7	56.5	55.2	31.2	32.9	32.7	31.5	95.8	36	50.7	31.6	33.3	37.2	39.8
Chromium	<0.0001	<0.0001	0.0027	0.00267	0.00278	0.00275	<0.0001	0.00012	0.00011	<0.0001	<0.0001	0.00012	<0.0001	<0.0001	<0.0001	<0.0001	0.00024	0.0078	0.00081	0.00107	0.0021	0.00074	0.00106
Cobalt	0.00037	0.00044	0.00018	<0.0001	<0.0001	<0.0001	0.0005	0.00039	0.00027	0.00202	0.00177	0.00125	0.00107	0.00112	0.00147	0.00136	<0.0001	<0.0003	0.00079	<0.0001	<0.0003	<0.0001	<0.0001
Copper	0.00184	0.00054	0.00169	0.00231	0.0009	0.00081	<0.0002	<0.0002	<0.0002	0.00043	<0.0002	<0.0002	0.00158	0.00113	0.00098	0.00063	<0.0002	0.002	0.0009	0.00092	<0.001	0.00074	0.00065
Dissolved Cadmium (by saltwater				0.000035						<0.00002			<0.00002	<0.00002									
Iron	<0.01	0.131	<0.01	<0.01	<0.01	<0.01	0.756	0.645	0.415	0.804	0.664	0.444	0.159	0.362	0.617	0.462	0.074	<0.03	<0.03	<0.03	<0.03	<0.01	<0.01
Lead	<0.00005	<0.00005	<0.00005	0.000068	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000053	<0.00005	<0.00005	<0.00005	<0.00005	<0.0005	<0.00005	<0.00005	<0.0005	<0.00005	<0.00005
Lithium	0.0436	0.0407	0.00849	0.00852	0.00854	0.00862	0.00492	0.00535	0.00504	0.00386	0.00403	0.00459	0.00889	0.00956	0.0086	0.00823	0.01	<0.005	0.00431	0.0056	0.0052	0.00513	0.00429
Magnesium	6.99	7.14	54.7	56.4	56.7	56.5	44	44.1	43.3	82.5	81.6	80.8	50.2	46.3	48.5	47.2	20.9	50.3	25.5	56.9	65	66.5	68.7
Manganese	0.0801	0.0865	0.0272	0.0105	0.00635	0.00608	0.668	0.646	0.469	1.16	1.13	0.752	0.356	0.673	1.1	0.974	0.339	0.00079	0.111	0.00891	0.0165	0.0161	0.0319
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001
Molybdenum	0.00588	0.00622	0.00154	0.00145	0.00149	0.00148	0.00506	0.00444	0.00422	0.208	0.212	0.233	0.0341	0.0389	0.0338	0.0303	0.0277	0.0835	0.0117	0.0442	0.0471	0.0446	0.0527
Nickel	0.00141	0.00169	0.00112	0.00082	0.00067	0.00051	0.00265	0.00249	0.0023	0.00366	0.00326	0.00246	0.00923	0.00888	0.00984	0.00972	<0.0005	0.0012	0.00513	0.0006	<0.001	0.00106	<0.0005
Phosphorus	0.066	0.065	<0.05	<0.05	<0.05	<0.05	0.175	0.163	0.169	0.137	0.164	0.15	0.19	0.259	0.319	0.3	0.086	<0.3	<0.3	<0.3	<0.3	0.089	<0.05
Potassium	1.12	1.24	2.24	2.44	2.35	2.3	13.9	13.9	14	33	32.2	33.6	23	24.9	21	20.8	31.3	17.7	1.35	22.9	21.5	20.6	20.1
Selenium	0.00012	0.00017	0.00099	0.00085	0.0009	0.00092	0.00032	0.00053	0.00023	0.00013	0.00011	<0.0001	0.00046	0.00053	0.00024	0.00024	0.00138	0.0044	0.00136	0.0039	0.0048	0.00567	0.00489
Silicon	6.99	7.18	7.52	7.51	7.53	7.71	10.6	10.9	10.3	11.5	11.4	12.4	7.61	6.69	7.24	7.62	13.2	4.96	5.03	4.4	6.1	5.97	6.64
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001
Sodium	108	102	9.25	9.32	9.56	9.87	150	158	146	234	246	227	150	152	159	153	103	71.4	8.3	75.5	77.8	74.9	77.1
Strontium	0.836	0.87	1.48	1.53	1.51	1.49	0.791	0.809	0.811	1.23	1.26	1.18	1.02	1.14	1.02	0.923	1.64	0.693	0.867	0.736	0.824	0.825	0.933
Sulphur	32.9	32.4	4.63	4.39	4.51	4.44	81	95.4	104	253	256	251	112	101	99.4	101	415						113
Thallium	0.000012	0.000012	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	0.000021	0.000013	<0.0002	0.000011	0.000011
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	0.0001	<0.0001	<0.0005	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.00247	0.00244	0.00126	0.00113	0.00114	0.00111	0.00142	0.00138	0.00152	0.00171	0.00162	0.00138	0.00312	0.00355	0.00254	0.00231	0.000159	0.0019	0.00306	0.00109	0.00087	0.000964	0.000934
Vanadium	<0.001	<0.001	0.0034	0.0039	0.0039	0.0041	0.0011	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0014	0.0011	<0.001	<0.001	0.0029	<0.001	0.0078	0.0093	0.0074	0.0083
Zinc	0.0064	0.0034	0.0031	0.0172	0.0135	0.007	0.0019	<0.001	0.0098	0.0176	0.0039	0.0037	0.0018	<0.001	<0.001	0.0019	0.0045	<0.005	0.0047	<0.003	<0.005	0.0011	<0.001
Total Metals																							
Aluminum	0.026		1.63	0.177	0.0282	0.0095	0.0198	0.019	0.0195	0.0813	0.175	0.0927	0.0948	0.0758	0.0647	0.0568	0.015	0.245	0.136	0.117	0.0509	0.267	0.197
Antimony	0.00021	0.00015	0.00025	0.00011	0.00016	0.00012	0.00015	0.00015	0.00015	0.00011	0.00023	0.00014	0.00037	0.00032	0.0002	0.00032	0.00036	<0.0005	0.00253	0.00021	<0.0005	0.00029	0.00015
Arsenic	0.0013	0.00116	0.00152	0.00105	0.00094	0.00098	0.00576	0.00561	0.00578	0.00647	0.00663	0.00655	0.00538	0.00647	0.00667	0.00596	0.00275	0.00274	0.00347	0.00356	0.0031	0.00306	0.00283
Barium	0.025	0.0213	0.144	0.16	0.137	0.14	0.0322	0.0335	0.0323	0.0244	0.0276	0.0235	0.0653	0.0873	0.0818	0.0728	0.0496	0.024	0.0936	0.0204	0.02	0.024	0.0218
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.0005	<0.0005	<0.2	<0.0005	<0.0005
Boron	0.099	0.087	0.015	0.018	0.02	0.018	0.676	0.745	0.684	0.19	0.22	0.194	0.383	0.358	0.4	0.396	2.65	<0.1	0.015	0.063	<0.1	0.094	0.067
Cadmium	0.000032	<0.00001	0.000065	<0.00005	0.000026	0.000023	<0.00001	<0.00001	<0.00001	<0.00012	0.000053	0.000062	<0.00006	<0.00008	0.000029	0.000032	<0.00001	<0.00004	0.000045	0.000045	0.000046	0.000031	0.000014
Calcium	11.9	10.9	63.4	65.6	64.6	65.9	30.1	29	28.2	58.1	58.9	55.2	32.7	32.5	31.3	30.4	92.2	37.2	51.2	30.5	35.7	36.3	37.5
Chromium	0.00013	<0.0001	0.00688	0.00333	0.00297	0.00301	0.00024	0.0002	0.00029	0.00263	0.00079	0.00049	0.00051	0.00057	0.00043	0.00037	0.00092	0.0085	0.00331	0.00162	0.0027	0.0111	0.00181
Cobalt	0.00039	0.00037	0.00148	0.00023	<0.0001	<0.0001	0.00076	0.00059	0.00046	0.0021	0.002	0.00141	0.00124	0.00137	0.00154	0.00151	0.00017	<0.0003	0.00084	0.00014	<0.0003	0.00042	0.00025
Copper	0.00204	<0.0005	0.0117	0.00233	0.00121	0.00099	0.00124	0.00052	<0.0005	0.00102	0.00162	0.00139	0.017	0.0164	0.0142	0.0111	<0.0005	0.0038	0.00091	0.00171	0.0019	0.00398	0.0029
Iron	0.032	<0.01	2.06	0.194	0.031	0.012	0.8	0.668	0.502	0.949	0.887	0.585	0.302	0.574	0.677	0.565	0.123	0.302	0.18	0.145	0.047	0.304	0.415
Lead	<0.00005	<0.00005	0.000464	0.000058	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000064	0.000101	0.000071	0.000219	0.000385	0.000311	0.000226	<0.00005	<0.0005	0.00009	<0.00005	<0.0005	0.000144	0.00005
Lithium	0.0448	0.0373	0.0081	0.00834	0.00846	0.00874	0.00501	0.00551	0.00528	0.00391	0.0043	0.00463	0.00886	0.00924	0.00836	0.00813	0.00961	<0.005	0.00407	0.00541	0.0055	0.00562	0.00399
Magnesium	6.96	6.58	53.1	55.8	55.9	56.5	44.5	43.2	43.2	85.1	82.7	81.7	49.5	45.7	46.8	46.4	19.9	52.6	26.1	56.3	65.4	65	64
Manganese	0.0822	0.0771	0.0722	0.0173	0.00828	0.00643	0.689	0.656	0.511	1.2	1.19	0.789	0.355	0.697	1.05	0.951	0.348	0.0124	0.118	0.0149	0.0197	0.0345	0.0402
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000032	0.000049	0.000048	0.000028	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001		0.000012
Molybdenum	0.00651	0.00589	0.00145	0.00151	0.00154	0.00154	0.00599	0.00518	0.00546	0.217	0.225	0.244	0.0349	0.0391	0.0315	0.0332	0.0774	0.0868	0.0113	0.0421	0.0489	0.0481	0.0462
Nickel	0.00152	0.0015	0.00646	0.00109	0.00074	0.00056	0.00297	0.00269	0.00245	0.00406	0.00418	0.00297	0.011	0.0105	0.0107	0.0107	0.00098	0.0017	0.00545	0.00103	<0.001	0.00726	0.00096
Phosphorus	0.074	0.064	0.084	<0.05	<0.05	<0.05	0.211	0.179	0.188	0.162	0.173	0.157	0.208	0.293	0.306	0.297	0.091	<0.3	<0.3	<0.3	<0.3	0.099	0.055
Potassium	1.1	1.19	2.36	2.31	2.32	2.34	13.7	13.4	14.1	33.3	32.9	33.9	23.5	23.6	19.8	20.5	28.5	18.3	1.43	23.6	23.1	20.5	18.8
Selenium	0.00013	0.00012	0.00087	0.00093	0.00085	0.00084	0.00014	0.00012	0.00012	0.00015	0.00012	0.0001	0.00053	0.00072	0.00037	0.00038	<0.0001	0.0046	0.00124	0.00406	0.0051	0.00558	0.00485
Silicon	7.04	6.36	11	7.86	7.54	7.7	10.6	10.5	10.4	11.9	12	12.7	8	6.75	7.12	7.67	12.6	5.66	5.41	4.58	6.29	6.39	6.96
Silver	<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000028	0.000024	0.000021	0.000025	<0.00001	<0.00002	<0.00001	<0.00001	<0.00002	0.000028	<0.00001
Sodium	104	94.3	9.07	9.5	9.87	9.96	152	160	150	237	254	231	159	154	148	143	101	73.8	8.56	77.8	83.4	77.8	76.2
Strontium	0.914	0.804	1.4	1.57	1.54	1.56	0.81	0.811	0.83	1.28	1.32	1.23	1.05	1.19	0.978	1	1.64	0.731	0.82	0.689	0.88	0.842	0.819
Sulphur	33.7	30.2	4.56	4.66	4.71	4.57	58.8	54.6	57.3	266	266	258	117	102	96.7	99.8	103						109
Thallium	<0.00001	0.00001	0.000023	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00003	0.000051	0.000032	0.00002	<0.00001	<0.0002	0.000021	0.000014	<0.0002	0.000011	0.000014
Tin	<0.0001	<0.0001	0.00024	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	0.00017	0.00011	0.00028	0.00019	0.00013	0.00021	<0.0001	0.00011	0.00015	<0.0005	0.00029	0.00011	<0.0005	0.00042	<0.0001
Titanium	<0.01	<0.01	0.072	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.015	<0.01	<0.01	<0.01	0.01	<0.01
Total Cadmium (by saltwater extra				0.000033						0.000057			0.000033	0.000048									
Uranium	0.00251	0.00224	0.00126	0.00118	0.00119	0.00119	0.00144	0.00137	0.00154	0.00179	0.00167	0.00143	0.00335	0.0037	0.00237	0.00237	0.000182	0.00202	0.0029	0.00105	0.00094	0.001	0.000806
Vanadium	<0.001	<0.001	0.0091	0.0048	0.0041	0.0043	0.0013	0.001	<0.001	<0.001	<0.001	<0.001	0.0015	0.0025	0.0019	0.0016	<0.001	0.0039	<0.001	0.0084	0.0099	0.0087	0.0092
Zinc	0.0069	0.0053	0.0065	0.014	0.0186	0.0098	<0.003	0.0036	0.0088	0.0115	0.0075	0.0056	0.0036	0.0056	0.0041	0.0037	<0.003	<0.005	0.0055	0.0044	<0.005	0.0051	<0.003
Organics																							
Carbon Organic (Dissolved)							10.9	13.4	4.49	4.38	4.48	3.76	10.6	12.9	9.05	7.9	12.5	4.32	1.43	1.96	2.35	1.81	2.41
Carbon Organic (Total)	2.56	3.03	2.6	1.61	1.23	1.34												4.14	1.29	2	1.71	1.8	2.07
Nitrogen Organic (Dissolved)																		0.33	0.103	6.1	<2.2		<2
Nitrogen Organic (Total)																		0.33	0.103	<0.3	<0.06		
ALS LAB ID	**L1481200**	**L1494504**	**L1459061**	**L1478436**	**L1491785**	**L1509422**	**L1488886**	**L1502282**	**L1516148**	**L1488886**	**L1502282**	**L1516148**	**L1464552**	**L1481825**	**L1502282**	**L1516148**	**L1517413**	**L1035635**	**L1074388**	**L1114029**	**L1160966**	**L1202478**	**L1247921**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D3.2 - GROUNDWATER QUALITY DATA

Site ID	MW11-01S						
Site ID	MW11-01S	MW11-01S	MW11-01S	MW11-01S	MW11-01S	MW11-01S	MW11-01S
Analytes	Mar-13	May-13	Aug-13	Nov-13	Mar-14	Jun-14	Sep-14
In Situ Parameters							
Conductivity µS/cm	625	800	808	0.948	658	740	653
Oxygen Dissolved %	1.8	0.6	1.1	2.2	1.5	4.6	3.4
Oxygen Dissolved	0.21	0.07	1.1	0.26	0.17	0.49	0.43
pH (unitless)	8.58	8.55	8.59	8.48	8.5	8.44	8.49
Redox Potential mV	105	134	212	125	3.74	67.3	115
Salinity ppt	0.46	0.58	0.56	0.47	0.48	0.48	0.46
Specific Conductivity µS/cm	926	1156	1125	0.655	959	966	934
Temperature °C	7.78	8.86	10.2	8.79	8.43	12.7	9.24
Total Dissolved Solids	605	752	730	617	627	628	607
Turbidity NTU	3.4	14	2.2	2.7	4.1	3.7	3.8
Physical Tests							
Acidity to pH 8.3 (as CaCO3)							
Alkalinity (Total as CaCO3)	153	152	159	146	148	161	161
Bicarbonate Alkalinity	143	149	154	146	141	156	158
Carbonate Alkalinity	9.9	2.9	4.4	<1	6.5	5.5	2.7
Color TCU	<5	<5	<5				
Hardness as CaCO3 (Dissolved)	389	386	374	369	366	370	366
Hydroxide Alkalinity	<1	<1	<1	<1	<1	<1	<1
pH (unitless)	8.41	8.4	8.37	8.43	8.38	8.38	8.41
Specific Conductivity µS/cm	1040	1040	1010	991	980	974	965
Total Dissolved Solids	705	700	717	662	666	669	686
Total Suspended Solids	<3	<3	<3			3.5	<3
Turbidity NTU	0.75	0.81	4.55			1.61	0.56
Dissolved Anions							
Bromide	<0.5	<0.5	<0.5	<1	<0.5	<0.25	<0.5
Chloride	<5	<5	<5	<5	<5	2.8	<5
Fluoride	0.32	<0.2	0.4	<0.2	0.4	0.191	0.199
Sulphate	361	371	365	361	369	359	367
Nutrients							
Ammonia (Total)	0.101	0.0819	0.0933	0.0888	0.0879	0.0974	0.102
Nitrate (as N)	11.9	11.4	9.13	6.43	3.73	2	1.37
Nitrite (as N)	0.084	0.025	0.059	0.116	0.142	0.174	0.201
Nitrogen (Dissolved)	10.8						
Nitrogen (Total)	12	11	8.68				
Nitrogen Kjeldahl (Total)	<0.05	0.255	<0.05	<0.05	<0.05	<0.05	0.189
Orthophosphate (Dissolved)				0.0429	0.0436	0.0414	0.0441
Phosphorus - Dissolved	0.0596	0.0588	0.0546	0.0471	0.0471	0.0442	0.0452
Phosphorus - Total	0.0608		0.057	0.05	0.0499	0.0507	0.047
Cyanide							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals							
Aluminum	0.0062	0.0057	0.0055	0.0055	0.006	0.0052	0.0057
Antimony	0.00015	0.00012	0.00014	0.00015	0.00016	0.00013	0.00014
Arsenic	0.00243	0.00222	0.0023	0.00208	0.00201	0.00211	0.00205
Barium	0.0209	0.0211	0.0212	0.0205	0.0208	0.0211	0.021
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.08	0.066	0.067	0.074	0.071	0.068	0.068
Cadmium	0.000012	0.000014	0.00002	<0.00002	<0.00003	<0.00005	0.000011
Calcium	37.7	39.9	38.8	38.4	39.6	40.8	39.9
Chromium	0.00045	0.00027	0.00048	<0.0001	0.0001	<0.0001	<0.0001
Cobalt	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001
Copper	0.00055	0.00063	0.00052	0.00041	0.00045	0.00079	0.00045
Dissolved Cadmium (by saltwater					<0.00002	<0.00002	
Iron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.00476	0.00422	0.00388	0.00474	0.00387	0.0036	0.00387
Magnesium	71.5	69.4	67.4	66.3	64.9	65.1	64.6
Manganese	0.037	0.0408	0.0491	0.0485	0.0588	0.0641	0.0656
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0467	0.0468	0.05	0.0518	0.0537	0.0591	0.0619
Nickel	0.00051	<0.0005	<0.0005	<0.0005	<0.0005	0.00059	<0.0005
Phosphorus	0.066	0.059	0.053	<0.05	<0.05	0.053	<0.05
Potassium	19.6	20	18.9	19.7	19.3	20.3	20.5
Selenium	0.00459	0.00369	0.00291	0.00197	0.00119	0.00071	0.00059
Silicon	6.59	6.84	6.85	6.85	6.79	7.19	7.64
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	74.9	72.5	76.6	72	71.5	68.9	72.1
Strontium	0.979	0.89	0.894	0.865	0.912	0.935	0.931
Sulphur	117	119	118	115	117	118	125
Thallium	0.000011	0.00001	0.000011	<0.00001	0.000015	<0.00001	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.000846	0.000834	0.00084	0.000731	0.000803	0.000786	0.000758
Vanadium	0.0066	0.0059	0.0064	0.0063	0.0058	0.0056	0.0056
Zinc	<0.001	<0.001	0.0013	<0.001	<0.001	0.0019	<0.001
Total Metals							
Aluminum	0.0301	0.0576	0.0437	0.0667	0.0451	0.063	0.0381
Antimony	0.00018	0.00017	0.00018	0.0002	0.00017	0.00016	0.00018
Arsenic	0.00249	0.00242	0.00228	0.00211	0.00202	0.00218	0.00208
Barium	0.0215	0.0239	0.0216	0.0217	0.0217	0.0225	0.0219
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.088	0.074	0.072	0.079	0.077	0.077	0.077
Cadmium	0.000017	0.000016	0.000025	<0.00003	<0.00004	<0.00005	0.000018
Calcium	37.4	40	38.4	39.3	38.2	40.4	39.1
Chromium	0.00061	0.00059	0.00109	0.00067	0.00051	0.0005	0.00042
Cobalt	<0.0001	0.00012	0.00011	0.00015	0.00013	0.00016	0.00014
Copper	0.00094	0.00135	0.00112	0.00108	0.00143	0.00145	0.00109
Iron	0.028	0.059	0.048	0.092	0.057	0.076	0.047
Lead	<0.00005	0.000257	0.00006	<0.00005	0.000137	0.000086	0.000074
Lithium	0.00471	0.00428	0.00406	0.00463	0.00398	0.00349	0.00412
Magnesium	67.4	70.7	66.3	65.9	63.1	64.4	63.2
Manganese	0.0395	0.0478	0.051	0.052	0.0625	0.0693	0.0702
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0482	0.0494	0.0518	0.0572	0.0572	0.0615	0.0664
Nickel	0.00062	0.00059	0.00067	0.00071	0.00078	0.0008	0.00063
Phosphorus	0.053	0.06	0.059	0.051	0.052	0.057	<0.05
Potassium	19.7	20.3	19.1	21.3	20	20.1	20.2
Selenium	0.0045	0.00353	0.00284	0.00194	0.0011	0.00068	0.0006
Silicon	6.52	7.07	6.82	7.19	6.82	7.38	7.73
Silver	0.000017	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	75.9	78.5	74.6	73.4	72.1	69.7	73.4
Strontium	1	0.916	0.91	0.88	0.921	0.979	0.997
Sulphur	118	122	119	122	119	122	124
Thallium	0.000014	0.000012	0.000015	<0.00001	<0.00001	<0.00001	0.00002
Tin	<0.0001	0.00018	<0.0001	0.00011	0.00015	0.00011	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extra					<0.00002	<0.00002	
Uranium	0.000878	0.000893	0.000843	0.00079	0.000797	0.00084	0.000797
Vanadium	0.0069	0.0067	0.0065	0.0069	0.0061	0.0063	0.0062
Zinc	<0.003	<0.003	<0.003	<0.003	<0.003	0.0033	0.0031
Organics							
Carbon Organic (Dissolved)	1.73	1.56	1.71	1.38			
Carbon Organic (Total)	1.31	1.41	1.62	1.34	1.34	1.42	1.39
Nitrogen Organic (Dissolved)	<2.2						
Nitrogen Organic (Total)	<0.06						
ALS LAB ID	**L1277099**	**L1308855**	**L1348177**	**L1392288**	**L1431355**	**L1478436**	**L1517413**

Site ID							MW11-02						
Site ID	MW11-02	MW11-02	MW11-02	MW11-02	MW11-02	MW11-02	MW11-02	MW11-02	MW11-02	MW11-02	MW11-02	MW11-02	MW11-02
Analytes	Aug-11	Nov-11	Feb-12	Jun-12	Aug-12	Dec-12	Mar-13	May-13	Aug-13	Nov-13	Mar-14	Jun-14	Sep-14
In Situ Parameters													
Conductivity µS/cm	1931	1957	1830	3284	3010	1918	1841	2234	2494	2.85	3072	2030	2052
Oxygen Dissolved %	9.5		48.5	25.4		59	14.2	19.7	6	7.2	6.1	5	5.3
Oxygen Dissolved	1.04		5.95	2.46	0.15	7.02	1.67	2.27	0.65	0.86	0.72	0.59	0.63
pH (unitless)	7.23	7.64	7.83	7.76	7.27	7.6	7.64	7.71	7.67	7.73	7.66	7.73	8.06
Redox Potential mV					-140	-99.3	-76.7	-38.6	237	1.48	-36.7	-67.4	-88.5
Salinity ppt					1.6	1.51	1.44	1.7	1.81	59.7	1.6	1.54	1.54
Specific Conductivity µS/cm	2643	3016	2934	2294		2893	2778	3240	3437	1.9	3029	2945	2943
Temperature °C	10.9	6.62	5.23	9.08	14.7	7.36	7.33	8.76	10.7	7.51	7.13	8.74	9.14
Total Dissolved Solids					1930	1880	1806	2102	2234	1851	1997	1916	1911
Turbidity NTU	0.8	1.8	23.6	0	32.3	3.3	4.7	0	3.4	2.4	3.2	13.2	3
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	5.3				4.5								
Alkalinity (Total as CaCO3)	220	203	218	177	186	180	195	176	165	192	176	182	173
Bicarbonate Alkalinity	220		218	177		180	195	176	165	192	176	182	173
Carbonate Alkalinity	<2		<2	<1		<2	<2	<2	<2	<2	<2	<2	<1
Color TCU	10.5	10.5	7.4	5.2	5.2	<5	<5	<5	<5	<5			
Hardness as CaCO3 (Dissolved)	428	464	428	450	463	432	431	426	433		433	443	429
Hydroxide Alkalinity	<2		<2	<1		<2	<2	<2	<2	<2	<2	<2	<1
pH (unitless)	7.93	8.07	7.87	8.02	7.97	8.12	8.06	8.1	8.05	8.17	8.05	8.17	8.03
Specific Conductivity µS/cm	2870	2910	2800	2840	2870	2850	3010	2900	2900	2940	2950	2980	2950
Total Dissolved Solids	2180	2260	2170	2270	2240	2260	2240	2210	2200	2220	2260	2260	2140
Total Suspended Solids	4	11.7	26	<3	7.2	11.7	7.4	4.7	6.8			12.5	3.8
Turbidity NTU	4	7.14	22.2	2.07	4.07	7.54	4.24	2.32	3.18			7.82	1.17
Dissolved Anions													
Bromide	<1	<1	<1	<1	<5	<1	<1	<1	<1	<2.5	<1	<1	<1
Chloride	17	16	16	16	<50	16	16	17	15	16	16	17	16
Fluoride	<0.4	<0.4	<0.4	<0.4	0.13	<0.4	<0.4	<0.4	0.58	<0.4	<0.4	0.119	0.099
Sulphate	1340	1460	1360	1430	1460	1430	1440	1430	1410	1420	1480	1470	1440
Nutrients													
Ammonia (Total)	0.0458	0.0885	<0.05	0.072	0.0928	0.0835	0.0831	0.0701	0.0699	0.0687	0.0674	0.0434	0.0705
Nitrate (as N)	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.11
Nitrite (as N)	<0.02	<0.02	<0.02	<0.02	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nitrogen (Dissolved)	0.25	0.22	0.14	1.75		0.137	0.129						
Nitrogen (Total)	0.28	0.323	0.334	0.224	<0.51	0.19	0.13	0.15	0.133				
Nitrogen Kjeldahl (Total)	0.28	0.323	0.33	0.224	0.181	0.194	0.13	0.154	0.186	0.161	0.179	0.192	0.169
Orthophosphate (Dissolved)					0.0522					0.0693	0.0721	0.0832	0.0808
Phosphorus - Dissolved	0.0426	0.0153	0.021	0.0558	0.0522	0.066	0.0639	0.0705	0.0753	0.0706	0.0728	0.079	
Phosphorus - Total	0.0558	0.0692	0.098	0.0826	0.0823	0.0987	0.0895	0.0916	0.0927	0.0926	0.0972	0.0986	0.117
Cyanide													
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.0059	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	<0.05	0.0108	<0.015	0.0106	0.0072	0.006	0.007	0.0061	0.006	0.0053	0.0047	0.0074	0.0054
Antimony	0.0055	0.00069	0.0016	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00028
Arsenic	<0.005	0.00288	0.00331	0.00306	0.00348	0.00262	0.00284	0.00258	0.00251	0.00278	0.0035	0.00321	0.00306
Barium	0.033	0.0421	0.0395	0.0363	0.0364	0.0318	0.0314	0.0288	0.0265	0.029	0.0283	0.0286	0.0277
Beryllium	<0.01	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Bismuth	<0.2	<0.001	<0.0025	<0.0025	<0.0025	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Boron	1.31	1.36	1.22	1.32	1.24	1.31	1.47	1.22	1.35	1.3	1.34	1.32	1.3
Cadmium	<0.00017	<0.00002	0.000105	<0.00005	<0.00005	<0.00005	<0.00002	<0.00002	0.000022	<0.00002	<0.00002	<0.00002	<0.00002
Calcium	84.8	92.9	86.3	88.5	91.5	84.7	83.3	84.5	83.1	82.1	83.7	86	83.7
Chromium	<0.01	<0.0002	0.00105	<0.0005	0.00124	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Cobalt	<0.003	0.00283	0.00259	0.00162	0.00156	0.00129	0.00125	0.00113	0.00103	0.00099	0.00102	0.00093	0.00093
Copper	<0.01	<0.001	<0.0025	<0.001	<0.001	<0.001	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Dissolved Cadmium (by saltwater											<0.00002	<0.00002	
Iron	<0.03	0.332	0.038	0.083	0.207	0.046	0.075	0.018	0.012	0.079	0.044	0.136	0.102
Lead	<0.005	<0.0001	<0.00025	<0.00025	<0.00025	<0.00025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Lithium	<0.05	0.0264	0.0381	0.0435	0.0452	0.0515	0.0538	0.0607	0.0595	0.0681	0.0648	0.0637	0.0616
Magnesium	52.6	56.3	51.6	55.6	56.9	53.6	54.3	52.2	54.9	56.1	54.5	55.3	53.3
Manganese	1.04	1.41	1.43	1.27	1.24	1.13	1.2	1.08	1.06	1.08	1.01	0.967	0.967
Mercury	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.014	0.0103	0.00862	0.00489	0.00462	0.00313	0.00263	0.00179	0.00166	0.00148	0.00152	0.00121	0.00124
Nickel	0.017	0.0095	0.0141	0.0041	0.0051	<0.0025	0.0029	0.0019	0.0017	0.0019	0.0017	0.0018	0.0015
Phosphorus	<0.3	<0.3	<0.3	<0.3	0.097	0.077	0.072	0.076	0.087	0.087	0.096	0.103	0.108
Potassium	2.7	2.31	2.66	1.61	1.37	1.22	1.14	1.09	1.06	1.07	1.03	1.02	0.95
Selenium	<0.01	0.00021	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Silicon	5.86	5.52	6.19	6.37	6.42	6.09	6.33	6.67	6.65	6.73	6.31	6.6	6.51
Silver	<0.0002	<0.00002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	551	627	528	547	530	538	542	523	510	517	545	533	564
Strontium	3.07	4.03	3.45	3.55	3.68	3.75	4.02	3.62	3.96	3.47	3.82	3.75	3.98
Sulphur						455	435	464	445	442	455	459	458
Thallium	<0.002	<0.00002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Tin	<0.005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Titanium	<0.01	<0.01	<0.01	0.012	<0.05	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Uranium	0.0069	0.0034	0.0034	0.00171	0.00165	0.0014	0.00129	0.000989	0.00095	0.000857	0.000746	0.000696	0.000679
Vanadium	<0.01	<0.002	<0.005	<0.005	<0.005	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Zinc	<0.005	0.0061	0.035	<0.005	0.0061	<0.005	<0.002	0.004	0.0025	0.0032	0.135	0.0062	0.0048
Total Metals													
Aluminum	0.184	0.14	0.617	0.085	0.15	0.264	0.164	0.0754	0.0667	0.0259	0.0405	0.381	0.0411
Antimony	0.0055	0.00083	0.00301	<0.0005	<0.0005	<0.0005	0.00024	0.0003	0.00023	0.00022	0.00033	0.00034	0.00041
Arsenic	<0.005	0.00297	0.00364	0.00298	0.00354	0.00305	0.00303	0.00279	0.00272	0.00291	0.00394	0.00351	0.00309
Barium	0.035	0.0441	0.0516	0.0347	0.036	0.0361	0.0319	0.0279	0.0272	0.0292	0.0288	0.0323	0.0265
Beryllium	<0.01	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Bismuth	<0.2	<0.001	<0.0025	<0.0025	<0.0025	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Boron	1.32	1.24	1.24	1.38	1.27	1.34	1.42	1.26	1.28	1.34	1.35	1.39	1.23
Cadmium	<0.00017	0.000077	0.000308	<0.00005	<0.00005	<0.00005	<0.00002	0.000023	0.000038	<0.00002	0.000026	0.00007	<0.00002
Calcium	84.5	97.5	81.6	86.2	89.7	84.3	83.8	81.6	81.5	81.9	82.2	86.9	80.4
Chromium	<0.01	0.00104	0.00835	0.00076	0.00804	0.00115	0.00062	0.00152	0.00068	0.00042	0.00061	0.00104	0.00045
Cobalt	<0.003	0.00293	0.00296	0.00159	0.00179	0.00153	0.0014	0.00122	0.00114	0.00104	0.00105	0.0012	0.00093
Copper	<0.01	0.0012	0.0049	<0.0025	<0.0025	<0.0025	<0.001	0.0021	<0.001	0.0018	0.0015	0.0027	0.0014
Iron	0.392	0.77	0.85	0.211	0.396	0.409	0.288	0.168	0.164	0.163	0.157	0.59	0.166
Lead	<0.005	<0.0001	0.00044	<0.00025	<0.00025	<0.00025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00016	<0.0001
Lithium	<0.05	0.0241	0.0394	0.0442	0.045	0.0522	0.0516	0.0602	0.0559	0.0701	0.0649	0.0658	0.0581
Magnesium	52.6	57.5	51.8	56.4	56.6	53.6	54.1	52	54	55.7	54.5	57	53.2
Manganese	0.972	1.44	1.39	1.15	1.25	1.18	1.24	1.08	1.11	1.09	1	0.996	0.909
Mercury	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.014	0.0104	0.00935	0.00555	0.00518	0.00324	0.00279	0.00219	0.00162	0.00186	0.00237	0.0013	0.00124
Nickel	0.018	0.0124	0.017	0.004	0.0072	0.0035	0.0032	0.0021	0.0021	0.002	0.0019	0.0023	0.0018
Phosphorus	<0.3	<0.3	<0.3	<0.3	0.104	0.104	0.091	0.092	0.097	0.111	0.1	0.117	0.112
Potassium	2.7	2.31	2.65	1.39	1.41	1.26	1.14	1.1	1.03	1.14	1.03	1.08	0.94
Selenium	<0.01	0.00028	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Silicon	6.08	6.21	7.54	6.49	6.78	6.62	6.63	6.75	6.82	6.92	6.42	7.45	6.42
Silver	<0.0002	<0.00002	<0.00005	<0.00005	0.000053	<0.00005	<0.00002	<0.00002	0.000033	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	547	630	506	497	531	555	541	525	532	512	542	536	535
Strontium	3.06	3.9	3.55	3.56	3.59	3.88	3.88	3.72	3.72	3.64	3.86	3.95	3.81
Sulphur						466	450	461	453	459	474	476	460
Thallium	<0.002	<0.00002	0.000056	<0.00005	<0.00005	<0.00005	<0.00002	0.000031	0.000033	<0.00002	<0.00002	0.000027	<0.00002
Tin	<0.005	0.00051	0.00112	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Titanium	0.015	0.013	0.04	0.016	<0.05	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	0.036	<0.02
Total Cadmium (by saltwater extra													
Uranium	0.0067	0.00341	0.00346	0.0017	0.00175	0.00146	0.00126	0.00102	0.000927	0.000909	0.000772	0.000754	0.000656
Vanadium	<0.01	<0.002	<0.005	<0.005	<0.005	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	0.0029	<0.002
Zinc	<0.005	<0.006	0.036	<0.015	<0.015	<0.015	<0.006	<0.006	<0.006	<0.006	0.149	0.0246	0.0141
Organics													
Carbon Organic (Dissolved)	8.81	4.7	9.21	17.2	3.99	3.42	3.51	3.81	3.78	3.41			
Carbon Organic (Total)	9.45	4.88	11.3	4.04	3.59	3.22	3.48	3.38	3.69	3.21	2.24	2.25	2.33
Nitrogen Organic (Dissolved)	0.204	0.132	0.094	1.68		0.054	<0.05						
Nitrogen Organic (Total)	0.234	0.172	0.33	0.152			<0.06						
ALS LAB ID	**L1041015**	**L1081224**	**L1114029**	**L1159542**	**L1202478**	**L1247928**	**L1277099**	**L1307601**	**L1348177**	**L1393344**	**L1431355**	**L1474413**	**L1516193**

Site ID		MW11-04D	
Site ID	MW11-04D	MW11-04D	MW11-04D
Analytes	Jun-12	Aug-12	Dec-12
In Situ Parameters			
Conductivity µS/cm	1081	1000	611
Oxygen Dissolved %	28.4		3
Oxygen Dissolved	2.64	1.87	0.36
pH (unitless)	9.91	9	9.62
Redox Potential mV		30	
Salinity ppt		0.5	
Specific Conductivity µS/cm	795		9060
Temperature °C	11	13.4	7.93
Total Dissolved Solids		638	
Turbidity NTU	5.2	1.5	-0.4
Physical Tests			
Acidity to pH 8.3 (as CaCO3)		<1	
Alkalinity (Total as CaCO3)	48.9	37.1	50.5
Bicarbonate Alkalinity	33.3		35.7
Carbonate Alkalinity	15.6		14.8
Color TCU	17	11.6	14.6
Hardness as CaCO3 (Dissolved)	38.1	33.8	43.2
Hydroxide Alkalinity	<1		<1
pH (unitless)	9.04	9.22	8.81
Specific Conductivity µS/cm	936	905	917
Total Dissolved Solids	644	592	610
Total Suspended Solids	<3	<3	4.7
Turbidity NTU	0.93	0.84	2.39
Dissolved Anions			
Bromide	<0.5	<0.5	<0.5
Chloride	26.1	26.1	25.7
Fluoride	1.11	1.02	0.99
Sulphate	356	341	349
Nutrients			
Ammonia (Total)	0.124	0.092	0.108
Nitrate (as N)	<0.05	<0.05	<0.05
Nitrite (as N)	<0.01	<0.01	0.037
Nitrogen (Dissolved)	0.3		0.265
Nitrogen (Total)	0.3	0.189	0.327
Nitrogen Kjeldahl (Total)	0.3	0.189	0.338
Orthophosphate (Dissolved)		0.169	
Phosphorus - Dissolved	0.247		0.264
Phosphorus - Total	0.252	0.178	0.287
Cyanide			
Cyanide (Free)	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005
Dissolved Metals			
Aluminum	0.147	0.0833	0.175
Antimony	<0.0005	0.00023	0.00043
Arsenic	0.012	0.0123	0.00925
Barium	<0.02	0.00859	0.0106
Beryllium	<0.001	<0.0001	<0.0001
Bismuth	<0.2	<0.0005	<0.0005
Boron	2.25	1.7	1.75
Cadmium	<0.00017	<0.00006	<0.00007
Calcium	14.4		16.3
Chromium	<0.001	0.00029	<0.0001
Cobalt	<0.0003	<0.0001	<0.0001
Copper	<0.001	<0.0002	0.00062
Dissolved Cadmium (by saltwater			
Iron	<0.03	<0.01	<0.01
Lead	<0.0005	<0.00005	<0.00005
Lithium	<0.005	0.003	0.00269
Magnesium	0.51		0.59
Manganese	0.017	0.0164	0.0158
Mercury	<0.00001	<0.00001	<0.00001
Molybdenum	0.216	0.218	0.204
Nickel	0.0015	0.00093	0.0014
Phosphorus	<0.3		0.247
Potassium	10.2	6.24	9.73
Selenium	<0.001	0.00026	0.00036
Silicon	2.66		2.73
Silver	<0.00002	<0.00001	<0.00001
Sodium	175	169	170
Strontium	0.235	0.212	0.228
Sulphur			114
Thallium	<0.0002	<0.00001	0.000013
Tin	<0.0005	<0.0001	0.0003
Titanium	<0.01		<0.01
Uranium	0.00026	0.000137	0.000282
Vanadium	0.0033	0.0018	0.003
Zinc	<0.005	<0.001	<0.001
Total Metals			
Aluminum	0.236	0.0977	0.287
Antimony	<0.0005	0.00025	0.00051
Arsenic	0.0126	0.0124	0.00879
Barium	<0.02	0.00845	0.0116
Beryllium	<0.001	<0.0001	<0.0001
Bismuth	<0.2	<0.0005	<0.0005
Boron	2.33	1.75	1.82
Cadmium	<0.00026	<0.00009	<0.0001
Calcium	16.3		16.6
Chromium	0.0036	0.00182	0.00119
Cobalt	<0.0003	0.00011	0.00014
Copper	0.0026	0.00104	0.00369
Iron	0.081	0.03	0.088
Lead	<0.0005	0.000052	0.00012
Lithium	<0.005	0.00324	0.00255
Magnesium	0.63		0.64
Manganese	0.0232	0.0176	0.0279
Mercury	<0.00001	<0.00001	<0.00001
Molybdenum	0.231	0.224	0.201
Nickel	0.0031	0.00152	0.00211
Phosphorus	<0.3		0.255
Potassium	11.8	6.02	10
Selenium	<0.001	0.00032	0.00041
Silicon	3.01		2.9
Silver	<0.00002	0.000011	<0.00001
Sodium	194	163	173
Strontium	0.265	0.21	0.229
Sulphur			113
Thallium	<0.0002	0.000015	0.000017
Tin	<0.0005	0.00014	0.00041
Titanium	<0.01		<0.01
Total Cadmium (by saltwater extra			
Uranium	0.00031	0.000142	0.000315
Vanadium	0.0041	0.0019	0.0036
Zinc	<0.005	<0.003	0.0038
Organics			
Carbon Organic (Dissolved)	6.4	4.54	4.75
Carbon Organic (Total)	5.81	4.5	4.85
Nitrogen Organic (Dissolved)	0.176		0.12
Nitrogen Organic (Total)	0.176		
ALS LAB ID	**L1160966**	**L1200094**	**L1248467**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D3.2 - GROUNDWATER QUALITY DATA

Site ID	MW11-04S													MW11-05D									
Site ID	**MW11-04D**	**MW11-04S**	**MW11-04S**	**MW11-04S**	**MW11-04S**	**MW11-04S**	**MW11-04S**	**MW11-04S**	**MW11-04S**	**MW11-04S**	**MW11-04S**	**MW11-04S**	**MW11-04S**	**MW11-05D**	**MW11-05D**	**MW11-05D**	**MW11-05D**	**MW11-05D**	**MW11-05D**	**MW11-05D**	**MW11-05D**	**MW11-05D**	**MW11-05D**
Analytes	**Aug-13**	**Jul-11**	**Oct-11**	**Feb-12**	**Jun-12**	**Aug-12**	**Dec-12**	**Mar-13**	**May-13**	**Nov-13**	**Mar-14**	**Jun-14**	**Sep-14**	**Oct-11**	**Feb-12**	**Jun-12**	**Aug-12**	**Dec-12**	**Mar-13**	**May-13**	**Aug-13**	**Nov-13**	**Mar-14**
In Situ Parameters																							
Conductivity µS/cm	1688	1609	1342	1412	2317	1970	1274	1356	1560	1.97	1783	1420	1472	971	1062	1827	1590	914	933	1016	1111	1.23	1295
Oxygen Dissolved %	6.8	56.3	19	36.8	15.1		38.9	2.1	10.6	9.5	19.5	5.7	7.7		33	10.1		3.7	79.9	43.9	58.2	20.9	6.8
Oxygen Dissolved	0.75	5.45	2.43	4.26	1.44	1.65	4.56	0.25	1.21	1.14	2.27	0.64	0.9		3.96	1.04	3	0.45	9.6	5.11	6.39	2.5	0.8
pH (unitless)	7.81	7.85	7.85	7.78	8.11	9.75	7.83	7.53	7.76	7.47	7.42	7.85	8.23	9.04	7.56	7.68	6.86	7.35	7.31	7.36	7.27	7.74	7.33
Redox Potential mV	147			-298		-74	-25.3	122	92.8	96.6	97.5	50.2	61		-292		-127		-167	-184	-104	-143	-127
Salinity ppt	1.22			1.11		1	0.96	1.28	1.14	1.01	0.91	1.04	1.07		0.81		0.8		0.71	0.75	0.77	0.801	0.65
Specific Conductivity µS/cm	2360	1937	1909	2166	1679		1882	1976	2220	1.31	1219	2028	2088	1435	1610	1351		1391	1403	1482	1525	0.823	871
Temperature °C	10.1	16.3	9.42	6.78	10.3	12.7	8.06	8.56	9.42	8	8.43	9.29	9.56	8.06	7.16	10.1	13.8	7.03	7.47	8.55	10.8	7.61	7.85
Total Dissolved Solids	1533			1410		1260	1222	1283	1443	1283	1159	1319	1355		1047		1010		912	963	991	620	842
Turbidity NTU	1.6	4	0.4	6.7	0	0.8	-0.9	-2.1	4.6	1.4	2.6	2.8	2.1	7.6	10.6	40.1	21.2	7.9	-2.7	0	9.3	3.1	4.7
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)		4.6	3.2			4								<1			14.9						
Alkalinity (Total as CaCO3)	71.1	81.9	106	99	91.8	80.9	84.5	75.7	77.1	80.1	71.7	68.7	53.8	275	313	364	431	439	441	416	419	402	398
Bicarbonate Alkalinity	71.1	81.9	106	99	91.8		84.5	75.7	77.1	80.1	71.7	68.7	53.8	272	313	364		439	441	416	419	402	398
Carbonate Alkalinity	<2	<2	<2	<2	<1		<2	<2	<2	<2	<2	<2	<1	3.2	<2	<1		<2	<2	<2	<2	<2	<2
Color TCU	7.3	11.6	15.7	13.2	10.7	8.9	9.1	8.6	7.7	7.4	6.7			18.7	16.6	12.7	14.1	11.9	10	8.8	7.5	7.2	
Hardness as CaCO3 (Dissolved)	237	257	291	259	246	246	221	236	230		237	248	248	582	626	652	675	619	619	590	569		569
Hydroxide Alkalinity	<2	<2	<2	<2	<1		<2	<2	<2	<2	<2	<2	<1	<1	<2	<1		<2	<2	<2	<2	<2	<2
pH (unitless)	7.94	8.11	8.22	8.01	7.98	7.78	7.98	7.96	7.97	8	7.91	7.86	7.75	8.33	8.01	8.01	7.76	7.98	8.03	7.96	8.02	8.12	8.15
Specific Conductivity µS/cm	2030	2110	2150	2110	2030	1960	1920	2030	2010	2060	2000	2070	2060	1600	1510	1480	1480	1440	1460	1340	1260	1260	1200
Total Dissolved Solids	1470	1500	1457	1540	1510	1440	1420	1340	1470	1470	1520	1490	1540	1190	1150	1140	1140	1080	994	958	905	876	853
Total Suspended Solids	<3	<3	9.7	10.4	3.3	<3	4	<3	<3		<3	<3	3.4	36	25.8	36.7	30.5	22	14.4	13.3	15.2		
Turbidity NTU	1.22	0.81	4.47	6.06	1.35	0.44	1.19	0.86	0.9		0.39	0.98	0.84	21.9	24.1	37.1	50.9	61	60.3	55.5	51.1		
Dissolved Anions																							
Bromide	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	21	23	24	28	24	23	22	22	23	25	21	21	22	27	19.7	15.5	14.4	10.8	9	8.5	5.4	8	7.8
Fluoride	0.83	0.54	0.44	0.42	0.48	0.52	0.5	0.9	0.55	0.6	0.86	0.645	0.572	<0.4	0.29	0.3	0.34	0.32	0.49	0.35	0.53	0.37	0.63
Sulphate	941	967	986	990	972	934	921	952	924	960	965	970	1010	597	560	518	509	456	399	380	359	353	344
Nutrients																							
Ammonia (Total)	0.065	0.0765	0.118	0.101	0.067	0.0744	0.0728	0.0639	0.092	0.127	0.0933	0.0677	0.0713	0.314	0.176	0.107	0.134	0.14	0.138	0.12	0.122	0.131	0.116
Nitrate (as N)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.13	<0.1	<0.1	<0.1	<0.1	<0.1	0.13	<0.1	<0.05	<0.05	<0.05	<0.05	0.073	0.051	<0.05	<0.05	0.119
Nitrite (as N)	0.028	<0.02	0.028	0.024	<0.02	<0.02	0.024	0.044	<0.02	<0.02	<0.02	<0.02	0.023	<0.02	<0.01	0.015	<0.01	<0.01	0.017	<0.01	<0.01	<0.01	0.026
Nitrogen (Dissolved)		0.44	0.49	0.27	0.63		0.321	0.219						0.89	0.41	0.28		0.312	0.176				
Nitrogen (Total)	0.31	0.44	0.61	0.441	0.352	0.25	0.243	0.261	0.28					0.661	0.502	<0.25	0.39	<0.5	0.221	0.313	0.21		
Nitrogen Kjeldahl (Total)	0.286	0.44	0.666	0.42	0.352	0.254	0.302	0.28	0.282	0.304	0.287	0.301	0.256	0.661	0.5	<0.5	0.39	0.357	0.294	0.262	0.248	0.283	0.255
Orthophosphate (Dissolved)			0.031			0.0643				0.0837	0.09	0.0973	0.099	0.0392			<0.001					0.002	0.0046
Phosphorus - Dissolved	0.0842	0.0556	0.0346	0.0496	0.0585		0.0737	0.0723	0.0886	0.0914	0.0984	0.0912		0.0368	<0.002	0.0035		<0.002	<0.002	<0.002	0.0038	<0.002	<0.002
Phosphorus - Total	0.0964	0.0601	0.0547	0.0757	0.0692	0.0766	0.0848	0.0815	0.097	0.119	0.129	0.0962	0.132	0.101	0.153	0.205	0.242	0.292	0.218	0.29	0.304	0.306	0.305
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	0.0051	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.007	0.0075	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																							
Aluminum	0.0114	<0.025	0.0119	0.0146	0.043	0.0131	0.0129	0.0112	0.012	0.0111	0.0089	0.0148	0.0159	<0.003	0.0058	0.0068	0.0055	0.0047	0.0036	0.0046	0.0025	0.0058	0.0053
Antimony	<0.0002	<0.0025	0.00094	0.00075	<0.0025	0.00034	0.00026	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0006	0.00047	<0.0005	<0.0005	0.00032	0.00032	0.00033	0.00034	0.00034	0.00046
Arsenic	0.00197	<0.0025	0.00154	0.00147	<0.0025	0.00193	0.00187	0.00187	0.00182	0.00189	0.002	0.00189	0.00192	0.00496	0.00496	0.00568	0.0073	0.00661	0.00685	0.00674	0.00654	0.00729	0.00661
Barium	0.0428	0.054	0.057	0.0482	0.048	0.0413	0.0383	0.0403	0.0386	0.0419	0.0412	0.0406	0.0434	0.0536	0.0527	0.072	0.067	0.0556	0.0552	0.0511	0.0474	0.0475	0.0445
Beryllium	<0.0002	<0.005	<0.0002	<0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.001	<0.2	<0.001	<0.001	<0.2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	1.35	1.67	1.72	1.72	1.71	1.45	1.56	1.32	1.44	1.58	1.54	1.62	1.59	0.045	0.048	<0.1	<0.1	0.068	0.055	0.06	0.055	0.064	0.054
Cadmium	<0.00012	<0.00085	<0.0002	0.000129	0.000219	<0.00007	0.0001	<0.0001	<0.0001	<0.00007	<0.00009	<0.00009	0.000022	0.000027	0.000015	0.000025	<0.000017	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	82.1	87.6	100	88.6	83.8	85.4	75.5	81.7	79.5	83.3	82.6	85.9	85.8	86.9	86.8	82.4	92.8	80.3	81	76.9	73.7	75.6	73.4
Chromium	<0.0002	<0.005	0.0006	0.00056	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00016	0.0005	<0.001		0.00016	0.00016	0.00013	<0.0001	0.00015	0.00012
Cobalt	0.00051	<0.0015	0.00055	0.00074	<0.0015	0.0006	0.0006	0.00045	0.00038	0.00051	0.00034	0.0004	0.00045	0.00279	0.00442	0.00536	0.00507	0.00555	0.00455	0.00408	0.00377	0.00302	0.00312
Copper	0.00069	<0.005	0.0014	0.0032	0.0224	0.00088	0.00094	0.00069	0.00041	<0.0004	0.00096	0.00066	0.00069	<0.0005	<0.0005	<0.001	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Dissolved Cadmium (by saltwater												0.00003											
Iron	0.023	<0.03	<0.03	<0.03	<0.03	<0.01	<0.01	<0.01	<0.01	0.082	<0.01	0.013	<0.01	0.519	1.71	2.66	4.72	4.35	4.38	4.17	3.44	4.14	3.73
Lead	<0.0001	<0.0025	<0.0001	<0.0001	<0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	0.000066	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0037	<0.025	0.0073	0.0028	<0.025	0.003	0.0028	<0.001	0.0036	0.005	0.0038	0.0043	0.0037	0.0116	0.0103	0.0094	0.0104	0.00977	0.0101	0.0108	0.00996	0.014	0.0104
Magnesium	7.77	9.41	9.89	9.05	8.85	7.91	7.8	7.8	7.73	8.07	7.41	8.09	8.13	88.7	99.4	108	108	102	101	96.6	93.6	98.2	93.7
Manganese	0.564	0.118	0.158	0.363	0.337	0.371	0.439	0.543	0.537	0.547	0.514	0.516	0.519	3.21	3.61	3.81	4.12	3.62	3.31	2.89	2.63	2.31	2.15
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.222	0.165	0.145	0.158	0.165	0.198	0.201	0.206	0.21	0.22	0.2	0.2	0.212	0.0474	0.041	0.0348	0.032	0.0332	0.0304	0.0297	0.0296	0.0329	0.0304
Nickel	0.0019	<0.005	0.0082	0.0045	<0.005	0.0046	0.0024	0.0022	0.0018	0.0019	0.0017	0.0017	0.0015	0.00519	0.011	0.0085	0.0095	0.00818	0.00599	0.0055	0.00556	0.00408	0.00467
Phosphorus	0.095	<0.3	<0.3	<0.3	<0.3	0.081	0.08	0.089	0.092	0.108	0.108	0.11	0.109	<0.3	<0.3	<0.3	<0.3	0.17	0.219	0.196	0.149	0.293	0.211
Potassium	7.08	8.6	11.3	8.06	7.8	7.29	7.39	7.28	7.07	7.48	6.84	7.3	6.96	53	25.9	11.5	11.4	9.99	8.43	8.15	6.36	6.05	6.06
Selenium	<0.0002	<0.005	0.00051	0.00034	<0.005	0.00029	0.00022	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00046	0.00029	<0.001	<0.001	0.0001	0.00013	<0.0001	<0.0001	<0.0001	<0.0001
Silicon	3.19	3.22	3.47	3.53	3.88	3.57	3.46	3.48	3.31	3.37	3.26	3.26	3.23	9.73	12.2	14.8	14.2	14.5	15.1	15.4	15.5	16.2	15.8
Silver	<0.00002	<0.0001	<0.00002	<0.00002	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	357	391	373	357	382	340	343	343	341	351	374	347	381	134	116	113	151	120	113	97.1	88.9	81.2	78.4
Strontium	1.8	1.49	1.56	1.73	1.83	1.73	1.6	1.7	1.7	1.82	1.82	1.82	1.95	0.684	0.666	0.678	0.706	0.648	0.642	0.606	0.587	0.634	0.6
Sulphur	289						298	312	299	303	308	314	312					142	133	121	113	107	108
Thallium	0.000034	<0.001	0.000058	0.000058	<0.001	0.000041	0.000047	0.000045	0.000029	<0.00002	0.000047	0.000026	0.000028	<0.00001	<0.00001	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0002	<0.0025	0.00184	<0.0002	<0.0025	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00015	0.00015	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.000806	0.0018	0.00214	0.00202	0.0019	0.00123	0.00103	0.000982	0.000787	0.000695	0.000673	0.000595	0.000624	0.00328	0.00741	0.00577	0.00587	0.00439	0.00367	0.00302	0.00275	0.00275	0.00236
Vanadium	<0.002	<0.005	<0.002	<0.002	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	0.0023	0.0062	0.0073	0.0202	0.0054	0.0034	0.0034	0.0032	0.0031	<0.002	0.0064	0.006	0.006	<0.003	<0.003	0.0083	0.0073	0.0016	0.0025	0.0019	0.0026	0.0012	0.0029
Total Metals																							
Aluminum	0.0294	0.041	0.102	0.302	0.131	0.0739	0.0407	0.0363	0.0294	0.0236	0.0199	0.0496	0.0265	0.0651	0.118	0.188	0.159	0.0569	0.0261	0.017	0.0212	0.0333	0.0267
Antimony	<0.0002	<0.0025	0.00091	0.00101	<0.0025	0.00035	0.0003	0.00022	<0.0002	<0.0002	<0.0002	0.00022	0.00022	0.00106	0.00112	0.00052	0.00058	0.00049	0.00041	0.00035	0.00041	0.00043	0.00054
Arsenic	0.00199	<0.0025	0.0015	0.00164	<0.0025	0.00196	0.00189	0.00199	0.00193	0.00203	0.0021	0.00203	0.00193	0.0044	0.00554	0.0066	0.00754	0.00699	0.00725	0.00688	0.00683	0.00753	0.00669
Barium	0.0391	0.053	0.0564	0.0562	0.05	0.0426	0.0386	0.0425	0.0399	0.0416	0.0416	0.04	0.0411	0.0471	0.0648	0.075	0.071	0.0599	0.0588	0.0524	0.0524	0.05	0.0465
Beryllium	<0.0002	<0.005	<0.0002	<0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.001	<0.2	<0.001	<0.001	<0.2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	1.3	1.64	1.68	1.76	1.81	1.55	1.55	1.42	1.52	1.6	1.68	1.64	1.56	0.055	0.052	<0.1	<0.1	0.073	0.057	0.067	0.059	0.065	0.056
Cadmium	<0.00011	<0.00085	<0.00024	0.000168	0.000252	<0.00009	<0.00012	<0.0001	<0.0002	<0.00008	<0.0001	<0.00009	<0.00002	0.000094	0.000171	0.000113	0.000092	0.000049	0.000023	0.00002	0.000023	0.000028	<0.00003
Calcium	77.8	86	93.4	91	88.4	83.3	75.3	84.1	75.1	82	85.1	84.3	80.5	72.5	90.8	94.4	94.3	79.8	83	74.1	71.7	77.8	71.2
Chromium	0.00044	<0.005	0.00164	0.00496	<0.005	0.00054	0.00038	0.00065	0.00026	0.00043	0.00023	0.00039	0.00048	0.00093	0.00454	0.0065	0.0152	0.00085	0.00065	0.00041	0.0005	0.00058	0.00036
Cobalt	0.00051	<0.0015	0.00066	0.00097	<0.0015	0.00065	0.00065	0.00051	0.00042	0.00051	0.00038	0.00045	0.00042	0.00231	0.00507	0.00641	0.0059	0.00559	0.00481	0.00426	0.00391	0.00327	0.00325
Copper	0.0012	<0.005	0.0028	0.0088	0.0244	0.0024	0.002	0.0035	0.0014	0.001	0.0016	0.0019	0.0011	0.00149	0.00305	0.0051	0.0056	0.00212	0.00146	0.00063	0.00067	0.00781	0.0037
Iron	0.072	<0.03	0.106	0.352	0.103	0.066	0.054	0.069	0.077	0.105	0.032	0.066	0.094	1	2.35	4	5.22	5.04	5.03	4.58	4.1	4.38	4.1
Lead	<0.0001	<0.0025	<0.0001	0.00053	<0.0025	<0.0001	0.00014	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.000088	0.00027	<0.0005	<0.0005	0.000092	0.000057	<0.00005	<0.00005	<0.00005	0.000067
Lithium	0.0038	<0.025	0.0072	0.0032	<0.025	0.0033	0.0027	0.0012	0.0038	0.0044	0.0043	0.0042	0.0038	0.0126	0.0104	0.01	0.0107	0.01	0.0105	0.0113	0.00996	0.0125	0.0101
Magnesium	7.51	9.24	9.39	9.48	9.33	7.78	7.85	8	7.87	8.05	7.89	8	7.65	80.2	98.9	111	105	96.9	100	94.1	89.8	98.2	91.5
Manganese	0.526	0.123	0.16	0.415	0.368	0.379	0.444	0.578	0.574	0.554	0.541	0.539	0.485	2.5	3.85	4.08	4.23	3.5	3.44	2.9	2.59	2.5	2.2
Mercury	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.213	0.17	0.145	0.161	0.172	0.199	0.202	0.209	0.222	0.214	0.217	0.206	0.202	0.0548	0.0427	0.0368	0.0349	0.0341	0.0319	0.0308	0.0302	0.0317	0.031
Nickel	0.0019	<0.005	0.0104	0.0082	<0.005	0.0028	0.0027	0.0026	0.002	0.0021	0.0018	0.0023	0.0016	0.00583	0.0129	0.0113	0.0146	0.00837	0.00657	0.0058	0.00594	0.00461	0.00503
Phosphorus	0.097	<0.3	<0.3	<0.3	<0.3	0.084	0.09	0.107	0.102	0.105	0.117	0.119	0.129	<0.3	<0.3	<0.3	<0.3	0.257	0.284	0.28	0.27	0.299	0.292
Potassium	6.82	8.3	11.8	8.19	8.3	7.04	7.38	7.35	7.48	7.46	7.34	7.05	6.56	67.5	26.5	12.7	10.1	9.33	8.44	7.96	6.08	6.12	5.76
Selenium	<0.0002	<0.005	0.00046	0.00035	<0.005	0.00026	0.00024	0.00022	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0005	0.00026	<0.001	<0.001	<0.0001	0.00011	<0.0001	<0.0001	<0.0001	<0.0001
Silicon	3.14	3.22	3.38	4.37	4.16	3.61	3.49	3.58	3.32	3.37	3.49	3.34	3.09	9.98	12.5	16.3	14.4	14.3	15.3	15.1	15	16.6	15.5
Silver	<0.00002	<0.0001	<0.00002	0.000022	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00002	0.000097	0.000021	<0.00001	0.000021	<0.00001	<0.00001	<0.00001
Sodium	336	382	358	368	403	348	340	361	336	358	381	347	348	121	118	125	143	114	114	101	89	84.4	79.3
Strontium	1.76	1.48	1.45	1.75	1.9	1.74	1.66	1.76	1.74	1.76	1.95	1.81	1.87	0.673	0.71	0.773	0.7	0.654	0.658	0.63	0.591	0.585	0.595
Sulphur	284						298	322	297	311	319	314	302					143	138	121	113	114	108
Thallium	0.00004	<0.001	0.000056	0.000056	<0.001	0.000044	0.000049	0.000043	0.00003	<0.00002	0.000052	0.000031	0.000026	<0.00001	<0.00001	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0002	<0.0025	0.00262	0.00135	<0.0025	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0009	0.00103	<0.0005	<0.0005	0.00021	0.00013	<0.0001	<0.0001	0.00011	<0.0001
Titanium	<0.02	<0.01	<0.01	0.023	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	0.018	0.014	0.012	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extra												0.000033											
Uranium	0.000779	0.0018	0.00192	0.00204	0.002	0.00128	0.00104	0.000969	0.000817	0.000709	0.000761	0.000623	0.000606	0.00334	0.0079	0.00597	0.00614	0.0045	0.00387	0.00307	0.00268	0.0026	0.00235
Vanadium	<0.002	<0.005	<0.002	<0.002	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	0.0015	0.0014	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	<0.006	<0.005	0.0105	0.0254	0.0086	<0.006	<0.006	<0.006	<0.006	<0.006	0.0068	0.009	0.0083	0.01	0.0186	0.017	0.0183	0.0047	0.0033	0.0034	0.0036	0.0032	0.0032
Organics																							
Carbon Organic (Dissolved)	6.57	7.03	8.47	7.69	10.1	6.87	6.76	6.2	6.37	6.7				33	22.7	21	20.3	17.8	17.8	13.5	11.9	11.1	
Carbon Organic (Total)	6.53	6.88	8.59	8.96	7.3	6.65	6.96	6.25	6.34	6.28	11.4	4.63	5.4	31.8	23.9	21.4	20.4	18.4	19.3	13.1	12.4	11.3	11.1
Nitrogen Organic (Dissolved)		0.363	0.344	0.146	0.563		0.097	0.111						0.58	0.235	0.158		0.172	<0.05				
Nitrogen Organic (Total)		0.363	0.464	0.32	0.285			0.154						0.37	0.33	<0.5			<0.05				
ALS LAB ID	**L1346553**	**L1038606**	**L1076555**	**L1115110**	**L1160966**	**L1202478**	**L1248467**	**L1277798**	**L1307601**	**L1393344**	**L1432458**	**L1474413**	**L1516193**	**L1078289**	**L1115110**	**L1160966**	**L1201474**	**L1248467**	**L1277798**	**L1307601**	**L1348177**	**L1393344**	**L1434002**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D3.2 - GROUNDWATER QUALITY DATA

Site ID			MW11-05S											
Site ID	MW11-05D	MW11-05D	MW11-05S	MW11-05S	MW11-05S	MW11-05S	MW11-05S	MW11-05S	MW11-05S	MW11-05S	MW11-05S	MW11-05S	MW11-05S	MW11-05S
Analytes	Jun-14	Sep-14	Nov-11	Feb-12	Jun-12	Aug-12	Dec-12	Mar-13	May-13	Aug-13	Nov-13	Mar-14	Jun-14	Sep-14
In Situ Parameters														
Conductivity µS/cm	832	792	875	913	1732	1050	911	891	1031	1111	1.29	1303	855	854
Oxygen Dissolved %	53.8	5.6		37.6	26.4		2.9	31.1	16.2	7	15.6	36	2.1	10.2
Oxygen Dissolved	6.19	0.67		4.75	2.56	3.47	0.35	3.73	1.86	0.77	1.88	4.29	0.24	1.17
pH (unitless)	7.47	7.47	7.27	7.6	7.69	6.98	7.39	7.39	7.36	7.17	7.47	7.39	7.42	7.5
Redox Potential mV	-141	-145		-293		-9	-191	-154	-190	-115	0.809	-112	-136	-156
Salinity ppt	0.6	0.58		0.74		0.5	0.69	0.67	0.75	0.78	0.65	0.63	0.62	0.62
Specific Conductivity µS/cm	1195	1157	1273	1478	1181		1369	1337	1486	1531	0.851	867	1238	1232
Temperature °C	9.02	8.47	8.41	4.97	8.25	16.9	7.49	7.52	8.95	10.6	7.49	7.5	8.76	8.54
Total Dissolved Solids	775	752		961		661	889	869	966	996	1310	847	806	801
Turbidity NTU	2.7	5.5	3.2	6.7	4.1	22.1	9.5	-3.3	0	5	5.1	13	9.5	14.3
Physical Tests														
Acidity to pH 8.3 (as CaCO3)						10.3								
Alkalinity (Total as CaCO3)	315	375	268	286	292	318	339	330	298	284	347	337	338	330
Bicarbonate Alkalinity	315	375		286	292		339	330	298	284	347	337	338	330
Carbonate Alkalinity	<2	<1		<2	<1		<2	<2	<2	<2	<2	<2	<2	<1
Color TCU			14.7	12.3	8.7	8	10.4	7.8	8.5	5.9	7			
Hardness as CaCO3 (Dissolved)	578	547	562	607	597	609	568	597	563	554		571	559	543
Hydroxide Alkalinity	<2	<1		<2	<1		<2	<2	<2	<2	<2	<2	<2	<1
pH (unitless)	8.19	7.93	7.97	7.95	7.91	7.75	8.01	8.04	7.97	7.95	8.1	8.04	8.1	7.92
Specific Conductivity µS/cm	1210	1170	1220	1510	1510	1390	1380	1400	1320	1290	1310	1210	1260	1240
Total Dissolved Solids	847	814	930	1210	1210	1150	1060	968	963	948	678	887	922	920
Total Suspended Solids	14.4	11.8	23.7	7.1	14.7	7.9	4	12.7	12	17.3			15.1	16.2
Turbidity NTU	37.8	35.9	10.7	7.58	9.34	17.6	29.8	29.6	37.4	55			49.6	34.7
Dissolved Anions														
Bromide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	<1	<0.5	<0.5	<0.5
Chloride	<5	<5	14.9	25.1	26.4	16.9	15.3	12.8	13.4	9.8	11.9	7.9	9	8.8
Fluoride	0.397	0.343	0.24	0.25	0.26	0.3	0.28	0.45	0.3	0.48	0.33	0.63	0.342	0.326
Sulphate	339	327	437	573	573	511	489	450	433	416	415	399	415	405
Nutrients														
Ammonia (Total)	0.1	0.115	<0.005	<0.05	0.0342	0.0109	0.0318	0.0367	0.0279	0.0342	0.0782	0.0564	<0.005	0.03
Nitrate (as N)	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	<0.05	0.078	<0.05	<0.05	<0.05	0.051	<0.05	0.059
Nitrite (as N)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.017	<0.01	<0.01	0.014	0.013	<0.01	<0.01
Nitrogen (Dissolved)			0.33	0.2	0.79		0.23	0.136						
Nitrogen (Total)			0.406	<0.043	<0.25	0.21	<0.5	0.232	0.212	0.184				
Nitrogen Kjeldahl (Total)	0.287	0.203	0.406	<0.2	<0.5	0.21	0.28	0.307	0.212	0.219	0.307	0.347	0.332	0.264
Orthophosphate (Dissolved)	0.0023	0.0022				0.0026					0.0023	<0.001	0.0015	<0.001
Phosphorus - Dissolved	<0.002		0.0136	0.0027	<0.002	0.0026	0.0021	<0.002	<0.002	<0.002	0.0035	<0.002	<0.002	
Phosphorus - Total	0.211	0.336	0.0728	0.107	0.118	0.142	0.237	0.16	0.232	0.285	0.287	0.207	0.225	0.284
Cyanide														
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	0.0056	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals														
Aluminum	0.006	0.0046	0.0058	0.0074	0.0071	0.0062	0.0059	0.0029	0.0039	0.0024	0.0026	0.0022	0.0023	0.0015
Antimony	0.00047	0.00054	0.00037	0.0001	<0.0005	<0.0001	<0.0001	0.00011	0.0001	<0.0001	<0.0001	<0.0001	0.00015	0.00031
Arsenic	0.00603	0.00683	0.00142	0.00379	0.00409	0.00501	0.00572	0.0052	0.00706	0.00761	0.00658	0.00595	0.00557	0.00569
Barium	0.042	0.0414	0.0662	0.0809	0.089	0.0821	0.0719	0.0725	0.0746	0.0704	0.0694	0.0684	0.0655	0.0641
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.056	0.049	0.05	0.042	<0.1	0.048	0.047	0.037	0.044	0.042	0.045	0.04	0.049	0.045
Cadmium	<0.00001	<0.00001	0.000032	0.000013	0.000045	0.000011	0.000013	<0.00001	<0.00001	0.000012	<0.00001	<0.00003	<0.00001	<0.00001
Calcium	75.7	70.7	103	104	93.7	100	89.7	97.7	90	89	83.8	92.1	93	88
Chromium	<0.0001	<0.0001	0.00059	0.00031	<0.001	0.00016	0.00024	0.00019	0.00019	0.00016	0.00027	0.00021	<0.0001	0.0002
Cobalt	0.00275	0.00254	0.00385	0.00533	0.0043	0.00368	0.00148	0.00211	0.00191	0.00239	0.0005	0.00103	0.00135	0.00067
Copper	<0.0002	<0.0002	<0.0005	<0.0005	<0.001	<0.0002	<0.0002	0.0015	<0.0002	<0.0002	<0.0002	0.00029	<0.0002	0.00032
Dissolved Cadmium (by saltwater														
Iron	3.3	3.17	0.105	0.904	1.18	2.1	1.94	2.2	3.35	4.51	0.077	4.04	4.05	2.85
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.0005	0.000066	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0108	0.00961	0.00433	0.00635	0.0065	0.00867	0.00901	0.00997	0.0108	0.00982	0.0183	0.0126	0.0106	0.00992
Magnesium	94.4	89.9	73.8	84.5	88.1	86.8	83.6	85.8	82.1	80.7	56.5	82.7	79.5	78.5
Manganese	1.93	1.76	2.34	4.29	4.46	4.52	4.78	5.07	4.54	4.26	3.73	3.87	3.26	2.71
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.03	0.0309	0.0212	0.0258	0.0275	0.0259	0.0266	0.0307	0.0263	0.0303	0.0173	0.0234	0.024	0.0237
Nickel	0.00473	0.00413	0.0136	0.00751	0.0048	0.00262	0.00225	0.00283	0.00177	0.00174	0.00141	0.00165	0.0026	0.00157
Phosphorus	0.225	0.264	<0.3	<0.3	<0.3	0.155	0.207	0.123	0.2	0.178	0.085	0.145	0.085	0.142
Potassium	5.4	4.68	10.2	7.79	6.8	7.69	7.96	7.96	7.82	6.26	1.02	7.85	5.65	5.59
Selenium	<0.0001	<0.0001	0.00054	0.00044	<0.001	0.00063	0.0003	0.00022	0.00014	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Silicon	16.8	16.9	8.74	9.76	10.3	10.9	9.66	10.4	10.4	10.2	6.59	10.4	10.6	10.8
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	72.8	68.2	85.4	118	133	118	118	101	99.2	90.1	93	76.3	81.3	88.4
Strontium	0.592	0.587	0.664	0.655	0.683	0.666	0.646	0.699	0.673	0.646	0.6	0.663	0.637	0.635
Sulphur	109	108					156	148	139	132	431	125	127	133
Thallium	<0.00001	<0.00001	0.000029	<0.00001	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0001	<0.0001	0.00038	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.00212	0.00191	0.0116	0.0159	0.0187	0.0198	0.0214	0.0183	0.0149	0.0128	0.0114	0.0102	0.00849	0.0082
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	0.0032	0.0027	0.0043	<0.003	0.0094	0.0031	0.0022	0.0031	0.0039	0.0036	0.0024	0.0058	0.0074	0.0068
Total Metals														
Aluminum	0.0496	0.0244	0.327	0.0706	0.0723	0.0426	0.0258	0.0302	0.0196	0.0114	0.0564	0.0678	0.032	0.0568
Antimony	0.00068	0.00072	0.0004	0.00025	<0.0005	0.0001	0.00013	0.00018	0.00015	0.00011	0.00023	0.00016	0.00026	0.0007
Arsenic	0.007	0.00643	0.00156	0.00406	0.00461	0.00512	0.00569	0.00643	0.00708	0.00807	0.00709	0.00564	0.00662	0.00651
Barium	0.0464	0.0416	0.0714	0.0858	0.088	0.0736	0.0746	0.0788	0.0722	0.0715	0.0739	0.0698	0.0705	0.0673
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.062	0.051	0.058	0.047	<0.1	0.043	0.049	0.04	0.046	0.045	0.051	0.043	0.08	0.054
Cadmium	<0.00003	0.000014	0.000124	0.000056	0.000105	0.000043	0.000045	0.000049	0.000034	0.000037	0.000069	0.000207	0.000038	0.000037
Calcium	75.5	67.5	106	105	101	93.9	87.1	101	87.9	88.8	84.3	90.9	92.5	81.9
Chromium	0.00057	0.00034	0.00201	0.00129	<0.001	0.00046	0.00065	0.0011	0.00059	0.00047	0.00103	0.00121	0.00082	0.00121
Cobalt	0.003	0.00257	0.00426	0.00578	0.00469	0.00395	0.00247	0.00273	0.00218	0.00252	0.00066	0.00128	0.00161	0.00083
Copper	0.00222	0.0011	0.00298	0.0013	0.0015	0.00192	0.00209	0.00208	0.00215	0.00099	0.00388	0.00357	0.00205	0.00314
Iron	3.89	3.28	0.514	0.979	1.55	2.28	2.47	3.19	3.55	5.15	0.161	4.08	5.05	3.98
Lead	0.000165	<0.00005	0.000187	0.000142	<0.0005	0.000167	0.000139	0.000104	0.000071	0.000059	0.000148	0.000147	0.000124	0.000088
Lithium	0.0111	0.00918	0.00422	0.00611	0.0072	0.00817	0.0089	0.0108	0.0108	0.00971	0.0189	0.0129	0.0111	0.0095
Magnesium	91.6	85.9	73.5	85.7	88.8	82.9	79.6	86.4	80.5	78.1	55.4	81.5	79.3	74.5
Manganese	2.06	1.72	2.51	4.56	4.72	5.03	4.79	5.24	4.59	4.22	3.77	3.95	3.33	2.66
Mercury	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0316	0.0306	0.023	0.0271	0.0296	0.0267	0.0282	0.034	0.0279	0.0321	0.0215	0.0253	0.0262	0.0239
Nickel	0.00539	0.00435	0.0168	0.00867	0.0054	0.00308	0.00298	0.0036	0.00196	0.00178	0.00185	0.00308	0.00331	0.00206
Phosphorus	0.319	0.287	<0.3	<0.3	<0.3	0.182	0.221	0.235	0.233	0.241	0.099	0.178	0.212	0.231
Potassium	5.32	4.47	10.8	8	7.1	7.19	7.34	8.08	7.06	6.11	1.07	8.17	5.71	5.18
Selenium	<0.0001	<0.0001	0.00067	0.00052	<0.001	0.00026	0.0002	0.0002	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Silicon	16.7	16.2	9.48	9.89	10.8	10.6	9.43	10.7	10.3	10.2	6.78	10.4	10.8	10.2
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	0.000015	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	74.5	66.1	87.4	124	140	120	114	104	102	89.1	93.3	77.8	80.5	85.4
Strontium	0.605	0.574	0.694	0.673	0.733	0.685	0.642	0.709	0.665	0.63	0.643	0.684	0.643	0.623
Sulphur	109	105					155	156	138	133	444	127	130	126
Thallium	<0.00001	<0.00001	0.000035	<0.00001	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.00013	<0.0001	0.00112	0.0003	<0.0005	0.00011	0.00012	0.00016	<0.0001	<0.0001	0.00015	0.00015	0.00017	0.00021
Titanium	<0.01	<0.01	0.02	0.015	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extra	0.000025													
Uranium	0.00218	0.00187	0.0118	0.0157	0.0197	0.0215	0.0215	0.0195	0.0155	0.0128	0.012	0.0107	0.00876	0.00802
Vanadium	<0.001	<0.001	0.0013	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	0.0049	0.0048	0.007	0.0066	0.011	0.0043	0.0033	0.0056	0.0055	0.0036	0.0053	0.011	0.0106	0.0105
Organics														
Carbon Organic (Dissolved)			12.8	22.5	23	20.2	16.2	13.1	12.6	12	13.8			
Carbon Organic (Total)	9.78	8.8	12.6	21.9	27.4	20.4	17.1	13.8	12.2	12.1	11.8	9.69	9.23	9.9
Nitrogen Organic (Dissolved)			0.329	0.168	0.756		0.199	<0.05						
Nitrogen Organic (Total)			0.406	<0.3	<0.5			0.1						
ALS LAB ID	**L1474413**	**L1516193**	**L1081224**	**L1115110**	**L1160966**	**L1202478**	**L1248467**	**L1277798**	**L1307601**	**L1348177**	**L1393344**	**L1434002**	**L1474413**	**L1516193**

Site ID	MW11-06D								
Site ID	MW11-06D	MW11-06D	MW11-06D	MW11-06D	MW11-06D	MW11-06D	MW11-06D	MW11-06D	MW11-06D
Analytes	Jul-11	Oct-11	Jun-12	Aug-12	Dec-12	Mar-13	May-13	Aug-13	Nov-13
In Situ Parameters									
Conductivity µS/cm	856	709	1992	2010	771	650	927	1400	2.12
Oxygen Dissolved %	43.6		24.4		28.8	0.5	0.7	3.6	1.3
Oxygen Dissolved	4.18		2.32	2.32	3.43	0.06	0.08	0.4	0.16
pH (unitless)	7.98	8.35	8.4	8.15	8.48	8.86	8.22	8.31	8.33
Redox Potential mV				-158	-140	-210	-244	-92.5	1.38
Salinity ppt				1	0.58	0.49	0.67	0.98	1.08
Specific Conductivity µS/cm	1005	1031	1474		1163	999	1327	1987	1.41
Temperature °C	17.3	8.67	10.9	12.3	7.35	6.72	9.2	10.9	7.54
Total Dissolved Solids				1300	756	649	863	1246	1846
Turbidity NTU	0	-5.2	0	2	2.1	1.8	0	0	1
Physical Tests									
Acidity to pH 8.3 (as CaCO3)	4.4			3.3			2.3		
Alkalinity (Total as CaCO3)	48.2	42.9	38.6	41.3	42.3	39.7	40.4	41.2	42.4
Bicarbonate Alkalinity	48.2		38.6		42.3	39.7	40.4	41.2	42.4
Carbonate Alkalinity	<2		<1		<2	<2	<2	<2	<2
Color TCU	<5	<5	<5	<5	<5	<5	<5	<5	
Hardness as CaCO3 (Dissolved)	157	140	424	586	195	156	205	557	638
Hydroxide Alkalinity	<2		<1		<2	<2	<2	<2	<2
pH (unitless)	7.8	7.9	7.7	8.02	7.85	7.92	8.03	7.67	7.86
Specific Conductivity µS/cm	1090	987	1730	1920	1130	1080	1180	2020	2140
Total Dissolved Solids	720	675	1340	1630	797	690	857	1560	1720
Total Suspended Solids	<3	<3	<3	<3	<3	3.3	<3	<3	
Turbidity NTU	0.39	1.87	0.38	0.47	0.83	0.42	0.57	0.51	
Dissolved Anions									
Bromide	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5	<1	<1
Chloride	11.8	9.1	12	12	9.8	9.1	11.7	11	14
Fluoride	0.63	0.38	<0.4	<0.4	0.31	0.55	0.32	0.51	<0.4
Sulphate	476	423	918	1040	520	476	558	1080	1190
Nutrients									
Ammonia (Total)	0.0215	0.0509	0.0707	0.0814	0.048	0.059	0.058	0.071	0.0904
Nitrate (as N)	<0.05	<0.05	<0.1	<0.1	<0.05	<0.05	<0.05	<0.1	<0.1
Nitrite (as N)	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.02	0.024
Nitrogen (Dissolved)	0.19	0.1	0.28		0.072	0.074			
Nitrogen (Total)	0.14	0.09	0.119	0.13	0.117	<0.071	0.108	0.17	
Nitrogen Kjeldahl (Total)	0.14	0.128	0.119	0.127	0.117	0.066	0.123	0.165	0.167
Orthophosphate (Dissolved)				0.0116					0.0072
Phosphorus - Dissolved	0.0214	0.0485	0.0135		0.0448	0.0348	0.0225	0.0085	0.007
Phosphorus - Total	0.0281	0.055	0.0165	0.015	0.0496	0.038	0.0239	0.0093	0.0089
Cyanide									
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals									
Aluminum	0.019	0.0139	0.022	<0.01	0.0078	0.0074	0.0065	0.0039	0.0034
Antimony	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0084	0.01	0.0156	0.015	0.0116	0.0122	0.0136	0.0135	0.0137
Barium	<0.02	0.015	0.022	0.023	0.0138	0.0126	0.016	0.0214	0.0242
Beryllium	<0.002	<0.0001	<0.002	<0.002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.2	<0.0005	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.65	0.612	0.64	0.59	0.561	0.545	0.481	0.493	0.555
Cadmium	<0.0004	<0.00003	0.000071	<0.000034	<0.00003	0.000017	<0.00005	<0.00002	<0.00003
Calcium	47.6	42.5	119	164	55.7	46.9	60.4	153	167
Chromium	<0.002	<0.0001	<0.002	<0.002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	<0.0006	0.00016	<0.0006	<0.0006	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	<0.004	<0.0005	0.0051	0.0025	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Dissolved Cadmium (by saltwater									
Iron	<0.03	0.043	0.095	0.098	0.058	0.057	0.044	0.074	0.104
Lead	<0.001	<0.00005	<0.001	<0.001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	<0.01	0.00541	0.01	0.013	0.00679	0.00549	0.00704	0.012	0.0137
Magnesium	9.39	8.2	31	42.9	13.7	9.53	13	42.7	53.6
Manganese	0.081	0.124	0.092	0.0882	0.105	0.0838	0.0725	0.0543	0.0668
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0777	0.0921	0.083	0.0833	0.0945	0.0871	0.0857	0.0769	0.0825
Nickel	<0.002	<0.0005	<0.002	<0.002	<0.0005	0.00201	0.00076	<0.0005	<0.0005
Phosphorus	<0.3	<0.3	<0.3	<0.3	0.051	<0.05	<0.05	<0.05	<0.05
Potassium	<2	1.08	<2	<2	1.19	0.98	1.13	1.82	2.05
Selenium	<0.002	0.0001	<0.002	<0.002	0.00015	<0.0001	<0.0001	<0.0001	<0.0001
Silicon	3.32	3.78	3.9	4.04	3.66	3.51	3.71	3.69	3.82
Silver	<0.00004	<0.00001	<0.00004	<0.00004	<0.00001	<0.00001	<0.00001	<0.00001	0.00005
Sodium	162	156	234	269	162	148	168	240	256
Strontium	2.44	2.31	7.88	8.14	3.2	2.6	3.4	7.59	7.45
Sulphur					170	147	169	333	370
Thallium	<0.0004	<0.00001	<0.0004	<0.0004	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0017	0.00014	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	<0.0004	0.00014	<0.0004	<0.0004	0.000114	0.00004	0.000025	0.000017	0.000024
Vanadium	<0.002	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	0.0131	0.0067	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001
Total Metals									
Aluminum	0.02	0.113	0.036	0.024	0.0341	0.0303	0.0143	0.0067	0.0066
Antimony	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	0.00012	0.00013
Arsenic	0.008	0.00972	0.0161	0.0156	0.0122	0.0123	0.0139	0.0135	0.0141
Barium	<0.02	0.0164	0.023	0.023	0.0145	0.0125	0.0159	0.0226	0.0239
Beryllium	<0.002	<0.0001	<0.002	<0.002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.2	<0.0005	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.67	0.617	0.67	0.61	0.629	0.576	0.503	0.515	0.584
Cadmium	<0.0004	<0.00003	0.000074	<0.000034	<0.00003	0.000017	<0.00005	<0.00002	<0.00003
Calcium	47.7	42.2	125	161	55.1	46.3	59.9	151	165
Chromium	<0.002	0.00019	<0.002	<0.002	0.00059	0.00023	0.00011	0.00017	0.00011
Cobalt	<0.0006	0.00022	<0.0006	<0.0006	<0.0001	0.00023	<0.0001	<0.0001	<0.0001
Copper	<0.006	<0.0005	0.0056	0.0085	0.00058	0.00347	<0.0005	<0.0005	<0.0005
Iron	<0.03	0.119	0.106	0.114	0.083	0.259	0.101	0.082	0.113
Lead	<0.001	<0.00005	<0.001	<0.001	0.000078	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	<0.01	0.00509	0.011	0.013	0.00764	0.00588	0.00743	0.0138	0.0142
Magnesium	9.58	8.17	31.7	43.5	13.5	9.95	12.9	42.4	53.4
Manganese	0.0834	0.128	0.103	0.0927	0.107	0.0842	0.0727	0.0565	0.0691
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0807	0.0964	0.087	0.0863	0.104	0.0906	0.0899	0.0814	0.0874
Nickel	<0.002	<0.0005	<0.002	<0.002	0.00063	0.0022	0.00069	<0.0005	<0.0005
Phosphorus	<0.3	<0.3	<0.3	<0.3	0.054	<0.05	<0.05	<0.05	<0.05
Potassium	<2	1.12	<2	<2	1.18	1.06	1.11	1.84	2.15
Selenium	<0.002	<0.0001	<0.002	<0.002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Silicon	3.36	3.93	4	4.09	3.7	3.59	3.69	3.72	3.87
Silver	<0.00004	<0.00001	<0.00004	<0.00004	<0.00001	<0.00001	<0.00001	<0.00001	0.000049
Sodium	165	160	248	266	166	151	167	244	267
Strontium	2.46	2.38	8.23	8.05	3.44	2.65	3.6	7.78	7.75
Sulphur					168	154	170	333	377
Thallium	<0.0004	<0.00001	<0.0004	<0.0004	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0022	0.00023	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extra									
Uranium	<0.0004	0.000142	<0.0004	<0.0004	0.000118	0.000045	0.000033	0.000022	0.000025
Vanadium	<0.002	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	0.0084	<0.003	0.0484	<0.005	<0.003	0.03	0.0129	0.0046	<0.003
Organics									
Carbon Organic (Dissolved)	7.28	2.38	3.25	2.18	2.06	1.72	1.5	1.99	1.97
Carbon Organic (Total)	5.47	2.18	1.78	2.03	2.18	1.53	1.33	1.87	1.75
Nitrogen Organic (Dissolved)	0.169	<0.05	0.209		<0.05	<0.05			
Nitrogen Organic (Total)	0.119	<0.05	<0.06		<0.08	<0.08			
ALS LAB ID	**L1036785**	**L1079367**	**L1160966**	**L1201474**	**L1246516**	**L1277099**	**L1306577**	**L1346553**	**L1392959**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D3.2 - GROUNDWATER QUALITY DATA

Site ID				MW11-06S												MW11-07D							
Site ID	**MW11-06D**	**MW11-06D**	**MW11-06D**	**MW11-06S**	**MW11-06S**	**MW11-06S**	**MW11-06S**	**MW11-06S**	**MW11-06S**	**MW11-06S**	**MW11-06S**	**MW11-06S**	**MW11-06S**	**MW11-06S**	**MW11-06S**	**MW11-07D**	**MW11-07D**	**MW11-07D**	**MW11-07D**	**MW11-07D**	**MW11-07D**	**MW11-07D**	**MW11-07D**
Analytes	**Apr-14**	**Jun-14**	**Sep-14**	**Jul-11**	**Oct-11**	**Jun-12**	**Aug-12**	**Dec-12**	**Mar-13**	**May-13**	**Aug-13**	**Nov-13**	**Apr-14**	**Jun-14**	**Sep-14**	**Jul-11**	**Oct-11**	**Feb-12**	**Jun-12**	**Aug-12**	**Dec-12**	**Mar-13**	**May-13**
In Situ Parameters																							
Conductivity µS/cm	1919	1597	1585	17	1664	2633	2330	1574	1545	1793	1816	2.29	1616	1758	1629	1167	945	1078	1803	1670	954	968	1720
Oxygen Dissolved %	3.4	3.3	25.8	16.5		24.8		19.9	3.8	3	66.2	1.9	66.2	4.5	9.9	3.9	0.2	19.1	20.8		2.4	1.5	1.4
Oxygen Dissolved	0.4	0.36	2.85	1.92		2.08	2.1	2.35	0.44	0.35	7.19	0.236	7.75	0.49	1.14	0.4	0.02	2.21	2.03	0.09	0.29	0.18	0.17
pH (unitless)	8.28	8.26	8.28	7.75	7.84	7.97		8.04	8.3	7.66	7.91	7.86	7.92	8	8.02		7.8	7.92	7.9	8.36	8.06	7.91	8.04
Redox Potential mV	-152	-151	-160				63	-55.4	-106	-144	26.9	-69	-92.4	-96.4	-76.9			-199		-230	-260	-189	-159
Salinity ppt	0.98	1.12	1.13				1.2	1.23	1.22	1.36	1.26	1.18	1.23	1.21	1.21			0.84		0.8	0.73	0.77	0.81
Specific Conductivity µS/cm	1293	2169	2195	2509	2429	2011		2384	2369	2640	2426	1.51	2382	2348	2341	1510	1466	1657	1254		1454	1528	1593
Temperature °C	7.91	11.2	10.4	8.11	8.53	12.6	12.5	7.3	6.73	8.06	11.9	7.21	8.16	11.7	9.07	13.1	6.39	6.71	8.89	10.5	6.99	5.82	7.88
Total Dissolved Solids	1248	1410	1426				1490	1553	1540	1780	1576	1486	1548	1526	1521			1079		1070	947	993	1036
Turbidity NTU	-2.4	1.4	1.4	2.5	4	23.6	18.5	5.6	10.7	0	2.3	2.2	-0.5	10.4	9.1	9.9	18.2	0.001	8.6	10.1	-1.3	179	0
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)				6.1			4.6			2.6						5.8	4.6			2.6		7.1	1.6
Alkalinity (Total as CaCO3)	27.8	39.7	39.9	83.9	78.4	59.5	77.2	77.4	75.3	72.8	74.4	76.8	104	54.7	56.2	126	124	132	120	128	126	195	112
Bicarbonate Alkalinity	27.8	39.7	39.9	83.9		59.5		77.4	75.3	72.8	74.4	76.8	104	54.7	56.2	126	124	132	120		126	195	112
Carbonate Alkalinity	<2	<1	<1	<2		<1		<2	<2	<2	<2	<2	<2	<1	<1	<2	<2	<2	<1		<2	<2	<2
Color TCU				9.8	6.7	<5	<5	<5	<5	<5	<5					10.7	7.4	11.1	9.6	8.2	7	<5	<5
Hardness as CaCO3 (Dissolved)	544	652	653	787	815	807	789	729	750	814	793	803	834	823	807	310	300	290	285	279	268	278	273
Hydroxide Alkalinity	<2	<1	<1	<2		<1		<2	<2	<2	<2	<2	<2	<1	<1	<2	<2	<2	<1		<2	<2	<2
pH (unitless)	7.9	7.81	7.77	7.56	7.93	7.69	7.9	7.88	7.83	7.97	7.95	7.84	7.82	7.91	7.81	7.97	8.09	8.07	8.01	8.12	8.14	8.02	8.23
Specific Conductivity µS/cm	1900	2170	2210	2360	2310	2280	2230	2310	2400	2290	2360	2320	2400	2350	2330	1640	1640	1600	1560	1580	1420	1560	1530
Total Dissolved Solids	1530	1750	1740	1960	1950	1960	1970	1970	1750	1990	1910	1910	2020	1980	1830	1160	1110	1120	1160	1160	1150	1030	1160
Total Suspended Solids	4.5	<3	<3	<3	4.2	25.3	3.9	4	11.4	9.7	7.1		8.3	33.2	5.4	7.1	7.1	3.3	<3	<3	<3	3.9	6.6
Turbidity NTU	0.35	0.34	0.57	2.61	4.97	21.2	5.18	3.7	7.74	6.95	3.76		1.91	9.04	6.11	4.27	5.05	2.3	1.47	2.25	2.76	6.43	5.26
Dissolved Anions																							
Bromide	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	<1	<0.5	<1	<1	<1	<0.5	<0.5
Chloride	17	12	11	38	33	29	31	29	28	31	28	30	34	28	29	16.5	17	19.9	21	19	17	15.5	18.4
Fluoride	<0.4	0.28	0.251	<0.4	<0.4	<0.4	<0.4	<0.4	0.56	<0.4	0.58	<0.4	<0.4	0.237	0.228	0.47	0.47	0.44	0.45	0.47	0.46	0.65	0.5
Sulphate	1000	1220	1230	1290	1290	1270	1280	1310	1320	1340	1300	1300	1320	1330	1310	695	714	688	711	700	683	676	722
Nutrients																							
Ammonia (Total)	0.08	0.0892	0.0961	0.125	0.14	0.13	0.129	0.102	0.143	0.124	0.096	0.067	0.11	0.0572	0.116	0.11	0.067	0.0564	0.0398	0.0561	0.0475	0.0372	0.0331
Nitrate (as N)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.05	<0.1	<0.05	<0.1	<0.1	<0.1	<0.05	<0.05
Nitrite (as N)	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	0.028	<0.01	<0.02	<0.02	<0.02	<0.01	<0.01
Nitrogen (Dissolved)				0.41	0.24	0.99		0.188	0.175							0.41	0.2	0.21	0.17		0.182	0.076	
Nitrogen (Total)				0.48	0.273	0.324	0.21	0.19	0.18	0.213	0.2					0.41	0.26	0.211	0.253	<0.27	0.149	0.144	0.139
Nitrogen Kjeldahl (Total)	0.146	0.205	0.169	0.48	0.273	0.324	0.208	0.192	0.181	0.202	0.203	0.165	0.215	0.194	0.308	0.41	0.233	0.211	0.25	<0.25	0.154	0.144	0.136
Orthophosphate (Dissolved)	0.0067	0.0052	0.0038				0.0503					0.0532	0.0382	0.0433	0.0312		0.0321			0.0982			
Phosphorus - Dissolved	0.0105	0.0056		0.0134	0.0305	0.0245		0.0504	0.048	0.0494	0.0528	0.0525	0.0591	0.0442		0.0409	0.0306	0.0668	0.0914		0.082	0.0943	0.11
Phosphorus - Total	0.0081	0.0057	0.0055	0.0329	0.0511	0.0982	0.0732	0.0735	0.0828	0.0765	0.0656	0.0712	0.0416	0.032	0.0362	0.0559	0.0743	0.111	0.162	0.129	0.136	0.138	0.165
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0054	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																							
Aluminum	0.0046	0.0046	0.0033	<0.025	0.0061	0.013	<0.01	0.0063	0.0046	0.0043	0.0038	0.0038	0.0039	0.0054	0.0023	<0.025	0.0087	0.0107	0.0098	0.0112	0.0076	0.0066	0.0062
Antimony	<0.0001	<0.0001	<0.0001	<0.0025	<0.0002	<0.001	<0.001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00016	<0.0001	<0.0025	<0.0002	<0.0002	<0.0002	0.00022	<0.0002	0.00012	<0.0001
Arsenic	0.0138	0.0134	0.013	<0.0025	0.00146	0.0014	0.0014	0.00149	0.00165	0.00144	0.00138	0.00151	0.00136	0.00137	0.00114	<0.0025	0.00368	0.00425	0.00536	0.00606	0.00574	0.00562	0.00542
Barium	0.0229	0.0232	0.0218	0.063	0.0514	0.042	0.035	0.0353	0.0278	0.0284	0.0253	0.0282	0.0259	0.0248	0.0245	0.041	0.0386	0.0468	0.0438	0.0456	0.0432	0.0408	0.0432
Beryllium	<0.0001	<0.0001	<0.0001	<0.005	<0.0002	<0.002	<0.002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.2	<0.001	<0.2	<0.2	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005
Boron	0.507	0.424	0.49	0.27	0.269	0.3	0.28	0.279	0.292	0.253	0.245	0.294	0.286	0.238	0.257	0.3	0.314	0.305	0.29	0.281	0.288	0.283	0.293
Cadmium	<0.00006	<0.00005	<0.00001	<0.000085	0.00003	0.000124	<0.000034	0.000043	<0.00005	<0.00002	<0.00004	<0.00006	<0.00009	<0.00005	0.000011	0.000147	<0.00002	0.000025	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001
Calcium	143	171	169	176	168	164	167	170	175	171	170	169	175	175	170	71.1	69.8	68.2	68		63.7	64.9	65.1
Chromium	<0.0001	<0.0001	<0.0001	<0.005	<0.0002	<0.002	<0.002	0.00543	<0.0001	<0.0001	<0.0001	0.00023	0.00033	0.00012	0.0017	<0.005	<0.0002	0.00064	0.00021	<0.0002	0.00023	<0.0001	<0.0001
Cobalt	<0.0001	<0.0001	<0.0001	0.003	0.00176	0.00148	0.00098	0.00088	0.00066	0.00061	0.00059	0.00063	0.00059	0.00046	0.00055	<0.0015	0.00114	0.00109	0.0007	0.00057	0.00047	0.0004	0.00041
Copper	0.00059	<0.0002	<0.0002	<0.005	<0.001	0.0051	<0.002	0.00089	<0.0002	<0.0002	<0.0002	<0.0002	0.00162	0.00034	<0.0002	<0.005	<0.001	<0.001	<0.0004	<0.0004	<0.0004	<0.0002	<0.0002
Dissolved Cadmium (by saltwater	<0.00002	<0.00002											<0.00002	<0.00002									
Iron	0.078	0.089	0.103	0.063	0.083	0.212	0.1	0.054	0.136	0.136	0.054	0.047	0.099	0.035	0.041	0.054	0.111	0.25	0.201	0.205	0.245	0.257	0.302
Lead	<0.00005	<0.00005	<0.00005	<0.0025	<0.0001	<0.001	<0.001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005
Lithium	0.0113	0.0142	0.0117	<0.025	0.0092	0.011	<0.01	0.0139	0.0132	0.0131	0.0152	0.0155	0.016	0.0192	0.0131	<0.025	0.0246	0.0241	0.0273	0.0222	0.0289	0.029	0.028
Magnesium	45.2	54.6	56.3	84.3	96.2	96.6	90.4	74.2	75.9	94.1	89.4	92.9	96.8	94.1	93	32.1	30.4	29	27.9		26.5	28.1	26.8
Manganese	0.056	0.0553	0.0558	1.46	1.14	0.541	0.498	0.497	0.405	0.372	0.344	0.353	0.304	0.232	0.319	0.65	0.777	1.16	0.908	0.97	0.855	0.712	0.737
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0809	0.0779	0.0809	0.0753	0.0964	0.102	0.11	0.115	0.11	0.106	0.0984	0.111	0.107	0.105	0.105	0.0354	0.0292	0.0264	0.0231	0.024	0.0228	0.0216	0.0214
Nickel	<0.0005	0.00149	<0.0005	<0.005	0.0026	<0.002	<0.002	0.0057	0.001	0.00083	0.00086	0.00165	0.00122	0.00091	0.00109	<0.005	0.002	0.0023	0.0012	0.0014	<0.001	0.00091	0.00232
Phosphorus	<0.05	<0.05	<0.05	<0.3	<0.3	<0.3	<0.3	0.061	0.08	0.066	0.068	0.073	0.061	<0.05	<0.05	<0.3	<0.3	<0.3	<0.3		0.15	0.172	0.16
Potassium	1.96	2.15	2.2	8.9	8.67	8.3	9	8.71	7.91	8.34	8.09	8.19	8.73	8.87	7.94	4.7	3.32	3.23	2.5	4.85	3.5	2.74	2.39
Selenium	<0.0001	0.0001	<0.0001	<0.005	<0.0002	<0.002	<0.002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.0002	0.0003	<0.0002	<0.0002	<0.0002	0.00012	<0.0001
Silicon	3.99	3.85	3.79	4.51	4.5	4.48	4.5	4.52	4.36	4.46	4.26	4.38	4.59	4.37	4.44	4.15	4.83	4.92	5.01		4.58	4.78	4.75
Silver	<0.00001	<0.00001	<0.00001	<0.0001	<0.00002	<0.00004	<0.00004	<0.00002	<0.00001	<0.00001	<0.00001	0.000035	<0.00001	<0.00001	<0.00001	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001
Sodium	242	253	264	288	275	272	275	261	255	255	253	257	269	264	262	255	237	261	241	260	243	214	223
Strontium	7.25	8.06	8.28	5.03	5.77	6.25	5.87	6.61	6.33	5.89	5.57	5.53	6.47	6.09	6.24	7.4	7.53	7.78	7.65	7.26	7.8	7.59	7.29
Sulphur	345	377	389					340	361	392	397	405	436	408	418						222	219	213
Thallium	<0.00001	<0.00001	<0.00001	<0.001	0.000036	<0.0004	<0.0004	0.000024	0.000015	0.000012	0.000014	0.000017	0.000015	<0.00001	0.000015	<0.001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0025	<0.0002	<0.001	<0.001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0025	0.00026	0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01		<0.02	<0.01	<0.01
Uranium	0.000023	0.000021	0.000022	0.0012	0.000749	0.0005	0.00053	0.000547	0.000378	0.000348	0.000351	0.000377	0.000341	0.000248	0.000335	0.0022	0.000993	0.000968	0.000769	0.000735	0.000673	0.000489	0.000465
Vanadium	<0.001	<0.001	<0.001	<0.005	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001
Zinc	<0.001	0.0024	<0.001	<0.005	<0.006	1.66	0.0529	0.0214	0.101	0.0815	0.038	0.0284	0.146	0.0236	0.323	<0.005	<0.006	<0.006	<0.002	<0.002	<0.002	<0.001	<0.001
Total Metals																							
Aluminum	0.0234	0.0098	0.0227	0.071	0.164	0.305	0.176	0.198	0.275	0.279	0.15	0.0402	0.0439	0.67	0.0805	0.189	0.117	0.0147	0.0156	0.018	0.0138	0.027	0.0288
Antimony	0.0001	<0.0001	0.00014	<0.0025	<0.0002	<0.001	<0.001	<0.0002	0.00013	<0.0001	0.00012	0.00012	<0.0001	0.00024	0.00015	<0.0025	<0.0002	<0.0002	0.0002	0.00029	<0.0002	0.00053	0.00022
Arsenic	0.015	0.0145	0.0135	<0.0025	0.003	0.0015	0.0016	0.00156	0.00193	0.0016	0.00155	0.00156	0.00143	0.00186	0.00137	0.0026	0.00362	0.00474	0.00588	0.00597	0.00591	0.00582	0.00553
Barium	0.0233	0.0237	0.0209	0.063	0.0518	0.049	0.036	0.0373	0.0313	0.0313	0.0279	0.0281	0.0253	0.031	0.0237	0.049	0.0432	0.0458	0.0457	0.0423	0.0446	0.042	0.0436
Beryllium	<0.0001	<0.0001	<0.0001	<0.005	<0.0002	<0.002	<0.002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.2	<0.001	<0.2	<0.2	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005
Boron	0.563	0.445	0.498	0.27	0.273	0.31	0.28	0.288	0.298	0.275	0.251	0.313	0.271	0.252	0.259	0.31	0.326	0.302	0.316	0.288	0.301	0.312	0.319
Cadmium	<0.00006	<0.00005	<0.00001	0.000125	0.000067	0.000155	0.000038	0.000063	<0.00005	<0.00004	<0.00005	<0.00009	<0.00009	<0.0001	0.000018	0.000228	0.000073	0.000022	<0.00002	<0.00002	<0.00002	0.000023	0.000037
Calcium	136	170	159	168	170	170	164	165	171	167	168	166	165	176	157	72.4	70	67.2	73.3		66.6	66.5	67.1
Chromium	0.00022	<0.0001	0.00016	<0.005	0.00051	<0.002	<0.002	0.00852	0.00066	0.00052	0.00049	0.00059	0.00057	0.00092	0.00293	<0.005	0.00296	0.00095	0.00057	0.00111	0.00071	0.00067	0.00104
Cobalt	0.00013	<0.0001	<0.0001	0.0032	0.00189	0.00366	0.00116	0.0011	0.00095	0.00087	0.00072	0.00067	0.00062	0.00106	0.00067	0.0018	0.00123	0.00118	0.00081	0.0006	0.00054	0.00046	0.00048
Copper	<0.0015	0.0005	<0.0005	<0.005	0.0017	0.0086	<0.002	0.0029	0.00551	0.00221	0.00109	0.00165	<0.0015	0.00435	0.00114	<0.005	0.0014	<0.001	<0.001	<0.001	<0.001	0.00096	0.00076
Iron	0.368	0.124	0.605	0.138	0.266	2.24	0.353	0.322	0.631	0.501	0.228	0.135	0.295	0.972	0.851	0.175	0.229	0.295	0.247	0.263	0.289	0.304	0.363
Lead	0.000062	<0.00005	<0.00005	<0.0025	0.00011	0.0013	<0.001	0.00013	0.000136	0.000098	0.000054	0.000095	0.000091	0.000305	0.000221	<0.0025	0.00012	<0.0001	<0.0001	<0.0001	<0.0001	0.000053	0.00006
Lithium	0.0121	0.0149	0.0116	<0.025	0.0089	0.01	0.011	0.0142	0.013	0.0133	0.015	0.0154	0.0149	0.02	0.0124	<0.025	0.0239	0.0223	0.0272	0.0231	0.0298	0.032	0.0285
Magnesium	43.6	56.3	54.6	82.2	95.2	96.4	90.9	75.3	76.1	92.9	89	91.8	92	97.2	86.2	33.1	30.3	28.6	28.2		27	27.8	27.4
Manganese	0.0587	0.0589	0.0559	1.55	1.17	0.505	0.514	0.506	0.423	0.378	0.36	0.35	0.304	0.257	0.321	0.695	0.81	1.17	0.962	0.931	0.881	0.756	0.794
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0832	0.0855	0.0778	0.0828	0.0951	0.0919	0.112	0.118	0.109	0.105	0.102	0.114	0.11	0.112	0.101	0.0384	0.0294	0.0268	0.0251	0.0251	0.0238	0.0235	0.0235
Nickel	<0.0005	0.00204	<0.0005	<0.005	0.0031	0.0027	0.0021	0.0071	0.00157	0.00137	0.00122	0.00187	0.00127	0.00219	0.00141	<0.005	0.0025	0.0025	0.0014	0.0016	0.0011	0.00122	0.00279
Phosphorus	<0.05	<0.05	<0.05	<0.3	<0.3	<0.3	<0.3	0.069	0.058	0.081	0.077	0.071	0.06	0.099	0.054	<0.3	<0.3	<0.3	<0.3		0.151	0.182	0.158
Potassium	1.84	2.14	2.12	8.7	8.68	8.6	8.8	8.49	7.9	8.08	7.94	8.43	8.25	9	7.56	4.9	3.44	3.21	2.56	3.96	3.6	2.56	2.48
Selenium	<0.0001	<0.0001	<0.0001	<0.005	<0.0002	<0.002	<0.002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	0.00032	0.00022	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001
Silicon	3.86	3.95	3.66	4.52	4.86	5.5	4.94	5.02	4.99	5.02	4.59	4.52	4.57	6.02	4.42	4.75	5.05	4.8	5.28		4.78	4.94	4.97
Silver	<0.00001	<0.00001	<0.00001	<0.0001	<0.00002	<0.00004	0.000053	<0.00002	<0.00001	<0.00001	<0.00001	0.000035	<0.00001	0.000017	<0.00001	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	0.000052	<0.00001
Sodium	241	265	250	281	277	281	271	260	250	253	271	260	264	262	252	264	243	257	245	240	255	219	231
Strontium	7.45	8.45	8	4.85	5.7	6.52	5.76	6.89	6.21	6.01	5.86	5.48	6.23	6.36	5.99	7.68	7.5	7.72	7.85	7.36	8.13	8.34	7.88
Sulphur	344	393	374					351	352	392	405	411	430	429	391						225	226	216
Thallium	<0.00001	<0.00001	<0.00001	<0.001	0.000038	<0.0004	<0.0004	0.00003	0.000018	0.000017	0.000016	0.000018	0.000019	0.000019	0.000013	<0.001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0025	0.00031	<0.001	<0.001	<0.0002	<0.0001	<0.0001	<0.0001	0.00013	<0.0001	0.0001	<0.0001	<0.0025	0.00077	0.0002	<0.0002	<0.0002	<0.0002	0.00033	0.00018
Titanium	<0.01	<0.01	<0.01	0.012	<0.01	0.024	0.018	<0.02	0.015	0.013	<0.01	<0.01	<0.01	0.032	<0.01	0.011	0.015	<0.01	<0.01		<0.02	<0.01	<0.01
Total Cadmium (by saltwater extra	<0.00002	<0.00002											<0.00002	0.000034									
Uranium	0.000025	0.000021	0.000021	0.0013	0.000762	0.00046	0.00055	0.000543	0.000403	0.00036	0.000369	0.000392	0.000346	0.000289	0.000346	0.0023	0.00107	0.000998	0.000834	0.000766	0.00069	0.000531	0.000495
Vanadium	<0.001	<0.001	<0.001	<0.005	<0.002	<0.002	<0.002	<0.002	0.0012	0.0011	<0.001	<0.001	<0.001	0.0025	<0.001	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001
Zinc	0.0711	0.0062	0.0387	<0.005	<0.006	2.28	0.0628	0.0317	0.153	0.127	0.0522	0.04	0.16	0.0989	0.617	<0.005	<0.006	<0.006	<0.006	<0.006	<0.006	0.0042	<0.003
Organics																							
Carbon Organic (Dissolved)	1.52			5.97	4.04	9.08	3.06	2.99	2.55	2.03	2.55	2.11	1.9			5.69	8.5	16.6	13.1	12.8	10	7.95	7.04
Carbon Organic (Total)	1.52	1.49	1.6	5.73	3.81	5.08	2.94	2.76	2.28	2	2.4	2.02	2.05	1.83	1.99	5.26	8.68	17.1	13.8	13.5	9.54	7.75	7.31
Nitrogen Organic (Dissolved)				0.285	0.1	0.86		0.085	<0.05							0.3	0.105	0.154	0.13		0.134	<0.05	
Nitrogen Organic (Total)				0.355	0.09	0.194		0.089	<0.08							0.3	0.135	0.154	<0.3			0.107	
ALS LAB ID	**L1441050**	**L1473868**	**L1516193**	**L1037497**	**L1079375**	**L1160966**	**L1201474**	**L1246516**	**L1277099**	**L1306577**	**L1346553**	**L1392959**	**L1441050**	**L1473868**	**L1516193**	**L1038606**	**L1077032**	**L1113106**	**L1159973**	**L1200094**	**L1247928**	**L1275064**	**L1306577**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D3.2 - GROUNDWATER QUALITY DATA

Site ID / Analytes	MW11-07D Aug-13	MW11-07D Nov-13	MW11-07D Mar-14	MW11-07D Jun-14	MW11-07D Sep-14
In Situ Parameters					
Conductivity µS/cm	1083	1.56	1514	1106	2217
Oxygen Dissolved %	6.3	1.3	68.9	1.7	22.4
Oxygen Dissolved	0.78	0.16	8.41	0.21	2.46
pH (unitless)	7.94	8.01	7.83	7.83	7.68
Redox Potential mV	-107	254	-93.9	-163	-130
Salinity ppt	0.73	0.79	0.76	0.8	1.6
Specific Conductivity µS/cm	1436	1.05	980	1577	3050
Temperature °C	12.2	7.7	6.54	9.42	10.7
Total Dissolved Solids	934	1015	984	1025	1983
Turbidity NTU	0	8.5	9.8	0.7	4.2
Physical Tests					
Acidity to pH 8.3 (as CaCO3)					
Alkalinity (Total as CaCO3)	119	134	128	131	134
Bicarbonate Alkalinity	119	134	128	131	134
Carbonate Alkalinity	<2	<2	<2	<1	<1
Color TCU	<5		10.2		
Hardness as CaCO3 (Dissolved)	266	255	263	270	272
Hydroxide Alkalinity	<2	<2	<2	<1	<1
pH (unitless)	8.18	8.18	8.14	8.12	8.15
Specific Conductivity µS/cm	1530	1590	1540	1610	1610
Total Dissolved Solids	1100	872	1130	1150	1160
Total Suspended Solids	<3		6.7	<3	3.6
Turbidity NTU	1.22		7.83	3.09	3.82
Dissolved Anions					
Bromide	<0.5	<0.5	<0.5	<1	<0.5
Chloride	14.7	17	15.5	16	15.5
Fluoride	0.62	0.48	0.74	0.114	0.484
Sulphate	678	673	670	708	673
Nutrients					
Ammonia (Total)	0.026	0.0986	0.0891	<0.005	0.158
Nitrate (as N)	<0.05	<0.05	<0.05	<0.1	<0.05
Nitrite (as N)	<0.01	<0.01	<0.01	<0.02	<0.01
Nitrogen (Dissolved)					
Nitrogen (Total)	0.108				
Nitrogen Kjeldahl (Total)	0.108	0.37	0.296	0.324	0.306
Orthophosphate (Dissolved)		0.103	0.0825	0.0748	0.0764
Phosphorus - Dissolved	0.0993	0.12	0.0806	0.075	0.081
Phosphorus - Total	0.129	0.206	0.197	0.185	0.169
Cyanide					
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals					
Aluminum	0.0075	0.0052	0.004	0.0117	0.0171
Antimony	<0.0001	0.00049	0.00049	0.00072	0.00051
Arsenic	0.00622	0.00354	0.00395	0.00448	0.0042
Barium	0.0387	0.0439	0.0485	0.0496	0.047
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.285	0.308	0.298	0.279	0.304
Cadmium	<0.00001	<0.00001	<0.00001	<0.00003	<0.00001
Calcium	62.5	58.9	62.5	63.6	64.6
Chromium	<0.0001	0.00024	0.0002	0.00057	0.00034
Cobalt	0.00033	0.00024	0.00036	0.0005	0.00037
Copper	<0.0002	<0.0002	<0.0002	0.00035	0.00026
Dissolved Cadmium (by saltwater				<0.00002	
Iron	0.255	0.207	0.392	0.579	0.504
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0299	0.0213	0.0186	0.027	0.0271
Magnesium	26.8	26.2	25.9	26.9	26.9
Manganese	0.547	1.1	1.24	0.908	0.831
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0211	0.0211	0.0222	0.0253	0.0212
Nickel	<0.0005	0.00111	0.00134	0.00212	0.00159
Phosphorus	0.125	0.167	0.161	0.174	0.177
Potassium	2.31	7.49	8.11	10	8.7
Selenium	<0.0001	0.00025	<0.0001	0.00011	<0.0001
Silicon	4.79	4.45	4.42	4.41	4.48
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	217	220	249	228	232
Strontium	6.98	7.42	7.61	7.8	7.51
Sulphur	210	211	214	227	220
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0001	0.00011	0.00018	0.00019	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.000325	0.000726	0.000693	0.000703	0.000724
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	<0.001	0.0011	0.0011	0.0021	0.0015
Total Metals					
Aluminum	0.0114	0.136	0.0256	0.0048	0.0211
Antimony	0.00011	0.00164	0.00059	0.00065	0.00074
Arsenic	0.00621	0.00421	0.00419	0.00444	0.00439
Barium	0.0397	0.0543	0.0507	0.0477	0.0483
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.331	0.331	0.318	0.288	0.321
Cadmium	<0.00001	0.000168	<0.00005	<0.00003	0.00003
Calcium	62.8	65.8	64.4	61.7	65.2
Chromium	0.00021	0.00506	0.00102	0.00052	0.00083
Cobalt	0.00037	0.00061	0.00049	0.00047	0.00045
Copper	<0.0005	0.00402	0.001	<0.0005	0.00052
Iron	0.281	0.659	0.56	0.54	0.538
Lead	<0.00005	0.00029	0.000058	<0.00005	<0.00005
Lithium	0.0322	0.0217	0.0189	0.0261	0.0272
Magnesium	26.9	27.5	26.4	26.2	27.2
Manganese	0.588	1.21	1.26	0.893	0.875
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0225	0.0284	0.0261	0.0319	0.0223
Nickel	<0.0005	0.00348	0.00184	0.00167	0.00192
Phosphorus	0.132	0.209	0.18	0.184	0.202
Potassium	2.29	7.69	8.05	9.48	9.07
Selenium	<0.0001	<0.0001	0.00012	<0.0001	<0.0001
Silicon	4.86	4.89	4.6	4.32	4.54
Silver	<0.00001	0.00001	<0.00001	<0.00001	<0.00001
Sodium	225	221	249	229	240
Strontium	7.37	7.68	7.98	7.71	7.56
Sulphur	214	218	222	223	218
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.00012	0.00101	0.00038	0.00013	0.00022
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extra				<0.00002	
Uranium	0.000329	0.000816	0.00076	0.000724	0.000759
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	<0.003	0.0086	0.0036	<0.003	0.0036
Organics					
Carbon Organic (Dissolved)	5.01	7.57			
Carbon Organic (Total)	5.09	8.27	9.11	6.88	4.8
Nitrogen Organic (Dissolved)					
Nitrogen Organic (Total)					
ALS LAB ID	**L1345714**	**L1392288**	**L1432458**	**L1473868**	**L1513822**

Site ID: MW11-07S

Site ID / Analytes	MW11-07S Aug-11	MW11-07S Oct-11	MW11-07S Feb-12	MW11-07S Jun-12	MW11-07S Aug-12	MW11-07S Dec-12	MW11-07S Mar-13	MW11-07S May-13	MW11-07S Aug-13	MW11-07S Nov-13	MW11-07S Mar-14	MW11-07S Jun-14	MW11-07S Sep-14
In Situ Parameters													
Conductivity µS/cm	928	958	867	1603	1480	935	786	876	1011	1.44	1506	940	2008
Oxygen Dissolved %	17.3	79.4	40.9	25.3		14.3	28.6	12.3	12	3.5	63.4	23.4	61.2
Oxygen Dissolved	1.98	9.08	5.36	2.46	1.06	1.71	3.61	1.45	1.24	0.4	7.74	2.72	6.47
pH (unitless)	7.7	7.96	8.06	7.87	7.73	7.83	7.9	7.9	7.87	7.83	8.04	7.86	7.7
Redox Potential mV			-292		-131	52.4	27.2	-57.2	119	0.933	91.4	21	20.1
Salinity ppt			0.75		0.7	0.71	0.63	0.66	0.64	0.72	0.76	0.69	1.37
Specific Conductivity µS/cm	1294	1369	1498	1107		1410	1273	1307	1281	0.974	941	1370	2639
Temperature °C	10.2	9.27	2.94	8.15	11.4	7.35	4.95	7.71	14	8.17	5.35	8.57	12.5
Total Dissolved Solids			973		944	916	828	850	833	1237	979	890	1716
Turbidity NTU	0	1.5	7.5	16.1	2.6	2	16.8	0	0	1.6	1.3	1.8	1.2
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1.7	3.2			3			<1					
Alkalinity (Total as CaCO3)	170	167	182	161	167	155	177	204	284	170	163	183	194
Bicarbonate Alkalinity	170	167	182	161		155	177	204	284	170	163	183	194
Carbonate Alkalinity	<2	<2	<2	<1		<2	<2	<1	<2	<2	<2	<1	<1
Color TCU	5.8	6.4	7.1	5.2	5.9	5.8	<5	<5	<5		<5		
Hardness as CaCO3 (Dissolved)	278	279	288	273	290	287	246	253	422	274	288	274	272
Hydroxide Alkalinity	<2	<2	<2	<1		<2	<2	<1	<2	<2	<2	<1	<1
pH (unitless)	8.17	8.19	8.26	8.1	8.11	8.03	8.14	8.34	8.24	8.25	8.22	8.2	8.26
Specific Conductivity µS/cm	1360	1430	1410	1350	1420	1400	1280	1260	897	1450	1410	1370	1370
Total Dissolved Solids	940	999	1010	962	1040	1020	853	896	610	997	985	958	946
Total Suspended Solids	3.8	<3	7.3	4	5.3	6.4	3.3	<3	12.4		<3	<3	<3
Turbidity NTU	0.62	0.35	4.09	1.36	4.27	4.86	1.83	0.15	0.64		0.53	0.38	0.26
Dissolved Anions													
Bromide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	10.9	10.5	11.2	10.8	12	11.3	9	10.7	<5	12.9	11.2	10.9	10
Fluoride	0.47	0.32	0.3	0.3	0.33	0.33	0.44	0.29	0.33	0.31	0.45	0.321	0.313
Sulphate	530	578	579	551	598	616	494	480	243	594	587	539	519
Nutrients													
Ammonia (Total)	0.0123	0.0281	<0.05	0.0157	0.0249	0.0271	0.0155	0.0161	<0.005	0.0212	0.0124	<0.005	0.0189
Nitrate (as N)	0.05	<0.05	<0.05	<0.05	<0.05	0.074	0.1	<0.05	<0.05	<0.05	<0.05	0.066	<0.05
Nitrite (as N)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen (Dissolved)	0.17	0.21	0.07	0.3		0.268	0.239						
Nitrogen (Total)	0.14	0.2	<0.043	0.261	0.151	0.26	0.314	0.13	0.075				
Nitrogen Kjeldahl (Total)	0.09	0.185	<0.2	0.261	0.151	0.25	0.259	0.095	0.075	0.118	0.128	0.176	0.123
Orthophosphate (Dissolved)		0.0355			0.0216					0.039	0.0493	0.0391	0.046
Phosphorus - Dissolved	0.0304	0.036	0.0219	0.0277		0.0399	0.0298	0.0354	0.0362	0.0418	0.0454	0.0374	0.0459
Phosphorus - Total	0.036	0.0375	0.0389	0.0383	0.0444	0.0538	0.0434	0.0397	0.0344	0.053	0.0502	0.0431	0.0466
Cyanide													
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	<0.025	0.0108	0.023	0.02	0.0082	0.0184	0.0114	0.0062	0.0012	0.0072	0.0048	0.0082	0.0063
Antimony	<0.0025	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	0.00012	<0.0001	0.00024	<0.0001	0.0001	0.00012	<0.0001
Arsenic	0.0045	0.00531	0.00383	0.0041	0.00412	0.00386	0.0054	0.00622	0.00499	0.00494	0.00373	0.00555	0.00654
Barium	0.041	0.0418	0.0431	0.041	0.041	0.0428	0.03	0.0293	0.0372	0.0372	0.037	0.036	0.0322
Beryllium	<0.005	<0.0002	<0.0002	<0.002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.2	<0.001	<0.001	<0.2	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.29	0.308	0.241	0.28	0.244	0.258	0.208	0.2	0.063	0.297	0.272	0.281	0.262
Cadmium	0.000194	0.000063	0.000119	0.000471	0.000026	0.000224	0.000098	0.000034	<0.00004	<0.00001	0.00005	0.000039	0.000023
Calcium	46.5	48.7	49.3	42.3		48.6	38.9	40.3	89.7	44.2	49.7	44.4	43.5
Chromium	<0.005	<0.0002	<0.0002	<0.002	<0.0002	0.00026	0.00029	<0.0001	0.00032	<0.0001	0.00013	0.00011	<0.0001
Cobalt	<0.0015	0.00087	0.00108	0.00098	0.001	0.00087	0.0005	0.0005	<0.0001	0.00062	0.00022	0.00062	0.00057
Copper	<0.005	<0.001	0.0013	0.0069	0.00045	0.00321	0.00199	0.00081	0.00173	0.00028	0.00235	0.00081	0.00047
Dissolved Cadmium (by saltwater													
Iron	<0.03	<0.03	<0.03	<0.03	0.081	<0.01	<0.01	0.03	<0.01	0.115	<0.01	0.021	0.031
Lead	<0.0025	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.028	0.0327	0.025	0.025	0.0228	0.0229	0.0263	0.0278	0.00386	0.0303	0.0217	0.0311	0.0283
Magnesium	39.3	38.2	40	40.7		40.3	36.2	36.9	48.2	39.8	39.8	39.7	39.8
Manganese	0.19	0.342	0.573	0.584	0.713	0.792	0.488	0.433	0.0167	0.646	0.212	0.766	0.552
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000012	<0.00001	<0.00001
Molybdenum	0.0184	0.0172	0.0155	0.0167	0.0179	0.016	0.0178	0.0161	0.127	0.0176	0.0159	0.0166	0.0166
Nickel	<0.005	0.0026	0.0041	0.0024	0.0024	0.0029	0.00172	0.00098	<0.0005	0.00103	0.00109	0.00172	0.00086
Phosphorus	<0.3	<0.3	<0.3	<0.3		<0.05	<0.05	<0.05	<0.05	0.061	0.056	<0.05	0.057
Potassium	2.7	2.03	5.79	2.2	1.65	2.2	1.41	1.25	7.61	1.44	1.72	1.63	1.31
Selenium	<0.005	<0.0002	<0.0002	<0.002	<0.0002	<0.0002	0.00024	0.0002	0.0271	<0.0001	0.00014	<0.0001	0.00012
Silicon	4.71	5.07	4.62	4.73		4.79	4.5	4.51	7.07	4.9	4.89	4.84	5.05
Silver	<0.0001	<0.00002	<0.00002	<0.00004	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	0.000019	<0.00001	<0.00001	<0.00001
Sodium	206	210	214	207	220	215	188	187	40.6	204	219	206	197
Strontium	8.11	8.4	8.55	9.48	9.19	8.68	8.9	9.11	0.68	9.71	10.3	9.68	9.21
Sulphur						197	156	142	75.8	183	194	166	166
Thallium	<0.001	0.000026	0.000025	<0.0004	<0.00002	0.000026	0.000027	0.000026	<0.00001	0.000013	0.000037	0.000025	0.00003
Tin	<0.0025	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01		<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.0046	0.00435	0.00477	0.00443	0.00402	0.00348	0.00448	0.00474	0.00403	0.00364	0.004	0.0045	0.00419
Vanadium	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	0.0033	<0.001	<0.001	<0.001	<0.001
Zinc	<0.005	<0.006	<0.006	0.0212	0.0033	0.0131	0.0035	0.0037	<0.001	0.0022	0.0062	0.004	0.0095
Total Metals													
Aluminum	0.026	0.0314	0.154	0.118	0.165	0.106	0.0627	0.0106	0.0538	0.0096	0.0145	0.0199	0.009
Antimony	<0.0025	<0.0002	0.00029	<0.001	<0.0002	0.00026	0.00035	<0.0001	0.00024	<0.0001	0.00015	0.00017	<0.0001
Arsenic	0.0045	0.00478	0.00405	0.0047	0.00475	0.00423	0.00568	0.00626	0.00466	0.0048	0.00395	0.00555	0.00654
Barium	0.042	0.0418	0.0451	0.04	0.0423	0.0458	0.0314	0.0288	0.0362	0.0373	0.0381	0.0359	0.0316
Beryllium	<0.005	<0.0002	<0.0002	<0.002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.2	<0.001	<0.001	<0.2	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.3	0.332	0.24	0.29	0.263	0.253	0.223	0.234	0.071	0.305	0.285	0.263	0.278
Cadmium	0.000097	0.000107	0.00017	0.000526	0.000065	0.000263	0.000153	0.000032	<0.00005	0.000014	0.000086	0.000107	0.000027
Calcium	46.2	47.5	48.1	44.6		48.3	39.4	39.9	88.2	44.8	48.7	43	43.3
Chromium	<0.005	0.0005	0.00137	<0.002	0.00059	0.0019	0.00251	0.00019	0.00049	0.00025	0.00031	0.00027	<0.0001
Cobalt	<0.0015	0.00098	0.00121	0.00114	0.00118	0.00101	0.00064	0.00054	0.00012	0.00066	0.00036	0.00068	0.00057
Copper	<0.005	0.0016	0.0039	0.0087	0.0033	0.0068	0.00487	0.00142	0.00325	<0.0005	0.00296	0.00174	0.00066
Iron	<0.03	0.036	0.188	0.131	0.268	0.135	0.064	0.034	0.069	0.133	0.022	0.039	0.034
Lead	<0.0025	<0.0001	0.0002	<0.001	<0.0001	0.0002	0.000149	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.029	0.0308	0.0255	0.028	0.023	0.0239	0.0286	0.0256	0.00446	0.0297	0.0228	0.0293	0.0287
Magnesium	39.8	37.2	40.5	41.2		39.5	36.4	36.1	47.2	39.5	39.5	39.1	40
Manganese	0.186	0.328	0.608	0.608	0.782	0.816	0.515	0.474	0.0499	0.688	0.363	0.796	0.555
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000013	<0.00001
Molybdenum	0.0183	0.0173	0.0156	0.0179	0.0184	0.0165	0.0186	0.0164	0.13	0.0189	0.0173	0.0181	0.0174
Nickel	<0.005	0.003	0.0059	0.003	0.004	0.004	0.00276	0.00099	0.0005	0.00124	0.00141	0.00197	0.00093
Phosphorus	<0.3	<0.3	<0.3	<0.3		0.061	<0.05	<0.05	<0.05	0.062	<0.05	0.059	<0.05
Potassium	2.2	2.08	6.94	2.1	1.7	2.19	1.53	1.21	7.82	1.53	1.66	1.59	1.36
Selenium	<0.005	<0.0002	<0.0002	<0.002	<0.0002	<0.0002	0.00025	0.00018	0.0227	<0.0001	0.00017	0.00011	0.00012
Silicon	4.82	4.91	5.07	5.08		4.89	4.68	4.49	7.14	5.03	4.91	4.87	5.11
Silver	<0.0001	<0.00002	<0.00002	<0.00004	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	0.000029	<0.00001	<0.00001	<0.00001
Sodium	212	204	212	218	220	221	195	183	42.1	220	226	205	197
Strontium	8.48	8.19	8.38	10.1	9.61	8.77	8.9	8.97	0.659	10.1	10.3	10.1	9.21
Sulphur						200	162	141	76.5	189	195	170	169
Thallium	<0.001	0.000027	0.00003	<0.0004	<0.00002	0.000027	0.000026	0.000026	<0.00001	0.000017	0.000041	0.000028	0.000031
Tin	<0.0025	0.00026	0.00021	<0.001	<0.0002	0.0003	0.00018	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	0.013	<0.01		<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extra													
Uranium	0.0046	0.00419	0.00488	0.00466	0.00429	0.0036	0.00456	0.00471	0.00408	0.00385	0.00426	0.0047	0.00441
Vanadium	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	0.0012	<0.001	0.0036	<0.001	<0.001	<0.001	<0.001
Zinc	<0.005	<0.006	0.008	0.0319	<0.006	0.0155	0.007	0.0042	<0.003	<0.003	0.0067	0.0046	0.0037
Organics													
Carbon Organic (Dissolved)	3.58	4.1	4.24	4.48	4.51	3.9	3.38	3.49	1.59	2.98			
Carbon Organic (Total)	3.22	3.93	4.22	4.01	4.68	3.64	3.25	3.23	1.39	2.91	3.2	3.16	3.58
Nitrogen Organic (Dissolved)	0.107	0.182	0.05	0.284		0.167							
Nitrogen Organic (Total)	0.077	0.172	<0.3	0.246			0.244						
ALS LAB ID	**L1041015**	**L1076555**	**L1115490**	**L1160966**	**L1200094**	**L1247921**	**L1275748**	**L1306577**	**L1345714**	**L1392288**	**L1432458**	**L1473868**	**L1513822**

Site ID / Analytes	MW11-08D Aug-11	MW11-08D Nov-11	MW11-08D Feb-12	MW11-08D Jun-12	MW11-08D Aug-12
In Situ Parameters					
Conductivity µS/cm	1448	1141	992	1776	1530
Oxygen Dissolved %	8.8		12.8	10.2	
Oxygen Dissolved	0.89		1.69	0.98	7.24
pH (unitless)	8.18	7.66	7.8	7.8	
Redox Potential mV			-298		-45
Salinity ppt			0.84		0.8
Specific Conductivity µS/cm	1812	1720	1683	1232	
Temperature °C	14.5	7.34	3.51	8.89	14
Total Dissolved Solids			1093		979
Turbidity NTU	8.7	4	4	0	9.9
Physical Tests					
Acidity to pH 8.3 (as CaCO3)	2.6				2.3
Alkalinity (Total as CaCO3)	204	219	234	233	237
Bicarbonate Alkalinity	204		237	233	
Carbonate Alkalinity	<2		<2	<1	
Color TCU	17.2	15.1	16.4	20.8	9
Hardness as CaCO3 (Dissolved)	192	181	180	177	164
Hydroxide Alkalinity	<2		<2	<1	
pH (unitless)	8.22	8.08	8.12	7.93	8.18
Specific Conductivity µS/cm	1790	1600	1610	1540	1470
Total Dissolved Solids	1240	1130	1110	1150	1070
Total Suspended Solids	13.3	13.6	6.5	<3	3.2
Turbidity NTU	6.68	8.28	6.43	1.66	3.68
Dissolved Anions					
Bromide	<1	<1	<1	<1	<1
Chloride	15	12	15	14	11
Fluoride	0.49	<0.4	<0.4	<0.4	0.42
Sulphate	696	626	626	578	553
Nutrients					
Ammonia (Total)	0.0585	0.0245	<0.05	0.0256	0.0238
Nitrate (as N)	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite (as N)	<0.02	<0.02	<0.02	<0.02	<0.02
Nitrogen (Dissolved)	0.46	0.66	0.32	0.24	
Nitrogen (Total)	0.45	0.3	0.348	<0.26	0.18
Nitrogen Kjeldahl (Total)	0.45	0.303	0.35	<0.5	0.18
Orthophosphate (Dissolved)					0.18
Phosphorus - Dissolved	0.0682	0.0745	0.112	0.17	
Phosphorus - Total	0.099	0.119	0.153	0.227	0.208
Cyanide					
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.0054	0.0053	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals					
Aluminum	<0.025	0.0103	0.0103	0.01	0.0108
Antimony	<0.0025	0.00042	0.00027	0.00025	<0.0002
Arsenic	0.0028	0.00312	0.00338	0.00321	0.00289
Barium	0.053	0.0576	0.0591	0.059	0.0548
Beryllium	<0.005	<0.0002	<0.0002	<0.0002	<0.0002
Bismuth	<0.2	<0.001	<0.001	<0.001	<0.001
Boron	2.69	2.55	2.51	2.28	2.36
Cadmium	<0.000085	0.000023	<0.00002	0.000051	<0.00002
Calcium	32.1	30.6	30.9	28.7	25.1
Chromium	<0.005	0.00032	0.00053	0.00034	0.00091
Cobalt	<0.0015	0.00128	0.00102	0.00106	0.00077
Copper	<0.005	<0.001	<0.001	<0.0004	<0.0004
Dissolved Cadmium (by saltwater					
Iron	<0.03	0.241	0.269	0.286	0.28
Lead	<0.0025	<0.0001	<0.0001	<0.0001	<0.0001
Lithium	<0.025	0.0011	0.0011	<0.001	<0.001
Magnesium	27.1	25.5	24.9	25.5	24.6
Manganese	0.391	1.1	1.23	1.29	1.05
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	
Molybdenum	0.0676	0.0604	0.061	0.0605	0.059
Nickel	<0.005	0.0066	0.0062	0.0038	0.0029
Phosphorus	<0.3	<0.3	<0.3	<0.3	0.24
Potassium	26.1	13.2	12.6	11.4	10
Selenium	<0.005	0.00023	0.00039	<0.0002	<0.0002
Silicon	3.48	4.04	4.01	3.91	4.29
Silver	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	341	296	300	281	271
Strontium	1.24	1.1	1.16	1.22	1.17
Sulphur					
Thallium	<0.001	<0.00002	<0.00002	<0.00002	<0.00002
Tin	<0.0025	0.00067	0.00043	0.0002	<0.0002
Titanium	<0.01	<0.01	<0.01	<0.01	<0.02
Uranium	0.0057	0.00529	0.00454	0.00457	0.00304
Vanadium	<0.005	<0.002	<0.002	<0.002	<0.002
Zinc	<0.005	<0.006	<0.006	<0.002	0.0021
Total Metals					
Aluminum	0.389	0.286	0.179	0.0507	0.209
Antimony	<0.0025	0.00033	0.0004	0.00036	0.00027
Arsenic	0.0031	0.00309	0.00341	0.00359	0.00294
Barium	0.055	0.0586	0.0627	0.0594	0.053
Beryllium	<0.005	<0.0002	<0.0002	<0.0002	<0.0002
Bismuth	<0.2	<0.001	<0.001	<0.001	<0.001
Boron	2.64	2.38	2.6	2.34	2.51
Cadmium	0.000119	0.000068	0.000068	0.000081	0.000022
Calcium	31.9	28.6	31	28.7	25.2
Chromium	<0.005	0.00145	0.00171	0.00069	0.00456
Cobalt	<0.0015	0.00152	0.00122	0.00119	0.00097
Copper	<0.005	0.0047	0.0013	0.0011	<0.001
Iron	0.21	0.51	0.43	0.368	0.442
Lead	<0.0025	0.00019	0.00017	0.00013	0.00011
Lithium	<0.025	0.0012	0.0013	<0.001	<0.001
Magnesium	26.9	23.9	25.5	24.9	24.5
Manganese	0.449	1.15	1.28	1.38	1.13
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	
Molybdenum	0.0737	0.0602	0.064	0.0664	0.0616
Nickel	0.0055	0.0069	0.0093	0.0046	0.0047
Phosphorus	<0.3	<0.3	<0.3	<0.3	0.24
Potassium	23.8	12.8	13.5	11.1	9.96
Selenium	<0.005	0.00037	0.0003	0.00027	<0.0002
Silicon	4.25	4.28	4.47	3.95	4.97
Silver	<0.0001	<0.00002	<0.00002	<0.00002	0.000074
Sodium	333	286	317	283	274
Strontium	1.24	1.06	1.23	1.25	1.2
Sulphur					
Thallium	<0.001	<0.00002	<0.00002	<0.00002	<0.00002
Tin	<0.0025	0.00113	0.00097	0.00054	<0.0002
Titanium	0.012	0.012	<0.01	<0.01	<0.02
Total Cadmium (by saltwater extra					
Uranium	0.0061	0.00505	0.00489	0.00486	0.00318
Vanadium	<0.005	<0.002	0.002	<0.002	<0.002
Zinc	<0.005	<0.006	<0.006	<0.006	<0.006
Organics					
Carbon Organic (Dissolved)	29.6	19.8	21.8	27.5	15.6
Carbon Organic (Total)	30.1	21.2	22.3	27.1	16.7
Nitrogen Organic (Dissolved)	0.401	0.635	0.291	0.214	
Nitrogen Organic (Total)	0.391	0.275	0.35	<0.5	
ALS LAB ID	**L1039843**	**L1080651**	**L1114498**	**L1159542**	**L1202478**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D3.2 - GROUNDWATER QUALITY DATA

Site ID	MW11-08D	MW11-08D	MW11-08D	MW11-08D	MW11-08D	MW11-08D	MW11-08D	MW11-08D
Analytes	Dec-12	Mar-13	May-13	Aug-13	Nov-13	Apr-14	Jun-14	Sep-14
In Situ Parameters								
Conductivity µS/cm	1050	992	1114	1104	1.48	998	1019	1076
Oxygen Dissolved %	7.3	2.4	6.8	3.7	1.6	13.9	1.1	5.6
Oxygen Dissolved	0.82	0.28	0.79	0.4	0.16	1.64	0.12	0.62
pH (unitless)	7.99	7.92	8.11	7.9	8.13	8.38	8.12	8.02
Redox Potential mV	-220	-161	-179	-106	0.96	-174	-162	-147
Salinity ppt	7.4E-07	0.75	0.83	0.76	0.74	0.75	0.74	0.75
Specific Conductivity µS/cm	1462	1493	1630	1504	0.976	1483	1461	1492
Temperature °C	10.3	7.41	8.45	11.1	7.19	7.88	9.19	10.4
Total Dissolved Solids	948	970	1060	979	1554	964	950	970
Turbidity NTU	-1.4	-1.9	0	0.5	1.2	1.7	1.8	2.1
Physical Tests								
Acidity to pH 8.3 (as CaCO3)								
Alkalinity (Total as CaCO3)	235	225	216	213	231	223	219	232
Bicarbonate Alkalinity	235	214	216	213	231	223	219	232
Carbonate Alkalinity	<2	11.7	<1	<1	<2	<1	<1	<1
Color TCU	11.1	9.8	<5	5.8				
Hardness as CaCO3 (Dissolved)	158	160	162	158	159	165	164	158
Hydroxide Alkalinity	<2	<1	<1	<1	<2	<1	<1	<1
pH (unitless)	8.23	8.33	8.3	8.32	8.2	8.37	8.38	8.23
Specific Conductivity µS/cm	1470	1540	1470	1480	1400	1460	1480	1480
Total Dissolved Solids	1040	1020	971	1010	965	1010	984	1030
Total Suspended Solids	<3	<3	7.3	4.4		<3	<3	<3
Turbidity NTU	2.84	2.06	2.53	1.68		0.62	0.66	0.81
Dissolved Anions								
Bromide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	9.2	8.8	8.4	8	9.6	14.6	8.7	8.8
Fluoride	0.4	0.53	0.31	0.51	0.35	0.36	0.34	0.306
Sulphate	538	530	535	530	528	535	526	535
Nutrients								
Ammonia (Total)	0.0311	0.0367	0.0292	0.0349	0.037	0.0423	0.0305	0.0432
Nitrate (as N)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrite (as N)	<0.01	0.014	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen (Dissolved)	0.217	0.136						
Nitrogen (Total)	0.195	0.153	0.134	0.153				
Nitrogen Kjeldahl (Total)	0.202	0.193	0.162	0.153	0.202	0.203	0.199	0.2
Orthophosphate (Dissolved)					0.218	0.238	0.226	0.222
Phosphorus - Dissolved	0.191	0.196	0.194	0.201	0.229	0.251	0.249	
Phosphorus - Total	0.224	0.217		0.239	0.257	0.274	0.242	0.303
Cyanide								
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals								
Aluminum	0.0095	0.01	0.0098	0.0092	0.0091	0.0087	0.011	0.0081
Antimony	<0.0002	0.0002	0.00019	0.00018	0.00018	0.00014	<0.0002	0.00012
Arsenic	0.00294	0.00288	0.0035	0.00285	0.00284	0.00299	0.00274	0.00324
Barium	0.0515	0.0497	0.0491	0.0452	0.0456	0.0441	0.0422	0.043
Beryllium	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
Bismuth	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005
Boron	2.35	2.14	2.34	2.42	2.42	2.31	2.5	2.33
Cadmium	<0.00002	<0.00005	<0.00005	<0.00002	<0.00003	<0.00002	<0.00002	<0.00001
Calcium	23.7	23.2	22.2	21.5	21.3	22.4	22.2	21.3
Chromium	0.00107	0.00022	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
Cobalt	0.00075	0.0006	0.00067	0.00048	0.00043	0.00046	0.00037	0.0004
Copper	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0002
Dissolved Cadmium (by saltwater						<0.00002	<0.00002	
Iron	0.272	0.246	0.141	0.165	0.16	0.189	0.168	0.186
Lead	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005
Lithium	<0.001	<0.0005	<0.0005	<0.0005	0.00067	<0.0005	<0.001	<0.0005
Magnesium	23.9	24.7	25.9	25.4	25.6	26.4	26.2	25.3
Manganese	1.08	0.954	0.778	0.73	0.676	0.71	0.599	0.629
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0578	0.0545	0.0558	0.0559	0.0525	0.0528	0.0546	0.0504
Nickel	0.0026	0.00209	0.00309	0.00156	0.00166	0.00113	0.0011	0.00107
Phosphorus	0.273	0.271	0.21	0.219	0.237	0.269	0.241	0.261
Potassium	9.91	10.4	10.2	9.89	11.2	9.87	10.4	9.84
Selenium	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
Silicon	3.98	4.25	4.15	4.08	4.31	4.12	4.25	3.92
Silver	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001
Sodium	284	274	274	264	254	251	243	256
Strontium	1.18	1.17	1.19	1.19	1.14	1.29	1.23	1.25
Sulphur	172	177	170	162	169	166	169	171
Thallium	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001
Tin	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
Titanium	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
Uranium	0.00302	0.0027	0.00255	0.00243	0.00251	0.00263	0.00252	0.00257
Vanadium	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001
Zinc	0.0023	0.0013	0.0012	<0.001	<0.001	0.0012	<0.002	0.0012
Total Metals								
Aluminum	0.0637	0.0405	0.183	0.103	0.0435	0.0233	0.0302	0.0241
Antimony	0.0002	0.00028	0.00023	0.0002	0.00019	0.00015	<0.0002	0.00019
Arsenic	0.00294	0.00287	0.00359	0.0027	0.00282	0.00295	0.00282	0.00318
Barium	0.0509	0.0499	0.0496	0.041	0.0432	0.0435	0.0425	0.0413
Beryllium	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
Bismuth	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005
Boron	2.26	2.45	2.38	2.33	2.42	2.29	2.57	2.38
Cadmium	0.000023	<0.00005	<0.00005	<0.00002	<0.00003	<0.00002	<0.00002	<0.00001
Calcium	23.3	23.5	22	21	20.7	21.4	21.6	20.6
Chromium	0.00309	0.00057	0.00051	0.00037	0.00018	0.0002	<0.0002	0.00026
Cobalt	0.00081	0.00061	0.00079	0.00048	0.00043	0.00047	0.00041	0.00041
Copper	<0.001	0.00083	0.0009	<0.0005	<0.0005	0.00146	<0.001	<0.0005
Iron	0.309	0.278	0.272	0.219	0.187	0.209	0.189	0.207
Lead	0.00026	0.000064	0.000105	0.000052	<0.00005	<0.00005	<0.0001	<0.00005
Lithium	<0.001	<0.0005	0.00059	0.00079	0.00055	<0.0005	<0.001	<0.0005
Magnesium	24	24.8	26	24.6	25.4	25.1	25.7	24.7
Manganese	1.06	0.948	0.793	0.689	0.672	0.69	0.632	0.623
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0585	0.0615	0.0592	0.0532	0.0549	0.0538	0.0559	0.0501
Nickel	0.0035	0.00232	0.00381	0.00157	0.00148	0.00129	0.0012	0.00126
Phosphorus	0.246	0.262	0.212	0.225	0.239	0.271	0.273	0.257
Potassium	9.86	10.4	10.2	9.48	11.2	9.34	10.1	9.61
Selenium	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
Silicon	4.04	4.29	4.71	4.33	4.32	4.07	4.26	3.87
Silver	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001
Sodium	276	272	267	247	245	250	255	251
Strontium	1.17	1.29	1.23	1.13	1.16	1.29	1.25	1.23
Sulphur	169	179	172	162	170	166	174	167
Thallium	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001
Tin	<0.0002	0.00015	0.00012	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
Titanium	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
Total Cadmium (by saltwater extra						<0.00002	<0.00002	
Uranium	0.00309	0.00307	0.00272	0.00232	0.00257	0.00256	0.00256	0.00257
Vanadium	<0.002	<0.001	0.0011	<0.001	<0.001	<0.001	<0.002	<0.001
Zinc	0.0063	<0.003	<0.003	<0.003	<0.003	<0.003	<0.006	<0.003
Organics								
Carbon Organic (Dissolved)	14.1	7.28	5.26	8.57	9.72			
Carbon Organic (Total)	14.8	13.1	5.28	9.41	10.5	12.1	9	12
Nitrogen Organic (Dissolved)	0.185	0.085						
Nitrogen Organic (Total)		0.102						
ALS LAB ID	**L1247928**	**L1277798**	**L1308855**	**L1346553**	**L1394557**	**L1439433**	**L1475661**	**L1516193**

Site ID	MW11-09D	MW11-09D	MW11-09D	MW11-09D	MW11-09D	MW11-09D	MW11-09D	MW11-09D	MW11-09D	MW11-09D	MW11-09D	MW11-09D
Analytes	Aug-11	Oct-11	Feb-12	Jun-12	Aug-12	Dec-12	Mar-13	May-13	Aug-13	Mar-14	Jun-14	Sep-14
In Situ Parameters												
Conductivity µS/cm	1296	1340	1084	1882	1660	1020	999	1172	1289	1722	1030	1022
Oxygen Dissolved %	19.2		36.6	12.1		12.3	18.4	33.4	28	12.8	8.3	9.9
Oxygen Dissolved	2.14		4.6	1.18	1.53	1.5	2.26	4.03	3.29	1.57	0.98	1.17
pH (unitless)	8.1	8.12	8.34	8.07		8.19	8.1	8.06	8.13	8.08	8.27	8.22
Redox Potential mV			-293		-42	-248	-146	-206	34.3	-157	-126	-182
Salinity ppt			0.88		0.8	0.8	0.79	0.91	0.98	0.87	0.78	0.77
Specific Conductivity µS/cm	1807	2133	1735	1323		1593	1565	1791	1913	1109	1549	1564
Temperature °C	10.1	5.53	5.34	9.22	8.66	6.17	6.07	6.88	7.92	6.36	7.48	7.75
Total Dissolved Solids			1129		1060	1035	1016	1165	1244	1119	1006	991
Turbidity NTU	3.3	26.1	6.9	1.7	10.1		1.4	0	1.8	1.6	2.6	1.5
Physical Tests												
Acidity to pH 8.3 (as CaCO3)	<1				2.6							
Alkalinity (Total as CaCO3)	116	163	134	143	145	144	137	142	143	185	173	171
Bicarbonate Alkalinity	116		134	143		144	137	142	143	185	173	169
Carbonate Alkalinity	<1		<2	<1		<2	<1	<2	<2	<2	<2	1.9
Color TCU	13.8	<5	12.5	17	15.2	14.7	12.1	11.4	10.1			
Hardness as CaCO3 (Dissolved)	85.8	112	66.8	76	64.6	59	59.5	58.9	59.3	64.2	55.3	56.4
Hydroxide Alkalinity	<1		<2	<1		<2	<1	<2	<2	<2	<2	<1
pH (unitless)	8.34	8.16	8.19	7.97	8.06	8.18	8.32	8.2	8.23	8.03	8.27	8.3
Specific Conductivity µS/cm	1770	2040	1660	1720	1610	1600	1680	1650	1630	1610	1550	1550
Total Dissolved Solids	1150	1470	980	1220	1110	1120	1140	1120	1140	1100	1060	1040
Total Suspended Solids	<3	32.2	11.8	13.3	8.5	<3	4.1	<3	<3		<3	<3
Turbidity NTU	1.82	37.9	6.92	4.95	4.92	2.4	1.27	1.57	1.98		1.41	0.97
Dissolved Anions												
Bromide	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	<0.5
Chloride	32	41	21	30	20	17	17	20	15	16	14	13.5
Fluoride	0.55	<0.4	<0.4	<0.4	0.44	0.41	0.75	0.41	0.87	0.75	0.398	0.375
Sulphate	705	830	672	713	662	650	673	657	636	624	599	571
Nutrients												
Ammonia (Total)	<0.005	<0.005	<0.05	0.0188	<0.005	0.0311	<0.005	<0.005	<0.005	0.0228	<0.005	0.0221
Nitrate (as N)	0.12	<0.1	<0.1	<0.1	0.17	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05
Nitrite (as N)	<0.02	<0.02	<0.02	<0.02	0.056	<0.02	<0.02	<0.02	<0.02	<0.02	0.01	<0.01
Nitrogen (Dissolved)	0.29	0.25	0.15	0.24		0.247	0.113					
Nitrogen (Total)	0.27	0.488	0.256	1.24	0.51	0.237	0.15	0.17	0.148			
Nitrogen Kjeldahl (Total)	0.146	0.488	0.26	1.24	0.28	0.244	0.154	0.174	0.187	0.234	0.177	0.169
Orthophosphate (Dissolved)					0.325					0.398	0.375	0.287
Phosphorus - Dissolved	0.116	0.147	0.22	0.253		0.391	0.352	0.375	0.377	0.42	0.401	0.367
Phosphorus - Total	0.124	0.234	0.29	0.352	0.365	0.396	0.4	0.43	0.445	0.467	0.429	0.437
Cyanide												
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	0.0086	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals												
Aluminum	<0.025	0.0178	0.0232	0.0193	0.0184	0.0194	0.012	0.0168	0.01	0.0095	0.0096	0.0097
Antimony	<0.0025	0.00049	0.00025	<0.0002	0.00022	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Arsenic	0.0042	0.00639	0.00464	0.00492	0.0053	0.00542	0.00534	0.00573	0.00619	0.00641	0.00588	0.00624
Barium	0.038	0.0527	0.0355	0.0445	0.0401	0.0399	0.0403	0.0429	0.0442	0.049	0.0411	0.0452
Beryllium	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Bismuth	<0.2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Boron	0.49	0.461	0.518	0.481	0.415	0.456	0.441	0.441	0.447	0.472	0.471	0.461
Cadmium	0.00019	0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Calcium	25.8	33.3	19.5	22	18.6	17	17.1	16.7	17.1	18.4	15.8	16.2
Chromium	<0.005	0.00033	0.00069	0.00144	0.00343	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Cobalt	<0.0015	0.00104	0.00059	0.00058	0.00055	0.00025	0.00043	0.00031	0.00029	0.00023	<0.0002	<0.0002
Copper	<0.005	<0.001	<0.001	0.00067	<0.0004	<0.0004	0.00076	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Dissolved Cadmium (by saltwater												
Iron	<0.03	0.131	0.163	0.386	0.305	0.296	0.214	0.239	0.3	0.389	0.159	0.43
Lead	<0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Lithium	<0.025	0.0118	0.0146	0.0145	0.0158	0.0152	0.0155	0.0197	0.0191	0.0198	0.0199	0.023
Magnesium	5.21	7.02	4.37	5.13	4.39	4.01	4.05	4.17	4.05	4.44	3.82	3.87
Manganese	0.0629	0.8	0.691	0.945	0.787	0.817	0.795	0.831	0.912	0.955	0.682	0.862
Mercury	<0.00001	<0.00005	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0404	0.0537	0.028	0.0279	0.0247	0.0191	0.0295	0.0162	0.0162	0.0149	0.0136	0.0128
Nickel	<0.005	0.0056	0.0063	0.0034	0.0071	0.0028	0.0055	0.0034	0.0025	0.0014	0.0018	0.0017
Phosphorus	<0.3	<0.3	<0.3	0.41	0.387	0.413	0.434	0.399	0.391	0.452	0.422	0.41
Potassium	3.8	3.82	1.75	1.68	1.69	1.44	1.34	1.33	1.24	1.3	1.1	1.11
Selenium	<0.005	0.00107	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Silicon	2.86	3.43	3.4	3.88	3.69	3.41	3.57	3.6	3.59	3.89	3.9	4.03
Silver	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	381	432	331	352	320	327	318	340	325	335	303	319
Strontium	0.775	1.02	0.697	0.854	0.745	0.739	0.747	0.793	0.764	0.815	0.701	0.683
Sulphur						208	213	211	202	202	189	204
Thallium	<0.001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Tin	<0.0025	0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Titanium	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Uranium	0.0049	0.00722	0.00324	0.0035	0.00244	0.00199	0.00175	0.0014	0.00117	0.00136	0.00121	0.000757
Vanadium	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Zinc	<0.005	<0.006	0.0114	0.0025	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Total Metals												
Aluminum	0.084	0.632	0.117	0.143	0.181	0.0547	0.0369	0.0413	0.0244	0.0374	0.0258	0.0291
Antimony	<0.0025	0.00055	0.00044	0.00029	0.00037	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Arsenic	0.0044	0.00805	0.00476	0.00534	0.00563	0.00539	0.0055	0.00571	0.00635	0.00639	0.00605	0.00618
Barium	0.04	0.0654	0.0421	0.0482	0.044	0.0422	0.0434	0.0429	0.0465	0.0485	0.0433	0.0434
Beryllium	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Bismuth	<0.2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Boron	0.51	0.451	0.543	0.504	0.496	0.411	0.461	0.449	0.459	0.47	0.498	0.516
Cadmium	0.000239	0.000147	0.000129	0.000059	0.000058	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	0.00002	<0.00002
Calcium	25.8	39.9	20.7	22.6	18.9	17.4	16.9	16.1	17.3	17.2	15.7	17
Chromium	<0.005	0.00209	0.00389	0.00429	0.0113	0.00059	0.00035	0.00122	0.00043	0.00071	0.00043	0.00045
Cobalt	<0.0015	0.00152	0.00077	0.00096	0.00085	0.00036	0.0005	0.0004	0.00033	0.00029	0.00024	0.00023
Copper	<0.005	0.0041	0.0079	0.0025	0.0032	0.0011	0.0011	0.002	<0.001	<0.001	0.001	0.001
Iron	0.056	0.781	0.441	0.541	0.564	0.371	0.37	0.358	0.44	0.458	0.342	0.55
Lead	<0.0025	0.00054	0.00029	0.00023	0.00028	0.00013	0.0001	0.00013	0.00015	0.00014	0.00014	0.00016
Lithium	<0.025	0.0118	0.0148	0.0151	0.0169	0.0135	0.0164	0.0195	0.0194	0.0192	0.021	0.0256
Magnesium	5.27	7.16	4.4	5.21	4.46	4.06	4.07	4.05	4.11	4.15	3.79	4.13
Manganese	0.0745	0.84	0.713	0.973	0.863	0.795	0.789	0.812	0.93	0.933	0.691	0.854
Mercury	<0.00001	<0.00001	<0.00005	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0462	0.0534	0.0291	0.0302	0.0267	0.0175	0.0307	0.0168	0.0172	0.0157	0.014	0.0145
Nickel	<0.005	0.0072	0.0081	0.0061	0.0112	0.0035	0.0058	0.0038	0.0026	0.0021	0.0022	0.0012
Phosphorus	<0.3	<0.3	0.31	0.39	0.406	0.406	0.426	0.415	0.422	0.445	0.434	0.4
Potassium	3.8	3.63	1.77	1.74	1.68	1.49	1.37	1.31	1.16	1.21	1.08	1.18
Selenium	<0.005	0.0008	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Silicon	3.02	4.62	3.61	3.98	4.02	3.5	3.6	3.56	3.6	3.78	3.89	4.34
Silver	<0.0001	<0.00002	<0.00002	<0.00002	0.000053	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	385	420	336	357	335	336	322	325	322	334	309	306
Strontium	0.791	1.07	0.721	0.886	0.778	0.657	0.77	0.781	0.785	0.809	0.728	0.747
Sulphur						212	215	210	204	198	188	176
Thallium	<0.001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Tin	<0.0025	0.00175	0.00054	0.00032	0.00033	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Titanium	<0.01	0.029	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Total Cadmium (by saltwater extra												
Uranium	0.0055	0.0071	0.00328	0.00363	0.00253	0.00179	0.00179	0.00141	0.00125	0.00142	0.00125	0.000835
Vanadium	<0.005	0.0025	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Zinc	<0.005	0.0082	0.0186	0.0067	0.0068	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
Organics												
Carbon Organic (Dissolved)	26.3	33.4	17.7	18.7	14.1	11.7	13.3	13.2	12.5			
Carbon Organic (Total)	26.1	33.4	18.2	17.8	14.4	11.4	13	12.7	12.8	13.2	10.5	11.1
Nitrogen Organic (Dissolved)	0.161	0.246	0.144	0.221		0.216	0.11					
Nitrogen Organic (Total)	0.141	0.496	<0.3	1.22			0.154					
ALS LAB ID	**L1039844**	**L1079375**	**L1115110**	**L1159973**	**L1202478**	**L1247921**	**L1277099**	**L1307601**	**L1348177**	**L1434002**	**L1475117**	**L1514758**

Site ID	MW11-09S	MW11-09S	MW11-09S
Analytes	Aug-11	Oct-11	Feb-12
In Situ Parameters			
Conductivity µS/cm	1486	1371	1197
Oxygen Dissolved %	4.5		46.1
Oxygen Dissolved	0.54		6.18
pH (unitless)	7.99	8.11	8.25
Redox Potential mV			-296
Salinity ppt			1.06
Specific Conductivity µS/cm	2247	2116	2108
Temperature °C	7.22	6.56	2.39
Total Dissolved Solids			1361
Turbidity NTU	4.1	2.3	8.6
Physical Tests			
Acidity to pH 8.3 (as CaCO3)	2.3		
Alkalinity (Total as CaCO3)	153	134	139
Bicarbonate Alkalinity	153		139
Carbonate Alkalinity	<2		<2
Color TCU	6.6	8.5	8.9
Hardness as CaCO3 (Dissolved)	137	126	110
Hydroxide Alkalinity	<2		<2
pH (unitless)	8.19	8.24	8.22
Specific Conductivity µS/cm	2240	2050	2000
Total Dissolved Solids	1490	1430	1220
Total Suspended Solids	3.3	8.2	6.4
Turbidity NTU	3.12	5.87	5.79
Dissolved Anions			
Bromide	<1	<1	<1
Chloride	36	23	23
Fluoride	0.46	<0.4	<0.4
Sulphate	979	881	859
Nutrients			
Ammonia (Total)	0.0112	0.029	<0.05
Nitrate (as N)	<0.1	<0.1	<0.1
Nitrite (as N)	0.027	<0.02	<0.02
Nitrogen (Dissolved)	0.28	0.21	0.17
Nitrogen (Total)	0.33	0.287	0.276
Nitrogen Kjeldahl (Total)	0.303	0.287	0.28
Orthophosphate (Dissolved)			
Phosphorus - Dissolved	0.0549	0.061	0.086
Phosphorus - Total	0.0618	0.0804	0.104
Cyanide			
Cyanide (Free)	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005
Dissolved Metals			
Aluminum	<0.025	0.0144	0.0124
Antimony	<0.0025	0.00031	<0.0002
Arsenic	0.0039	0.00637	0.00379
Barium	0.047	0.0405	0.0338
Beryllium	<0.005	<0.0002	<0.0002
Bismuth	<0.2	<0.001	<0.001
Boron	0.49	0.465	0.529
Cadmium	0.000157	0.000061	0.000089
Calcium	39.9	37.5	32.5
Chromium	<0.005	<0.0002	0.00031
Cobalt	<0.0015	0.00056	0.00026
Copper	<0.005	<0.001	0.0074
Dissolved Cadmium (by saltwater			
Iron	<0.03	0.042	<0.03
Lead	<0.0025	<0.0001	<0.0001
Lithium	0.033	0.0258	0.0238
Magnesium	9.05	7.95	7.04
Manganese	0.201	0.26	0.17
Mercury	<0.00001	<0.00005	<0.00001
Molybdenum	0.0162	0.0184	0.0188
Nickel	<0.005	0.003	0.0037
Phosphorus	<0.3	<0.3	<0.3
Potassium	<2	1.59	1.25
Selenium	<0.005	0.00022	<0.0002
Silicon	4.06	4.09	3.79
Silver	<0.0001	<0.00002	<0.00002
Sodium	456	418	399
Strontium	1.59	1.28	1.18
Sulphur			
Thallium	<0.001	<0.00002	0.000023
Tin	<0.0025	0.00026	0.00021
Titanium	<0.01	<0.01	<0.01
Uranium	0.0019	0.0016	0.00145
Vanadium	<0.005	<0.002	<0.002
Zinc	<0.005	<0.006	0.0174
Total Metals			
Aluminum	0.166	0.195	0.24
Antimony	<0.0025	0.00031	0.00033
Arsenic	0.0039	0.00559	0.00385
Barium	0.05	0.0428	0.0412
Beryllium	<0.005	<0.0002	<0.0002
Bismuth	<0.2	<0.001	<0.001
Boron	0.5	0.473	0.56
Cadmium	0.000182	0.000082	0.000137
Calcium	40.2	37.9	32.8
Chromium	<0.005	0.00078	0.0021
Cobalt	<0.0015	0.00069	0.00047
Copper	<0.005	0.0019	0.0163
Iron	0.128	0.284	0.298
Lead	<0.0025	0.00012	0.00022
Lithium	0.034	0.0261	0.0244
Magnesium	9.21	8.04	7.15
Manganese	0.226	0.283	0.214
Mercury	<0.00001	<0.00001	<0.00005
Molybdenum	0.0171	0.0189	0.0194
Nickel	<0.005	0.0039	0.0053
Phosphorus	<0.3	<0.3	<0.3
Potassium	<2	1.59	1.31
Selenium	<0.005	0.00027	0.00023
Silicon	4.35	4.45	4.41
Silver	<0.0001	<0.00002	<0.00002
Sodium	461	420	408
Strontium	1.6	1.31	1.2
Sulphur			
Thallium	<0.001	<0.00002	0.000026
Tin	<0.0025	0.00137	0.0078
Titanium	<0.01	<0.01	0.017
Total Cadmium (by saltwater extra			
Uranium	0.0021	0.00165	0.00149
Vanadium	<0.005	<0.002	<0.002
Zinc	<0.005	<0.006	0.0221
Organics			
Carbon Organic (Dissolved)	5.9	5.65	6.6
Carbon Organic (Total)	5.84	5.76	6.58
Nitrogen Organic (Dissolved)	0.242	0.181	0.146
Nitrogen Organic (Total)	0.292	0.258	<0.3
ALS LAB ID	**L1039843**	**L1079375**	**L1115110**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D3.2 - GROUNDWATER QUALITY DATA

Site ID	MW11-09S									MW11-10D													
Site ID	**MW11-09S**	**MW11-09S**	**MW11-09S**	**MW11-09S**	**MW11-09S**	**MW11-09S**	**MW11-09S**	**MW11-09S**	**MW11-09S**	**MW11-10D**	**MW11-10D**	**MW11-10D**	**MW11-10D**	**MW11-10D**	**MW11-10D**	**MW11-10D**	**MW11-10D**	**MW11-10D**	**MW11-10D**	**MW11-10D**	**MW11-10D**	**MW12-01**	**MW12-01**
Analytes	**Jun-12**	**Aug-12**	**Dec-12**	**Mar-13**	**May-13**	**Aug-13**	**Mar-14**	**Jun-14**	**Sep-14**	**Dec-11**	**Feb-12**	**Jun-12**	**Aug-12**	**Dec-12**	**Mar-13**	**May-13**	**Aug-13**	**Nov-13**	**Mar-14**	**Jun-14**	**Sep-14**	**Dec-12**	**Mar-13**
In Situ Parameters																							
Conductivity µS/cm	2273	2160	1238	1242	1440	1695	2074	1301	1299	1961	1856	2642	2920	2016	1946	2228	2561	2.88	3019	2057	1941		2229
Oxygen Dissolved %	20.8		2.9	6	19.2	18.3	67.3	38.7	11.5	5	1.9	11.7		2.9	2	1.7	8.7	1.4	7	1.9	16.3		1.5
Oxygen Dissolved	2.03	1.38	0.36	0.74	2.36	2.12	8.41	4.66	1.36	0.56	0.22	1.03	0.05	0.33	0.23	0.19	0.94	0.16	0.84	0.21	1.87	1.8	0.21
pH (unitless)	8.11	7.78	8.1	8.04	7.98	8.11	8.11	8.21	8.28	7.91	9.07	9.01		7.65	7.5	7.5	7.4	7.54	7.48	7.53	8.35	7.25	7.22
Redox Potential mV		-153		81.8	117	135	8.3	75.4	77.2	-338			-137	-198	82.7	-189	-96.3	-140	-132	-137	-195	130	191
Salinity ppt		1.1		0.99	1.14	1.24	1.06	1.01	1	1.45			1.5	1.49	1.51	1.68	1.83	1.5	1.58	1.5	1.46		1.71
Specific Conductivity µS/cm	1506		1931	1955	2219	2392	1312	1980	1963	2778	2747	1981		2840	2898	3200	3469	1.94	2083	2876	2795	3229	3265
Temperature °C	7.23	8.27	6.21	5.89	6.66	9.94	5.76	7.03	7.3	9.52	8.03	12.2	11.9	9.72	7.81	9.12	11.3	7.96	8.82	10.1	9.01	8.5	8.4
Total Dissolved Solids		1380		1270	1442	1557	1348	1288	1276	1.81			1870	1850	1884	2081	2252	1871	1963	1870	1817		2121
Turbidity NTU	0	2.1	-1.5	1.2	0	2.3	1.5	2.8	2.8	68.1	44.7	3.8	2.8	-2.1	82.7	0	3.2	2.4	1.8	1.8	4.8		-1.8
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)		2.6											3.1										
Alkalinity (Total as CaCO3)	121	152	117	124	123	111	110	129	122	208	152	174	228	243	245	230	247	266	245	256	245	175	178
Bicarbonate Alkalinity	121		117	124	123	111	110	129	122		152	174		243	245	230	247	266	245	256	245		178
Carbonate Alkalinity	<1		<2	<1	<2	<2	<1	<2	<1		<2	<1		<2	<2	<2	<2	<2	<2	<2	<1		<2
Color TCU	<5	11.1	6.4	7.1	6.1	6				<5	<5	<5	<5	<5	<5	<5	<5	<5					<5
Hardness as CaCO3 (Dissolved)	104	110	102	104	106	103	102	106	105	1530	1410	1540	1580	1480	1630	1610	1620		1590	1620	1520	1760	1620
Hydroxide Alkalinity	<1		<2	<1	<2	<2	<1	<2	<1		<2	<1		<2	<2	<2	<2	<2	<2	<2	<1		<2
pH (unitless)	8.1	8.14	8.13	8.33	8.18	8.19	8.3	8.16	8.23	8.12	8.24	8.09	8.22	7.96	7.93	8	8.04	8.07	7.89	7.99	8.01	8.05	7.98
Specific Conductivity µS/cm	2010	2000	1920	2040	2010	2020	1960	2000	2010	2790	2680	2680	2690	2780	2870	2920	2900	2920	2870	2880	2820	3190	3340
Total Dissolved Solids	1440	1410	1330	1380	1400	1330	1260	1320	1370	2830	2490	2580	2740	2730	2710	2820	2860	2750	2690	2790	2640	3160	3070
Total Suspended Solids	<3	<3	<3	<3	<3	5		<3	<3	<3	163	98.7	3.2	<3	11.3	10	11			8.9	6.6	<3	<3
Turbidity NTU	0.79	1.46	2.18	0.8	0.7	3.45		1.28	0.64	2.57	97	90.8	2.89	8.88	11.9	12.3	11.7			10.8	8.84	0.46	0.43
Dissolved Anions																							
Bromide	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloride	24	23	19	19	20	19	20	21	21	<10	<10	<10	<10	<10	<10	<10	<10	10	<10	<10	<10	18	17
Fluoride	<0.4	<0.4	<0.4	0.6	<0.4	0.63	0.71	0.301	0.294	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	0.67	<0.4	<0.4	0.213	0.185	<0.4	0.47
Sulphate	874	879	841	876	866	865	872	881	852	1720	1640	1660	1740	1700	1740	1730	1720	1760	1730	1770	1720	1670	1660
Nutrients																							
Ammonia (Total)	0.0219	0.0326	0.0217	0.0209	0.0186	0.0208	0.0187	0.0175	0.0118	0.0632	0.148	0.103	0.0659	0.0547	0.0518	0.0558	0.0574	0.0721	0.0546	0.0618	0.0809	<0.005	0.0213
Nitrate (as N)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	88.2	80.6
Nitrite (as N)	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.024	<0.02	<0.02	<0.02	<0.02	0.042	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.334	0.429
Nitrogen (Dissolved)	0.16		0.173	0.152							0.34	0.21		0.271	0.182								85.9
Nitrogen (Total)	0.169	<0.27	0.178	0.16	0.18	0.168				0.13	0.357	0.274	0.21	0.174	0.182	0.22	0.205					88.5	110
Nitrogen Kjeldahl (Total)	0.169	<0.25	0.184	0.16	0.177	0.184	0.223	0.198	0.174	0.264	0.357	0.274	0.211	0.225	0.21	0.224	0.208	0.219	0.262	0.223	0.298	<0.05	<0.05
Orthophosphate (Dissolved)		0.098					0.107	0.111	0.111				<0.001					0.0011	0.001	0.0014	0.0035	0.0037	
Phosphorus - Dissolved	0.0727		0.092		0.104	0.12	0.125	0.122	0.147	0.0082	0.0058	0.0021		0.0025	<0.002	<0.002	<0.002	<0.002	<0.002	0.0024		0.0047	0.0153
Phosphorus - Total	0.0825	0.11	0.101	0.107	0.114	0.129	0.134	0.139	0.161	0.0105	0.0196	0.0212	0.0192	0.0215	0.0235	0.021	0.0243	0.0209	0.0219	0.022	0.0153		0.0153
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005
Dissolved Metals																							
Aluminum	0.043	0.0109	0.0115	0.0144	0.0106	0.01	0.0092	0.0099	0.015	<0.006	<0.006	<0.01	<0.01	<0.002	0.0011	0.0022	<0.002	0.0017	0.0016	<0.001	0.0025	0.0022	0.0042
Antimony	<0.0025	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00737	0.00045	<0.001	<0.001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	0.00035	0.00398	0.00372
Arsenic	0.0045	0.00433	0.00475	0.00449	0.00485	0.00487	0.00506	0.00479	0.00481	0.0056	0.00453	0.0051	0.0051	0.00543	0.00547	0.00558	0.00554	0.0056	0.00577	0.00581	0.00544	0.00578	0.0043
Barium	0.037	0.0345	0.0288	0.0281	0.0267	0.0273	0.0258	0.0266	0.0265	0.0214	0.0589	0.034	<0.02	0.00934	0.00832	0.00876	0.00752	0.00769	0.00813	0.00723	0.0102	0.0315	0.0487
Beryllium	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.002	<0.002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
Bismuth	<0.2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.2	<0.2	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005
Boron	0.52	0.423	0.441	0.45	0.45	0.446	0.466	0.452	0.467	0.078	0.088	0.1	<0.1	0.082	0.088	0.089	0.09	0.093	0.089	0.089	0.083	0.115	0.098
Cadmium	<0.000085	<0.00002	<0.00002	0.000039	0.000067	0.000067	0.000052	0.000029	0.000034	<0.00002	<0.00002	<0.000034	<0.000034	<0.00002	<0.00001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.0007	<0.001
Calcium	29.8		29.8	30.2	30.6	29.9	29.5	30.5	30.4	262	244	265	262	272	280	284	288	299	281	291	278	245	243
Chromium	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00021	<0.0002	<0.002	<0.002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
Cobalt	<0.0015	0.00059	0.00033	0.00023	0.00029	0.00025	0.00024	0.00029	0.00026	0.00214	<0.0002	<0.0006	<0.0006	<0.0002	0.00017	<0.0002	<0.0002	0.00013	0.00012	0.00011	0.00011	0.00192	0.00122
Copper	0.02	0.00045	<0.0004	0.00147	0.00042	<0.0004	0.00074	<0.0004	0.00087	<0.001	<0.001	<0.002	<0.002	<0.0004	0.00029	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	0.00712	0.003
Dissolved Cadmium (by saltwater																							
Iron	<0.03	0.083	0.021	0.031	<0.01	<0.01	0.016	0.016	0.033	0.148	<0.03	0.347	0.805	0.978	0.982	0.994	1.02	1.02	1.03	1.03	0.947	<0.01	<0.01
Lead	<0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.0001	<0.00005	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005
Lithium	0.031	0.0158	0.0254	0.0234	0.0273	0.0253	0.0273	0.0239	0.0268	0.0097	0.0125	0.012	0.011	0.0091	0.0118	0.0114	0.0098	0.0109	0.0102	0.0102	0.00909	0.0296	0.0328
Magnesium	7.16		6.78	7.01	7.12	7.01	6.88	7.2	7.14	213	195	214	224	195	226	219	218	223	217	218	201	279	247
Manganese	0.207	0.327	0.224	0.168	0.214	0.218	0.179	0.227	0.207	0.282	0.153	0.33	0.319	0.34	0.343	0.368	0.356	0.358	0.367	0.357	0.34	0.0875	0.0879
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0186	0.0209	0.0182	0.0367	0.021	0.0206	0.0207	0.0201	0.0224	0.0296	0.0262	0.0255	0.0272	0.0222	0.027	0.0255	0.0248	0.0249	0.0237	0.0245	0.0253	3.42	3.37
Nickel	<0.005	0.0024	0.0011	0.0016	0.0012	0.0011	0.0011	0.0012	0.0013	0.0111	0.0023	<0.002	<0.002	<0.001	0.00138	<0.001	<0.001	0.00052	<0.0005	<0.0005	0.00089	0.0148	0.01
Phosphorus	<0.3		0.096	0.113	0.108	0.111	0.11	0.117	0.124	<0.3	<0.3	<0.3	<0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	<2	1.15	1.03	1.14	1.03	0.99	1	1.02	1.04	14.8	17.9	15.2	14.3	14.4	13.9	14.3	14.4	13.8	14.4	13.7	14.1	41.7	41.2
Selenium	<0.005	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00951	<0.0002	<0.002	<0.002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	0.0405	0.0425
Silicon	4.19		3.89	3.95	3.96	3.88	3.95	4.06	3.88	11	12.9	13.8	13.6	14.3	14.7	14.4	14.9	14.6	14.4	14.9	14.6	7.35	6.93
Silver	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00004	<0.00004	<0.00002	<0.00001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001
Sodium	397	428	394	387	407	398	387	374	398	161	183	163	167	169	163	166	163	161	156	159	174	151	147
Strontium	1.32	1.31	1.25	1.34	1.35	1.35	1.37	1.32	1.35	2.67	4.16	3.64	3.04	2.86	3.58	3.26	3.16	3.2	3.12	3.22	3.44	3.51	3.58
Sulphur			270	275	283	274	271	269	274					493	539	546	552	520	541	543	534	541	448
Thallium	<0.001	<0.00002	<0.00002	0.000025	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.0004	<0.0004	<0.00002	<0.00001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	0.000019
Tin	<0.0025	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
Titanium	<0.01		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.017	0.012	<0.01	<0.01	<0.02	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
Uranium	<0.001	0.00155	0.000739	0.000917	0.000789	0.000765	0.000657	0.000692	0.000705		0.00301	0.00277	0.00235	0.00236	0.00291	0.00276	0.00274	0.00274	0.00275	0.00281	0.00275	0.0146	0.0141
Vanadium	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.0027	<0.002	<0.002	<0.002	<0.002	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	0.004	0.0026
Zinc	<0.005	<0.002	<0.002	0.0034	0.0035	<0.002	0.0026	0.0021	0.0058	<0.006	<0.006	<0.005	<0.005	0.0043	0.0011	<0.002	<0.002	0.0014	<0.001	<0.001	0.0027	<0.002	0.0024
Total Metals																							
Aluminum	0.072	0.0519	0.0276	0.055	0.0474	0.0372	0.043	0.0436	0.0696	0.0086	0.01	0.055	0.018	<0.006	0.0049	0.0103	<0.006	0.0035	0.0046	<0.003	0.0154	0.0154	0.0084
Antimony	<0.0025	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00023	0.00683	0.00043	<0.001	<0.001	<0.0002	<0.0001	<0.0002	<0.0002	0.00017	<0.0001	<0.0001	0.00048	0.00401	0.00392
Arsenic	0.0046	0.0043	0.00508	0.00466	0.00516	0.00534	0.00501	0.00501	0.00537	0.00541	0.00479	0.0056	0.0053	0.00541	0.00581	0.00552	0.0056	0.00592	0.00602	0.00546	0.00519	0.00586	0.00434
Barium	0.032	0.0358	0.0293	0.0292	0.0276	0.028	0.0254	0.0265	0.029	0.0246	0.0502	0.063	0.054	0.00983	0.0102	0.0203	0.0146	0.0117	0.0103	0.00807	0.0224	0.0312	0.0497
Beryllium	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.002	<0.002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
Bismuth	<0.2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.2	<0.2	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005
Boron	0.53	0.44	0.441	0.458	0.48	0.46	0.459	0.459	0.497	0.084	0.092	0.11	<0.1	0.093	0.096	0.095	0.11	0.099	0.101	0.099	0.091	0.117	0.104
Cadmium	<0.000085	0.00005	<0.00002	0.000048	0.00009	0.000053	0.000088	0.000041	0.000046	<0.00002	<0.00002	<0.000034	<0.000034	<0.00002	<0.00001	<0.00002	<0.00002	<0.00001	<0.00002	<0.00001	<0.00001	<0.0007	<0.001
Calcium	31.8		29.6	30.6	30	29.7	28.9	29.7	30.8	252	259	278	272	278	288	275	276	291	275	275	263	240	247
Chromium	<0.005	0.00022	<0.0002	0.00033	0.00025	0.00028	0.00039	0.00032	0.00056	0.00114	0.00108	<0.002	0.0025	0.00053	0.0001	0.00089	<0.0002	0.00019	0.00011	0.00014	0.00022	<0.0002	0.00016
Cobalt	<0.0015	0.00062	0.00038	0.00026	0.00035	0.00033	0.00024	0.00034	0.00036	0.00229	0.0003	<0.0006	<0.0006	0.0002	0.00017	<0.0002	<0.0002	0.00013	0.00013	0.00011	0.00011	0.0019	0.0013
Copper	0.021	<0.001	<0.001	0.0024	0.0019	<0.001	0.0019	0.0012	0.002	<0.001	<0.001	<0.002	0.0024	<0.001	0.00082	0.0015	<0.001	<0.0005	<0.0005	0.00059	0.00061	0.0094	0.00371
Iron	0.059	0.135	0.063	0.077	0.067	0.075	0.083	0.09	0.122	0.166	0.489	0.834	1.04	1.02	1.02	1	1	1.03	1.03	1.01	0.954	0.028	0.045
Lead	<0.0025	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	0.00021	<0.00005	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	0.000119	<0.0001	<0.00005
Lithium	0.031	0.0156	0.0262	0.0238	0.0287	0.0258	0.0263	0.0254	0.0282	0.0102	0.0126	0.012	0.013	0.0108	0.0122	0.0118	0.0112	0.0104	0.011	0.0105	0.00979	0.0299	0.0352
Magnesium	7.61		6.91	7.24	7.06	6.95	6.79	7.05	7.34	210	201	216	223	202	230	219	211	221	212	213	194	275	255
Manganese	0.22	0.34	0.241	0.171	0.232	0.236	0.175	0.242	0.239	0.289	0.285	0.346	0.331	0.36	0.356	0.369	0.365	0.379	0.368	0.349	0.337	0.0871	0.0934
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0184	0.0213	0.019	0.0325	0.0218	0.021	0.021	0.0204	0.0231	0.0295	0.0268	0.0268	0.0286	0.026	0.0278	0.0267	0.028	0.0253	0.0251	0.0247	0.0245	3.36	3.62
Nickel	<0.005	0.0026	0.0012	0.0019	0.0014	0.0013	0.0014	0.0013	0.0016	0.0111	0.0024	0.0021	0.0027	<0.001	0.00156	<0.001	<0.001	0.00055	<0.0005	<0.0005	0.00113	0.0148	0.0105
Phosphorus	<0.3		0.101	0.11	0.109	0.105	0.111	0.13	0.14	<0.3	<0.3	<0.3	<0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	<2	1.14	1.06	1.15	1.03	1.02	0.98	1.01	1.09	14.7	17.1	16.4	18	14.7	14.2	14	13.5	14.1	14.3	13.3	13.6	40.7	40.7
Selenium	<0.005	0.00023	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00843	<0.0002	<0.002	<0.002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	0.0395	0.0437
Silicon	4.34		3.93	4.05	4.02	3.9	3.98	4.06	4.11	10.8	13	14.4	13.7	14.7	15.2	14.3	14.4	14.8	14.4	14.1	13.9	7.33	7.13
Silver	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	0.000022	<0.00002	<0.00004	0.000106	<0.00002	<0.00001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001
Sodium	421	408	399	387	418	394	384	384	428	162	183	175	179	175	173	167	163	163	157	155	165	146	153
Strontium	1.43	1.34	1.27	1.39	1.44	1.35	1.35	1.31	1.41	2.68	4.12	3.89	3.41	3.31	3.66	3.45	3.6	3.08	3.23	3.13	3.35	3.46	3.71
Sulphur			276	279	282	275	268	270	281					526	570	552	547	540	550	529	518	543	473
Thallium	<0.001	<0.00002	<0.00002	0.000028	<0.00002	<0.00002	<0.00002	0.000029	0.000024	<0.00002	<0.00002	<0.0004	<0.0004	<0.00002	<0.00001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	0.00002	0.000019
Tin	<0.0025	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	0.00011	<0.0002	0.00026
Titanium	<0.01		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.017	0.012	0.011	0.01	<0.02	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
Total Cadmium (by saltwater extra																			<0.00002				
Uranium	<0.001	0.00163	0.000751	0.000963	0.000823	0.000767	0.000679	0.000702	0.000782	0.0263	0.00315	0.00284	0.00253	0.00269	0.00312	0.00286	0.00288	0.00285	0.00286	0.00279	0.00265	0.0142	0.0148
Vanadium	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.0025	<0.002	<0.002	<0.002	<0.002	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	0.004	0.0027
Zinc	<0.005	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	0.0144	<0.006	0.0108	<0.005	<0.005	<0.006	<0.003	<0.006	<0.006	<0.003	<0.003	<0.003	0.0044	<0.006	0.0035
Organics																							
Carbon Organic (Dissolved)	5.28	7.55	4.3	5.27	5.22	5.88				5.09	15.4	8.26	5.15	3.96	4.66	4.17	3.85	3.38				2.69	2.72
Carbon Organic (Total)	4.76	8	4.17	5.16	4.88	5.35	4.96	5	5.42	4.8	14.1	8.11	4.6	3.96	4.22	3.57	3.8	3.39	3.25	3.27	5.24	2.69	2.45
Nitrogen Organic (Dissolved)	0.138		0.152	0.131							0.193	0.107		0.174									<17
Nitrogen Organic (Total)	0.148			0.139						0.067	0.209	0.172			0.159								29
ALS LAB ID	**L1160966**	**L1200094**	**L1247921**	**L1277099**	**L1307601**	**L1348177**	**L1434002**	**L1475117**	**L1514758**	**L1092874**	**L1113319**	**L1160966**	**L1201474**	**L1247459**	**L1275748**	**L1307601**	**L1348177**	**L1393344**	**L1431355**	**L1475117**	**L1516193**	**L1245169**	**L1277798**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D3.2 - GROUNDWATER QUALITY DATA

Site ID	MW12-01						MW12-02								MW12-04								
Site ID	**MW12-01**	**MW12-01**	**MW12-01**	**MW12-01**	**MW12-01**	**MW12-01**	**MW12-02**	**MW12-02**	**MW12-02**	**MW12-02**	**MW12-02**	**MW12-02**	**MW12-02**	**MW12-02**	**MW12-04**	**MW12-04**	**MW12-04**	**MW12-04**	**MW12-04**	**MW12-04**	**MW12-04**	**MW12-04**	**RES-4**
Analytes	**May-13**	**Aug-13**	**Nov-13**	**Mar-14**	**Jun-14**	**Sep-14**	**Dec-12**	**Mar-13**	**May-13**	**Aug-13**	**Nov-13**	**Mar-14**	**Jun-14**	**Sep-14**	**Dec-12**	**Mar-13**	**May-13**	**Aug-13**	**Nov-13**	**Apr-14**	**Jun-14**	**Sep-14**	**Mar-13**
In Situ Parameters																							
Conductivity µS/cm	2558	2855	3.33	3431	2379	2406		2122	2540	3924	3.25	3401	2469	2435		823	914	1023	1.18	840	847	832	
Oxygen Dissolved %	2	29.3	2.9	79.9	12	6.1		11.2	28.3	35.8	2.4	24.1	17.1	2		0.4	1	56.2	1.2	48.9	16.9		
Oxygen Dissolved	0.22	3.24	0.34	9.15	1.35	0.68	3.56	1.25	3.29	4.09	0.27	2.84	1.85	0.22	0.48	0.05	0.12	6.38	0.15	5.74	1.8		
pH (unitless)	7.38	7.48	7.49	7.64	7.47	7.49	7.36	7.29	7.33	7.59	7.53	7.79	7.56	7.58	7.78	7.72	7.77	7.83	7.94	7.97	7.96	8.01	
Redox Potential mV	224	236	2.17	71.4	99.3	101	167	165	171	221	63.7	30.4	119	87.8	51.6	-76.1	-116	151	-143	-160	-124	55.6	
Salinity ppt	1.95	2.11	1.75	1.81	1.78	1.78		1.62	1.92	2.08	1.7	1.79	1.76	1.76		0.61	0.67	0.73	0.59	0.62	0.59	0.58	
Specific Conductivity µS/cm	3695	3976	2.27	2343	3385	3376	3156	3090	3640	3924	2.18	2281	3340	3343	1159	1217	1333	1447	0.787	1237	1186	1164	
Temperature °C	8.9	10.3	8.22	8.42	9.44	9.96	7.36	8.54	9.17	9.56	7.94	7.76	11.4	10.8	7	7.93	8.54	9.67	7.66	8.16	10.1	10.1	
Total Dissolved Solids	2403	2582	38200	2230	2201	2196		2011	2366	2550	2100	2212	2172	2171		791	866	941	764	806	770	756	
Turbidity NTU	0	1.5	-2.2	1.9	2	1.6		-3.9	0	2.5	-1.9	2.1	2.7	2		3.4	0	6.4	2.7	-0.4	15.7	3.1	
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)		<1								4.7													
Alkalinity (Total as CaCO3)	173	177	189	183	185	179	171	171	176	174	186	169	188	181	219	222	193	182	202	185	186	189	495
Bicarbonate Alkalinity	173	177	189	183	185	179		171	176	174	186	169	188	181		222	193	182	202	185	186	189	
Carbonate Alkalinity	<2	<2	<2	<2	<2	<1		<2	<2	<2	<2	<2	<2	<1		<2	<2	<2	<2	<2	<1	<1	
Color TCU	<5	<5						<5	<5	<5						7.1	<5	<5	<5				5.1
Hardness as CaCO3 (Dissolved)	1810		1870	1950	1860	1920	1730	1740	1780		1830	1890	1810	1880	405	422	359	395		460	415	419	914
Hydroxide Alkalinity	<2	<2	<2	<2	<2	<1		<2	<2	<2	<2	<2	<2	<1		<2	<2	<2	<2	<2	<1	<1	
pH (unitless)	7.98	8.06	7.88	8.07	8.1	8.08	8.1	8.05	7.95	8.09	7.92	8.1	8.13	8.09	8.28	8.24	8.24	8.13	8.25	8.29	8.18	8.28	7.73
Specific Conductivity µS/cm	3280	3260	3290	3350	3440	3410	3120	3290	3260	3240	3260	3340	3360	3370	1150	1260	1210	1220	1260	1250	1200	1180	1910
Total Dissolved Solids	3350	3270	3200	3290	3420	3300	3390	1470	2890	3240	3130	3190	3160	3150	823	772	770	851	838	899	825	791	1290
Total Suspended Solids	8.7	7.3			7.3	3	<3	<3	10	8.6			5.2	<3	7.7	16.2	16	8.1		3.3	24.8	3.7	
Turbidity NTU	0.19	0.19			0.5	0.15	0.72	0.78	0.28	0.74			0.78	0.19	2.27	7.27	3.03	3.92		1	7.71	0.56	0.19
Dissolved Anions																							
Bromide	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Chloride	19	17	20	17	19	17	15	15	17	15	19	15	16	17	6.5	5.6	14.6	18.5	23.1	28.2	24.6	26.6	136
Fluoride	<0.4	0.46	<0.4	<0.4	0.189	0.165	<0.4	0.49	<0.4	<0.4	<0.4	<0.4	0.186	0.175	<0.2	0.35	0.23	0.37	<0.2	<0.2	0.203	0.038	0.44
Sulphate	1700	1720	1730	1790	1790	1800	1650	1710	1720	1740	1720	1800	1790	1760	436	457	436	443	471	484	436	423	524
Nutrients																							
Ammonia (Total)	0.0058	<0.005	<0.005	<0.005	<0.005	<0.005	0.0055	0.0203	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.243	0.211	0.306	0.316	0.321	0.377	0.372	0.397	0.0058
Nitrate (as N)	88.4	89.4	88.5	90.3	88	87.1	76.3	69.6	83.4	82.6	77.7	77.7	83.3	87.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	2.18
Nitrite (as N)	0.318	0.204	0.163	0.194	0.097	0.168	0.527	0.426	0.545	0.533	0.37	0.28	0.451	0.533	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02
Nitrogen (Dissolved)								73.5								0.356							
Nitrogen (Total)	83.5	83.5					76.8	70.1	77.5	73.6					0.333	0.355	0.418	0.417					
Nitrogen Kjeldahl (Total)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.333	0.4	0.449	0.443	0.43	0.446	0.582	0.536	0.37
Orthophosphate (Dissolved)			0.0154	0.0165	0.0183	0.0164	0.0079				0.018	0.0277	0.0269	0.0225	0.0688				0.14	0.126	0.127	0.111	
Phosphorus - Dissolved	0.0183	0.0192	0.0194	0.0185	0.0191	0.0191	0.0075	0.019	0.023	0.0185	0.0213	0.0317	0.0253	0.0248	0.082	0.0816	0.168	0.181	0.16	0.143	0.138	0.131	
Phosphorus - Total		0.0182	0.0193	0.0186	0.0202	0.0169		0.0212		0.0206	0.0216	0.0321	0.0274	0.0195		0.0951		0.198	0.17	0.143	0.18	0.154	
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Dissolved Metals																							
Aluminum	0.0031	0.0021	0.0023	0.0031	0.0041	0.0044	<0.002	0.0017	0.0015	0.0017	0.0016	0.002	0.0041	0.0024	0.0068	0.0043	0.0034	0.0025	0.0025	0.0032	0.0024	0.0193	
Antimony	0.00412	0.00353	0.00372	0.00371	0.00396	0.00364	0.0169	0.0108	0.0107	0.00953	0.00821	0.0075	0.0196	0.017	0.00063	0.00016	0.00012	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Arsenic	0.00521	0.00503	0.00488	0.00472	0.00525	0.00494	0.0229	0.0104	0.0139	0.0159	0.0138	0.011	0.0224	0.0261	0.0118	0.00711	0.00426	0.00473	0.00461	0.00375	0.00433	0.0046	
Barium	0.0404	0.0347	0.0364	0.0326	0.0297	0.031	0.0212	0.0334	0.0304	0.023	0.026	0.0275	0.0217	0.0224	0.0696	0.0983	0.0801	0.0746	0.0703	0.0627	0.0558	0.0506	
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Boron	0.109	0.101	0.12	0.115	0.105	0.117	0.117	0.094	0.116	0.102	0.12	0.116	0.114	0.12	0.098	0.087	0.097	0.096	0.102	0.098	0.092	0.09	
Cadmium	0.000712	<0.0008	<0.0015	<0.0012	<0.001	<0.0001	<0.00068	<0.001	<0.001	<0.0008	<0.0014	<0.0012	<0.001	<0.0002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00004	<0.00003	<0.00005	<0.00001	
Calcium	238	242	240	258	254	245	233	235	232	243	235	230	238	237	43.4	51.4	40.3	41.7	45.4	47.6	45.7	45.7	
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Cobalt	0.00092	0.00088	0.00081	0.00074	0.00073	0.00071	0.00275	0.00187	0.00171	0.00179	0.00166	0.00098	0.00159	0.0021	0.00045	0.00084	0.00064	0.00048	0.00043	0.00041	0.00045	0.00039	
Copper	0.00311	0.00335	0.00301	0.00271	0.00312	0.00479	0.0173	0.00744	0.00654	0.00851	0.00798	0.00331	0.00579	0.0094	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00043	
Dissolved Cadmium (by saltwater				<0.00015	<0.00015	<0.00012						<0.00015	<0.00015	<0.00012						<0.00002	<0.00002		
Iron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.012	0.024	0.03	0.024	0.026	0.024	0.078	0.081	
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	
Lithium	0.0294	0.0282	0.033	0.0331	0.028	0.0318	0.0301	0.0341	0.0311	0.0288	0.0336	0.0343	0.0305	0.036	0.00255	0.00119	0.00166	0.00238	0.0035	0.0028	0.00278	0.0029	
Magnesium	295	296	310	317	298	318	278	279	291	291	303	321	296	312	72	71.4	62.8	70.6	79.4	82.7	73.1	74.1	
Manganese	0.068	0.0598	0.0545	0.0529	0.0458	0.0461	0.11	0.121	0.109	0.101	0.1	0.0752	0.0845	0.0991	0.092	0.394	0.346	0.3	0.272	0.24	0.256	0.206	
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000022	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
Molybdenum	3.26	3.1	3.41	3.59	3.62	3.55	3.33	3.33	3.32	3.03	3.32	3.39	3.48	3.44	0.204	0.181	0.166	0.148	0.145	0.12	0.125	0.101	
Nickel	0.00999	0.0124	0.0128	0.0123	0.0142	0.0136	0.0282	0.0265	0.0224	0.0232	0.0214	0.0271	0.0235	0.0218	0.00123	0.00331	0.00188	0.00137	0.00149	0.00162	0.00146	0.00129	
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.067	0.088	0.165	0.17	0.162	0.135	0.153	0.121	
Potassium	41.3	44.1	49.5	46.8	45.8	46.6	38.1	44.8	39.4	37.9	42.4	56.9	44.2	41	43.7	42.3	37.5	36.9	40.8	39	39.7	38	
Selenium	0.0423	0.0414	0.0437	0.044	0.0463	0.0394	0.04	0.0396	0.0395	0.0371	0.0401	0.0418	0.0414	0.0409	0.00017	0.00012	0.00042	0.00015	<0.0001	<0.0001	<0.0001	<0.0001	
Silicon	6.92	7.23	7.36	7.33	7.19	7.27	7.29	6.97	7.13	7.45	7.52	7.98	7.31	7.31	12.4	11.3	10.8	11.6	12.3	12.8	12.3	12.1	
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
Sodium	145	144	150	151	132	148	153	160	159	145	154	154	135	152	92.2	101	116	106	97.8	91.3	92.4	89.9	
Strontium	3.35	3.01	3.4	3.44	3.51	3.45	3.65	3.46	3.63	3.28	3.61	3.47	3.69	3.72	0.276	0.272	0.257	0.287	0.318	0.351	0.341	0.324	
Sulphur	532	538	553	553	561	587	539	510	529	531	553	562	550	571	143	150	136	144	149	153	142	137	
Thallium	0.000015	0.000017	0.000012	0.000012	<0.00002	<0.00002	0.000042	0.000037	0.000031	0.000025	0.000025	0.00003	0.000021	0.000021	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	0.00012	0.00017	<0.0001	<0.0001	0.00015	<0.0002	<0.0001	<0.0001	0.00025	<0.0001	<0.0001	<0.0001	<0.0001	0.00017	0.00019	
Titanium	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Uranium	0.0138	0.0138	0.0142	0.0145	0.0153	0.0152	0.0117	0.0109	0.0131	0.0127	0.0131	0.0103	0.0135	0.0147	0.000847	0.00128	0.00133	0.00105	0.000958	0.00099	0.0011	0.000998	
Vanadium	0.0031	0.003	0.0028	0.0027	0.0029	0.0029	0.0039	0.0018	0.0023	0.0032	0.0031	0.0022	0.0023	0.0029	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Zinc	0.0022	0.0024	0.0027	0.0038	<0.002	0.0032	<0.002	0.001	0.0021	0.0014	0.0011	0.0016	0.0044	0.0041	<0.001	<0.001	<0.001	<0.001	<0.001	0.0015	0.0012	0.0016	
Total Metals																							
Aluminum	0.0072	0.0036	0.0045	0.0056	0.0168	0.0166	0.0264	0.0294	0.017	0.0151	0.004	0.0201	0.0406	0.009	0.216	0.352	0.299	0.175	0.0656	0.0861	0.434	0.0036	<0.01
Antimony	0.00434	0.00354	0.00389	0.00377	0.00412	0.00395	0.0163	0.0107	0.0109	0.00938	0.00865	0.00753	0.0191	0.0171	0.00061	0.00019	0.00014	<0.0001	<0.0001	0.00013	0.00019	<0.0001	<0.0005
Arsenic	0.0053	0.00494	0.00506	0.00486	0.00531	0.00564	0.0226	0.0102	0.0135	0.016	0.0138	0.0112	0.0227	0.0259	0.0113	0.00733	0.00436	0.00436	0.00463	0.00379	0.00445	0.00474	0.00375
Barium	0.0422	0.0365	0.0359	0.0314	0.0284	0.0335	0.0221	0.0328	0.0298	0.0239	0.026	0.0273	0.0225	0.0224	0.0695	0.106	0.0849	0.0737	0.0711	0.0616	0.0588	0.0515	0.063
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Boron	0.124	0.108	0.132	0.127	0.112	0.132	0.11	0.094	0.127	0.108	0.132	0.125	0.14	0.127	0.1	0.089	0.1	0.1	0.119	0.102	0.096	0.101	0.11
Cadmium	<0.0009	<0.0008	0.0016	<0.0012	<0.001	<0.0002	<0.00068	<0.001	<0.001	<0.00085	<0.0015	<0.0012	<0.001	<0.0001	<0.00006	<0.00005	<0.00005	<0.00005	<0.00005	<0.00003	<0.0001	<0.00001	<0.0002
Calcium	236	242	234	254	242	257	225	222	228	241	228	224	233	246	42.2	52.6	39.6	40.1	45.3	46.1	42.9	46.5	119
Chromium	<0.0002	0.00023	0.00012	<0.0002	0.00024	<0.0002	0.00037	0.00035	0.00023	0.00034	0.00015	0.00021	0.00043	0.00011	0.00062	0.0011	0.00078	0.00054	0.00027	0.00041	0.00139	<0.0001	<0.002
Cobalt	0.00101	0.00093	0.00084	0.00081	0.00091	0.00081	0.00283	0.002	0.0018	0.00182	0.0017	0.00102	0.00165	0.00215	0.00061	0.00112	0.00089	0.00059	0.00051	0.0005	0.00083	0.0004	
Copper	0.00486	0.0035	0.00346	0.00309	0.004	0.0055	0.0205	0.00945	0.00734	0.0102	0.00838	0.00451	0.0083	0.0105	0.00216	0.00254	0.00222	0.00089	0.00085	0.00114	0.00362	<0.0005	0.0066
Iron	0.029	0.016	0.014	0.033	0.102	0.036	0.036	0.043	0.026	0.024	0.012	0.029	0.082	0.011	0.304	0.516	0.415	0.261	0.104	0.145	0.697	0.056	<0.03
Lead	<0.00005	<0.00005	<0.00005	<0.00015	0.00034	<0.0001	<0.0001	<0.00005	0.000062	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.00005	0.000132	0.000127	0.000052	<0.00005	0.000161	0.000188	<0.00005	<0.0005
Lithium	0.0336	0.0279	0.0341	0.0338	0.0287	0.0345	0.0277	0.0343	0.0342	0.0296	0.0345	0.0343	0.0325	0.0337	0.00263	0.00157	0.00168	0.0025	0.00365	0.00285	0.00282	0.00303	
Magnesium	300	298	308	314	297	340	270	275	284	294	302	317	300	326	70.4	72.2	64.6	67.4	78.5	76.8	68.8	75.8	150
Manganese	0.0751	0.0606	0.0563	0.0539	0.0499	0.0519	0.111	0.123	0.114	0.103	0.101	0.0767	0.0892	0.101	0.0996	0.418	0.364	0.292	0.287	0.251	0.269	0.211	<0.002
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000056	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0002
Molybdenum	3.54	3.13	3.64	3.57	3.71	3.95	3.12	3.26	3.44	3.05	3.44	3.42	3.46	3.67	0.208	0.194	0.172	0.149	0.154	0.127	0.124	0.111	
Nickel	0.0114	0.0122	0.0131	0.0129	0.0139	0.0154	0.0293	0.0283	0.0228	0.0241	0.0222	0.028	0.0247	0.0227	0.00192	0.00489	0.00311	0.00201	0.00197	0.00208	0.00344	0.00123	
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.077	0.114	0.186	0.178	0.161	0.155	0.179	0.127	
Potassium	42.3	43.5	50.3	45.7	44.1	49.7	36.4	42.5	38.6	38.2	43.2	55.4	43.3	42.9	41.4	43.3	38.9	36.6	43.3	37.2	36.8	39	21.4
Selenium	0.0447	0.0413	0.0443	0.0431	0.0454	0.0437	0.0388	0.038	0.0376	0.0377	0.0396	0.0418	0.0406	0.041	0.00018	0.00015	0.0004	0.00017	<0.0001	<0.0001	0.0001	<0.0001	0.0029
Silicon	6.99	7.25	7.39	7.31	7.13	7.7	7.16	6.9	7.12	7.67	7.55	7.96	7.43	7.69	12.5	12.5	11.7	11.7	12.4	12.5	12.5	12.3	
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
Sodium	152	144	154	145	131	161	154	162	157	150	160	156	142	161	91.4	104	115	101	102	90.7	88.7	93.1	128
Strontium	3.62	2.98	3.57	3.41	3.62	3.74	3.36	3.49	3.74	3.11	3.73	3.47	3.7	3.91	0.287	0.286	0.266	0.292	0.336	0.344	0.337	0.346	
Sulphur	540	552	564	561	563	633	533	518	526	553	572	571	569	602	142	156	140	141	155	152	139	143	
Thallium	0.000023	0.000021	0.000014	0.000015	<0.00002	<0.00002	0.000039	0.000036	0.000035	0.000026	0.000023	0.00003	0.000022	0.000021	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
Tin	0.00019	0.00018	0.00011	0.00046	0.00148	0.00051	<0.0002	0.00017	0.00027	<0.0001	<0.0001	0.00024	<0.0002	<0.0001	0.00013	0.00047	0.0002	0.00011	<0.0001	0.00056	0.00057	<0.0001	
Titanium	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	0.012	0.024	0.02	0.011	<0.01	<0.01	0.026	<0.01	
Total Cadmium (by saltwater extra				<0.00015	<0.00015	<0.0001						<0.00015	<0.00015	<0.0001						<0.00002	<0.00002		
Uranium	0.0146	0.0141	0.0153	0.0148	0.016	0.0166	0.0112	0.0106	0.0139	0.0129	0.0132	0.0101	0.0134	0.0153	0.000862	0.00137	0.0014	0.00104	0.00101	0.000998	0.00105	0.00111	0.0046
Vanadium	0.0033	0.0033	0.0032	0.003	0.0032	0.0034	0.0041	0.0019	0.0025	0.0036	0.0034	0.0026	0.0028	0.003	0.0013	0.0019	0.0015	<0.001	<0.001	<0.001	0.0023	<0.001	
Zinc	<0.003	0.0032	0.0031	<0.003	<0.006	0.0065	<0.006	0.0039	<0.003	<0.003	<0.003	<0.003	<0.006	0.0049	<0.003	<0.003	0.0079	<0.003	<0.003	<0.003	0.0034	<0.003	<0.05
Organics																							
Carbon Organic (Dissolved)	2.51	2.72	2.59				2.49	2.71	2.72	2.58	2.6				2.6	3.81	2.6	2.5	2.48				
Carbon Organic (Total)	2.42	2.82	2.41	2.34	2.25	2.48	2.44	2.5	2.57	2.63	2.48	2.24	2.28	2.38	2	3.6	2.52	2.49	2.26	2.32	2.16	2.29	7.11
Nitrogen Organic (Dissolved)								<15								0.144							
Nitrogen Organic (Total)								<14								0.143							
ALS LAB ID	**L1308855**	**L1348395**	**L1394557**	**L1435486**	**L1475661**	**L1514758**	**L1245169**	**L1277798**	**L1308855**	**L1348395**	**L1394557**	**L1435486**	**L1475661**	**L1514758**	**L1245169**	**L1277798**	**L1308855**	**L1348177**	**L1393344**	**L1439433**	**L1478436**	**L1514758**	**L1281919-**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D3.2 - GROUNDWATER QUALITY DATA

Site ID	Residential Wells							Pumping Well	
Site ID	RES-4	RES-6	RES-2	RES-3	RES-5	RES-1	RES-1	PW01	PW01
Analytes	Oct-14	Oct-14	Oct-14	Oct-14	Oct-14	Mar-13	Oct-14	Oct-14	Oct-14
In Situ Parameters									
Conductivity µS/cm	901	2403	1555	911	2935		2445		
Oxygen Dissolved %	6.2	24.6	47.8	61.3	65.8		42.2		
Oxygen Dissolved	0.69	2.67	4.83	6.63	7.18		4.46		
pH (unitless)	7.45	7.59	7.54	7.78	7.94		7.8		
Redox Potential mV	167	-28.6	21.2	143	103		56.3		
Salinity ppt	0.62	1.71	0.99	0.61	2.13		1.76		
Specific Conductivity µS/cm	1230	3254	1941	1226	4004		3342		
Temperature °C	11	11.3	14.6	11.6	11.1		10.9		
Total Dissolved Solids	0.8	2.11	1.26	0.797	2.6		2.17		
Turbidity NTU									
Physical Tests									
Acidity to pH 8.3 (as CaCO3)									
Alkalinity (Total as CaCO3)	427	243	285	488	24.9	450	671	63	57.1
Bicarbonate Alkalinity	427	243	285	488	24.9		671	63	57.1
Carbonate Alkalinity	<2	<2	<2	<1	<2		<20	<1	<1
Color TCU						<5			
Hardness as CaCO3 (Dissolved)	489	1600	1100	606	437	2580	1340	1080	1700
Hydroxide Alkalinity	<2	<2	<2	<1	<2		<20	<1	<1
pH (unitless)	8.15	8.03	7.99	8.35	7.33	7.89	8.23	7.92	7.77
Specific Conductivity µS/cm	1200	3160	1910	1260	4080	4650	3260	2460	3580
Total Dissolved Solids	815	3110	1790	805	3150	4380	2510	2050	3520
Total Suspended Solids	<3	<3	<3	<3	<3		20.7	<3	<3
Turbidity NTU	0.23	5.66	1.09	1.16	0.5	151	11.2	1.38	2.18
Dissolved Anions									
Bromide	<0.5	<1	<1	<0.5	<1		<1	<1	<1
Chloride	76.1	32	14	44.2	98	253	133	37	64
Fluoride	0.293	0.098	0.317	0.28	<0.4	0.44	0.168	0.108	0.116
Sulphate	200	1960	1010	209	2090	2440	1230	1440	2290
Nutrients									
Ammonia (Total)	0.0058	0.945	<0.005	0.0073	0.106	0.0292	0.009	0.0214	0.0114
Nitrate (as N)	0.317	<0.1	<0.1	0.071	0.24	21.1	43.3	<0.1	<0.1
Nitrite (as N)	<0.01	<0.02	<0.02	<0.01	<0.02	0.123	0.028	<0.02	<0.02
Nitrogen (Dissolved)									
Nitrogen (Total)									
Nitrogen Kjeldahl (Total)	0.502	1.05	0.12	0.602	0.169	<0.05	<0.05	0.098	0.068
Orthophosphate (Dissolved)	0.124	<0.001	0.0021	0.0656	<0.001		0.0092	<0.001	<0.001
Phosphorus - Dissolved	0.164	<0.002	0.0025	0.066	<0.002		0.0121	<0.002	<0.002
Phosphorus - Total	0.16	0.0037	0.006	0.0638	<0.002		0.0581	<0.002	<0.002
Cyanide									
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005
Dissolved Metals									
Aluminum								<0.001	<0.002
Antimony								<0.0001	<0.0002
Arsenic								0.0185	0.0289
Barium								0.0117	0.0105
Beryllium								<0.0001	<0.0002
Bismuth								<0.0005	<0.001
Boron								0.512	0.391
Cadmium								<0.00001	<0.00002
Calcium								238	377
Chromium								<0.0001	<0.0002
Cobalt								<0.0001	<0.0002
Copper								<0.0002	<0.0004
Dissolved Cadmium (by saltwater									
Iron								0.386	0.632
Lead								<0.00005	<0.0001
Lithium								0.035	0.0563
Magnesium								118	184
Manganese								0.0319	0.0575
Mercury								<0.00001	<0.00001
Molybdenum								0.278	0.188
Nickel								0.00133	<0.001
Phosphorus								<0.05	<0.05
Potassium								22.3	15.3
Selenium								<0.0001	<0.0002
Silicon								13.7	16.9
Silver								<0.00001	<0.00002
Sodium								176	281
Strontium								4.09	6.8
Sulphur								447	720
Thallium								<0.00001	<0.00002
Tin								<0.0001	<0.0002
Titanium								<0.01	<0.02
Uranium								0.000015	<0.00002
Vanadium								<0.001	<0.002
Zinc								0.0063	0.0037
Total Metals									
Aluminum	<0.003	<0.003	<0.003	0.0034	<0.015	0.011	<0.006	0.0039	<0.006
Antimony	0.00018	<0.0001	0.00011	0.0002	<0.0005	<0.0005	0.00035	<0.0001	<0.0002
Arsenic	0.0052	<0.0001	0.00093	0.00312	<0.0005	0.0129	0.00459	0.019	0.0289
Barium	0.0365	0.00798	0.0294	0.0601	0.00507	<0.02	0.00626	0.0116	0.0103
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005		<0.0002	<0.0001	<0.0002
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0025		<0.001	<0.0005	<0.001
Boron	0.068	0.385	0.172	0.049	0.466	0.22	0.227	0.542	0.394
Cadmium	0.000014	<0.00001	0.000015	<0.00001	<0.00005	<0.0002	0.000034	<0.00001	<0.00002
Calcium	65.1	257	242	94.8	173	276	154	237	360
Chromium	0.00019	0.00032	0.00011	0.00028	<0.0005	<0.002	0.00159	0.00026	<0.0002
Cobalt	<0.0001	<0.0001	0.00012	<0.0001	<0.0005		0.00072	<0.0001	<0.0002
Copper	0.0125	0.00075	0.0913	0.0207	0.0063	0.0156	0.0259	0.00098	0.0016
Iron	<0.01	0.353	0.314	0.17	0.059	22.3	0.353	0.416	0.639
Lead	0.000243	0.000103	0.000519	0.000439	0.00272	0.00369	0.00578	0.000102	<0.0001
Lithium	0.00799	0.0886	0.0109	0.00785	0.0066		0.0146	0.0358	0.0567
Magnesium	79.3	234	121	89.6	1.4	459	233	119	180
Manganese	0.00987	0.158	0.037	0.0231	0.0136	0.31	0.0158	0.0329	0.0575
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	<0.00001	<0.00001	<0.00001
Molybdenum	0.0236	0.0037	0.0156	0.021	0.02		0.0159	0.285	0.185
Nickel	0.00397	<0.0005	0.00191	0.0013	0.004		0.0348	0.00141	<0.001
Phosphorus	0.138	<0.05	<0.05				<0.05	<0.05	<0.05
Potassium	21.6	20.7	13.9	14.5	84.4	39.3	30.5	22.6	14.8
Selenium	0.00038	<0.0001	0.00011	0.00081	<0.0005	0.044	0.0246	<0.0001	<0.0002
Silicon	9.08	15.1	11.4	10.3	0.933		7.78	13.8	16.2
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005		<0.00002	<0.00001	<0.00002
Sodium	86	239	81.8	62.9	751	385	349	178	283
Strontium	0.703	6.71	2.98	0.974	4.24		2.37	4.16	6.57
Sulphur	67.5	624	327	67.7	648		411	453	702
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005		<0.00002	<0.00001	<0.00002
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005		0.00042	<0.0001	<0.0002
Titanium	<0.01	<0.01	<0.01	<0.01	<0.05		<0.02	<0.01	<0.02
Total Cadmium (by saltwater extra									
Uranium	0.00297	0.000091	0.00179	0.00282	<0.00005	0.0225	0.0146	0.000018	<0.00002
Vanadium	0.0066	<0.001	0.0018	0.0046	<0.005		0.0034	<0.001	<0.002
Zinc	0.0094	0.02	0.0484	0.406	0.242	<0.05	0.167	0.0099	<0.006
Organics									
Carbon Organic (Dissolved)								1.81	1.88
Carbon Organic (Total)	9.33	2.45	2	11.3	0.77	5.9	3.28	1.74	1.93
Nitrogen Organic (Dissolved)									
Nitrogen Organic (Total)									
ALS LAB ID	.1527496-1	1527496-1	1527496-1	1528012-1	1528012-1	1280813-1	1531115-1	1537086-1	1540210-1

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D3.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

APPENDIX D4

GWQ SUMMARY GUIDELINE IRRIGATION, LIVESTOCK AND RECREATION

(Pages D4-1 to D4-19)

TABLE D4.1 - AGRICULTURAL GUIDELINES

PAGE 1 OF 1

Analytes	BCWQG-Rec[2]	BCWQG-Irrigation[3]	BCWQG-Livestock[4]	CEQG-Irrigation[5]	CEQG-Livestock[6]
Physical Tests					
Color (TCU)	15				
Conductivity (µS/cm)		700	1400		
Total Dissolved Solids		500	1000	500	3000
Turbidity (NTU)		10	5		
Dissolved Anions					
Chlorate			3		
Chloride		100	600	100	
Fluoride		1 / 2[16]	1	1	1[20]
Sulphate			1000		1000
Nutrients					
Nitrate (as N)			100		
Dissolved Nitrate+Nitrite	10				100
Nitrite (as N)	1		10		10
Metals					
Aluminum	0.2[13]	5	5	5	5
Arsenic		0.1	0.025	0.1	0.025
Beryllium		0.1	0.1	0.1	0.1
Boron		0.5	5	0.5	5
Cadmium		0.0051	0.08	0.0051	0.08
Calcium			1000		1000
Chromium					
Chromium III		0.0049	0.05	0.0049	0.05
Chromium VI		0.008		0.008	0.05
Cobalt		0.05	1	0.05	1
Copper	1[14]	0.2	0.3	0.2[17]	1
Iron				5	
Lead	0.05[14]	0.2	0.1	0.2	0.1
Lithium		0.75[18]		2.5	
Manganese		0.2		0.2	
Mercury	1[14]	0.0002	0.0003		0.003
Molybdenum		0.02[19]	0.05	0.01	0.5
Nickel		0.2	1	0.2	1
Selenium		0.01	0.03	0.02	0.05
Uranium		0.01	0.2	0.01	0.2
Vanadium		0.1	0.1	0.1	0.1
Zinc	5[14]	1	2	1	50

M:\1\01\00246\31\A\Report\3 - Baseline Water Quality - GW SW\Rev0\Appendix\Appendix D - GWQ Data Tables\[Appendix D2 D3 D4 D5 - GWQ Data Compared with Guidelines Rev0.xlsx]D4.1 - AGRICULTURAL GU

NOTES:

1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. BCWQG-Rec: BC WATER QUALITY GUIDELINE FOR RECREATIONAL WATER USE.
3. BCWQG-Irrigation: BC WATER QUALITY GUIDELINES FOR IRRIGATION.
4. BCWQG-Livestock: BC WATER QUALITY GUIDELINES FOR LIVESTOCK.
5. CEQG-Irrigation: CCME GUIDELINES FOR IRRIGATION.
6. CEQG-Livestock CCME GUIDELINES FOR IRRIGATION.
7. THIS SHADING INDICATES THE VALUE EXCEEDS THE LIMITS OF BCWQG-Irrigation.
8. THIS SHADING INDICATES THE VALUE EXCEEDS THE LIMITS OF BCWQG-Livestock.
9. THIS SHADING INDICATES THE VALUE EXCEEDS THE LIMITS OF BCWQG-Irrigation AND BCWQG-Livestock.
10. **GREEN BOLD TEXT INDICATES THE VALUE EXCEEDS THE LIMITS OF CCME-Irrigation.**
11. **GREY BOLD TEXT INDICATES THE VALUE EXCEEDS THE LIMITS OF CCME-Livestock.**
12. **RED BOLD TEXT INDICATES THE VALUE EXCEEDS THE LIMITS OF CCME-Irrigation AND CCME-Livestock.**
13. GUIDELINE APPLIES TO THE DISSOLVED CONCENTRATION ONLY.
14. GUIDELINE APPLIES TO THE TOTAL CONCENTRATION ONLY.
15. DETECTION LIMIT VALUES ARE DISPLAYED WITH LESS THAN SYMBOL (<).
16. GUIDELINE IS 1 mg/L FOR CHRONIC EXPOSURE (AVERAGE OVER 30 DAYS) AND 2 mg/L FOR SHORT-TERM EXPOSURE (SINGLE SAMPLES).
17. GUIDELINE IS CROP-DEPENDENT; THE MOST CONSERVATIVE VALUE IS FOR CEREALS.
18. GUIDELINE IS CROP-DEPENDENT; THE MOST CONSERVATIVE VALUE IS FOR CITRUS.
19. GUIDELINE IS FOR POORLY DRAINED SOIL WITH A RATIO OF Cu : Mo GREATER THAN 2 : 1.
20. GUIDELINE IS FOR FEED WATER CONTAINING FLUORIDE.

NOTES:

1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D4.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D4.2 - GROUNDWATER QUALITY DATA

Site ID	MDL	AJGW01-D		AJGW02-D		AJGW02-S		AJGW03-D														
Site ID		AJGW01-DA	JGW01-DA	JGW02-DA	JGW02-DA	JGW02-SA	JGW02-SA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-D
Analytes		Mar-08	Jun-10	Jul-08	Jun-10	Jul-08	Sep-08	Jul-08	Sep-08	Jun-10	Aug-10	Nov-10	Mar-11	May-11	Jul-11	Nov-11	Feb-12	Jun-12	Aug-12	Dec-12	Mar-13	May-13
In Situ Parameters																						
Conductivity µS/cm	...	2081	1483	732	810	3651	2317	916	893	934	930	907	913	883	1040	887	843	1325	1220	895	853	941
Oxygen Dissolved %	...	51.7	39.7	50.4	36	39.5	30.2	31.6	6.5	0.8	0.4	4.7	2.7	2.4	29.3		28.5	3.7		2.3	1.1	5.4
Oxygen Dissolved	...	5.95	4.37	5.44	4.03	4.02	3.35	3.48	0.73	0.09	0.04	0.53	0.31	0.27	3.14	157	3.16	0.37	0.1	0.27	0.13	0.61
pH (unitless)	...	8.57	7.74	9.33	10.5	6.81	7.38	7.46	7.56	7.61	6.57	7.74	7.57	7.32	7.83	7.62	7.93	7.75	6.16	7.75	7.65	7.03
Redox Potential mV	...		-28.2	-172	-17.8	-29.7	-49.7	-67	-57.8	-82.3	-1.7	-68.6	-44.5	-61.5			-287		-54	-100	-114	36.9
Salinity ppt	...													0.602			0.64		0.6		0.62	0.66
Specific Conductivity µS/cm	...	1434	2034	976	1134	4442	3185	1263	1245	1288	1260	1290	1278	1234	1379	1262	1273	928		1281	1241	1310
Temperature °C	...		10.8	11.7	10	12.8	10.7	10.6	10.3	10.6	11.3	9.44	10.1	10.1	12.1	9.43	7.29	9.24	12.2	9.26	8.63	10.2
Total Dissolved Solids	...										819	839	831	803			927		779	832	807	852
Turbidity NTU	...														0	-5.8	1.6	0	3.7	2	18.6	0
Physical Tests																						
Acidity to pH 8.3 (as CaCO3)	1	9.2	4.6	<1	<1	24	41.1	5.3	5.8	2	5.3	4.6	5.8	4.3	6.1				4.8		6.3	<1
Alkalinity (Total as CaCO3)	1 to 2	293	254	59.8	<1	469	688	292	281	277	275	275	276	286	287	272	282	272	284	279	275	257
Bicarbonate Alkalinity	1 to 2	293	254	23.4	<1	469	688	292	281	277	275	275	276	286	287		282	272		279	275	257
Carbonate Alkalinity	1 to 2	<2	<2	36.4	<1	<1	<1	<2	<2	<2	<2	<1	<2	<2	<2		<2	<1		<1	<2	<2
Color TCU	5	<5	<5	<5	<5	23	63.7	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	1080	1120	243	292	1090		586	588	647	633	596	599	613	619	609	596	594	629	607	617	558
Hydroxide Alkalinity	1 to 2	<2	<2	<1	<1	<1	<1	<2	<2	<2	<2	<1	<2	<2	<2		<2	<1		<1	<2	<2
pH (unitless)	0.01 to 0.1	8.04	8.14	9.14	9.38	7.57	7.63	8.04	8.04	8.21	8.1	8.11	8.05	8.1	8.1	8.12	8.19	8.1	8.08	8.33	8.11	8.3
Specific Conductivity µS/cm	2	2150	1990	920	1030	4120	3190	1250	1240	1250	1270	1280	1270	1280	1320	1230	1210	1200	1220	1240	1250	1150
Total Dissolved Solids	1 to 2	1430	1640	661	768	4180	2970	881	881	896	944	891	922	928	974	916	879	913	984	926	854	853
Total Suspended Solids	3	338	86.5	144	24.3	151	39.3	1280	<3	4.7	8	4	<3	<3	<3	3	3.3	<3	11.9	10	<5	<3
Turbidity NTU	0.1	191	53.7	160	19.2	89.4	25.3	128	2.24	1.23	0.58	1.04	0.75	0.8	0.65	1.29	3.72	0.66	2.83	1.85	2.07	0.67
Dissolved Anions																						
Bromide	0.05 to 2.495	<2.5	<0.5	<0.05	<0.5	<2.5	<5	<0.05	<0.05	<0.5	<0.5	<0.5	<2.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	0.5 to 1	62	41.6	3.38	<5	152	104	8.29	7.25	7.3	9.1	8.1	9.9	11.1	10.7	8.3	8.5	8.7	9.6	9.1	8.4	8.9
Fluoride	0.02 to 0.4	<1	<0.2		<0.2	1.7	8.1	0.183	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.38	0.22	0.22	0.21	<0.2	<0.2	0.35	0.2
Sulphate	0.5 to 1	763	835	367	484	2020	1260	415	414	446	458	459	457	465	496	463	428	448	460	466	451	419
Nutrients																						
Ammonia (Total)	0.005 to 0.05	0.108	<0.01	0.122	0.265	0.603	0.064		<0.02	0.015	<0.005	0.0087	0.0075	<0.005	0.0065	0.0153	0.0315	0.0698	0.0171	0.0127	0.0182	0.0473
Nitrate (as N)	0.005 to 0.1	35.3	25.7	<0.005	0.063	0.35	<0.5	<0.005	<0.005	<0.05	<0.05	<0.05	<0.05	<0.05	0.078	0.074	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrite (as N)	0.001 to 0.02	0.185	0.022	<0.001	<0.01	0.132	0.23	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	0.012	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen (Dissolved)	0.05 to 0.1													0.15	0.17	0.07	0.05	0.26		0.132	0.093	
Nitrogen (Total)	0.0025 to 0.11																					
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.87	<0.5	0.35	0.348	8.41	7.77		0.092	0.087	0.105	0.116	0.134	0.153	0.08	0.146	0.163	0.295	0.146	0.128	0.158	0.173
Orthophosphate (Dissolved)	0.001 to 0.01	0.0421	0.0455	0.0182	0.0033	0.0605	0.0489	0.0175	0.0161		0.0165	0.0145	0.0152	0.0165					0.0161			
Phosphorus - Dissolved	0.002 to 0.02		0.148		0.0352						0.0169			0.0156	0.0152	0.0197	0.0288	0.0219		0.0148	0.0188	0.0275
Phosphorus - Total	0.002 to 0.02	0.0996		0.213		0.337	0.288	0.701	0.0204	0.0214	0.0217	0.0195	0.02	0.0271	0.0188	0.0289	0.0424	0.0305	0.0388	0.0237	0.0273	0.0335
Cyanide																						
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.005	0.007	<0.005	<0.005	<0.005	0.0352		<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																						
Aluminum	0.001 to 0.025	<0.025	<0.025	0.016	<0.01	<0.05		0.197	<0.01	<0.01	<0.01	<0.01		<0.01	<0.005	<0.003	<0.003	0.0016	<0.005	0.0013	0.0012	0.0024
Antimony	0.0001 to 0.0025	<0.0025	<0.0025	<0.001	<0.001	<0.005		<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.0005	<0.0001	0.00014	0.00019	<0.0005	<0.0001	<0.0001	0.00016
Arsenic	0.0001 to 0.0025	0.0046	0.0062	0.0026	<0.001	<0.005		0.0062	0.0064	0.0066	0.0058	0.0064		0.0057	0.00554	0.00552	0.00591	0.00558	0.00592	0.00565	0.0054	0.00551
Barium	5E-005 to 0.02	0.175	0.062	0.213	0.169	0.058		0.037	0.028	0.029	0.029	0.03		0.028	0.027	0.0275	0.0299	0.031	0.034	0.0281	0.0278	0.0304
Beryllium	0.0001 to 0.005	<0.005	<0.005	<0.002	<0.002	<0.01		<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	<0.001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2													<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.2	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	0.26		<0.1	<0.1	<0.1	<0.1	<0.1		<0.1	<0.1	0.031	0.032	0.042	<0.1	0.031	0.033	0.033
Cadmium	1E-005 to 8.5E-005	<0.000085	0.000119	<0.00085	<0.001	<0.00017		0.000481	<0.000034	0.000055	<0.00015	<0.0002		<0.000034	<0.0003	0.000013	0.000015	0.000033	<0.000017	0.000012	<0.00001	0.000013
Calcium	0.05 to 0.1	135	139	53.2	96.1	177		73.3	73.8	79.3	78	74.8		77.7	76.1	76	73	75.1	77.8	73.9	75.2	70
Chromium	0.0001 to 0.018	<0.005	<0.005	<0.002	<0.002	<0.01		<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	<0.001	0.00013	<0.0001	0.00043	<0.001	0.00027	<0.0001	0.00021
Cobalt	0.0001 to 0.0015	0.0036	<0.0015	<0.0006	<0.0006	0.0192		<0.0006	<0.0006	<0.0006	<0.0006	<0.0006		<0.0006	<0.0003	0.00012	0.00066	0.00018	<0.0003	0.00013	0.00014	0.00043
Copper	0.0002 to 0.006	<0.005	<0.005	<0.002	<0.002	0.093		<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	<0.002	<0.0005	<0.0005	<0.0002	<0.001	<0.0002	<0.0002	<0.0002
Dissolved Cadmium (by saltwater	0.00002																					
Iron	0.01 to 0.03	0.041	<0.03	<0.03	<0.03	0.231		0.085	0.074	0.089	0.082	0.088		0.106	0.097	0.136	0.156	0.124	0.134	0.125	0.14	0.079
Lead	5E-005 to 0.0025	<0.0025	<0.0025	<0.001	<0.001	<0.005		<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.0005	<0.00005	<0.00005	<0.00005	<0.0005	0.00008	<0.00005	<0.00005
Lithium	0.0005 to 0.025	<0.025	<0.025	0.013	0.011	<0.05		<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.005	0.00479	0.00503	0.00484	0.0052	0.00496	0.00463	0.00442
Magnesium	0.1	180	188	26.7	12.7	157		97.8	97.9	109	106	99.4		102	104	102	100	98.8	106	103	104	93.1
Manganese	5E-005 to 0.0015	1.04	0.12	0.00335	<0.0006	1.71		0.287	0.268	0.325	0.269	0.287		0.292	0.249	0.327	0.321	0.296	0.317	0.316	0.284	0.271
Mercury	1E-005 to 5E-005	<0.00002	<0.00001	<0.00002	<0.00001	0.000032		<0.00002	<0.00002	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.556	0.593	0.492	0.377	0.231		0.0452	0.0472	0.0551	0.0437	0.0455		0.0458	0.043	0.0388	0.0467	0.0449	0.0513	0.0497	0.0478	0.0529
Nickel	0.0005 to 0.005	0.0235	0.0128	<0.002	<0.002	0.028		<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	<0.001	0.00114	0.00108	0.00098	<0.001	0.00075	0.00157	0.00627
Phosphorus	0.05 to 0.3													<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.05	<0.05	<0.05
Potassium	0.05 to 2	47.5	50.1	29.5	29.2	30.7		17.6	17.7	19.4	19.1	18.1		17.6	17.6	20.2	18.7	16.9	20.5	18.8	18.7	17.2
Selenium	0.0001 to 0.006	0.0317	0.0416	<0.002	<0.002	<0.01		<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	<0.001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001
Silicon	0.05													9.82	9.44	9.88	9.61	9.8	9.86	9.52	9.62	9.33
Silver	1E-005 to 0.0001	<0.0001	<0.0001	<0.00004	<0.00004	<0.0002		0.000086	<0.00004	<0.00004	<0.00004	<0.00004		<0.00004	<0.00002	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	64.2	63.3	72.1	116	280		64.6	64.2	69.1	68.8	66.8		67.6	62.9	69.5	63.5	57.4	67.1	62.3	57.8	55.6
Strontium	0.0001 to 0.005													0.86	0.809	0.922	0.838	0.782	0.888	0.845	0.782	0.767
Sulphur	0.5																			150	146	131
Thallium	1E-005 to 0.001	<0.001	<0.001	<0.0004	<0.0004	<0.002		<0.0004	<0.0004	<0.0004	<0.0004	<0.0004		<0.0004	<0.0002	<0.00001	<0.00001	<0.00001	<0.0002	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0025	<0.0025	<0.001	<0.001	<0.005		<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.02		<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01
Uranium	1E-005 to 0.001	0.0077	0.0065	<0.0004	<0.0004	0.0077		0.00284	0.00294	0.00287	0.00266	0.0025		0.00262	0.00261	0.00242	0.00265	0.00263	0.00278	0.00284	0.00271	0.00254
Vanadium	0.001 to 0.03	<0.005	<0.005	<0.002	0.0034	<0.01		<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	0.001 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.01		<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.003	<0.003	<0.001	<0.005	0.0017	<0.001	0.0018
Total Metals																						
Aluminum	0.003 to 0.025	8.22	1.98	19.5	0.712	2.63	0.245	14.3	0.143	0.055	0.019	0.03	<0.005	0.027	0.0068	0.0294	0.0173	0.0092	0.171	0.0785	0.0351	0.0118
Antimony	0.0001 to 0.0025	<0.0025	<0.0025	<0.001	<0.001	<0.005	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.0005	0.00013	0.00014	0.00032	<0.0005	0.00013	0.00011	0.00035
Arsenic	0.0001 to 0.0025	0.0145	0.0094	0.02	0.0018	0.0055	0.0067	0.0269	0.0064	0.0067	0.0054	0.0054	0.0046	0.0054	0.00535	0.00533	0.00552	0.00574	0.00631	0.00536	0.00565	0.00559
Barium	5E-005 to 0.02	0.236	0.082	0.643	0.237	0.147	0.067	0.216	0.029	0.029	0.029	0.031	0.029	0.028	0.029	0.0279	0.0306	0.0323	0.033	0.0287	0.0291	0.0329
Beryllium	0.0001 to 0.005	<0.005	<0.005	<0.002	<0.002	<0.01	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.002	<0.001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001
Bismuth	0.0005 to 0.2												<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.2	<0.0005	<0.0005	<0.0005
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	0.46	0.25	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.037	0.036	0.054	<0.1	0.035	0.036	0.039
Cadmium	1E-005 to 8.5E-005	0.0006	0.000156	<0.00094	<0.0012	0.00055	<0.0004	0.000626	0.000051	0.000082	<0.0002	<0.0002	<0.0002	<0.000034	<0.0003	0.000644	0.000134	0.000092	0.00018	0.00004	0.000022	0.000046
Calcium	0.05 to 0.1	164	138	98.4	100	241	203	128	71.9	76.3	77.4	75.8	75.8	77.6	76.9	77.5	74	74.1	75.5	72.2	75.3	68.1
Chromium	0.0001 to 0.005	0.0729	0.0205	0.0579	0.0032	0.016	<0.005	0.038	0.0067	<0.002	<0.002	<0.002	<0.001	<0.002	<0.001	0.00048	0.00033	0.0009	0.0015	0.0015	0.00027	0.00042
Cobalt	0.0001 to 0.0015	0.029	0.005	0.0236	0.00114	0.0296	0.0121	0.0166	<0.0006	<0.0006	<0.0006	<0.0006	0.00052	<0.0006	<0.0003	0.00017	0.00018	0.00026	0.00039	0.00026	0.0002	0.00071
Copper	0.0005 to 0.007	0.145	0.0212	0.214	0.0132	0.607	0.363	0.0847	0.0023	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0005	<0.0005	0.00061	0.0023	0.00319	<0.0005	0.00081
Iron	0.01 to 0.03	12.4	3.05	26.8	0.974	3.46	4.36	24.5	0.324	0.168	0.122	0.145	0.096	0.141	0.109	0.181	0.173	0.155	0.416	0.249	0.172	0.067
Lead	5E-005 to 0.0025	<0.0025	<0.0025	0.0054	<0.001	<0.005	<0.0025	0.0049	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.00005	<0.00005	<0.00005	<0.0005	0.000153	<0.00005	<0.00005
Lithium	0.0005 to 0.025	<0.025	<0.025	0.024	0.011	<0.05	<0.025	0.012	<0.01	<0.01	<0.01	<0.01	<0.005	<0.01	<0.005	0.00454	0.00488	0.00508	0.0056	0.00522	0.00469	0.0045
Magnesium	0.1	191	187	63.6	14.7	253	211	114	96.5	104	105	103	100	105	109	102	101	99.4	104	98	103	91.4
Manganese	5E-005 to 0.0015	1.54	0.228	0.902	0.041	2.23	2.99	1.08	0.288	0.349	0.283	0.29	0.25	0.306	0.269	0.343	0.326	0.29	0.326	0.296	0.291	0.278
Mercury	1E-005 to 5E-005	0.000048	<0.00001	<0.00002	<0.00001	0.00028	0.000057	0.000354	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	5E-005 to 0.005	0.485	0.598	0.499	0.399	0.279	0.293	0.0456	0.0475	0.0594	0.0469	0.0458	0.0431	0.049	0.0482	0.0408	0.0479	0.0457	0.0551	0.0506	0.0494	0.0566
Nickel	0.0005 to 0.005	0.215	0.0535	0.0947	0.0046	0.055	0.0224	0.0786	0.0042	0.0021	<0.002	<0.002	0.0012	<0.002	<0.001	0.00101	0.00098	0.00206	0.0036	0.00231	0.00198	0.0136
Phosphorus	0.05 to 0.3												<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.05	<0.05	<0.05
Potassium	0.05 to 2	47.7	48.8	34.2	28.4	54.9	25.8	20.2	17.4	18.6	18.9	19	17.8	17.4	18.6	17.4	18.5	16.6	20	18	18.2	17.5
Selenium	0.0001 to 0.006	0.0318	0.0412	<0.002	<0.002	<0.01	<0.005	0.0049	<0.002	<0.002	<0.002	<0.002	<0.001	<0.002	<0.001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001
Silicon	0.05												9.87	9.77	9.7	10.1	9.86	9.98	10.2	9.37	9.68	9.42
Silver	1E-005 to 0.0001	<0.0001	<0.0001	0.00015	<0.00004	0.0008	0.00011	0.000234	<0.00004	<0.00004	<0.00004	<0.00004	<0.00002	<0.00004	<0.00002	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001
Sodium	0.05 to 2	63	61.8	73.4	113	475	279	65.8	62.7	66.3	68	69.4	67.6	67	65.3	71.1	63.3	56.5	65.6	60.1	59.5	56.6
Strontium	0.0001 to 0.005												0.847	0.852	0.848	0.891	0.834	0.789	0.87	0.861	0.807	0.795
Sulphur	0.5																			147	151	130
Thallium	1E-005 to 0.001	<0.001	<0.001	<0.0004	<0.0004	<0.002	<0.001	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0002	<0.0004	<0.0002	<0.00001	<0.00001	<0.00001	<0.0002	<0.00001	<0.00001	<0.00001
Tin	0.0001 to 0.0025	<0.0025	<0.0025	0.0015	0.0011	<0.005	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001
Titanium	0.01	0.271	0.096	1.19	0.047	0.121	0.022	0.832	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	0.014	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extr	0.00002																					
Uranium	1E-005 to 0.001	0.0077	0.0066	0.00149	<0.0004	0.0094	0.007	0.00367	0.00301	0.00294	0.00283	0.00267	0.00252	0.00279	0.00252	0.00236	0.00266	0.00254	0.00277	0.00277	0.00277	0.00253
Vanadium	0.001 to 0.03	0.0293	0.0107	0.0827	0.0069	0.017	0.0056	0.0605	<0.002	<0.002	<0.002	<0.002	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	0.003 to 0.006	0.0194	0.0058	0.0489	<0.005	0.043	<0.005	0.0447	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.003	<0.003	<0.003	<0.005	<0.003	0.0045	0.0038
Organics																						
Carbon Organic (Dissolved)	0.5 to 5	3.63	2.67	2.93	2.51	114		2.51	2.54	2.38	2.42	2.57	2.68	1.9	2.64	2.49	2.44	4.4	2.64	2.69	2.95	2.47
Carbon Organic (Total)	0.5 to 5													1.97	2.53	2.38	2.41	3.72	2.56	2.74	2.73	2.37
Nitrogen Organic (Dissolved)	0.05 to 0.26													0.147	0.073	<0.05	<0.05	0.19		0.119	0.075	
Nitrogen Organic (Total)	0.05 to 0.3													0.157	0.073	0.131	0.131	0.226		0.115	0.14	
ALS LAB ID		L613954	L894378	L655020	L894378	L653846	L678833	L655304	L678594	L893847	L924086	L957406	L990458	L1007006	L1036787	L1081224	L1113319	L1159542	L1201474	L1246516	L1275064	L1306577

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D4.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D4.2 - GROUNDWATER QUALITY DATA

Site ID							AJGW04-D		AJGW05-S												AJGW06-D		
Site ID	AJGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW04-DA	JGW04-DA	JGW05-SA	JGW05-SA	JGW05-SA	JGW05-SA	JGW06-DA	JGW06-DA	JGW06-DA	JGW06-DA	JGW06-DA	JGW06-DA	JGW06-DA	JGW06-DA	JGW06-DA	JGW06-DA	JGW06-D
Analytes	Aug-13	Nov-13	Mar-14	May-14	Jun-14	Sep-14	Sep-08	Nov-08	Apr-08	Sep-08	Nov-08	Jun-10	Apr-08	Jul-08	Sep-08	Nov-08	May-10	Aug-10	Nov-10	Mar-11	May-11	Jul-11	Dec-12
In Situ Parameters																							
Conductivity µS/cm	1113	1.22	1126	902	852	872	1573	1247		2007	1217	1701		480	671	996	530	521	497	530	545	583	447
Oxygen Dissolved %	1.6	10.6	2.7	-1.3	27	7.5	43.2	14.3		43.9	16.1	30.4		17.2		10.5	12.7	1	6.8	9	11	8.4	1.2
Oxygen Dissolved	0.18	1.22	0.32	-0.14	3.04	0.84	4.6	1.78		5.05	1.91	3.35		1.94		1.25	1.38	0.11	0.79	1.02	1.17	0.92	0.15
pH (unitless)	7.54	7.74	7.72	6.49	7.68	7.72	7.68	8.6		7.97	8.12	7.94		8.66	8.22	8.64	7.97	7.12	7.55	7.99	7.14	8.14	8.04
Redox Potential mV	79.5	101	-77.1	-55.3	-59.9	-3.8	-64.4	-91.5		-71.2	-75.6	-79.6		-139	-93.3	-93.8		-66	151	-33.2	-16.4		177
Salinity ppt	0.77	0.63	0.63	0.63	0.6	0.62															0.36		0.33
Specific Conductivity µS/cm	1517	0.851	879	1259	1197	1239	2246	1985		2854	1807	2351		673		1476	721	698	723	753	736	796	677
Temperature °C	11	9.01	9.16	10.1	9.91	9.51	9.28	5.63		9.45	7.99	10.7		9.95	9.88	7.98	11.1	11.7	8.65	9.49	11.3	11	7.07
Total Dissolved Solids	987	810	820	819	778	805												453	470	490			440
Turbidity NTU	1.2	1.2	2.1	-2.1	-2.3	0.9															20.8	0	-1.8
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)				3			11	4	4.4	7.3	7.5	5	<1	<1	2.2	1.1	2	2.5	1.7	3.9	1.5	4.8	2.7
Alkalinity (Total as CaCO3)	293	289	279	288	294	278	523	384	82.1	141	155	174	84.9	79.9	91.8	94.9	109	109	107	123	126	125	112
Bicarbonate Alkalinity	293	289	279	288	294	278	523	384	82.1	141	155	174	84.9	72.2	91.8	94.9	109	109	107	123	126	125	112
Carbonate Alkalinity	<2	<2	<2	<2	<2	<2	<1	<2	<2	<2	<2	<2	<1	7.7	<2	<2	<2	<2	<1	<2	<2	<2	<2
Color TCU	<5						11.4	11	21.1	6.9	6.5	6	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hardness as CaCO3 (Dissolved)	607	615	625	602	618	610	435	345	1080	990	976	963	150	129	152	149	160	173	166	181	194	191	176
Hydroxide Alkalinity	<2	<2	<2	<2	<2	<2	<1	<2	<2	<2	<2	<2	<1	<1	<2	<2	<2	<2	<1	<2	<2	<2	<2
pH (unitless)	8.23	8.27	8.27	8.14	8.23	8.26	7.95	8	7.84	7.71	7.62	8.07	8.48	8.55	8.13	8.14	8.2	8.17	8.21	7.94	8.14	8.03	8.24
Specific Conductivity µS/cm	1300	1250	1260	1230	1240	1280	2300	2190	2650	2940	2390	2410	685	665	690	676	686	695	700	741	761	785	727
Total Dissolved Solids	940	906	907	943	960	959	1680	1610	2220	2340	2020	2060	447	434	456	449	472	468	464	497	517	521	495
Total Suspended Solids	<3			<3	<3	<3	73.1	93.3	105	27.1	828	218	114	18.8	<3	79	13.5	17	12.5	<3	4.6	<3	<3
Turbidity NTU	0.96			0.93	1.48	0.76	93.4		91.4	27		110	41.5	15.5	1.74		4.96	2.72	7.89	2.7	1.91	0.61	0.62
Dissolved Anions																							
Bromide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.5	<2.5	<0.5	<5	<2.5	<1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.05	<1.2	<0.25	<0.25	<0.5
Chloride	9.2	9.2	8.9	9.4	11	9.7	41	40	31	<50	30	20	1.51	1.55	1.56	1.39	1.72	<5	1.96	<5	4.1	3.5	<5
Fluoride	0.31	0.22	0.33	<0.2	0.22	0.229	57	<1	0.37	<2	<1	<0.4	0.369	0.38	0.328	0.326	0.303	0.26	0.306	<0.2	0.24	0.4	0.26
Sulphate	464	462	462	466	468	471	642	751	1450	1570	1260	1290	241	235	247	234	239	252	237	249	259	278	265
Nutrients																							
Ammonia (Total)	0.0068	0.0166	0.0091	0.0083	0.0165	0.0071	0.03	0.0652	<0.02	0.029	<0.005	0.156	<0.02		0.031	<0.005	<0.02	0.0123	0.022	<0.005	<0.005	<0.005	<0.005
Nitrate (as N)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.25	0.675	<0.5	<0.25	<0.1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.05	<0.025	<0.025	<0.05
Nitrite (as N)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.111	1.02	0.111	0.14	0.959	<0.02	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.01	<0.005	0.006	0.012
Nitrogen (Dissolved)																					0.12	0.13	0.143
Nitrogen (Total)																							
Nitrogen Kjeldahl (Total)	0.128	0.189	0.138	0.136	0.168	0.133	0.637		1.34	0.244		0.38	0.175		0.094		0.125	0.459	0.084	0.129	0.15	0.114	0.081
Orthophosphate (Dissolved)		0.017	0.0181	0.0159	0.0188	0.0158	0.267	0.519	<0.001	<0.001	0.0054	0.0339	0.0136	0.0236	0.0105	0.0109	0.005	0.0076	0.0041	<0.001			
Phosphorus - Dissolved	0.0175	0.0164	0.018	0.0183	0.0188	0.015		0.497			0.0108	0.372				0.0189		0.0076			0.0046	0.0111	0.0096
Phosphorus - Total	0.0232	0.0236	0.0252	0.0239	0.0295	0.0191	0.59	0.67	0.0993	0.0549	1.08		0.0949	0.0523	0.0178	0.09	0.0249	0.0129	0.0329	0.023	0.0086	0.0156	0.0143
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005		<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	0.0074		<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005		<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																							
Aluminum	0.0011	0.0016	0.0011	0.0022	0.0023	0.0016	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.0125	0.0399	<0.005	0.0056	<0.005	<0.005	<0.005	<0.01	<0.01	0.0056	0.0026
Antimony	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.00131	0.0007	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.0001
Arsenic	0.00532	0.00574	0.00545	0.00557	0.00577	0.00569	0.0085	0.0221	<0.0025	<0.0025	<0.0025	<0.0025	0.0159	0.0271	0.0334	0.025	0.0241	0.0223	0.0213	0.0215	0.0199	0.0202	0.0141
Barium	0.0253	0.0276	0.0282	0.0279	0.0282	0.0281	0.173	0.147	0.138	0.088	0.077	0.078	0.033	0.021	0.021	0.032	<0.02	0.024	0.023	<0.02	<0.02	0.024	0.0228
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005														<0.2	<0.2	<0.2	<0.0005
Boron	0.026	0.033	0.032	0.031	0.035	0.029	0.13	0.11	<0.1	0.13	0.11	0.11	0.21	0.2	0.22	0.22	0.23	0.24	0.25	0.24	0.25	0.25	0.221
Cadmium	<0.00001	<0.00002	<0.00002	<0.00002	0.000018	0.000021	<0.000085	0.000135	<0.000085	<0.000085	<0.000085	<0.000085	<0.000017	<0.0002	<0.000017	<0.00041	<0.0002	<0.00015	<0.00015	<0.00018	<0.000034	<0.0002	0.000013
Calcium	78.9	75.1	76.5	71.6	77.6	75.7	96.8	77.2	251	205	196	186	35.7	29.9	34.8	34	37.1	39.7	37.7	41.3	44	44.1	40.7
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0013	<0.001	<0.001	<0.001	0.0011	<0.001	0.0017	<0.002	<0.002	<0.001	<0.0001
Cobalt	0.00011	0.00014	0.00012	0.00013	0.00015	0.00012	<0.0015	<0.0015	<0.0015	0.0083	0.0043	0.0033	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0006	<0.0006	<0.0003	<0.0001
Copper	<0.0002	<0.0002	<0.0002	0.00026	0.00034	<0.0002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.002	<0.002	<0.003	<0.0002
Dissolved Cadmium (by saltwater			<0.00002																				
Iron	0.119	0.119	0.107	0.106	0.114	0.129	<0.03	<0.03	<0.03	0.191	0.063	<0.03	<0.03	<0.03	<0.03	0.033	0.045	0.036	0.04	0.043	0.039	0.064	0.062
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.00005
Lithium	0.00377	0.00516	0.00447	0.00455	0.0051	0.00502	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	0.00308
Magnesium	99.6	104	105	103	103	102	46.9	36.9	109	116	118	121	14.7	13.1	15.9	15.6	16.4	18.1	17.5	19	20.4	19.6	18.1
Manganese	0.284	0.306	0.292	0.303	0.283	0.291		0.656	0.242	3.87	2.19	1.5	0.0117	0.0319	0.0758	0.107	0.0704	0.0743	0.0822	0.0592	0.072	0.103	0.0832
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.047	0.0492	0.0464	0.0465	0.0505	0.0464	0.0152	0.0376	0.0703	0.0726	0.0862	0.102	0.0494	0.0511	0.0468	0.0478	0.0422	0.0385	0.04	0.0409	0.0394	0.0393	0.0426
Nickel	0.00058	0.00099	0.00068	0.00069	0.00122	0.00129	<0.005	<0.005	0.0565	0.0435	0.016	0.0189	<0.001	<0.001	<0.001	<0.001	0.0011	<0.001	0.0013	<0.002	<0.002	<0.001	0.00076
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05														<0.3	<0.3	<0.3	<0.05
Potassium	18.4	18.5	18.3	17.1	19.1	18.4	42.4	39.3	26	36.6	29.8	32.4	2.1	2	<2	<2	<2	<2	<2	<2	<2	<2	1.36
Selenium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0056	0.004	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.0001
Silicon	9.35	9.6	9.68	9.47	9.66	10.1														5.15	5.14	5.08	4.97
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00004	<0.00004	<0.00002	<0.00001
Sodium	62.6	63.3	58.9	61.5	60.8	64.6	379	341	217	344	218	208	91.6	90	87.2	83.7	91.2	97	97.3	100	102	95.6	93.3
Strontium	0.789	0.708	0.798	0.826	0.895	0.852														1.03	1.11	1.03	1.06
Sulphur	145	142	152	150	149	156																	89.5
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0004	<0.0002	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.00271	0.00283	0.00269	0.00271	0.00301	0.0028	<0.001	0.0021	0.0017	0.0057	0.0046	0.0037	0.00414	0.00257	0.00191	0.00188	0.00106	0.00104	0.00096	0.00108	0.00104	0.00092	0.000514
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0012	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001
Zinc	0.0016	0.0018	0.0018	<0.001	0.0064	0.0018	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0083	<0.005	<0.005	<0.005	<0.001
Total Metals																							
Aluminum	0.021	0.013	0.0129	0.0182	0.0513	0.0218	1.6	0.678	3.43	1.68	17.3	7.27	1.77	0.24	0.0236	1.02	0.199	0.179	0.0603	0.011	0.268	0.0073	0.01
Antimony	0.00011	0.00016	<0.0001	<0.0001	0.00018	0.00016	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.0012	0.0007	<0.0005	0.00105	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	0.00013
Arsenic	0.00528	0.00576	0.00563	0.00555	0.00577	0.00579	0.012	0.0226	0.0029	0.0035	0.0096	0.0061	0.0154	0.029	0.036	0.024	0.0231	0.0205	0.0215	0.0208	0.0194	0.0187	0.0147
Barium	0.0249	0.0274	0.0275	0.0262	0.0288	0.0282	0.195	0.159	0.223	0.112	0.439	0.211	0.098	0.032	0.022	0.065	0.027	0.027	0.02	<0.02	0.02	0.024	0.023
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005														<0.2	<0.2	<0.2	<0.0005
Boron	0.029	0.042	0.034	0.038	0.038	0.034	0.13	0.11	<0.1	0.12	0.12	0.12	0.2	0.2	0.22	0.22	0.23	0.24	0.24	0.24	0.26	0.26	0.232
Cadmium	0.000018	<0.00004	<0.00003	<0.00004	0.00005	0.000049	0.000162	0.000197	0.000136	0.000159	0.00123	0.00055	0.000046	<0.0003	0.000041	<0.00041	<0.0002	<0.0002	<0.00016	<0.00024	0.000051	<0.0003	0.000026
Calcium	77.1	74.6	76	71.1	74.9	73.9	96.8	82.6	267	198	224	194	38.6	31.5	35.3	41.8	37.7	39.7	36.6	40.9	45.4	43.3	41.4
Chromium	0.00037	0.00021	0.00012	0.00027	0.00067	0.00028	0.02	0.0604	0.017	0.0052	0.0648	0.0257	0.0029	0.0012	0.0066	0.0922	0.0045	0.0018	0.0027	<0.002	<0.002	<0.001	0.00022
Cobalt	0.00014	0.00017	0.00016	0.00015	0.0002	0.00018	0.0027	<0.0015	0.0056	0.0104	0.0294	0.0161	0.00128	0.00067	0.00039	0.00184	0.00036	<0.0003	0.00031	0.00398	<0.0006	<0.0003	<0.0001
Copper	<0.0005	<0.0005	0.00055	0.0009	0.00238	0.00081	0.0124	0.0052	0.0406	0.0217	0.213	0.0913	0.0166	0.0011	<0.001	0.0119	<0.02	<0.004	<0.001	<0.002	<0.002	<0.002	0.00055
Iron	0.151	0.137	0.136	0.145	0.207	0.176	2.45	1.26	6.41	2.97	27.7	11.1	2.58	0.461	0.08	1.65	0.26	0.216	0.122	0.065	0.191	0.092	0.103
Lead	<0.00005	<0.00005	<0.00005	<0.00005	0.000057	<0.00005	<0.0025	<0.0025	<0.0025	<0.0025	0.0064	0.0028	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.00005
Lithium	0.00341	0.00523	0.0052	0.00487	0.00477	0.00516	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.01	<0.005	0.00366
Magnesium	99.3	105	101	98.7	102	101	48.6	37.4	107	115	134	129	15.2	13.6	16.3	16.4	16.2	17.8	17.5	18.7	20.8	19.7	18.6
Manganese	0.298	0.313	0.303	0.299	0.292	0.303	2.94	0.702	0.357	3.84	2.8	1.93	0.0652	0.051	0.0773	0.157	0.0984	0.0922	0.0612	0.0604	0.0761	0.107	0.096
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	0.000052	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0461	0.0516	0.0491	0.049	0.0503	0.0498	0.0394	0.0459	0.0591	0.0727	0.0948	0.101	0.0463	0.0509	0.0488	0.0487	0.0444	0.0426	0.0395	0.0425	0.0437	0.0425	0.0443
Nickel	0.0008	0.00121	0.00084	0.00088	0.00176	0.00124	0.0239	0.0308	0.0784	0.0506	0.0921	0.0579	0.0029	0.0013	0.0039	0.0472	0.0037	0.0017	0.0024	<0.002	<0.002	<0.001	0.0011
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05														<0.3	<0.3	<0.3	<0.05
Potassium	18.3	19.2	18.5	17.3	18.6	18.2	40.3	37.5	25.7	34	30.3	33.9	2.3	2.1	<2	<2	<2	<2	<2	<2	<2	<2	1.41
Selenium	0.00011	<0.0001	0.00013	<0.0001	<0.0001	<0.0001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0047	0.0046	0.0011	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.0001
Silicon	9.29	9.75	9.74	9.36	9.83	10.1														5.13	6.13	5.07	5.03
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0001	<0.0001	<0.0001	<0.0001	0.00015	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	0.000087	<0.00004	<0.00002	<0.00001
Sodium	61.3	64.2	63.2	63.1	62.3	64.2	368	333	222	325	204	216	86.3	91	89.4	82.4	89.6	95.2	97.9	99.1	103	96	95.1
Strontium	0.771	0.717	0.838	0.83	0.85	0.898														1.02	1.13	1.05	1.06
Sulphur	149	151	157	154	155	157																	91.5
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0004	<0.0002	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0025	<0.0025	0.0035	<0.0025	<0.0025	<0.0025	<0.0005	<0.0005	<0.0005	0.00069	0.00093	0.00095	<0.0005	<0.001	<0.001	<0.0005	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.078	0.036	0.238	0.134	1.22	0.545	0.116	0.017	<0.01	0.053	<0.01	<0.01	<0.01	<0.01	0.011	<0.01	<0.01
Total Cadmium (by saltwater ext			<0.00002																				
Uranium	0.00282	0.00287	0.00271	0.00273	0.00283	0.00285	<0.001	0.0021	0.0021	0.0058	0.0054	0.0041	0.00407	0.0028	0.00198	0.00213	0.00121	0.0012	0.00104	0.00114	0.00121	0.00087	0.00052
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0066	<0.005	0.0161	0.0093	0.0907	0.039	0.0095	0.0029	0.0011	0.0042	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001
Zinc	<0.003	<0.003	<0.003	<0.003	0.0087	0.0036	<0.005	<0.005	0.0142	<0.005	0.0612	0.0243	<0.005	<0.005	<0.005	<0.005	<0.005	0.0099	0.007	<0.005	<0.005	<0.005	<0.003
Organics																							
Carbon Organic (Dissolved)	2.81	2.39					123	14.1	10.3	26.4	9.22	8.88	3.73	2.75	4.12	2.91	2.66	2.66	4.19	4.6	4.14	2.87	2.94
Carbon Organic (Total)	2.41	2.18	2.16	2.37	2.18	2.26															3.43	2.79	2.54
Nitrogen Organic (Dissolved)																					0.12	0.123	0.128
Nitrogen Organic (Total)																					0.15	0.113	0.081
ALS LAB ID	L1346553	L1392959	L1430651	L1452371	L1470495	L1517413	L678833	L710078	L623639	L678833	L710078	L894378	L623639	L655304	L679955	L710078	L892818	L924086	L957406	L990459	L1007395	L1036787	L1249108

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D4.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D4.2 - GROUNDWATER QUALITY DATA

Site ID	AJGW06-D	AJGW06-D	AJGW06-D	AJGW06-D	AJGW06-D	AJGW06-D	AJGW06-D	AJGW06-D
Analytes	**Mar-13**	**May-13**	**Aug-13**	**Nov-13**	**Mar-14**	**May-14**	**Jun-14**	**Sep-14**
In Situ Parameters								
Conductivity µS/cm	448	567	613	0.681	706	515	522	535
Oxygen Dissolved %	14.5	3.9	2.3	2.3	5.6	3.7	4.9	
Oxygen Dissolved	1.71	0.45	0.25	0.28	0.65	0.42	0.59	
pH (unitless)	8.18	8.01	7.97	8.11	8.07	8.22	8.06	8.01
Redox Potential mV	-91.3	-178	52.2	0.443	-89.9	-103	-141	-134
Salinity ppt	0.34	0.4	0.4	0.33	0.35	0.37	0.36	0.37
Specific Conductivity µS/cm	688	815	818	0.438	481	748	744	790
Temperature °C	6.68	9.02	11.9	6.21	8.44	8.74	9.35	10
Total Dissolved Solids	446	530	532	-140000	459	486	483	487
Turbidity NTU	113	0	1	1.3	1.6	6.2	1.5	2
Physical Tests								
Acidity to pH 8.3 (as CaCO3)	3.1							
Alkalinity (Total as CaCO3)	159	115	122	117	106	108	112	113
Bicarbonate Alkalinity	159	115	122	117	106	108	112	113
Carbonate Alkalinity	<2	<2	<2	<2	<2	<1	<1	<1
Color TCU	<5	<5	<5					
Hardness as CaCO3 (Dissolved)	177	183	178	172	177	181	179	172
Hydroxide Alkalinity	<2	<2	<2	<2	<2	<1	<1	<1
pH (unitless)	8.21	8.21	8.1	8.17	8.25	7.88	8.14	8.18
Specific Conductivity µS/cm	727	736	748	731	728	735	739	756
Total Dissolved Solids	476	486	518	495	509	486	500	508
Total Suspended Solids	<3	<3	<3			<3	<3	<3
Turbidity NTU	0.39	0.26	0.37			0.31	0.44	0.53
Dissolved Anions								
Bromide	<0.05	<0.5	<0.25	<0.25	<0.5	<0.05	<0.05	<0.5
Chloride	2.13	<5	<2.5	3.3	<5	2.51	2.67	<5
Fluoride	0.309	0.25	0.34	0.28	0.45	0.299	0.3	0.041
Sulphate	258	270	265	278	274	258	260	277
Nutrients								
Ammonia (Total)	<0.005	<0.005	<0.005	0.0105	<0.005	<0.005	<0.005	<0.005
Nitrate (as N)	<0.005	<0.05	<0.025	<0.025	<0.05	<0.005	0.0102	<0.05
Nitrite (as N)	<0.001	<0.01	<0.005	<0.005	<0.01	<0.001	<0.001	<0.01
Nitrogen (Dissolved)	0.06							
Nitrogen (Total)								
Nitrogen Kjeldahl (Total)	0.082	0.085	0.082	0.087	0.085	0.075	0.109	0.117
Orthophosphate (Dissolved)				0.0076	0.0079	0.0093	0.0093	0.0103
Phosphorus - Dissolved	0.0082	0.0101	0.0113	0.0094	0.0095	0.0087	0.0107	0.0115
Phosphorus - Total	0.0109		0.0124	0.0119	0.0116	0.0106	0.0129	0.0136
Cyanide								
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals								
Aluminum	0.0021	0.0019	0.0023	0.002	0.0013	0.0023	0.0015	0.0018
Antimony	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0176	0.0152	0.0161	0.0148	0.0152	0.0153	0.0152	0.0142
Barium	0.0184	0.0201	0.0201	0.02	0.0179	0.0175	0.019	0.0201
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.217	0.209	0.184	0.206	0.186	0.227	0.213	0.217
Cadmium	<0.00001	<0.00001	0.000013	<0.00001	<0.00002	0.000011	<0.00005	<0.00001
Calcium	40.6	42.1	41.2	40.1	41.6	41.5	41.1	40
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Dissolved Cadmium (by saltwater					<0.00002		<0.00002	
Iron	0.07	0.066	0.059	0.083	0.066	0.064	0.075	0.081
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.00324	0.00294	0.00287	0.00309	0.00316	0.00277	0.00297	0.00297
Magnesium	18.3	18.8	18.2	17.4	17.8	18.7	18.6	17.4
Manganese	0.08	0.0904	0.101	0.0971	0.0809	0.0852	0.0978	0.102
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0413	0.0421	0.0431	0.0427	0.0398	0.0411	0.0407	0.0405
Nickel	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	1.38	1.45	1.35	1.36	1.39	1.34	1.38	1.21
Selenium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Silicon	5	5.08	4.89	5.13	5.12	5.1	5.04	4.73
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	87.5	84.7	89.7	87.6	89.4	90.4	86.7	94.5
Strontium	0.917	0.933	0.958	0.96	0.937	0.968	1.01	0.972
Sulphur	86.5	86.6	82.7	93.8	91.9	90.2	88.4	94.3
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.000564	0.00053	0.000522	0.000478	0.000441	0.0005	0.000514	0.00043
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	<0.001	<0.001	<0.001	0.0012	<0.001	<0.001	0.0017	0.0023
Total Metals								
Aluminum	0.0053	0.0033	0.0048	0.0043	<0.003	0.0072	0.0052	0.0138
Antimony	0.00018	0.00012	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	0.00012
Arsenic	0.0175	0.016	0.0158	0.0153	0.0152	0.0154	0.0155	0.0148
Barium	0.019	0.0211	0.0203	0.0189	0.0181	0.0179	0.0193	0.0211
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.228	0.225	0.207	0.22	0.199	0.213	0.232	0.225
Cadmium	0.000016	0.000017	0.000017	<0.00002	<0.00003	0.000014	<0.00005	0.00002
Calcium	40.4	41	41.8	40.5	41.5	41.7	40.7	43.5
Chromium	0.00012	0.00012	0.0002	<0.0001	<0.0001	0.00013	<0.0001	0.00019
Cobalt	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Iron	0.092	0.076	0.084	0.092	0.076	0.089	0.087	0.123
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.00317	0.00303	0.00309	0.00319	0.00325	0.0025	0.00311	0.00281
Magnesium	18.3	18.9	18.6	17.9	17.9	18.6	18.7	19.7
Manganese	0.0858	0.0974	0.103	0.0987	0.0903	0.0925	0.0988	0.113
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0442	0.0468	0.0466	0.0462	0.0422	0.0407	0.0412	0.0429
Nickel	0.00052	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	1.41	1.56	1.4	1.44	1.41	1.31	1.39	1.39
Selenium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Silicon	5.01	5.09	5.01	5.15	5.1	5.13	5.08	5.36
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	87.8	88.1	89.9	90.1	93.3	92.2	90	94
Strontium	0.958	0.96	1.03	0.974	0.963	0.958	1.01	0.987
Sulphur	88.5	87.5	87	97.9	93.8	89.6	89.2	96.6
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extr					<0.00002		<0.00002	
Uranium	0.000608	0.000564	0.000543	0.000495	0.000469	0.000499	0.000521	0.000457
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Organics								
Carbon Organic (Dissolved)	2.93	2.52	2.91	2.75				
Carbon Organic (Total)	2.81	2.47	2.8	2.35	2.18	2.51	2.46	2.83
Nitrogen Organic (Dissolved)	0.055							
Nitrogen Organic (Total)	0.082							
ALS LAB ID	**L1275064**	**L1308855**	**L1346553**	**L1394041**	**L1430651**	**L1461077**	**L1478436**	**L1514758**

Site ID	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D
Analytes	**Apr-08**	**Jul-08**	**Sep-08**	**Nov-08**	**Jun-10**	**Aug-10**	**Nov-10**	**Mar-11**	**May-11**	**Jul-11**	**Oct-11**	**Feb-12**	**Jun-12**	**Aug-12**	**Dec-12**
In Situ Parameters															
Conductivity µS/cm		733		1052	688	659	629	626	615	689	864	631	975	887	605
Oxygen Dissolved %		56.4		20.7	7.5	1.6	32.2	10	2.6		1.6	3.4	21.9		4.4
Oxygen Dissolved		5.92		2.36	0.79	0.18	3.6	1.11	0.29		0.18	0.39	2	2.12	0.48
pH (unitless)		7.68	7.58	8.34	7.59	7.24	7.81	7.62	7.68	8.16	7.92	8.04	7.98	7.89	7.94
Redox Potential mV		-79.1	-60.4	-83.7	-97.5	-130	-113	-71.6	144			-294		-165	-232
Salinity ppt									0.42			0.45		0.4	0.41
Specific Conductivity µS/cm		966	911	1493	903	886	902	868	841	961	875	911	729		847
Temperature °C		12.4	10.6	9.58	12.5	11.6	9.19	10.4	10.9	10.3	9.98	8.91	11.4	14.8	10.5
Total Dissolved Solids						757	586	575	546			592		568	544
Turbidity NTU									2.5		-1.4	2	0	0	-1
Physical Tests															
Acidity to pH 8.3 (as CaCO3)	4.2	2	3.8	3.9	1.8	4.2	3.9	5.7	4.1	1.8	2			2.8	
Alkalinity (Total as CaCO3)	217	208	214	224	228	218	211	227	230	220	232	225	219	218	222
Bicarbonate Alkalinity	217	208	214	224	228	218	211	227	230	220	232	225	219		222
Carbonate Alkalinity	<2	<2	<2	<2	<2	<2	<1	<2	<2	<2	<2	<2	<1		<2
Color TCU	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Hardness as CaCO3 (Dissolved)	449	426	443	423	416	436	408	407	413	415	413	410	398	374	403
Hydroxide Alkalinity	<2	<2	<2	<2	<2	<2	<1	<2	<2	<2	<2	<2	<1		<2
pH (unitless)	8.09	8.18	8.1	7.87	8.19	8.12	8.1	8.01	8.08	8.2	8.27	8.22	8.07	8.18	8.13
Specific Conductivity µS/cm	935	918	910	919	857	888	890	859	865	899	910	908	855	861	835
Total Dissolved Solids	641	653	645	641	623	641	612	609	611	645	587	661	611	619	597
Total Suspended Solids	79.5	7.3	<3	71	6	4	<3	<3	<3	<3	<3	3.3	<3	<3	<3
Turbidity NTU	84	7.21	3.14		4.6	6.44	8.67	3.86	7.16	10.5	22.1	8.11	5.57	8.24	5.31
Dissolved Anions															
Bromide	<0.05	<0.05	<0.05	<0.05	<0.25		<0.5	<1.3	<0.25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	5.85	5.94	5.7	5.86	4.3		<5	6.8	5.8	5.6	<5	5.3	5.2	13.8	<5
Fluoride	0.21	0.167	0.174	0.151	0.16		<0.2	<0.2	0.15	0.25	<0.2	<0.2	<0.2	2.67	<0.2
Sulphate	288	289	283	273	258		264	251	262	291	274	297	269	274	258
Nutrients															
Ammonia (Total)	0.03		<0.02	0.0131	<0.02	<0.005	<0.005	<0.005	<0.005	<0.005	0.0139	0.019	0.0064	0.0072	0.0067
Nitrate (as N)	0.0724	0.0264	0.0413	<0.005	<0.025		<0.05	<0.05	<0.025	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrite (as N)	<0.001	0.0021	<0.001	0.0012	<0.005		<0.01	<0.01	<0.005	<0.01	0.014	<0.01	<0.01	0.01	0.015
Nitrogen (Dissolved)									0.11	0.11	0.14	0.05	1.8		0.07
Nitrogen (Total)															
Nitrogen Kjeldahl (Total)	0.159		<0.05		<0.05	<0.05	<0.05	0.065	0.091	0.11	0.153	0.121	0.082	0.066	0.077
Orthophosphate (Dissolved)	0.0075	0.005	0.0029	<0.001	0.0015	0.0012	0.0021	0.0017	<0.001	<0.001	0.0026			<0.001	
Phosphorus - Dissolved				<0.002		0.0025			0.0022	<0.002	0.0036	0.0141	0.0047		0.0053
Phosphorus - Total	0.0909	0.0189	0.0085	0.11	0.0168	0.0108	0.0127	0.0095	0.0129	0.0108	0.0378	0.0447	0.035	0.0237	0.0228
Cyanide															
Cyanide (Free)	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals															
Aluminum	<0.01	<0.01	<0.005	<0.005	<0.01	<0.005	<0.01		<0.01	<0.005	<0.003	<0.003	0.0012	0.0012	<0.001
Antimony	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.0005	<0.001		<0.001	<0.0005	0.00014	0.00025	0.00021	<0.0001	0.00019
Arsenic	0.0016	0.0021	0.00193	0.00114	<0.001	0.00129	0.0013		0.0013	0.0012	0.00047	0.00129	0.00117	0.00071	0.00121
Barium	0.05	0.051	0.037	0.044	0.036	0.037	0.038		0.033	0.034	0.0433	0.0509	0.0441	0.0403	0.0405
Beryllium	<0.002	<0.002	<0.001	<0.001	<0.002	<0.001	<0.002		<0.002	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth									<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1	<0.1	0.092	0.108	0.095	0.079	0.095
Cadmium	<0.000034	<0.000034	<0.000017	<0.00031	<0.0004	<0.00025	<0.000034		<0.000034	<0.000017	<0.000015	<0.00003	<0.00005	<0.00005	0.000015
Calcium	100	92.3	97.7	92.4	90.5	94.2	88.8		89.6	90.2	86.1	86.6	83.3		84.1
Chromium	<0.002	<0.002	<0.001	<0.001	<0.002	<0.001	<0.002		<0.002	<0.001	0.00014	0.00023	0.00015	<0.0001	<0.0001
Cobalt	<0.0006	0.00076	<0.0003	<0.0003	<0.0006	<0.0003	<0.0006		<0.0006	<0.0003	<0.0001	0.00013	0.00018	<0.0001	0.00011
Copper	<0.002	<0.002	<0.001	<0.001	<0.002	<0.001	<0.002		<0.002	<0.001	<0.0005	<0.0005	0.00028	0.00022	<0.0002
Dissolved Cadmium (by saltwater															
Iron	0.094	0.229	0.219	0.787	0.339	0.581	0.328		0.613	0.835	0.841	0.42	0.545	1.19	0.612
Lead	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.0005	<0.001		<0.001	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	<0.01	<0.01	0.0056	0.0053	<0.01	<0.005	<0.01		<0.01	<0.005	0.00525	0.00598	0.0057	0.0045	0.00544
Magnesium	48.1	47.6	48.2	46.8	46.1	48.8	45.2		45.9	46.1	48	47.1	46.1		46.9
Manganese	0.0874	0.209	0.0931	0.138	0.0867	0.0979	0.0839		0.079	0.104	0.159	0.19	0.127	0.144	0.107
Mercury	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.11	0.0794	0.0722	0.0682	0.0797	0.0667	0.0715		0.0693	0.0718	0.0537	0.0746	0.0771	0.0617	0.0772
Nickel	0.0049	0.0048	0.0031	0.0028	0.0042	0.0015	<0.002		<0.002	<0.001	<0.0005	0.00095	0.00218	0.001	0.00091
Phosphorus									<0.3	<0.3	<0.3	<0.3	<0.3		<0.05
Potassium	7.9	8	8.2	8.9	7.7	8.5	8.4		7.6	8	8.65	8.9	8.04	7.94	8.45
Selenium	0.0234	0.0227	0.0312	0.0255	0.0301	0.0061	0.0203		0.0058	0.0033	0.0169	0.0236	0.0163	0.00039	0.0205
Silicon									6.99	6.52	6.57	6.92	6.96		6.99
Silver	<0.00004	<0.00004	<0.00002	<0.00002	<0.00004	<0.00002	<0.00004		<0.00004	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	40.6	41.7	39.3	41.6	39.5	42.3	42.5		41.5	38.6	42.2	46.6	42.3	42.5	41.8
Strontium									0.591	0.586	0.63	0.674	0.621	0.604	0.585
Sulphur															84
Thallium	<0.0004	<0.0004	<0.0002	<0.0002	<0.0004	<0.0002	<0.0004		<0.0004	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.0005	<0.001		<0.001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01	0.012	<0.01	<0.01		<0.01
Uranium	0.00206	0.00144	0.00141	0.00138	0.00138	0.00088	0.00107		0.00091	0.00079	0.000663	0.000999	0.000997	0.00027	0.00105
Vanadium	0.0027	0.0022	0.003	0.0019	<0.002	0.0013	<0.002		<0.002	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0102		<0.005	<0.005	<0.003	<0.003	<0.001	<0.001	0.0018
Total Metals															
Aluminum	1.65	0.073	<0.022	0.182	0.065	0.0063	<0.01	0.0076	<0.01	<0.005	0.0118	0.0059	0.0061	0.0075	<0.003
Antimony	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	0.00025	0.00028	0.00024	0.00013	0.0002
Arsenic	0.0033	0.0023	0.00191	0.00291	0.0013	0.00128	0.0014	0.00122	0.0014	0.00132	0.00076	0.00142	0.00139	0.00073	0.00127
Barium	0.072	0.054	0.037	0.056	0.037	0.037	0.036	0.034	0.035	0.036	0.0449	0.0517	0.047	0.0393	0.0414
Beryllium	<0.002	<0.002	<0.001	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth								<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.1	0.116	0.105	0.087	0.094
Cadmium	0.000067	<0.000034	0.000019	<0.00041	<0.0004	<0.0003	<0.000034	0.000035	<0.000034	<0.00004	<0.00006	<0.00006	<0.00005	<0.00005	0.000022
Calcium	97	92.4	94.8	86.1	88.1	92.1	84.7	88.1	92.9	92.9	86.3	86.4	91.3		85.1
Chromium	0.0059	<0.002	<0.002	0.0097	0.0052	<0.001	<0.002	<0.001	<0.002	<0.001	0.00055	0.00098	0.0011	0.00087	0.00042
Cobalt	0.00215	0.00094	<0.0003	0.00065	0.0007	<0.0003	<0.0006	<0.0003	<0.0006	<0.0003	0.00012	0.00016	0.00021	0.00011	0.00011
Copper	0.0225	0.0059	0.0069	0.0303	0.0051	0.0045	0.0054	<0.0045	0.0036	0.0033	0.00226	0.00185	0.00311	0.00527	0.00265
Iron	3.15	0.703	0.38	8.88	0.606	0.665	0.84	0.497	0.769	1.03	1.32	0.647	0.775	1.24	0.768
Lead	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	0.000072
Lithium	<0.01	<0.01	0.0058	0.0052	<0.01	<0.005	<0.01	<0.005	<0.01	<0.005	0.00536	0.0056	0.00588	0.0044	0.00549
Magnesium	48	47.7	47.7	46.2	45.5	48	44.3	44.6	48.3	48.3	48.7	47.6	45.7		46.6
Manganese	0.156	0.215	0.1	0.212	0.102	0.107	0.0819	0.0622	0.0826	0.112	0.174	0.203	0.137	0.145	0.11
Mercury	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.104	0.0789	0.0749	0.0655	0.0835	0.0723	0.0699	0.0729	0.0758	0.0722	0.0641	0.0785	0.0805	0.0639	0.0819
Nickel	0.0131	0.0058	0.0048	0.0096	0.0061	0.002	<0.002	0.0019	<0.002	<0.001	0.00068	0.00143	0.00243	0.00135	0.00114
Phosphorus								<0.3	<0.3	<0.3	<0.3	<0.3	<0.3		<0.05
Potassium	8.1	8.1	8.2	9.1	7.6	8.3	8.2	7.7	7.9	8.3	9.04	9.06	8.53	7.87	8.86
Selenium	0.0218	0.0236	0.0241	0.0113	0.0206	0.0046	0.0205	0.0148	0.0055	0.0032	0.0149	0.0191	0.0155	0.00063	0.0185
Silicon								7.23	7.22	6.75	6.56	6.75	7.33		7.16
Silver	<0.00004	<0.00004	<0.00002	<0.00002	<0.00004	0.000028	<0.00004	<0.00002	<0.00004	0.000021	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	39.2	42	39.6	43.1	39.2	41.8	41.4	41.4	43.3	40.8	43.9	49.2	44.5	41.4	42.2
Strontium								0.586	0.62	0.615	0.629	0.735	0.637	0.608	0.61
Sulphur															87.9
Thallium	<0.0004	<0.0004	<0.0002	<0.0002	<0.0004	<0.0002	<0.0004	<0.0002	<0.0004	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	0.119	<0.01	<0.01	0.019	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.013	<0.01	<0.01		<0.01
Total Cadmium (by saltwater extr															
Uranium	0.00215	0.00143	0.00145	0.00099	0.00153	0.00103	0.00105	0.00117	0.00101	0.00078	0.000626	0.001	0.00101	0.000276	0.0011
Vanadium	0.0111	0.0028	0.0036	0.0094	<0.002	0.0016	<0.002	0.0016	<0.002	0.0012	<0.001	<0.001	0.0012	<0.001	0.0011
Zinc	0.0064	<0.005	<0.005	<0.005	<0.005	<0.005	0.0098	<0.005	<0.005	<0.005	<0.003	0.0159	<0.003	<0.003	<0.003
Organics															
Carbon Organic (Dissolved)	2.1	1.95	1.59	1.93	1.51	1.51	1.22	1.53	0.97	1.26	2.4	1.87	16.3	3.85	1.52
Carbon Organic (Total)									0.85	1.1	2.44	2.13	1.78	1.86	1.5
Nitrogen Organic (Dissolved)									0.11	0.105	0.112	<0.05	1.79		<0.05
Nitrogen Organic (Total)									0.11	0.105	0.122	0.102	0.075		
ALS LAB ID	**L623639**	**L655304**	**L678594**	**L710078**	**L892818**	**L924086**	**L957406**	**L990458**	**L1007006**	**L1035635**	**L1077032**	**L1113319**	**L1159973**	**L1200094**	**L1247459**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D4.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D4.2 - GROUNDWATER QUALITY DATA

Site ID							AJGW07-S															
Site ID	AJGW07-DA	JGW07-DA	JGW07-DA	JGW07-DA	JGW07-DA	JGW07-DA	JGW07-SA	JGW07-SA	JGW07-SA	JGW07-SA	JGW07-SA	JGW07-SA	3/Nov/201(	JGW07-SA	JGW07-SA	JGW07-SA	JGW07-SA	JGW07-SA	JGW07-SA	JGW07-SA	JGW07-SA	JGW07-SA	JGW07-S
Analytes	Mar-13	May-13	Nov-13	Mar-14	May-14	Jun-14	Apr-08	Jul-08	Sep-08	Nov-08	Jun-10	Aug-10		Mar-11	May-11	Jul-11	Oct-11	Feb-12	Jun-12	Aug-12	Mar-13	May-13	Aug-13
In Situ Parameters																							
Conductivity µS/cm	541	639	0.902	903	609	583		714	659	1255	713	662	644	674	615	695	662	636	1001	921	638	664	681
Oxygen Dissolved %	1.6	1.6	2.6	1.2	17.7	0.2		25.7	29	23	5.8	6.1	11.8	7.3	4.3	0	14.7	7.1	15.5		5.3	34.6	28.5
Oxygen Dissolved	0.18	0.18	0.3	0.14	1.98	0.02		2.69	3.2	2.69	0.62	0.67	1.27	0.81	0.47	0	1.69	0.83	1.41	1.62	0.61	3.92	3.07
pH (unitless)	8.33	8.17	8.19	8.17	6.93	8.29		7.43	7.56	8.23	7.51	7.66	7.66	7.57		7.35	7.76	7.87	7.84	8.68	8.08	7.72	7.61
Redox Potential mV	-213	-240	239	-106	-183	-213		-65.6	-59	-79.9	-3.3	-30.1	94.5	-32				609		-132	-104	90.4	165
Salinity ppt	0.38	0.44	0.45	0.45	0.42	0.39										0.49		0.46		0.5	0.45	0.46	0.45
Specific Conductivity µS/cm	770	894	0.604	631	847	791		938	910	1763	947	901	924	931	848	990	939	937	722		915	930	918
Temperature °C	9.24	10.1	9.81	9.31	10.3	11.3		12.5	10.6	9.2	12.1	11.1	9.12	10.5	10.6	9.4	9.6	8.19	10.3	13.9	9.14	10	11.5
Total Dissolved Solids	501	581	538	585	551	515						586	600	605				12.8		591	595	606	597
Turbidity NTU	2.1	0	6.3	5.6	-1.7	-3.6										48	8.2	11.8	6.4	1	4.4	35.9	1
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)		<1			1.6		4.7	3.2	5.1	1.6	2.7	4.6	3.1	5.9	4.1	2.8	<1			4		<1	
Alkalinity (Total as CaCO3)	231	207	216	211	209	182	230	268	240	254	266	270	256	256	268	274	265	259	254	260	265	258	
Bicarbonate Alkalinity	231	207	216	211	209	178	230	268	240	254	266	270	256	256	268	274	265	259	246		265	258	
Carbonate Alkalinity	<2	<1	<2	<1	<2	4.7	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	8.7	<1	<1	
Color TCU	<5	<5					<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	
Hardness as CaCO3 (Dissolved)	402	408	420	412	363	374	463	427	451	433	436	452	430	429	441	441	441	426	425	409	437	430	
Hydroxide Alkalinity	<2	<1	<2	<1	<2	<1	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1		<1	<1	
pH (unitless)	8.28	8.33	8.25	8.36	8.2	8.34	8.05	8.16	8.06	7.9	8.16	8.12	8.15	8.01	8.03	8.15	8.28	8.23	8.34	8.13	8.32	8.34	
Specific Conductivity µS/cm	868	864	918	881	812	830	933	917	921	913	893	913	910	896	903	924	934	897	881	902	915	881	
Total Dissolved Solids	598	646	623	621	592	583	649	650	650	640	645	637	637	634	632	646	590	640	630	641	628	650	
Total Suspended Solids	4.3	5.6			6.8	5	92	38.3	12.6	247	3.5	3	5.2	6	6.4	42.9	13.7	8.7	3.2	3.3	3	<3	
Turbidity NTU	15.3	19.4			22.3	15.4	54.3	21.4	37.2		1.17	0.36	6.24	6.57	6.66	43.3	9.74	7.64	0.65	1.08	1.98	0.97	
Dissolved Anions																							
Bromide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.25	<0.05	<0.05	<0.05	<0.05	<0.25	<0.5	<0.5	<1.3	<0.25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Chloride	<5	6.8	6.3	<5	5.3	7.4	6.63	4.92	5.18	4.89	3.8	5.7	<5	6	5.3	<5	<5	5.9	7.9	14.5	<5	5.2	
Fluoride	0.29	<0.2	<0.2	0.38	<0.2	0.16	0.167	0.199	0.194	0.187	0.2	<0.2	<0.2	<0.2	0.18	0.35	0.22	0.22	0.21	3.82	0.31	<0.2	
Sulphate	271	296	314	290	272	260	281	252	258	249	255	256	251	252	254	264	263	259	260	257	264	262	
Nutrients																							
Ammonia (Total)	0.0114	0.0085	0.0136	0.0101	0.0059	0.0064	<0.02		<0.02	<0.005	<0.02	<0.005	<0.005	<0.005	<0.005	0.0098	0.0077	0.0056	<0.005	<0.005	<0.005	<0.005	
Nitrate (as N)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.025	0.0383	<0.005	0.017	0.0174	0.025	<0.05	<0.05	<0.05	<0.025	0.078	<0.05	<0.05	<0.05	0.074	<0.05	<0.05	
Nitrite (as N)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.005	0.003	<0.001	<0.001	<0.001	<0.005	<0.01	<0.01	<0.01	<0.005	<0.01	0.012	<0.01	<0.01	0.01	<0.01	<0.01	
Nitrogen (Dissolved)	<0.05														0.09	0.17	0.08	0.05	0.05		0.055		
Nitrogen (Total)																							
Nitrogen Kjeldahl (Total)	0.078	0.062	0.077	0.066	0.069	0.092	0.101		0.063		<0.05	0.051	0.055	0.057	0.076	0.092	0.071	0.051	0.076	0.061	0.071	0.06	
Orthophosphate (Dissolved)			<0.001	0.0021	<0.001	<0.001	0.017	0.0196	0.0173	0.0194	0.0281	0.0292	0.0263	0.0279	0.0283	0.03	0.0312			0.0302			
Phosphorus - Dissolved	<0.002	<0.002	<0.002	0.0038	0.0026	<0.002				0.0186		0.029			0.029	0.0332	0.0359	0.031	0.0292		0.032	0.0341	
Phosphorus - Total	0.0271	0.0326	0.0297	0.0347	0.0298	0.0293	0.0973	0.0686	0.0369	0.282	0.033	0.0294	0.0349	0.0388	0.0449	0.087	0.0537	0.0457	0.0322	0.0329	0.0349	0.0368	
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Dissolved Metals																							
Aluminum	0.0034	<0.001	0.0016	0.001	0.0015	0.0015	<0.01	<0.01	<0.01	0.0778	<0.01	<0.005	<0.01	<0.005	<0.01	<0.005	<0.003	<0.003	0.0015	0.0013	0.0034	0.0015	
Antimony	<0.0001	<0.0001	<0.0001	0.00011	<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	0.00022	0.00024	0.00024	0.00023	0.00026	0.00022	
Arsenic	0.0005	0.00057	0.00052	0.0006	0.0006	0.00069	0.0024	0.0028	0.0036	0.00407	0.0043	0.00394	0.0036	0.00385	0.004	0.00454	0.00436	0.00473	0.00393	0.00455	0.00483	0.00454	
Barium	0.0386	0.0414	0.0418	0.0408	0.0382	0.0376	0.043	0.052	0.048	0.085	0.04	0.043	0.046	0.042	0.042	0.042	0.0388	0.0373	0.0361	0.037	0.0359	0.0369	
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.002	<0.002	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005								<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Boron	0.103	0.084	0.103	0.098	0.092	0.089	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.066	0.07	0.066	0.062	0.076	0.06	
Cadmium	<0.00005	<0.00005	<0.00002	<0.00003	<0.00003	<0.00005	<0.000034	<0.000034	<0.000034	<0.00051	<0.0004	<0.000017	<0.000034	0.000029	<0.000034	<0.00005	<0.00004	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	
Calcium	83.6	84	86.1	83.4	67.1	71.5	105	92.3	99.8	94.2	91.7	95.3	90.8	92.5	94.3	94.3	93.5	89.4	90.8		93	90.5	
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.002	<0.002	<0.002	<0.001	<0.004	<0.001	<0.002	0.0012	<0.002	<0.001	0.00015	0.00014	0.00022	0.00021	0.00018	0.00028	
Cobalt	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0006	0.00115	0.00117	0.00133	<0.0006	<0.0003	<0.0006	<0.0003	<0.0006	<0.0003	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Copper	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0022	0.0027	<0.002	0.0027	0.0022		0.0024	<0.0035	0.0026	0.0012	<0.0005	0.00119	0.00174	0.00166	0.00122	0.00145	
Dissolved Cadmium (by saltwater				<0.00002		<0.00002																	
Iron	1.45	2.05	2.05	1.33	2.13	1.93	<0.03	<0.03	0.053	0.227	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.01	<0.01	<0.01	<0.01	
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	
Lithium	0.0058	0.00442	0.00539	0.00613	0.00418	0.00454	<0.01	<0.01	<0.01	<0.005	<0.01	<0.005	<0.01	<0.005	<0.01	<0.005	0.00406	0.00415	0.00402	0.00348	0.00464	0.00376	
Magnesium	46.8	48.2	49.8	49.5	47.5	47.5	48.8	47.6	49.1	48.1	50.2	52	49.3	48.1	49.9	49.9	50.5	49.2	48.2		49.8	49.5	
Manganese	0.141	0.234	0.237	0.189	0.21	0.215	0.0501	0.241	0.257	0.368	0.0375	0.0415	0.0573	0.0626	0.0748	0.0516	0.0614	0.0602	0.02	0.0336	0.0373	0.0188	
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
Molybdenum	0.0676	0.0724	0.0733	0.0758	0.0804	0.0952	0.0981	0.12	0.109	0.106	0.135	0.124	0.121	0.107	0.127	0.136	0.132	0.141	0.129	0.138	0.145	0.136	
Nickel	0.00071	0.00074	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.002	0.0023	0.004	<0.002	0.001	<0.002	0.001	<0.002	<0.001	<0.0005	0.00064	<0.0005	<0.0005	<0.0005	<0.0005	
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05								<0.3	<0.3	<0.3	<0.3	<0.3	<0.3		<0.05	<0.05	
Potassium	8.59	8.2	8.68	9.02	7.75	8.67	6.9	7.5	7.5	8	7.6	8.6	7.7	7.6	7.6	8	7.52	7.68	7.07	7.32	7.82	7.76	
Selenium	0.00012	<0.0001	0.00322	0.00876	0.0001	<0.0001	0.0179	0.0179	0.022	0.0266	0.0396	0.0326	0.0317	0.0305	0.0286	0.0248	0.0269	0.0252	0.0221	0.0238	0.025	0.0234	
Silicon	5.78	5.24	5.87	6.05	4.54	4.54								7.6	7.51	7.31	7.53	7.32	7.68		7.23	7.19	
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00004	<0.00004	<0.00004	<0.00002	<0.00004	<0.00002	<0.00004	<0.00002	<0.00004	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
Sodium	42.9	42.1	42.8	46.6	42.8	38.4	34.5	42.9	41.2	41.9	44	46.9	43.7	44.7	45.8	43.5	42.8	45.2	40.8	42.5	43.3	41.4	
Strontium	0.609	0.664	0.647	0.676	0.582	0.597								0.702	0.72	0.705	0.679	0.728	0.667	0.694	0.724	0.699	
Sulphur	87.5	88.6	95.9	98.2	89.5	87.8															86	78.6	
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0004	<0.0004	<0.0004	<0.0002	<0.0004	<0.0002	<0.0004	<0.0002	<0.0004	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.013	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.013	<0.01	<0.01		<0.01	<0.01	
Uranium	0.000245	0.000179	0.000472	0.000471	0.000146	0.000123	0.00243	0.00308	0.00288	0.00327	0.00422	0.00405	0.00345	0.00325	0.00363	0.00399	0.00399	0.00397	0.00343	0.0038	0.0044	0.00391	
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0023	0.0026	0.0029	0.0027	0.0032	0.003	0.0029	0.0025	0.0028	0.0031	0.0032	0.0033	0.003	0.0031	0.0031	0.0029	
Zinc	<0.001	<0.001	<0.001	0.0013	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.003	<0.003	<0.001	0.001	<0.001	0.0011	
Total Metals																							
Aluminum	0.0109	0.0092	0.009	0.0049	0.0068	0.011	2.16	0.71	0.79	2.58	0.03	0.0076	0.281	0.261	0.256	1.84	0.517	0.268	0.0369	0.0442	0.0714	0.0408	
Antimony	0.00011	0.00011	0.00014	0.00014	<0.0001	0.00011	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	0.00025	0.00023	0.00025	0.00025	0.00029	0.00022	
Arsenic	0.00058	0.00065	0.00056	0.00082	0.00062	0.00077	0.0037	0.003	0.0041	0.0045	0.0039	0.00359	0.0038	0.00317	0.0039	0.00557	0.00445	0.00458	0.00399	0.00442	0.00491	0.0047	
Barium	0.0405	0.0422	0.0432	0.0414	0.0369	0.0382	0.07	0.058	0.058	0.093	0.04	0.043	0.047	0.046	0.047	0.062	0.0449	0.04	0.037	0.0378	0.0388	0.0378	
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.002	<0.002	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005								<0.2	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Boron	0.108	0.094	0.113	0.102	0.094	0.097	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.071	0.073	0.073	0.083	0.08	0.065	
Cadmium	<0.00005	<0.00005	<0.00003	<0.00005	<0.00003	<0.00005	0.00009	0.00006	0.000039	<0.00051	<0.0004	<0.000017	<0.000034	0.000038	<0.000034	<0.00008	<0.00005	<0.00007	<0.00005	<0.00005	<0.00005	<0.00005	
Calcium	84.4	83.7	86.1	83.4	70.3	69.5	103	91.1	103	93.2	88.9	93.1	90.4	92	96.2	97.8	91	90.2	98.5		95.9	91	
Chromium	0.00028	0.00025	0.00031	0.00017	0.00014	0.00017	0.0055	<0.002	0.0068	0.0115	<0.002	<0.001	0.0021	0.0012	<0.002	0.0042	0.00137	0.0009	0.00042	0.00052	0.00043	0.00045	
Cobalt	<0.0001	<0.0001	0.00012	<0.0001	<0.0001	<0.0001	0.00245	0.00196	0.00239	0.00408	<0.0006	<0.0003	<0.0006	0.00046	<0.0006	0.00211	0.00061	0.0004	<0.0001	0.00011	0.00017	0.0001	
Copper	0.00363	0.00189	0.00212	0.00182	0.00126	0.00085	0.0306	0.0169	0.0172	0.0404	0.004		0.0072	0.0066	0.0063	0.0217	0.00776	0.00683	0.00332	0.00275	0.00351	0.00287	
Iron	1.58	2.13	2.18	1.86	2.37	2.08	3.28	0.963	0.919	4.02	0.049	<0.03	0.404	0.369	0.352	2.09	0.602	0.36	0.053	0.06	0.099	0.057	
Lead	<0.00005	<0.00005	0.000062	<0.00005	<0.00005	<0.00005	<0.001	<0.001	<0.001	0.0006	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	0.000108	0.000072	<0.00005	<0.00005	<0.00005	<0.00005	
Lithium	0.00581	0.00474	0.00561	0.00606	0.00428	0.0045	<0.01	<0.01	<0.01	0.0057	<0.01	<0.005	<0.01	<0.005	<0.01	<0.005	0.00435	0.00401	0.00419	0.00371	0.00468	0.00388	
Magnesium	46.9	47.9	50	47.1	46.4	46.7	49.4	46.9	49.3	49.5	48.7	50.6	49.3	48.7	51.5	52.1	49.9	49.6	48.6		50.5	49	
Manganese	0.149	0.245	0.251	0.19	0.217	0.221	0.126	0.268	0.304	0.303	0.0854	0.0542	0.152	0.0786	0.0925	0.154	0.129	0.0946	0.0302	0.0447	0.0899	0.039	
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
Molybdenum	0.0686	0.0766	0.0807	0.0799	0.0849	0.102	0.0958	0.121	0.108	0.107	0.138	0.134	0.124	0.116	0.137	0.138	0.131	0.145	0.137	0.142	0.157	0.14	
Nickel	0.00137	0.00129	0.00082	0.00076	0.00062	<0.0005	0.0078	0.0038	0.008	0.012	<0.002	<0.001	0.0023	0.0019	<0.002	0.0053	0.00164	0.00129	0.00053	0.00051	0.00059	<0.0005	
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05								<0.3	<0.3	<0.3	<0.3	<0.3	<0.3		<0.05	<0.05	
Potassium	8.8	8.32	9.53	8.81	7.99	8.33	7.5	7.4	7.4	8.6	7.6	8.5	7.8	7.8	7.9	8.5	7.67	7.72	7.27	7.29	8.1	7.98	
Selenium	0.00024	0.00012	0.00276	0.00873	0.00018	<0.0001	0.0168	0.0167	0.0218	0.0206	0.029	0.0255	0.029	0.0211	0.0243	0.0253	0.0244	0.022	0.0216	0.0213	0.0231	0.0226	
Silicon	5.77	5.3	5.93	6.15	4.65	4.5								8.31	8.31	11.2	8.51	8.01	8.05		7.54	7.44	
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00004	<0.00004	<0.00004	0.000048	<0.00004	0.000021	<0.00004	<0.00002	<0.00004	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
Sodium	43.3	43.3	45.9	46.7	43.5	39.7	34.9	41.9	40.4	41.2	43.2	45.9	44.5	44.9	47.1	45.5	43.4	45.6	42.3	42.3	45	42.3	
Strontium	0.62	0.698	0.67	0.677	0.598	0.631								0.716	0.743	0.746	0.673	0.748	0.697	0.704	0.733	0.71	
Sulphur	89.3	91.2	99.4	97.9	91.4	89.5															88.5	80.4	
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0004	<0.0004	<0.0004	<0.0002	<0.0004	<0.0002	<0.0004	<0.0002	<0.0004	<0.0002	0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.185	0.054	0.047	0.228	<0.01	<0.01	0.026	0.027	0.024	0.121	0.047	0.028	<0.01		<0.01	<0.01	
Total Cadmium (by saltwater ext				<0.00002		<0.00002																	
Uranium	0.000235	0.000188	0.000511	0.000533	0.000169	0.000127	0.00252	0.00312	0.00296	0.00352	0.00443	0.00451	0.00355	0.00341	0.00388	0.00425	0.00396	0.004	0.00361	0.004	0.00444	0.00401	
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0126	0.0056	0.0064	0.0149	0.0034	0.0032	0.0044	0.0038	0.004	0.0102	0.0053	0.0045	0.0035	0.0033	0.0037	0.0035	
Zinc	<0.003	<0.003	0.003	<0.003	<0.003	<0.003	0.0066	<0.005	<0.005	0.0083	<0.005	<0.005	0.0089	<0.005	<0.005	0.0055	<0.003	0.0033	<0.003	<0.003	<0.003	<0.003	
Organics																							
Carbon Organic (Dissolved)	1.74	1.67	1.62				2.18	2.12	1.85	2.01	1.78	1.74	2.28	1.84	1.04	1.86	1.82	1.79	2.16	1.78	1.7	1.41	
Carbon Organic (Total)	1.58	1.44	1.58	1.62	1.45	1.67									1.08	1.9	1.75	1.34	1.55	1.7	1.52	1.29	
Nitrogen Organic (Dissolved)	<0.05														0.088	0.082	0.06	<0.05	<0.05		0.05		
Nitrogen Organic (Total)	<0.05														0.108	0.082	0.09	<0.06	0.076		0.055		
ALS LAB ID	L1276505	L1306577	L1392288	L1430651	L1452371	L1469742	L623639	L655304	L678594	L710078	L892818	L924086	L956921	L990458	L1007006	L1035437	L1077032	L1113319	L1159973	L1200094	L1276505	L1306577	L1345714

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D4.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D4.2 - GROUNDWATER QUALITY DATA

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Site ID					BGC14-001D					BGC14-002D					BGC14-002S					BGC14-003D			
Site ID	AJGW07-S	AJGW07-S	AJGW07-S	AJGW07-S	BGC14-001	BGC14-001	BGC14-001	BGC14-001	BGC14-001	BGC14-002	BGC14-002	BGC14-002	BGC14-002	BGC14-002	BGC14-002	BGC14-002	BGC14-002	BGC14-002	BGC14-002	BGC14-003	BGC14-003	BGC14-003	BGC14-003
Analytes	**Nov-13**	**Mar-14**	**May-14**	**Jun-14**	**Mar-14**	**May-14**	**Jun-14**	**Jul-14**	**Aug-14**	**Mar-14**	**May-14**	**Jun-14**	**Jul-14**	**Aug-14**	**Mar-14**	**May-14**	**Jun-14**	**Jul-14**	**Aug-14**	**Jun-14**	**Jul-14**	**Aug-14**	**Mar-14**
In Situ Parameters																							
Conductivity µS/cm	0.9	931	605	689	1060	719	677	699	719	1297	842	822	862	832	1419	876	873	943	920	570	632	1128	699
Oxygen Dissolved %	56.2	2.5	7.77	14.7	73.3	4.4	4.2	16.3	3.9	32.5	0	2.1	1.1	1.1	45	-0.3	2.9	2.7	9.8	0.6	2.4	5.5	43.3
Oxygen Dissolved	6.5	0.29	41.6	1.61	8.65	0.52	0.47	1.88	0.48	3.79	0	0.25	0.12	0.12	5.27	-0.001	0.32	0.23	1.04	0.07	0.26	0.0006	5.28
pH (unitless)	7.81	7.75	8.7	7.89	7.68	7.41	7.5	6.55	6.96	7.43	7.71	7.26	9.32	7.11	7.32	7.64	7.44	9.13	7.51	9.41	9.14	9.14	8.35
Redox Potential mV	0.587	57.6	51.2	-13	76	11.2	-39.4	22.9	-31.4	53.7	-44.5	-44.8	-158	-68.9	-37.9	-84.1	-83	-155	-97.6	-88.2	36.1	-4.9	37.8
Salinity ppt	0.45	0.46	0.42	0.47	0.53	0.52	0.48	0.49	0.52	0.65	0.61	0.6	0.59	0.59	0.72	0.62	0.62	0.6	0.6	0.4	0.42	8E-07	0.35
Specific Conductivity µS/cm	0.637	657	892	939	716	1047	960	994	1052	889	1212	1189	1193	1169	965	1240	1240	1209	1200	806	850	1588	458
Temperature °C	9.69	9.59	10.3	11.1	8	8.57	9.45	9.45	8.39	8.45	9.05	8.83	10.6	9.83	8.37	9.49	9.49	13.9	12.7	9.7	11.8	9.84	6.8
Total Dissolved Solids	425	605	546	610	689	681	624	646	684	843	788	773	772	761	923	806	805	781	780	525	553	0.00103	454
Turbidity NTU	6.2	1.6	5.73	8.7	4.8	6.5	-3.4	0	0	2.9	-2.4	-3.2	0	0	1.8	-2.6	-3.1	0	0	0.7	0	2.5	10.5
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)			2.8								4.8					4.6							
Alkalinity (Total as CaCO3)	286	271	293	271	424	437	451	449	457	288	291	287	287	290	266	262	279	260	263	138	135	136	200
Bicarbonate Alkalinity	286	271	293	263	424	437	451	449	457	288	291	287	287	290	266	262	279	259	263	94.2	110	98.6	198
Carbonate Alkalinity	<2	<1	<2	7.9	<2	<1	<1	<1	<2	<2	<2	<1	<1	<2	<2	<2	<2	<1	<2	43.4	24.7	37.8	2.4
Color TCU										<5	5.8				6.2	8.6							
Hardness as CaCO3 (Dissolved)	444	439	438	455	445	404	439	422	429	409	385	399	393	399	512	443	459	437	445	22.1	21.5	20.2	125
Hydroxide Alkalinity	<2	<1	<2	<1	<2	<1	<1	<1	<2	<2	<2	<1	<1	<2	<2	<2	<2	<1	<2	<1	<1	<1	<1
pH (unitless)	8.21	8.31	8.15	8.34	8.2	8.31	8.19	8.01	8.23	8.16	8.02	8.14	8.29	8.08	8.09	8.02	8.1	8.28	8.08	8.97	8.86	8.9	8.3
Specific Conductivity µS/cm	903	905	879	908	1050	1030	1020	1010	1010	1260	1230	1270	1240	1230	1330	1270	1270	1260	1240	848	856	844	703
Total Dissolved Solids	608	611	632	640	653	618	635	604	614	854	862	795	856	843	963	921	929	887	852	569	575	573	463
Total Suspended Solids			3.5	3.6		<3	<3	<3	<3	<3	3	<3	3.2	4	<3	<3	<3	<3	3.6	4	<3	<3	7.9
Turbidity NTU			1.81	1.33		0.47	0.54	0.65	0.8	1.99	0.61	0.56	0.78	0.81	1.29	0.75	1.98	1.83	1.67	3.33	2.71	1.31	6.68
Dissolved Anions																							
Bromide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.117	<0.5	<0.5	<0.25
Chloride	5.3	<5	<5	9.4	<5	<5	<5	<5	<5	6.3	7.1	6	5.5	5.4	8.4	9.2	8.5	6.8	6.8	9.33	9.2	8.4	3
Fluoride	0.2	0.37	0.2	0.22	0.34	0.22	0.255	0.232	0.216	0.43	0.31	0.338	0.31	0.356	0.44	0.33	0.34	0.33	0.361	0.121	0.148	0.117	0.57
Sulphate	246	247	248	254	185	154	150	147	142	419	405	418	399	416	494	468	484	448	457	254	268	255	172
Nutrients																							
Ammonia (Total)	<0.005	<0.005	<0.005	<0.005	0.0757	0.0542	0.0547	0.0625	0.0523	0.199	0.211	0.205	0.199	0.199	0.128	0.125	0.145	0.139	0.146	0.101	0.0819	0.0828	0.0215
Nitrate (as N)	<0.05	<0.05	<0.05	0.056	0.282	0.27	0.301	0.313	0.299	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.005	<0.05	<0.05	<0.025
Nitrite (as N)	<0.01	<0.01	<0.01	<0.01	0.021	0.015	<0.01	<0.01	0.014	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.031	<0.01	<0.001	<0.01	<0.01	<0.005
Nitrogen (Dissolved)																							
Nitrogen (Total)																							
Nitrogen Kjeldahl (Total)	0.071	0.066	0.079	0.101	0.249	0.178	0.186	0.137	0.189	0.371	0.349	0.383	0.355	0.348	0.345	0.331	0.387	0.139	0.363	0.222	0.247	0.209	0.177
Orthophosphate (Dissolved)	0.0301	0.034	0.035	0.0371	0.0058	0.0151	0.0151	0.0168	0.0175	0.0128	0.0212	0.0209	0.022	0.0258	0.017	0.0234	0.0157	0.0228	0.0296	0.176	0.267	0.27	0.0286
Phosphorus - Dissolved	0.0313	0.0328	0.0354	0.0367	0.014	0.0163	0.0144	0.0203	0.0173	0.0215	0.0241	0.0194	0.0255	0.0241	0.026	0.0242	0.0151	0.0256	0.025	0.189	0.28	0.259	0.0502
Phosphorus - Total	0.0343	0.0328	0.0396	0.0412	0.0069	0.0179	0.0204	0.0246	0.0223	0.014	0.0264	0.0354	0.0406	0.0448	0.0193	0.0359	0.0703	0.0679	0.0661	0.187	0.302	0.295	
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																							
Aluminum	0.002	0.0012	0.0027	0.0013	0.0052	0.0038	0.003	0.003	0.003	0.0042	0.0043	0.0029	0.0045	0.0034	0.0062	0.0054	0.0059	0.0054	0.0054	0.0465	0.0511	0.0592	0.0062
Antimony	0.00024	0.00025	0.00027	0.00024	0.00025	0.00022	0.0002	0.00015	0.00014	0.00024	0.00031	0.00022	0.00017	<0.0001	0.00024	0.00022	0.00016	0.00012	0.00015	<0.0002	0.00023	0.00021	0.00028
Arsenic	0.00481	0.00475	0.00481	0.00478	0.00044	0.00047	0.00065	0.00068	0.00057	0.00077	0.00136	0.00247	0.00233	0.00242	0.00071	0.00129	0.00288	0.00256	0.00251	0.00535	0.00496	0.00547	0.00436
Barium	0.0347	0.0331	0.0356	0.0363	0.0329	0.0299	0.0299	0.0305	0.0294	0.027	0.0245	0.0237	0.0237	0.0224	0.024	0.0217	0.0207	0.0198	0.0193	0.00979	0.00997	0.00906	0.0302
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.0005
Boron	0.071	0.063	0.068	0.061	0.122	0.122	0.116	0.106	0.114	0.504	0.58	0.482	0.492	0.528	0.395	0.438	0.367	0.396	0.398	8.13	8.9	10.1	1.73
Cadmium	<0.00004	<0.00006	<0.00005	<0.0001	0.000072	0.000025	0.000023	0.000023	0.000017	0.000035	0.000021	<0.00002	<0.00001	<0.00001	0.000019	0.00001	0.000013	0.000013	0.000018	<0.00002	<0.00002	<0.00002	0.000019
Calcium	91.7	93	92	97.4	60.6	57.1	60.2	58.6	57.7	64.4	63.1	62.6	59.9	59.4	86.7	73.3	73.7	67.8	67.7	5.15	5.09	4.73	21.3
Chromium	0.00025	0.00016	0.00027	0.00023	0.00047	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00028	0.00017	0.00014	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	0.00021
Cobalt	<0.0001	<0.0001	<0.0001	<0.0001	0.00117	0.00125	0.00132	0.00121	0.00105	0.0017	0.00217	0.00284	0.00244	0.00194	0.00247	0.00226	0.00276	0.00214	0.00182	<0.0002	0.00022	<0.0002	0.00029
Copper	0.00179	0.00181	0.00228	0.00163	0.00219	0.00058	0.00043	0.00043	0.00045	0.00064	0.00033	<0.0002	<0.0002	<0.0002	0.0002	0.00022	0.00064	0.00033	0.00059	<0.0004	<0.0004	<0.0004	0.00102
Dissolved Cadmium (by saltwater		<0.00002		<0.00002								<0.00002								<0.00002	<0.00002	<0.00002	
Iron	0.013	<0.01	<0.01	<0.01	<0.01	0.012	0.038	0.051	0.057	<0.01	0.023	0.125	0.142	0.211	0.065	0.111	0.449	0.335	0.363	<0.01	0.013	0.014	<0.01
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000076	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.0001	<0.0001	<0.00005
Lithium	0.00419	0.00456	0.00392	0.00359	0.0158	0.0141	0.0148	0.0147	0.015	0.00946	0.00826	0.00656	0.0073	0.00731	0.00589	0.00619	0.00576	0.00607	0.00585	0.0086	0.0064	0.0075	0.00915
Magnesium	52.1	50.2	50.6	51.3	71.3	63.6	70.2	66.9	69.3	60.4	55.3	58.9	59	60.9	71.8	63.1	66.8	65	67	2.24	2.13	2.04	17.5
Manganese	0.0166	0.0222	0.00946	0.00973	0.208	0.296	0.345	0.334	0.313	0.408	0.672	1.09	0.94	0.823	0.731	0.981	1.31	1.14	1.03	0.0281	0.0348	0.0336	0.107
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.125	0.124	0.128	0.128	0.0101	0.00984	0.00978	0.00814	0.00943	0.0116	0.0122	0.0116	0.0119	0.0125	0.0147	0.0163	0.0155	0.0164	0.0171	0.0172	0.0175	0.0178	0.0167
Nickel	<0.0005	<0.0005	<0.0005	<0.0005	0.00405	0.00282	0.0026	0.00229	0.00184	0.00507	0.00518	0.00512	0.00414	0.00327	0.00615	0.00471	0.00449	0.00347	0.00338	<0.001	0.0017	0.0013	0.00157
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.072	<0.05	<0.05	0.051	0.067	0.133	0.079	0.182	0.284	0.292	<0.05
Potassium	8.02	8.05	7.59	8.32	7.35	6.51	7.57	7.72	7.46	8.9	8.31	9.26	8.91	9.55	13.3	12.7	14.4	13.2	13.9	10.2	9.95	9.45	9.95
Selenium	0.0266	0.0273	0.0223	0.0229	0.0038	0.00344	0.00314	0.00291	0.00281	0.00019	0.00022	0.00028	0.00013	0.00015	0.00026	0.00015	0.00015	0.00016	0.00013	<0.0002	0.00026	0.00027	0.00128
Silicon	7.51	7.42	7.4	7.44	4.74	4.74	4.82	4.69	4.65	6.27	6.07	6.34	6.19	6.18	6.57	6.33	6.69	6.52	6.44	4.29	3.97	4.12	5.56
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00001
Sodium	41.2	42.4	42.4	40.1	99.9	85.3	81.3	81.4	76.8	148	148	131	132	136	126	128	122	116	121	163	166	161	110
Strontium	0.682	0.685	0.706	0.716	1.18	1.13	1.26	1.13	1.3	1.52	1.33	1.34	1.36	1.41	1.39	1.19	1.32	1.25	1.28	0.168	0.155	0.159	0.66
Sulphur	77.7	81.3	77.3	80.6	57.1	51.4	47.7	47.7	48.9	135	129	135	136	132	163	144	149	147	146	86.9	88	85.6	57.1
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	0.000034	0.000031	0.000029	0.000027	0.000027	0.000041	0.000027	0.000026	0.000027	0.000017	0.000016	0.000012	0.000011	0.000013	0.000011	<0.00002	<0.00002	<0.00002	0.000018
Tin	<0.0001	<0.0001	<0.0001	<0.0001	0.00017	<0.0001	<0.0001	<0.0001	<0.0001	0.00017	0.00013	<0.0001	<0.0001	<0.0001	0.00021	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	0.00014
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.01
Uranium	0.00386	0.00387	0.00405	0.00398	0.00336	0.00327	0.00312	0.00247	0.00299	0.00267	0.00319	0.00274	0.00272	0.0026	0.0032	0.00306	0.00255	0.00261	0.00271	0.000532	0.00101	0.000812	0.00142
Vanadium	0.003	0.0033	0.003	0.0029	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	0.002
Zinc	<0.001	0.001	0.0041	0.0106	0.005	0.0016	0.007	0.0061	0.0055	0.003	0.0032	0.017	0.0042	0.005	0.0015	0.0021	0.0132	0.0074	0.0571	0.0025	0.0023	<0.002	0.0017
Total Metals																							
Aluminum	0.0089	<0.003	0.0886	0.0632	0.134	0.016	0.0198	0.0233	0.0278	0.102	0.0305	0.0249	0.0365	0.0347	0.0426	0.0236	0.0108	0.0143	0.021	0.202	0.309	0.111	0.308
Antimony	0.00029	0.00024	0.00029	0.00029	0.00027	0.00024	0.0002	0.00021	0.00015	0.00027	0.00035	0.00025	0.0002	0.00012	0.00026	0.0003	0.00016	0.00012	0.00018	<0.0002	0.0003	0.0003	0.00035
Arsenic	0.00465	0.00448	0.00487	0.0048	<0.0005	0.00045	0.00074	0.00078	0.00057	0.00084	0.00151	0.0025	0.00237	0.00242	0.00072	0.00137	0.00299	0.00268	0.00249	0.00533	0.00517	0.00509	0.00447
Barium	0.0352	0.0331	0.0371	0.0384	0.0352	0.0303	0.0311	0.031	0.0294	0.0285	0.0269	0.0246	0.0241	0.0234	0.0251	0.0221	0.0201	0.0203	0.0196	0.0107	0.0116	0.00952	0.0337
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.0005
Boron	0.08	0.066	0.077	0.064	0.129	0.127	0.126	0.131	0.119	0.534	0.614	0.464	0.478	0.586	0.423	0.448	0.372	0.398	0.43	8.74	10.5	10.4	1.77
Cadmium	<0.00004	<0.00006	<0.00006	<0.0001	0.000074	0.000027	0.000025	0.000025	0.000022	0.000044	0.000028	<0.00003	0.000029	0.000018	0.000025	0.000014	0.000014	0.000019	0.000034	<0.00002	0.000028	0.000023	0.000029
Calcium	91.5	88.9	91	93.5	61.9	57.5	58.7	56.7	57.4	64	62.8	61.7	59.8	59.5	86.4	73.9	70.2	68.2	67	5.1	5.28	4.72	20.9
Chromium	0.00041	0.00026	0.00053	0.00066	<0.0009	0.00013	0.00016	0.00014	<0.0001	0.00063	0.00022	0.00019	0.00026	0.00024	0.00058	0.00027	0.0002	0.00018	0.00018	0.00119	0.00244	0.00035	<0.0013
Cobalt	<0.0001	<0.0001	0.00022	0.00016	0.00125	0.00131	0.00135	0.00128	0.00105	0.00194	0.00234	0.00298	0.00256	0.00206	0.00265	0.00249	0.00286	0.00228	0.0019	0.0003	0.00053	0.00024	0.00062
Copper	0.00201	0.00185	0.00459	0.00404	0.00331	0.0008	0.00089	0.00097	0.00101	0.00148	0.00067	0.0007	0.00102	0.0007	0.00062	<0.0005	0.00098	0.00081	0.00121	<0.001	0.0017	<0.001	0.00326
Iron	0.022	<0.01	0.12	0.091	0.146	0.027	0.06	0.072	0.09	0.129	0.055	0.152	0.179	0.248	0.128	0.147	0.462	0.387	0.417	0.248	0.419	0.096	0.432
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000098	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	0.00011	<0.0001	0.000129
Lithium	0.00448	0.00444	0.00416	0.0033	0.016	0.0145	0.0147	0.016	0.0148	0.00973	0.00837	0.00552	0.00726	0.0077	0.00635	0.00593	0.00558	0.00641	0.00602	0.0089	0.0082	0.0075	0.00929
Magnesium	51	46.7	48	50.5	68.1	64.9	69.8	67.2	69.1	60.8	53.4	59	57.8	63	70.9	62.2	64.9	64.2	67.1	2.54	2.72	2.1	17.1
Manganese	0.0182	0.0213	0.12	0.0607	0.203	0.303	0.354	0.364	0.33	0.429	0.72	1.11	0.953	0.849	0.766	1.07	1.36	1.18	1.08	0.0338	0.0449	0.0357	0.115
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.137	0.127	0.135	0.127	0.011	0.01	0.0101	0.00999	0.00997	0.0126	0.0123	0.0117	0.0125	0.0135	0.0163	0.0157	0.0162	0.0172	0.0179	0.0179	0.0209	0.0184	0.0173
Nickel	<0.0005	<0.0005	0.0007	0.0007	0.00406	0.00305	0.00288	0.00244	0.00195	0.00598	0.00574	0.00557	0.00441	0.00356	0.00636	0.00522	0.00454	0.00386	0.00355	0.0026	0.005	0.0019	0.0032
Phosphorus	<0.05	<0.05	0.051	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.053	0.056	<0.05	<0.05	0.068	0.091	0.091	0.186	0.305	0.294	0.053
Potassium	8.6	7.73	7.32	8.15	7.44	6.68	7.42	7.75	7.49	8.8	8.14	9	8.93	9.8	13.2	12.6	13.6	13.3	13.7	9.73	9.97	9.28	9.58
Selenium	0.0248	0.0236	0.0219	0.022	0.00325	0.00294	0.00282	0.00255	0.00245	0.00021	0.00016	0.00024	0.00017	0.00011	0.00031	0.00019	0.00017	0.00015	0.00015	0.00021	0.00029	0.0003	0.00124
Silicon	7.59	7.16	7.41	7.5	5.13	4.79	4.87	4.8	4.68	6.42	6.03	6.4	6.26	6.38	6.7	6.32	6.65	6.62	6.49	4.73	4.81	4.21	6.2
Silver	<0.00001	<0.00001	<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00001
Sodium	43.4	41.9	41.8	41.5	101	86.2	82.5	82.9	77.1	151	156	134	132	141	131	130	125	120	123	161	171	161	107
Strontium	0.694	0.681	0.727	0.716	1.23	1.15	1.24	1.3	1.28	1.55	1.32	1.33	1.42	1.48	1.45	1.17	1.35	1.3	1.31	0.174	0.182	0.161	0.676
Sulphur	81.8	80.9	80.4	83.4	61.1	52.4	50.7	50.1	48.9	141	128	142	136	139	169	144	153	149	149	87.4	90.4	85.1	56.2
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	0.000036	0.000035	0.000032	0.000031	0.000032	0.00004	0.000026	0.000027	0.000026	0.000019	0.000018	0.000012	0.000013	0.000013	0.000013	<0.00002	<0.00002	<0.00002	0.000018
Tin	<0.0001	<0.0001	<0.0001	<0.0001	0.00035	0.0001	<0.0001	<0.0001	<0.0001	0.00023	0.00023	0.00017	0.0002	0.00015	0.00027	0.00016	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	0.00035
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	0.012
Total Cadmium (by saltwater extr		<0.00002		0.000029								<0.00002								<0.00002			
Uranium	0.0041	0.00395	0.00421	0.00401	0.00364	0.00346	0.00322	0.0031	0.003	0.00295	0.00328	0.00289	0.00285	0.00276	0.00342	0.0032	0.00267	0.00271	0.0028	0.00058	0.00112	0.00085	0.00156
Vanadium	0.0033	0.0033	0.0037	0.0034	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0021	0.0025	<0.002	0.0032
Zinc	<0.003	<0.003	<0.003	0.0122	0.0038	<0.003	0.0087	0.0083	0.0067	<0.003	<0.003	0.0188	0.0078	0.0104	<0.003	<0.003	0.0096	0.0087	0.0577	<0.006	<0.006	<0.006	<0.003
Organics																							
Carbon Organic (Dissolved)	1.46																						
Carbon Organic (Total)	1.29	1.39	1.39	1.6	2.19	1.54	1.51	1.31	1.08	2.76	2.84	2.62	3.04	2.39	4.16	3.8	3.69	3.58	3.45	3.03	3.68	3.36	2.64
Nitrogen Organic (Dissolved)																							
Nitrogen Organic (Total)																							
ALS LAB ID	**L1392288**	**L1430651**	**L1452371**	**L1469742**	**L1435486**	**L1455485**	**L1473799**	**L1486405**	**L1507004**	**L1432458**	**L1453027**	**L1471871**	**L1485034**	**L1503481**	**L1432458**	**L1453027**	**L1470495**	**L1485034**	**L1503481**	**L1478436**	**L1488139**	**L1508557**	**L1435549**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D4.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D4.2 - GROUNDWATER QUALITY DATA

Site ID	BGC14-003I				BGC14-003S					BGC14-005					BGC14-006D				BGC14-009				
Site ID	BGC14-003	BGC14-003	BGC14-003	BGC14-003	BGC14-003	BGC14-003	BGC14-003	BGC14-003	BGC14-003	BGC14-005	BGC14-005	BGC14-005	BGC14-005	BGC14-005	BGC14-006	BGC14-006	BGC14-006	BGC14-006	BGC14-009	BGC14-009	BGC14-009	BGC14-009	BGC14-009
Analytes	May-14	Jun-14	Jul-14	Aug-14	Mar-14	May-14	Jun-14	Jul-14	Aug-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	May-14	Jul-14	Aug-14	Sep-14	Apr-14	May-14	Jul-14	Jul-14	Aug-14
In Situ Parameters																							
Conductivity µS/cm	491	449	447	481	732	533	464	464	479	2100	2155	2010	2534	2095		2774	2592	2623	728	706	641	788	1289
Oxygen Dissolved %	12	1.3	8.3	8.1	53.3	3	1.4	1.4	101	0.31	4	1.7	2.9	4.8		6.3	20.2	15	7.6	2.2	0.6	4	7.3
Oxygen Dissolved	1.41	0.16	0.58	0.91	7.27	0.35	0.17	0.17	11.6	0.03	0.42	0.19	0.33	0.52		0.69	2.11	1.74	0.89	0.25	0.07	0.44	0.79
pH (unitless)	8.25	8.22	7.6	8.23	7.99	7.88	7.99	7.99	8	8.86	8.16	9.83	10.2	8.45		7.32	6.97	7.01	7.64	7.56	9.41	7.81	7.54
Redox Potential mV	38.4	-19.7	87.7	13.4	68.3	82.9	-31.3	-31.3	95.3	-182	-170	-274	-301	-216		-87.9	-31.7	-47	-53.1	-101	-189	-103	-67.1
Salinity ppt	0.35	0.33	0.34	0.34	0.36	0.39	0.34	0.34	0.33	1.53	1.6	1.46	1.88	1.54		2.02	1.89	2.03	0.36	0.51	0.45	0.54	0.88
Specific Conductivity µS/cm	722	674	703	699	470	785	689	689	683	2923	3058	2807	3558	2946		3817	3576	3833	489	1016	909	1074	1724
Temperature °C	8.27	7.52	8.32	8.67	6.25	8.16	7.88	7.88	9.35	10.9	9.49	10.1	9.89	9.87		10.7	10.6	8.48	7.85	9	9.58	11.1	11.8
Total Dissolved Solids	469	438	456	455	476	510	448	443	444	1899	1988	1824	2312	1915		2477	2322	2942	473	661	591	698	1121
Turbidity NTU	12.4	2.8	2	3.2	4	7.4	-3.6	0	4.2	11.6	7.3	-1.7	-3.1	0		5.2	0	0	-2	6.5	-2.3	-4.4	2.2
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)	<1					<1				2.7	4.4									4			
Alkalinity (Total as CaCO3)	196	202	199	202	182	182	183	174	173	159	177	163	171	172	137	108	131	135	121	125	136	146	150
Bicarbonate Alkalinity	196	197	189	199	182	182	183	174	173	159	177	163	171	172	137	108	131	135	121	125	136	146	150
Carbonate Alkalinity	<1	4.4	10	3.5	<2	<2	<2	<1	<1	<2	<2	<1	<2	<2	<2	<1	<2	<2	<2	<2	<1	<2	<2
Color TCU	<5					6.6																	
Hardness as CaCO3 (Dissolved)	118	115	117	117	204	199	189	191	188	1580	1560	1530	1590	1540	2460	2360	2360	2450	175	248	236	233	232
Hydroxide Alkalinity	<1	<1	<1	<1	<2	<2	<2	<1	<1	<2	<2	<1	<2	<2	<2	<1	<2	<2	<2	<2	<1	<2	<2
pH (unitless)	8.38	8.32	8.41	8.4	8.17	8.27	8.19	8.15	8.35	8.17	8.09	8.24	8.22	8.24	7.73	7.93	7.71	7.68	8.03	7.96	8.08	7.96	8.1
Specific Conductivity µS/cm	694	721	715	719	697	733	712	692	686	2860	2890	2970	2880	2990	3700	3840	3700	3700	715	975	954	907	917
Total Dissolved Solids	455	472	459	495	464	492	451	454	454	2920	2810	2830	2820	2880	4010	4020	3910	4020	524	619	689	625	642
Total Suspended Solids	<3	5.5	4.7	<3	<3	<3	<3	<3	<3	8.4	5.9	9.4	4.3	7.6	33.4	9.4	5.4	5.8	<3	<3	<3	<3	18.2
Turbidity NTU	4.1	4.31	2.94	0.62	1.59	1.17	0.46	0.41	0.38	1.83	4.06	2.53	3.28	2.47	28.8	16.7	11	10.4	0.62	2.09	1.31	1.04	7.57
Dissolved Anions																							
Bromide	0.064	<0.25	<0.5	0.051	<0.25	<0.25	<0.25	<0.5	0.068	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.25	<0.5	<0.5	<0.5	<0.5
Chloride	2.61	2.6	<5	2.5	4.1	4.9	3.7	<5	3	13	10	<10	<10	<10	12	11	<10	10	7.5	11.2	7.8	6.7	6.2
Fluoride	0.423	0.35	0.313	0.317	0.36	0.27	0.29	0.258	0.288	<0.4	0.197	0.183	0.195	0.175	<0.4	0.24	0.226	0.232	0.19	0.21	0.28	0.165	0.166
Sulphate	165	169	158	164	200	212	196	186	180	1840	1870	1850	1880	1890	2740	2710	2720	2730	250	374	368	329	324
Nutrients																							
Ammonia (Total)	0.0457	0.0448	0.0627	0.043	0.0505	0.0617	0.0591	0.0678	0.0686	0.0676	0.0663	0.0683	0.0659	0.0798	0.238	0.248	0.247	0.267	0.131	0.146	0.162	0.156	0.185
Nitrate (as N)	<0.005	<0.025	<0.05	<0.005	<0.025	<0.025	<0.025	<0.05	<0.005	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.025	<0.05	<0.05	<0.05	<0.05
Nitrite (as N)	<0.001	<0.005	<0.01	0.0037	<0.005	<0.005	<0.005	<0.01	<0.001	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.0054	<0.01	<0.01	<0.01	<0.01
Nitrogen (Dissolved)																							
Nitrogen (Total)																							
Nitrogen Kjeldahl (Total)	0.178	0.156	0.176	0.165	0.19	0.195	0.186	0.192	0.176	0.143	0.171	0.16	0.162	0.153	0.391	0.323	0.258	0.29	0.298	0.416	0.368	0.406	0.352
Orthophosphate (Dissolved)	0.0591	0.0657	0.0679	0.065	0.0374	0.0498	0.0513	0.0522	0.0526	0.0149	0.001	0.0035	0.0075	0.0012	<0.001	<0.001	<0.001	<0.001	0.0027	0.0078	0.0384	0.0394	0.0602
Phosphorus - Dissolved	0.0661	0.0674	0.0768	0.0627	0.0464	0.0507	0.0498	0.0566	0.0565	0.0139	<0.002	0.0029	0.0084	<0.002	<0.002	<0.002	<0.002	<0.002	0.0339	0.017	0.0415	0.0402	0.0538
Phosphorus - Total	0.0787	0.0791	0.0821	0.0672	0.0425	0.0525	0.0511	0.0562	0.0577	0.0276	0.0272	0.0283	0.0224	0.0218	0.0137	<0.002	0.0034	0.004	0.0041	0.0666	0.075	0.0694	0.0567
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																							
Aluminum	0.0068	0.0059	0.0066	0.0053	0.0052	0.006	0.0058	0.0086	0.0063	0.0037	0.0021	0.0025	0.0024	0.0013	<0.002	<0.002	<0.002	<0.002	0.008	0.0048	0.0051	0.0058	0.0056
Antimony	0.00017	0.00013	0.00013	0.00011	0.00029	0.00029	0.00028	0.00027	0.00034	<0.0001	<0.0002	<0.0001	0.00017	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	0.00317	0.00077	0.00038	0.00044	0.00029
Arsenic	0.0048	0.00487	0.00511	0.00531	0.00141	0.00145	0.00145	0.00151	0.00158	0.00135	0.00123	0.00113	0.00119	0.00114	<0.0002	0.00598	0.00644	0.00662	0.00431	0.0051	0.00498	0.00503	0.0053
Barium	0.0266	0.0251	0.0254	0.0246	0.0338	0.0294	0.0273	0.0277	0.0277	0.0234	0.0229	0.0295	0.0322	0.0339	0.00773	0.00849	0.00787	0.00738	0.023	0.0259	0.024	0.0215	0.0208
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	1.89	1.66	1.83	1.69	0.997	1.01	0.896	1.04	0.838	0.08	0.075	0.07	0.076	0.074	0.123	0.144	0.151	0.138	0.122	0.122	0.131	0.125	0.149
Cadmium	0.000015	<0.00001	0.000011	0.00001	<0.00005	<0.00006	<0.00005	<0.00003	<0.00001	<0.00002	<0.00002	0.000011	<0.00001	<0.00001	<0.00002	0.000024	<0.00002	0.00002	0.000012	<0.00001	<0.00002	<0.00002	<0.00001
Calcium	19.8	19.1	19.1	19.2	38.4	37.9	35.2	34.5	34.3	297	294	283	301	293	453	446	461	477	52.8	74.5	70.4	69.6	69.8
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00033	0.0003	0.00017	0.00011	0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.00016	0.00011	0.00012	0.00012	0.00058	0.00048	0.00044	0.00049	0.00051	0.00091	0.00092	0.00081	0.00083	0.00078	0.00076	0.00096	0.00082	0.00071	0.00167	0.00257	0.00182	0.00154	0.00125
Copper	0.00042	0.00046	0.00039	0.00038	0.00148	0.00063	0.00094	0.00053	0.00061	0.00047	<0.0004	<0.0002	0.00073	<0.0002	<0.0004	<0.0004	<0.0004	<0.0004	0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Dissolved Cadmium (by saltwater					0.00004	0.000029	0.000029	<0.00002		<0.00002	<0.00002				<0.00002		0.000022				<0.00002	<0.00002	
Iron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.485	0.578	0.575	0.597	0.572	1.19	1.49	1.6	1.88	<0.01	0.31	0.251	0.221	0.238
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.00005	<0.00005	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0103	0.00979	0.0103	0.0115	0.00113	0.00094	0.00115	0.00099	0.00089	0.0145	0.0122	0.0138	0.0147	0.0149	0.0235	0.0275	0.0283	0.0256	0.00469	0.00495	0.0051	0.00477	0.00581
Magnesium	16.7	16.4	16.7	16.8	26.2	25.4	24.5	25.4	24.9	204	201	200	202	197	322	304	294	306	10.6	15	14.7	14.4	14.1
Manganese	0.107	0.0744	0.1	0.0915	0.111	0.158	0.166	0.184	0.199	0.496	0.493	0.461	0.457	0.465	0.323	0.384	0.355	0.362	0.471	1.27	1.11	0.92	0.727
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0168	0.0165	0.0171	0.0174	0.0284	0.0287	0.0301	0.0313	0.0333	0.0353	0.0312	0.03	0.0302	0.0309	0.00464	0.00485	0.00467	0.00483	0.0247	0.0236	0.0227	0.0213	0.0213
Nickel	0.00127	0.00069	0.00069	0.00052	0.0024	0.0022	0.00171	0.00141	0.00143	0.0022	0.0017	0.00111	0.00092	0.00102	<0.001	0.0013	0.0011	<0.001	0.00399	0.00453	0.00365	0.00314	0.00262
Phosphorus	0.071	0.065	0.083	0.066	<0.05	<0.05	<0.05	0.06	0.061	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.3	<0.05	0.07	0.073	0.075	0.102
Potassium	9.58	9.59	9.85	9.72	8.95	8.57	8.45	9.16	8.66	11.1	12.1	12.1	13.7	13.7	6.15	6.05	5.95	6.38	0.79	0.98	0.93	0.91	0.83
Selenium	0.001	0.00084	0.00066	0.00046	0.00088	0.00067	0.00054	0.00045	0.00042	<0.0001	<0.0002	0.00012	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	0.00026	0.00023	0.00021	0.00017	0.00026
Silicon	6.04	6.22	6.27	6.54	5.77	6.29	6.19	6.26	6.24	9.23	9.44	9.76	9.86	9.82	8.74	8.25	8.28	8.4	8.53	7.96	8.08	8.5	8.64
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	110	105	110	105	81.8	82.6	74	76	74.6	192	171	169	187	181	131	145	154	155	97.1	111	115	103	108
Strontium	0.645	0.638	0.663	0.677	0.603	0.547	0.533	0.569	0.565	2.53	2.21	2.17	2.32	2.37	8.31	8.57	8.54	8.65	0.0857	0.131	0.139	0.121	0.128
Sulphur	56.8	55.2	57.7	56.9	66.8	69.4	62.2	61.2	61.2	596	592	564	567	570	879	854	773		79.6	129	117	106	107
Thallium	<0.00001	<0.00001	0.000011	<0.00001	0.000026	0.000025	0.000021	0.000019	0.000019	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	0.00002	<0.00001	0.000013	0.000015	0.000013
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	0.00085	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	0.016	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.00128	0.00111	0.00108	0.00105	0.00306	0.00327	0.00309	0.00297	0.00317	0.00151	0.00162	0.0016	0.00164	0.00166	0.000616	0.00127	0.000984	0.000939	0.00251	0.0027	0.00249	0.00231	0.00262
Vanadium	0.0014	0.0015	0.0014	0.0014	0.0016	0.0012	0.0013	0.0013	0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	<0.001	0.0021	0.0077	0.0019	0.0015	<0.001	0.0044	0.0067	0.0037	0.0029	<0.002	0.001	<0.001	<0.001	<0.002	0.0025	0.0052	0.0033	<0.001	0.0018	0.0079	0.0026	0.0033
Total Metals																							
Aluminum	0.132	0.144	0.0815	0.0325	0.0958	0.0354	0.0326	0.0227	0.0618	0.0068	0.0071	0.01	0.0057	0.0071	0.282	0.0165	0.0148	0.0205	0.0335	0.0217	0.0247	0.0489	0.185
Antimony	0.00022	0.00018	0.00016	0.00014	0.00028	0.00031	0.00034	0.0003	0.00042	<0.0001	<0.0002	0.0001	0.00021	0.00015	0.00024	<0.0002	<0.0002	<0.0002	0.00315	0.00083	0.00046	0.00049	0.00059
Arsenic	0.00456	0.00493	0.0053	0.00558	0.00142	0.00146	0.0015	0.00156	0.00156	0.00132	0.0012	0.00119	0.00123	0.00117	0.00358	0.00636	0.00694	0.00765	0.00425	0.00521	0.00528	0.00516	0.00533
Barium	0.0288	0.0272	0.0273	0.0252	0.0343	0.0306	0.0288	0.0275	0.0268	0.0235	0.0237	0.031	0.0333	0.0336	0.0107	0.00927	0.0083	0.00751	0.022	0.0264	0.0255	0.0216	0.022
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	1.97	1.77	2.02	1.77	1.03	1.06	0.974	1.02	0.84	0.081	0.083	0.066	0.083	0.08	0.133	0.155	0.155	0.146	0.127	0.123	0.147	0.128	0.159
Cadmium	0.00003	0.000019	0.000025	0.000011	<0.00008	<0.00006	<0.0001	<0.00003	0.000017	<0.00002	<0.00002	0.000014	0.00001	<0.00001	0.000032	0.00003	0.000027	0.000028	0.00002	0.000012	<0.00003	<0.00002	0.000032
Calcium	20	19	19	19.6	36.6	37.9	36.3	33.6	33	291	289	289	306	293	437	460	475	483	52.4	74.3	73.3	66.9	66
Chromium	0.00056	0.00063	0.00034	0.00016	<0.00037	0.00016	0.00026	0.00014	0.00035	0.00302	0.00167	0.00072	0.00058	0.00081	0.00083	<0.0002	<0.0002	<0.0002	0.00011	0.00015	0.00023	0.00022	0.00054
Cobalt	0.00035	0.00036	0.00029	0.0002	0.00063	0.00053	0.0005	0.00052	0.00053	0.0009	0.00101	0.00088	0.00091	0.0009	0.00089	0.00106	0.00091	0.00075	0.00171	0.00275	0.00196	0.00161	0.00144
Copper	0.00272	0.00231	0.00139	0.00115	0.00172	0.00124	0.00179	0.00094	0.00195	<0.0005	<0.001	<0.0005	0.00106	<0.0005	0.0017	<0.001	<0.001	<0.001	<0.001	<0.0005	0.00052	0.00073	0.00205
Iron	0.216	0.233	0.136	0.046	0.107	0.038	0.035	0.02	0.073	0.522	0.607	0.648	0.668	0.697	2.06	1.68	1.77	2.23	0.035	0.341	0.298	0.267	0.405
Lead	0.000066	0.000059	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000053	<0.00005	<0.0001	<0.00005	<0.00005	<0.00005	0.00016	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	0.000099
Lithium	0.0102	0.0102	0.011	0.0118	0.00129	0.00107	0.00141	0.00108	0.00096	0.0137	0.0131	0.012	0.0156	0.015	0.0258	0.0282	0.0281	0.0261	0.00448	0.00463	0.0052	0.00468	0.00605
Magnesium	16.9	16.3	16.7	16.9	25.3	25.6	25.2	25.1	24.2	204	200	198	217	196	316	312	319	313	10.8	14.7	15.5	13.9	13.5
Manganese	0.135	0.133	0.151	0.129	0.114	0.164	0.181	0.185	0.193	0.479	0.502	0.483	0.469	0.483	0.341	0.398	0.381	0.358	0.464	1.34	1.12	0.926	0.736
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0173	0.018	0.0185	0.0184	0.03	0.0307	0.0329	0.0324	0.0328	0.035	0.0328	0.0283	0.0314	0.0322	0.00471	0.00522	0.00489	0.00499	0.0265	0.0241	0.0252	0.0215	0.0222
Nickel	0.00201	0.00155	0.00119	0.00074	0.00281	0.00254	0.00205	0.00159	0.00162	0.00307	0.0022	0.00136	0.0014	0.00137	0.0015	0.0015	0.0012	<0.001	0.0041	0.00478	0.00391	0.0034	0.0032
Phosphorus	0.08	0.079	0.079	0.073	0.056	0.062	<0.05	0.062	0.059	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.3	<0.05	0.074	0.081	0.078	0.105
Potassium	9.61	9.39	9.77	10.1	8.59	8.66	8.63	9.15	8.49	10.9	11.5	12.3	14	13.5	6.17	6.34	6.24	6.37	0.83	0.94	0.99	0.89	0.81
Selenium	0.00096	0.00084	0.00067	0.00048	0.00087	0.00063	0.00061	0.00045	0.0004	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	0.00027	0.00024	0.00022	0.00025	0.00045
Silicon	6.31	6.46	6.44	6.66	5.91	6.31	6.36	6.28	6.13	9.12	9.42	9.99	10.1	9.93	9.15	8.6	8.64	8.69	8.74	7.73	8.6	8.35	8.73
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	109	103	112	105	80.4	84	79.4	77.9	70.8	187	178	170	186	187	132	153	164	154	92.2	114	123	104	110
Strontium	0.661	0.664	0.716	0.693	0.605	0.571	0.553	0.575	0.566	2.46	2.38	1.97	2.39	2.38	8.35	8.78	8.79	8.94	0.0881	0.134	0.149	0.121	0.129
Sulphur	57.7	55.3	58.8	58.1	65.9	70.9	64.8	62.1	59	590	611	561	613	577	851	869	825		80.8	130	126	104	106
Thallium	0.000013	0.000012	0.000012	<0.00001	0.000025	0.000034	0.000022	0.000021	0.000017	<0.00001	<0.00002	0.00002	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	0.00002	0.00001	0.000015	0.000014	0.000018
Tin	0.00015	0.00011	<0.0001	<0.0001	0.00014	<0.0001	0.0001	<0.0001	0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	0.00458	0.00026	<0.0002	<0.0002	0.00019	0.00011	0.00016	0.00015	0.00041
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	0.017	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extr					0.000063	0.000038	0.000037	0.000022		<0.00002	<0.00002										<0.00002	<0.00002	
Uranium	0.00132	0.00118	0.00112	0.0011	0.00318	0.00355	0.0034	0.00319	0.00318	0.00146	0.00169	0.00154	0.00169	0.00175	0.000635	0.00137	0.0011	0.000945	0.00246	0.00273	0.00272	0.00231	0.00275
Vanadium	0.002	0.0025	0.0018	0.0015	0.002	0.0015	0.0017	0.0014	0.0013	<0.001	<0.002	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	<0.003	<0.003	0.0092	0.0031	<0.003	<0.003	0.0068	0.0044	0.0067	<0.003	<0.006	0.0045	<0.003	<0.003	<0.006	<0.006	0.0073	<0.006	<0.003	<0.003	0.0099	0.0035	0.0081
Organics																							
Carbon Organic (Dissolved)										1.62									4.02				
Carbon Organic (Total)	1.78	1.64	1.84	1.66	2.94	2.89	2.45	2.05	2.16	2.34	1.91	2.11	2	1.88	4.19	1.41	1.13	1.22	4.92	6.96	6.46	5.97	6.82
Nitrogen Organic (Dissolved)																							
Nitrogen Organic (Total)																							
ALS LAB ID	**L1456126**	**L1475118**	**L1488139**	**L1507004**	**L1435549**	**L1456126**	**L1475118**	**L1486405**	**L1505010**	**L1447261**	**L1463124**	**L1478887**	**L1496084**	**L1510175**	**L1459725**	**L1485034**	**L1497579**	**L1512652**	**L1440275**	**L1463124**	**L1481825**	**L1494504**	**L1508557**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D4.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D4.2 - GROUNDWATER QUALITY DATA

Site ID	BGC14-010					BGC14-011D					BGC14-011S					BGC14-012D					BGC14-012		
Site ID	BGC14-01(	BGC14-01(	BGC14-01(	BGC14-01(	BGC14-01(	BGC14-011	BGC14-011	BGC14-011	BGC14-011	BGC14-011	BGC14-011	BGC14-011	BGC14-011	BGC14-011	BGC14-011	BGC14-012	BGC14-012	BGC14-012	BGC14-012	BGC14-012	BGC14-012	BGC14-012	BGC14-012
Analytes	Mar-14	May-14	Jun-14	Jul-14	Aug-14	Mar-14	May-14	Jun-14	Jul-14	Aug-14	Mar-14	May-14	Jun-14	Jul-14	Aug-14	Mar-14	May-14	Jun-14	Jul-14	Aug-14	Mar-14	May-14	Jun-14
In Situ Parameters																							
Conductivity µS/cm	1586	1079	1026	1108	1176	966	1000	660	754	653	714	834	453	532	528	2029	1408	1314	1581	1446	796	1047	1368
Oxygen Dissolved %	6.3	5.5	17.6	2.7	14.3	13.4	0	0.8	4.3	2.1	14.4	0	0.5	18.6	2.8	75.5	3.7	5.7	25	7.4	18.1	5.1	2.3
Oxygen Dissolved	0.76	0.64	2.02	0.3	1.66	1.64	0	0.1	0.48	0.28	1.75	0	0.06	2.13	0.31	9.51	0.43	0.66	2.62	0.85	133	0.63	0.28
pH (unitless)	6.93	7.03	7.06	8.78	6.97	8.57	8.07	8.1	7.97	7.65	9.36	8.28	8.92	8.4	7.83	7.81	7.72	7.68	7.55	7.32	8	7.61	7.43
Redox Potential mV	-9.6	-36.3	-20.7	-128	-47.6	-108	-134	-77.5	-32.1	-99.6	-2.3	-199	-215	-144	-218	-84.2	-97.2	-86.3	-62.4	-81.8	58.9	-28.1	33.1
Salinity ppt	0.8	0.79	0.75	0.76	0.86	0.48	0.5	0.48	0.51	0.48	0.35	0.4	0.33	0.37	0.36	1.03	1.06	0.97	1.06	1.08	0.39	0.85	1.09
Specific Conductivity µS/cm	1044	1561	1482	1504	1678	629		967	1030	965	459		671	759	739	1267	2072	1910	12055	2092	461	1683	2121
Temperature °C	7.1	8.8	8.95	11.1	9.52	6.7	10.5	8.35	10.6	8.07	6.28	10.7	8.03	9.37	9.92	5.36	8.25	8.72	13.1	8.82	2.97	5.23	6.38
Total Dissolved Solids	1031	1013	964	980	1096	628	640	628	670	627	464	539	436	493	431	1320	1345	1241	1340	1362	517	1093	1380
Turbidity NTU	6.7	7.1	-1.3	0	0	6.7		-2.6	1.5	0	2.4		-2.9	3.1	0	2.3	6.3	-3.6	0.9	0	2.3	1.09	-3.6
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)		16.5					<1					<1											
Alkalinity (Total as CaCO3)	383	392	377	371	386	321	318	331	323	328	194	179	157	174	178	219	220	213	212	221	190	286	406
Bicarbonate Alkalinity	383	392	377	371	386	312	310	311	307	319	164	174	150	168	178	219	220	213	212	221	190	286	406
Carbonate Alkalinity	<2	<2	<1	<1	<2	9.4	8.1	19.6	16.4	8.8	29.6	5	6.9	5.7	<1	<2	<2	<1	<1	<2	<2	<2	<1
Color TCU																							
Hardness as CaCO3 (Dissolved)	896	856	885	892	907	58.4	65.4	70.4	71.6	66.5	73.1	78	69.4	79.8	82.8	718	666	734	699	718	289	698	1090
Hydroxide Alkalinity	<2	<2	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2	<2	<1	<1	<2	<2	<2	<1
pH (unitless)	7.88	7.75	8	8.1	7.95	8.56	8.39	8.53	8.53	8.42	8.99	8.48	8.46	8.42	8.32	8.04	8.28	8.2	8.03	8.18	8.17	8.21	8.16
Specific Conductivity µS/cm	1520	1510	1580	1570	1590	974	968	1010	1020	1000	659	760	703	746	752	1970	2010	2010	2030	2020	771	1630	2230
Total Dissolved Solids	1240	1240	1270	1330	1290	621	636	648	658	656	438	505	456	489	502	1550	1600	1580	1540	1690	512	1260	1840
Total Suspended Solids		<3	4.3	4	6.4		5.5	<3	<3	<3		<3	<3	4.6	7.2	<3	<3	<3	3.3	7.1	<3	<3	<3
Turbidity NTU		2.34	4.3	6.4	5.69		2.76	1	0.82	0.54		0.75	0.6	1.18	1.81	1.35	0.9	1.09	1.14	2.1	0.58	0.27	0.28
Dissolved Anions																							
Bromide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.25	0.153	0.149	<0.25	<0.5	<1	<1	<1	<1	<1	<0.5	<0.5	<1
Chloride	8.2	9.5	8.8	7.7	7.9	20.2	18.6	19.5	19.1	19.5	11.9	11.9	11.9	12.7	13.5	<10	12	<10	<10	<10	<5	14.1	16
Fluoride	0.28	0.27	0.307	0.28	0.286	0.66	0.63	0.656	0.62	0.674	0.49	0.584	0.583	0.52	0.539	0.72	<0.4	0.301	0.281	0.258	0.45	0.2	0.232
Sulphate	573	579	593	607	619	172	173	182	185	189	158	185	178	181	194	993	995	995	974	985	237	671	1030
Nutrients																							
Ammonia (Total)	0.054	0.0553	0.0726	0.0705	0.0868	0.0096	0.0216	0.025	0.0237	0.031	0.0225	0.0184	0.0106	0.0055	0.0088	0.0992	0.0932	0.0901	0.0936	0.084	<0.005	0.0126	0.0182
Nitrate (as N)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.025	<0.005	<0.005	<0.025	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.1
Nitrite (as N)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.005	<0.001	<0.001	<0.005	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.01	<0.02
Nitrogen (Dissolved)																							
Nitrogen (Total)																							
Nitrogen Kjeldahl (Total)	0.216	0.201	0.22	0.789	0.26	0.096	0.151	0.224	0.181	0.201	0.182	0.214	0.303	0.337	0.349	0.248	0.226	0.244	0.257	0.246	0.39	0.495	0.871
Orthophosphate (Dissolved)	0.0016	0.002	0.0013	0.0021	<0.001	0.009	0.0278	0.0309	0.039	0.0379	0.0641	0.0588	0.0825	0.141	0.13	0.0046	0.0089	0.0088	0.0125	0.0089	0.0384	0.0351	0.0389
Phosphorus - Dissolved	0.0021	0.0031	<0.002	<0.002	<0.002	0.0111	0.0302	0.0345	0.0432	0.0398	0.0708	0.0666	0.086	0.165	0.14	0.0059	0.0087	0.0081	0.0127	0.0086	0.0531	0.0392	0.0416
Phosphorus - Total	0.016	0.0182	0.0181	0.0221	0.0489	0.0207	0.0502	0.0384	0.0451	0.0406	0.071	0.0752	0.0985	0.177	0.169	0.0134	0.0205	0.0162	0.0243	0.0257	0.0613	0.0415	0.0466
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																							
Aluminum	0.0024	0.0033	0.003	0.0029	0.0024	0.0083	0.0105	0.0097	0.0092	0.0082	0.0449	0.034	0.0501	0.033	0.0286	0.0043	0.0055	0.0055	0.005	0.0038	0.0052	0.0042	0.0038
Antimony	0.00031	0.00023	0.0001	<0.0001	<0.0001	0.00016	0.00026	0.00019	0.00012	<0.0001	0.00018	0.00024	0.00026	0.00027	0.00024	<0.0002	0.00012	0.00011	0.00015	<0.0001	0.0009	0.00024	0.00017
Arsenic	0.00096	0.00072	0.00081	0.00074	0.00087	0.00037	0.00062	0.00069	0.00068	0.00061	0.00105	0.00086	0.00124	0.00183	0.00197	0.0371	0.0379	0.0387	0.036	0.0401	0.0038	0.00265	0.00295
Barium	0.0247	0.0244	0.0279	0.0275	0.0268	0.0207	0.0231	0.0242	0.0251	0.0218	0.015	0.0172	0.0162	0.0242	0.0263	0.016	0.0187	0.0173	0.0183	0.0152	0.0225	0.0287	0.0386
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.02	0.019	0.022	0.022	0.018	0.029	0.028	0.03	0.03	0.033	0.017	0.016	0.014	0.017	0.017	0.626	0.586	0.602	0.592	0.571	0.068	0.149	0.176
Cadmium	0.000052	0.00004	0.000027	0.000028	0.000026	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	0.000027	<0.00001	<0.00001	<0.00001	<0.00001	0.000033	0.000017	0.000017	0.000011	0.000013	0.000024	0.000025	0.000021
Calcium	166	160	163	164	168	7.44	9.78	10.7	10.9	9.49	9.85	10.2	9.09	10.5	11.1	71.6	66.6	71.3	70.9	70.1	39.1	98	152
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00011
Cobalt	0.00154	0.00159	0.00256	0.00232	0.00226	0.00014	0.00052	0.00057	0.00061	0.00041	0.00017	0.00052	0.00034	0.00034	0.00025	0.00122	0.002	0.00146	0.00152	0.00093	0.00044	0.00099	0.00067
Copper	<0.0002	0.00034	0.00028	<0.0002	0.00023	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0005	0.00023	<0.0002	0.00067	<0.0002	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	0.00847	0.00394	0.00485
Dissolved Cadmium (by saltwate																							
Iron	0.507	0.626	0.745	0.803	0.719	<0.01	0.023	0.023	0.025	0.032	<0.01	<0.01	0.035	0.111	0.105	0.134	0.184	0.227	0.191	0.256	<0.01	0.013	0.032
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0396	0.0427	0.0424	0.0433	0.0387	0.0196	0.0158	0.0155	0.0125	0.0158	0.0147	0.0151	0.013	0.0136	0.0133	0.0465	0.0452	0.0495	0.0448	0.0493	0.00762	0.0127	0.0172
Magnesium	117	111	116	117	118	9.67	9.95	10.6	10.8	10.4	11.8	12.7	11.3	13	13.4	131	121	135	127	132	46.5	110	174
Manganese	0.287	0.327	0.699	0.557	0.67	0.0288	0.119	0.155	0.17	0.123	0.0175	0.108	0.163	0.324	0.386	0.173	0.442	0.365	0.381	0.248	0.0489	0.0847	0.0743
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.00297	0.00306	0.00333	0.00324	0.00326	0.00477	0.00617	0.00614	0.0059	0.00597	0.0183	0.0225	0.0228	0.0238	0.0217	0.0168	0.0162	0.0163	0.0164	0.0167	0.0105	0.00965	0.0102
Nickel	0.00224	0.00268	0.00434	0.00356	0.00374	<0.0005	0.00173	0.00199	0.00259	0.00144	0.00094	0.00162	0.00105	0.00154	0.00088	0.002	0.00244	0.00186	0.00204	0.00116	0.00168	0.0022	0.00275
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.084	<0.05	0.084	0.062	0.103	0.211	0.164	<0.05	<0.05	<0.05	<0.05	<0.05	0.056	<0.05	<0.05
Potassium	11.5	11.3	12	11.8	12.3	5.17	5.95	6.18	6.14	5.81	6.19	6.26	5.69	5.9	5.89	6.71	5.97	6.76	6.74	6.66	12	17.3	24.9
Selenium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00012	0.00011	<0.0001	0.00012	0.00061	0.0006	0.0003	0.00025	0.00033	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	0.00225	0.00028	0.00029
Silicon	24.7	24.2	22.1	23.5	23	4.11	4.31	4.44	4.43	4.31	3.21	3.09	3.07	3.19	3.37	7.32	7.12	7.36	7.16	7.36	5.29	6.48	7.68
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	41.1	40.4	47.9	42.7	44.4	200	191	191	197	203	130	127	112	125	124	226	207	218	217	208	63.5	115	162
Strontium	1.76	2.02	1.93	2.02	2.05	0.297	0.286	0.293	0.254	0.296	0.28	0.322	0.25	0.323	0.336	10.5	10	9.92	9.62	10.1	0.596	1.46	2.24
Sulphur	174	174	192	198	199	53.9	55.3	60	62	59.4	50.9	59	61.4	64.6	70.6	308	313	311	316	321	77.8	220	315
Thallium	0.000024	0.000021	0.000028	0.000027	0.000025	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	0.000014	0.000017	0.000017	0.000015	<0.00001	<0.00001	<0.00001
Tin	0.00017	0.00011	<0.0001	<0.0001	<0.0001	0.00018	0.00021	0.00012	0.00011	0.00014	0.00015	0.00025	0.00032	0.00019	0.00028	0.00022	0.00018	0.00014	0.00016	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.00242	0.00228	0.00295	0.00265	0.00269	0.000359	0.00138	0.00152	0.00156	0.0013	0.00161	0.00209	0.00128	0.00151	0.00123	0.000745	0.000961	0.000848	0.00113	0.000827	0.0012	0.00205	0.00343
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0013	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	0.0337	0.0096	0.0089
Zinc	0.0023	0.003	0.0105	0.0057	0.015	<0.001	<0.001	0.0025	0.0013	0.0071	0.0022	0.0017	0.0014	0.0059	<0.001	<0.002	0.0017	0.0033	0.0019	0.0024	0.0011	0.002	0.0052
Total Metals																							
Aluminum	0.439	0.0437	0.0149	0.0407	0.145	0.241	0.144	0.0864	0.046	0.064	0.0771	0.0554	0.0697	0.122	0.0999	0.0362	0.0218	0.0195	0.0247	0.0807	0.0163	0.0116	0.0151
Antimony	0.00057	0.00028	0.00014	0.00013	0.00019	0.00038	0.00037	0.00029	0.00017	0.00019	0.00019	0.00027	0.00035	0.00035	0.00036	<0.0002	0.00019	0.00016	0.00026	0.00014	0.00095	0.00025	0.00023
Arsenic	0.00106	0.00072	0.00084	0.00077	0.00091	0.0004	0.00061	0.00071	0.00073	0.00068	0.00106	0.00087	0.00126	0.0019	0.0021	0.0379	0.0386	0.0411	0.0367	0.0431	0.00391	0.00264	0.00297
Barium	0.0271	0.0244	0.0288	0.0284	0.0298	0.0242	0.0257	0.0291	0.0255	0.0237	0.0151	0.018	0.0168	0.0236	0.0282	0.0172	0.0204	0.0178	0.0187	0.0164	0.0226	0.029	0.0399
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.022	0.02	0.027	0.03	0.022	0.031	0.029	0.032	0.035	0.047	0.017	0.016	0.018	0.022	0.024	0.629	0.608	0.642	0.614	0.612	0.071	0.152	0.196
Cadmium	0.00006	0.000042	0.000032	0.000033	0.000035	0.000014	0.000013	0.00001	0.000011	<0.00001	0.000024	0.000021	0.000014	0.000023	0.00002	0.000027	0.000029	0.000016	0.000023	0.000023	0.000021	0.00003	0.000024
Calcium	166	156	165	164	162	7.71	9.89	10.8	10.7	9.96	9.81	10.2	9.12	10.1	11.3	70.2	66.5	69.5	69.6	70.7	38.6	97.4	153
Chromium	0.00031	0.00012	0.00015	0.00026	0.00072	0.00031	0.00029	0.00019	0.00022	0.00021	0.00016	0.00014	0.00017	0.00047	0.00027	<0.0002	0.00016	0.00019	0.00018	0.00029	<0.00026	0.00015	0.00027
Cobalt	0.00173	0.00164	0.0027	0.00237	0.00245	0.00026	0.00058	0.0007	0.00064	0.0005	0.0002	0.00055	0.00068	0.00059	0.00049	0.00124	0.002	0.00151	0.00156	0.00106	0.00046	0.00104	0.00071
Copper	0.00052	<0.0005	<0.0005	<0.0005	0.00179	0.00059	0.00065	<0.0005	<0.0005	0.00061	0.0006	0.00066	0.00059	0.00118	0.00073	<0.001	0.00051	0.00059	<0.0005	0.00119	0.00956	0.00516	0.0062
Iron	0.844	0.677	0.803	0.854	1.08	0.252	0.173	0.104	0.061	0.088	0.046	0.031	0.067	0.25	0.243	0.193	0.239	0.253	0.234	0.374	0.021	0.022	0.043
Lead	0.000198	<0.00005	<0.00005	<0.00005	0.000131	0.000065	<0.00005	0.000105	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000187	0.000054	<0.0001	0.000228	<0.00005	0.000101	0.000063	<0.00005	<0.00005	<0.00005
Lithium	0.0406	0.0416	0.0437	0.0442	0.0388	0.019	0.015	0.0143	0.0139	0.0162	0.0141	0.014	0.015	0.0134	0.0136	0.0469	0.0471	0.0502	0.0451	0.0505	0.00763	0.0122	0.0178
Magnesium	115	110	120	119	118	9.89	9.96	10.5	10.6	10.8	11.7	12.6	11.4	12.3	13.5	135	125	134	128	134	44.2	110	178
Manganese	0.299	0.331	0.708	0.582	0.71	0.0352	0.122	0.168	0.169	0.141	0.0182	0.114	0.168	0.315	0.398	0.171	0.433	0.375	0.4	0.262	0.0496	0.088	0.0771
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.00319	0.00321	0.00353	0.00343	0.00338	0.00502	0.00712	0.00709	0.00692	0.00677	0.0196	0.0243	0.0283	0.0237	0.0234	0.0174	0.0176	0.018	0.0171	0.0179	0.0111	0.0102	0.0114
Nickel	0.00245	0.00287	0.00454	0.00387	0.00452	0.00066	0.002	0.00239	0.00281	0.00181	0.00098	0.00177	0.00131	0.00244	0.00129	0.0019	0.00265	0.00188	0.00228	0.00147	0.00179	0.0023	0.00294
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.075	<0.05	0.093	0.077	0.11	0.186	0.185	<0.05	<0.05	<0.05	<0.05	<0.05	0.072	<0.05	0.057
Potassium	11.5	10.8	12.6	11.8	12.2	5.22	5.96	6.06	6.05	6.16	6.18	6.13	5.73	5.48	5.96	6.59	6.36	6.62	6.62	6.83	11.7	17.1	24.3
Selenium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00012	0.00014	0.00013	0.00011	0.00057	0.00054	0.00033	0.00027	0.00022	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	0.00241	0.00023	0.00031
Silicon	26.6	23.9	24.2	23.6	22.7	4.71	4.61	4.61	4.45	4.61	3.32	3.14	3.14	3.23	3.58	7.36	7.32	7.51	7.31	7.68	5.25	6.44	7.93
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	0.000015	<0.00001	<0.00001	0.000013	<0.00001	0.000012
Sodium	42.7	40.7	50.8	43.2	44.5	206	191	189	190	210	128	128	112	115	126	222	210	221	218	215	65.3	104	168
Strontium	1.8	2	2.06	2.09	2	0.304	0.305	0.312	0.294	0.315	0.285	0.333	0.299	0.311	0.35	10.8	10.5	10.2	9.84	10.4	0.585	1.51	2.37
Sulphur	186	174	204	203	200	56.7	57	61.9	61.8	62.6	53.6	59.4	62.3	61.6	66	321	319	321	327	329	78.9	215	334
Thallium	0.000027	0.00002	0.000029	0.000028	0.000024	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000012	<0.00001	<0.00001	<0.00001	<0.00001	0.000024	0.000015	0.000019	0.000019	0.000015	<0.00001	<0.00001	<0.00001
Tin	0.00052	0.00027	0.00012	0.00016	0.00023	0.00043	0.00044	0.00025	0.00017	0.00033	0.00017	0.0003	0.00047	0.00069	0.0006	0.00037	0.00038	0.00026	0.00031	0.00029	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	0.012	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extr																							
Uranium	0.00258	0.00231	0.00298	0.00272	0.0027	0.000391	0.00146	0.00176	0.00189	0.0016	0.0017	0.00211	0.00153	0.00146	0.00132	0.000737	0.000987	0.00091	0.0012	0.000898	0.00128	0.00204	0.00377
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0016	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	0.0346	0.0102	0.0098
Zinc	<0.003	<0.003	0.0117	0.0066	0.0206	<0.003	<0.003	0.0032	<0.003	0.0083	<0.003	<0.003	<0.003	0.0053	0.0045	<0.006	<0.003	0.0038	0.0042	0.0046	<0.003	<0.003	0.0069
Organics																							
Carbon Organic (Dissolved)																							
Carbon Organic (Total)	3.17	3.24	3.35	3.53	4.02	2.09	3.13	3.79	4.58	3.42	22.6	23.1	30.7	24.4	14.5	2.41	2.45	2.73	2.68	2.58	6.9	9.15	13.1
Nitrogen Organic (Dissolved)																							
Nitrogen Organic (Total)																							
ALS LAB ID	**L1434993**	**L1454698**	**L1471871**	**L1485034**	**L1505010**	**L1434993**	**L1454698**	**L1472814**	**L1485034**	**L1503481**	**L1434993**	**L1454698**	**L1472814**	**L1485034**	**L1503481**	**L1435549**	**L1455485**	**L1473799**	**L1486405**	**L1507004**	**L1435549**	**L1455485**	**L1473799**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D4.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D4.2 - GROUNDWATER QUALITY DATA

Site ID	S		BGC14-013					BGC14-014D			BGC14-015D				BGC14-015S				BGC14-016				
Site ID	3GC14-012	3GC14-012	BGC14-01	BGC14-01	BGC14-01	BGC14-01	BGC14-01	3GC14-014	3GC14-014	3GC14-014	3GC14-015	3GC14-015	3GC14-015	3GC14-015	3GC14-015	3GC14-015	3GC14-015	3GC14-015	BGC14-01	BGC14-01	BGC14-01	BGC14-01	BGC14-01
Analytes	Jul-14	Aug-14	Mar-14	Jun-14	Jul-14	Jul-14	Aug-14	May-14	Jul-14	Aug-14	May-14	Jul-14	Jul-14	Aug-14	May-14	Jun-14	Jul-14	Aug-14	Mar-14	May-14	Jun-14	Jul-14	Aug-14
In Situ Parameters																							
Conductivity µS/cm	1507	1522	280	327	285	370	289		2100	3281	433	419	456	429	550	507	526	567	535	621	572	15	1179
Oxygen Dissolved %	34.8	51.1	6.3	60.7	1.8	4.8	1.1		51.9	73.8	-0.3	0.8	8.2	30.9	2.4	1.2	2	10.7	26	2.7	0.9	-7.4	14.9
Oxygen Dissolved	4	5.82	0.8	7.27	0.21	0.55	0.13		5.47	7.75	-0.04	0.09	0.87	3.52	0.27	0.13	0.22	1.18	3.28	0.31	0.1	-0.32	1.72
pH (unitless)	7.39	6.9	8.45	8.23	9.64	9.54	8.03		10.3	7.61	8.31	8.64	8.18	7.95	7.76	8.06	7.72	7.26	7.59	7.32	7.58	7.35	7.28
Redox Potential mV	-35.4	0.8	3.8	49.4	-81	-81.2	-32.8		-196	-2.2	-147	-114	-101	-10.1	8.5	-104	-103	-83.3	30.9	-135	-74.2	-63.6	-32.4
Salinity ppt	1.11	1.12	0.21	0.24	0.2	0.26	0.21		1.51	2.49	0.29	0.28	0.29	0.3	0.37	0.34	0.35	0.38	0.42	0.44	0.41	0.42	0.84
Specific Conductivity µS/cm	2164	2169	444	490	419	535	434		2881	45.3	604	576	601	607	756	693	716	771	855	892	826	854	1649
Temperature °C	9.06	9.39	5.68	7.53	8.25	8.9	7.47		10.8	10.7	10.2	10.7	12.3	9.73	10.7	11	11.1	11.3	5.43	9.11	9.08	10.4	10.1
Total Dissolved Solids	1140	1410	289	320	272	347	282		1876	3013	392	374	391	394	491	450	455	504	556	579	536	585	1070
Turbidity NTU	1.9	0	2.4	8.1	-2.4	51.2	0		-2.6	2.5	12.4	0.3	26	4	9.1	-0.3	2.6	0	2.3	6.6	-3.2	2.3	0.7
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)								10.2															
Alkalinity (Total as CaCO3)	411	455	142	141	132	131	130	131	109	123	167	179	180	176	299	296	296	298	387	388	383	395	380
Bicarbonate Alkalinity	411	455	142	141	131	131	130	131	109	123	167	177	177	176	299	296	296	297	387	388	383	395	380
Carbonate Alkalinity	<1	<2	<2	<2	<1	<1	<2	<2	<1	<2	<1	2.6	3.5	<1	<2	<1	<1	<1	<2	<2	<1	<2	<2
Color TCU																							
Hardness as CaCO3 (Dissolved)	985	927	56.3	55.6	42.2	46	42.6	1120	1230	1240	64.2	68.7	71.2	68.7	355	343	351	353	477	479	455	475	468
Hydroxide Alkalinity	<1	<2	<2	<2	<1	<1	<2	<2	<1	<2	<1	<1	<1	<1	<2	<1	<1	<1	<2	<2	<1	<2	<2
pH (unitless)	8	8.12	8.18	8.27	8.28	8.33	8.25	7.45	7.84	7.69	8.36	8.41	8.34	8.4	8.17	8.16	8.2	8.27	8.13	7.98	8.06	7.97	7.79
Specific Conductivity µS/cm	2140	2070	438	453	440	430	434	2200	2380	2330	572	593	615	611	707	710	734	728	844	858	854	833	854
Total Dissolved Solids	1810	1730	294	284	299	293	283	1820	2200	2170	380	386	399	403	440	408	443	452	510	517	522	527	568
Total Suspended Solids	<3	<3	3.1	<3	<3	<3	<3	25.2	5.4	10.3	20.8	9.4	45.4	14.5	6.5	3.6	<3	<3	<3	<3	<3	<3	<3
Turbidity NTU	0.29	0.46	1.65	1	0.93	0.25	0.22	16.8	3.9	3.99	5.15	3.26	18.7	4.87	1.37	0.97	1.12	0.87	1.16	0.85	0.77	2.07	0.92
Dissolved Anions																							
Bromide	<1	<1	0.073	0.077	0.079	0.061	0.063	<1	<1	<1	0.062	0.053	0.065	<0.05	<0.25	<0.5	<0.25	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	13	11	5.11	5.3	4.98	4.77	4.69	18	<10	<10	2.6	2.68	2.83	2.73	2.7	<5	<2.5	2.03	<5	<5	<5	<5	<5
Fluoride	0.228	0.231	0.249	0.271	0.275	0.277	0.27	<0.4	0.204	0.48	0.391	0.394	0.437	0.406	0.24	0.233	0.242	0.26	<0.2	<0.2	0.126	0.134	0.136
Sulphate	939	860	82.7	88.3	86.1	83.8	82.6	1370	1410	1420	127	128	131	130	121	119	120	118	135	123	134	134	145
Nutrients																							
Ammonia (Total)	0.022	0.0206	0.0711	0.054	0.0712	0.0651	0.0824	<0.005	0.222	0.441	0.0582	0.0838	0.0819	0.122	0.0332	0.039	0.0491	0.0554	<0.005	<0.005	<0.005	0.0089	0.0104
Nitrate (as N)	<0.1	<0.1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.1	<0.1	<0.1	<0.005	<0.005	<0.005	<0.005	<0.025	<0.05	<0.025	<0.005	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrite (as N)	<0.02	<0.02	0.001	<0.001	<0.001	0.0012	<0.001	<0.02	<0.02	<0.02	<0.001	<0.001	<0.001	<0.001	<0.005	<0.01	<0.005	0.0013	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen (Dissolved)																							
Nitrogen (Total)																							
Nitrogen Kjeldahl (Total)	0.717	0.637	0.152	0.157	0.143	0.126	0.158	0.528	0.516	0.551	0.203	0.228	0.275	0.244	0.155	0.169	0.168	0.18	0.114	0.147	0.143	0.142	0.155
Orthophosphate (Dissolved)	0.0398	0.0428	0.0193	0.0185	0.0259	0.0285	0.031	0.0024	0.0017	0.0017	0.0382	0.057	0.0672	0.0641	0.0533	0.0628	0.0619	0.0648	0.014	0.0169	0.0209	0.0107	0.0155
Phosphorus - Dissolved	0.0456	0.0432	0.0233	0.0188	0.0294	0.0311	0.0305	0.0068	<0.002	<0.02	0.0441	0.0579	0.0687	0.0646	0.0607	0.0643	0.0649	0.0654	0.0178	0.0159	0.0188	0.0132	0.0136
Phosphorus - Total	0.0457	0.049	0.0261	0.0269	0.0325	0.0315	0.0311	0.0861	0.0449	0.0449	0.0535	0.0643	0.0778	0.0588	0.0654	0.0704		0.0776	0.0208	0.0311	0.0344	0.0333	0.0369
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																							
Aluminum	0.0062	0.0035	0.0127	0.0123	0.0116	0.0119	0.0113	0.0075	0.0029	0.0034	0.0108	0.0097	0.0086	0.0094	0.0056	0.0044	0.0047	0.0046	0.0055	0.0049	0.0041	0.0042	0.0045
Antimony	0.00013	0.00012	<0.0001	0.00012	<0.0001	<0.0001	<0.0001	0.00043	0.00024	0.00044	0.00011	0.00011	0.00017	0.00017	0.00015	0.00012	0.00011	<0.0001	0.00035	0.00037	0.00016	0.00012	<0.0001
Arsenic	0.00265	0.00283	0.00311	0.00317	0.00337	0.00356	0.00369	0.00159	0.00208	0.00228	0.00406	0.00398	0.0034	0.00402	0.00259	0.00253	0.00275	0.00279	0.00177	0.00207	0.00228	0.00248	0.00275
Barium	0.0365	0.0367	0.0193	0.0173	0.0147	0.0145	0.0139	0.0416	0.0379	0.0372	0.0164	0.0156	0.0172	0.0169	0.0368	0.0372	0.0367	0.0353	0.0393	0.0397	0.0397	0.038	0.0368
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.179	0.184	0.241	0.257	0.278	0.281	0.239	0.09	0.072	0.077	0.122	0.114	0.116	0.129	0.063	0.063	0.062	0.067	0.031	0.027	0.031	0.031	0.027
Cadmium	0.000013	0.000012	0.000014	0.000017	0.000014	<0.00001	<0.00001	0.000013	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		0.000013	<0.00001	<0.00001	0.000043	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	140	128	12.9	12.8	9.62	10.6	9.65	208	216	220	9.05	9.41	10.4	9.86	42.4	42.6	43.3	43.2	61.3	64.4	60.2	60.7	60.6
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	<0.0001	0.00089	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00035	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.00061	0.00066	0.00026	0.0004	0.0003	0.0003	0.0002	0.00112	0.0068	0.00633	0.00049	0.00051	0.00064	0.00052	0.00098	0.00112	0.00147	0.00136	0.00174	0.00319	0.00291	0.00256	0.00241
Copper	0.00349	0.0028	0.00085	0.00055	0.00038	0.00063	0.00028	<0.0002	0.00022	0.00029	0.00099	<0.0002	<0.0002	0.00047	0.00079	0.00029	<0.0002	<0.0002	0.00072	<0.0002	<0.0002	<0.0002	<0.0002
Dissolved Cadmium (by saltwater																							
Iron	0.044	0.058	<0.01	<0.01	<0.01	<0.01	<0.01	0.318	0.765	0.768	0.012	0.013	0.024	0.029	0.011	<0.01	0.038	0.081	<0.01	0.205	0.165	0.231	0.303
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0167	0.0179	0.0148	0.0146	0.0142	0.014	0.0145	0.00459	0.00382	0.0037	0.0453	0.043	0.0382	0.043	0.00494	0.00438	0.00435	0.00396	0.0223	0.0189	0.0196	0.0218	0.0207
Magnesium	155	148	5.86	5.73	4.41	4.76	4.49	145	168	168	10.1	11	11	10.7	60.4	57.5	59	59.5	78.8	77.4	74.1	78.6	76.9
Manganese	0.0696	0.0777	0.0447	0.122	0.119	0.101	0.0829	4.2	2.9	2.78	0.122	0.133	0.197	0.154	0.249	0.294	0.374	0.371	0.3	1	0.886	0.731	0.924
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.00957	0.00823	0.00597	0.00648	0.00639	0.00618	0.00571	0.0196	0.0312	0.0353	0.0156	0.0152	0.0159	0.0158	0.0173	0.0159	0.0164	0.0161	0.00321	0.00374	0.0038	0.00372	0.00443
Nickel	0.0026	0.00268	0.00098	0.00112	0.0008	0.00071	0.00054	0.00582	0.0096	0.00935	0.00168	0.00139	0.00208	0.00164	0.0028	0.0025	0.0025	0.00232	0.00345	0.00399	0.00374	0.00337	0.00321
Phosphorus	0.063	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.054	0.051	0.06	0.081	0.082	0.071	0.076	0.076	0.071	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	25.3	25.4	2.85	2.7	2.25	2.62	2.49	16.6	18.4	17.9	1.26	1.29	1.34	1.26	7.68	7.38	8.05	7.72	2.16	2.33	2.25	2.24	2.33
Selenium	0.00022	0.00021	0.00013	0.00011	<0.0001	<0.0001	<0.0001			0.00067	<0.0001	0.00011	0.00015	0.00015	0.00013	0.00011	<0.0001	<0.0001	0.00039	0.00047	0.00017	0.00013	0.00012
Silicon	8.04	9.09	6.47	6.33	5.56	6.48	6.3	6.29	5.94	5.8	8.31	7.82	7.36	7.46	9.22	9.2	8.98	8.85	8.01	8.28	8.27	8.1	8.09
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	155	155	75.1	73.2	72.8	77.6	75.9	131	127	131	98.6	99.2	109	107	33.4	35.3	36.1	34.4	22.1	20.9	23.3	24.2	28.9
Strontium	2.13	2.05	0.31	0.312	0.302	0.282	0.272	3.92	4.13	4.44	0.515	0.566	0.595	0.598	0.671	0.683	0.688	0.676	2.58	2.92	2.68	2.73	2.66
Sulphur	296	279	27.8	29.6	29.6	28.7	26.5	401	449	472	45	44.3	44.2	44.4	40.7	38.8	39.1	40.7	43.7	44.7	41.9	44	46.3
Thallium	<0.00001	<0.00001	0.000022	0.000011	0.000012	<0.00001	<0.00001	<0.00001	<0.00001	0.000014	<0.00001	<0.00001	<0.00001	<0.00001	0.000016	0.000019	0.000012	<0.00001	0.000018	<0.00001	0.000017	<0.00001	0.000013
Tin	<0.0001	<0.0001	0.00012	0.00029	<0.0001	<0.0001	<0.0001	0.00131	<0.0001	0.00013	0.00018	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00021	0.00016	0.00013	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.0031	0.00288	0.000596	0.000639	0.000517	0.000487	0.000448	0.00326	0.0026	0.00276	0.000507	0.000547	0.000898	0.000731	0.00367	0.00346	0.00369	0.00358	0.00131	0.00182	0.00161	0.00132	0.00156
Vanadium	0.0072	0.0061	0.0012	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	0.0021	0.0095	0.0032	0.0094	0.0079	0.0045	0.0022	<0.001	0.0094	0.0106	0.0059	0.0093	0.0025	0.0083	0.0059	0.0039	0.0021	0.0015	0.0035	<0.001	0.0049	0.0025	0.0029
Total Metals																							
Aluminum	0.0106	0.009	0.0658	0.0683	0.0609	0.0162	0.025	0.271	0.0205	0.0246	0.943	0.417	0.79	0.72	0.271	0.101	0.0344	0.0308	0.0307	0.0146	0.0292	0.0421	0.0069
Antimony	0.00017	0.00013	<0.0001	0.00015	0.00013	<0.0001	<0.0001	0.00045	0.00035	0.00046	0.00014	0.00019	0.00024	0.00021	0.00016	0.00013	0.00012	0.00011	0.00038	0.00041	0.0002	0.00019	0.00012
Arsenic	0.00287	0.00287	0.00312	0.00323	0.00362	0.00357	0.00359	0.00169	0.00226	0.0025	0.00399	0.00435	0.00298	0.0041	0.00264	0.00275	0.00293	0.00276	0.0018	0.00203	0.00221	0.00266	0.00265
Barium	0.0373	0.037	0.02	0.0184	0.0163	0.0138	0.0138	0.045	0.0375	0.0369	0.018	0.0187	0.0179	0.0192	0.0393	0.0409	0.0385	0.0358	0.04	0.0399	0.0394	0.0406	0.0365
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.212	0.197	0.268	0.262	0.298	0.278	0.276	0.101	0.081	0.083	0.127	0.125	0.113	0.133	0.062	0.067	0.072	0.096	0.031	0.03	0.034	0.035	0.032
Cadmium	0.000019	0.000015	0.000018	0.000033	0.000019	<0.00001	0.000011	0.000146	0.000053	0.000035	0.000012	0.000013	0.000019	0.000023		0.000021	0.000013	<0.00001	0.000063	0.000015	0.000013	0.000019	<0.00001
Calcium	138	128	12.4	12.9	10.9	10.2	9.57	200	212	212	8.76	9.84	9.84	9.8	41.5	41.3	44.2	42.5	61	63.4	59.8	64.3	59.4
Chromium	0.00024	0.00021	0.00021	0.00032	0.0002	<0.0001	0.00011	0.00127	0.00025	0.00066	0.00033	0.00031	0.00028	0.00046	0.00087	0.00036	0.00018	0.0002	0.00058	0.00013	0.00021	0.0003	0.00012
Cobalt	0.00068	0.00063	0.00023	0.00046	0.00038	0.0003	0.00023	0.00608	0.00684	0.00626	0.0007	0.00071	0.00074	0.00068	0.00121	0.00129	0.00156	0.00145	0.00181	0.00331	0.00299	0.0028	0.00245
Copper	0.00462	0.00334	0.00069	0.00148	0.00077	<0.0005	0.00089	<0.0015	0.00137	0.00092	0.00055	0.00051	0.00072	0.00177	0.0029	0.00113	<0.0005	0.00063	<0.001	<0.0005	0.00057	0.00073	<0.0005
Iron	0.049	0.054	0.071	0.074	0.056	0.011	0.023	0.971	0.866	0.905	0.356	0.211	0.361	0.305	0.36	0.119	0.072	0.108	0.063	0.216	0.179	0.29	0.295
Lead	<0.00005	<0.00005	0.000055	0.000059	<0.00005	<0.00005	<0.00005	0.000234	<0.00005	0.000091	0.000384	0.000141	0.000482	0.000277	0.000126	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000051	<0.00005	<0.00005
Lithium	0.0188	0.0183	0.0148	0.0143	0.0139	0.0133	0.0159	0.00463	0.00404	0.00358	0.0442	0.0424	0.0347	0.0413	0.00472	0.00427	0.00451	0.00407	0.0211	0.0188	0.0191	0.0225	0.0206
Magnesium	157	147	5.74	5.74	5	4.7	4.47	144	168	175	10.1	11.5	10.6	11	58.2	55.5	60.9	58.2	75.6	78	73.5	80.2	76.5
Manganese	0.0723	0.075	0.044	0.122	0.131	0.103	0.0828	4.24	2.94	2.73	0.13	0.163	0.179	0.164	0.262	0.319	0.397	0.371	0.314	1.01	0.867	0.769	0.91
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000021	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0108	0.00879	0.00628	0.00644	0.00655	0.00649	0.00645	0.0241	0.0353	0.0355	0.0162	0.0167	0.0147	0.0157	0.0169	0.0167	0.0173	0.0169	0.00336	0.00377	0.00405	0.00412	0.00459
Nickel	0.00275	0.00253	0.00095	0.00134	0.00101	0.00066	0.0006	0.0114	0.00985	0.00922	0.00175	0.00194	0.00216	0.00201	0.00378	0.00306	0.00286	0.00249	0.00372	0.00437	0.00369	0.00373	0.00312
Phosphorus	0.054	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.07	0.064	0.067	0.051	0.064	0.078	0.081	0.074	0.075	0.07	0.089	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	24.4	24.7	2.79	2.68	2.59	2.6	2.49	16	18.3	18.9	1.31	1.38	1.43	1.34	7.5	7.23	8.26	7.34	2.38	2.35	2.26	2.44	2.29
Selenium	0.00037	0.00021	0.00013	0.00013	<0.0001	<0.0001	<0.0001			0.00147	<0.0001	0.00013	0.00016	0.00012	0.00012	0.00011	0.00012	<0.0001	0.00036	0.00055	0.0002	0.00014	0.00013
Silicon	8.15	9.06	6.57	6.37	6.39	6.45	6.34	6.63	5.93	5.87	11.1	9.52	9.39	9.84	9.52	9.17	9.39	8.73	8.3	8.24	8.29	8.68	7.97
Silver	<0.00001	<0.00001	<0.00001	0.000021	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	167	157	75.3	75.2	79	74.9	75.1	128	124	131	96.8	107	95.3	108	34	37.7	38.6	33.6	21.9	20.9	22.8	25.2	28.2
Strontium	2.28	2.02	0.332	0.306	0.296	0.291	0.293	3.76	4.57	4.39	0.556	0.603	0.561	0.585	0.653	0.679	0.722	0.687	2.59	2.92	2.67	2.92	2.66
Sulphur	310	284	27.9	30.3	29.9	28.6	26.4	391	447	469	43.5	47.9	42.5	43.6	40.6	38.7	43.2	40.8	45.8	44.1	41.9	47.2	47.4
Thallium	<0.00001	<0.00001	0.000015	0.000012	0.000011	<0.00001	0.00001	0.000015	0.000015	0.000016	0.000016	0.000016	0.000022	0.000015	0.00002	0.000018	0.000014	<0.00001	0.000019	<0.00001	0.00002	0.000012	0.000014
Tin	<0.0001	<0.0001	0.00026	0.00047	0.00021	<0.0001	<0.0001	0.00275	0.0002	0.00019	0.00027	0.00014	0.00012	0.00017	0.00011	0.0001	<0.0001	0.0001	0.00024	0.0003	0.00029	0.0002	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.015	<0.01	0.011	0.013	0.013	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extr																							
Uranium	0.00339	0.00299	0.000597	0.000665	0.000546	0.000513	0.000475	0.00301	0.00283	0.00279	0.000612	0.000724	0.000971	0.000781	0.00379	0.00361	0.00394	0.00372	0.00139	0.00193	0.00159	0.00147	0.00164
Vanadium	0.0079	0.0064	0.0015	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0015	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	0.0033	0.0092	<0.003	0.0127	0.0102	<0.003	0.0034	0.0041	0.0464	0.0202	<0.003	0.0206	0.0046	0.0204	<0.003	0.0059	<0.003	0.0051	<0.003	<0.003	0.0066	0.0037	0.0031
Organics																							
Carbon Organic (Dissolved)					1.21																		
Carbon Organic (Total)	11.5	9.41	1.24	1.74	1.41	1.07	0.89	8.1	6.5	5.76	2.19	2.77	3.11	3.06	1.99	1.9	2.02	1.94	3.5	2.31	2.31	2.95	2.88
Nitrogen Organic (Dissolved)																							
Nitrogen Organic (Total)																							
ALS LAB ID	L1486405	L1507004	L1438371	L1464552	L1483419	L1496084	L1510175	L1459061	L1496798	L1510761	L1459725	L1481200	L1494491	L1508557	L1459725	L1478887	L1491785	L1507004	L1437641	L1458341	L1478887	L1490937	L1509422

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D4.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D4.2 - GROUNDWATER QUALITY DATA

Site ID	BGC14-017D			BGC14-017S				KAX-14-107S			KAX-14-108S			KAX-14-114S				KAX-14-128					
Site ID	3GC14-017	3GC14-017	3GC14-017	3GC14-017	3GC14-017	3GC14-017	3GC14-017	AX-14-107	AX-14-107	AX-14-107	AX-14-108	AX-14-108	AX-14-108	AX-14-114	AX-14-114	AX-14-114	AX-14-114	AX-14-128	MW11-01S	MW11-01S	MW11-01S	MW11-01S	MW11-01S
Analytes	May-14	Jul-14	Jul-14	May-14	Jun-14	Jul-14	Aug-14	Jul-14	May-14	Sep-14	Jul-14	Aug-14	Sep-14	Jun-14	Jul-14	Aug-14	Sep-14	Sep-14	Jul-11	Oct-11	Feb-12	Jun-12	Aug-12
In Situ Parameters																							
Conductivity µS/cm	457	414	483	474	445	495	491	767	738	769	1425	1347	1314		809	35	824	765	725	741	625	1071	951
Oxygen Dissolved %	11	42.6	26.5	84.5	27.1	83.6	9.5	12.8	0.8	8.3	3.8	0.3	46.9		7.3	21.7	9.7	0.9		9.3	8.1	20.2	
Oxygen Dissolved	1.29	4.61	3.03	9.7	3.16	9.3	1.06	1.42	0.08	0.94	0.4	0.03	5.31		0.81	1.97	1.07	0.26	6.22	1.01	0.97	1.96	1.03
pH (unitless)	8.23	10.2	8.61	8.26	8.04	5.4	7.55	5.5	7.41	5.91	5.95	7.62	5.88		10.5	7.12	6.05	5.57	8.37	8.4	8.85	9.05	6.31
Redox Potential mV	39	-15.9	-18.1	111	68.6	208	70.6	-134	-267	-163	-41	-125	19		-250	167	-45.8	-196			36.5		179
Salinity ppt	0.33	0.27	0.34	0.33	0.31	0.34	0.34	0.53	0.51	0.54	0.96	0.93	0.95		0.56	0.02	0.58	0.53			0.46		0.5
Specific Conductivity µS/cm	669	556	692	675	644	684	689	1062	1017	1076	1867	1819	1866		1118	39	1166	1055	936	529	934	775	
Temperature °C	8.38	11.7	9.12	9.4	8.85	10.6	10.1	10.4	10.6	10.1	12.6	11.4	9.52		10.5	20.1	9.64	10.6	13.2	10.1		10.1	13.5
Total Dissolved Solids	436	362	450	439	419	444	448	688	661	701	1220	1183	1207		725	25	758	686			7.67		608
Turbidity NTU	60.1	-3	0.3	56.8	3.9	0	0	-0.7	0	0	-0.6	0	0		17.8	1.1	0	0	9.8	9.1	21.8	1.4	9.1
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)	<1			<1															1.6				<1
Alkalinity (Total as CaCO3)	205	210	200	350	392	391	401	424	441	437	194	201	195	287	334	328	320	209	129	232	124	148	141
Bicarbonate Alkalinity	205	203	195	342	392	391	401	405	441	437	194	201	195	281	315	315	317	209	129		110	132	
Carbonate Alkalinity	<2	6.9	4.1	8.2	<1	<1	<2	19.2	<2	<1	<1	<2	<1	5.8	18.6	13	2.5	<1	<2		13	15.4	
Color TCU																			13.5	<5	5.9	<5	<5
Hardness as CaCO3 (Dissolved)	61.2	58.8	59.2	387	396	401	396	257	256	250	484	477	471	285	273	281	273	325	297	232	313	351	367
Hydroxide Alkalinity	<2	<1	<1	<1	<1	<1	<2	<1	<2	<1	<1	<2	<1	<1	<1	<1	<1	<1	<2		<1	<1	
pH (unitless)	8.27	8.5	8.36	8.31	8.17	8.22	8.08	8.46	8.28	8.24	8.27	8.15	8.12	8.42	8.53	8.45	8.31	8.57	8.19	8.3	8.54	8.63	8.59
Specific Conductivity µS/cm	635	579	580	641	673	679	659	1090	1070	1060	1890	1880	1810	1190	1190	1170	1150	1030	895	443	928	950	941
Total Dissolved Solids	426	371	366	356	366	398	366	690	759	688	1400	1420	1340	778	788	796	749	856	600	241	630	672	697
Total Suspended Solids	27	<3	<3	62	8.4	<3	<3	5.2	5.2	<3	6	13.8	5.6	7.7	12.6	8.3	3	<3	10.3	3.2	4	4.7	8.5
Turbidity NTU	46.9	0.98	2	24.8	4.47	0.96	0.17	8.19	7.78	11.6	3.84	5.93	3.4	5.07	5	3.78	2.79	106	5.5	3.64	3.94	1.33	4.62
Dissolved Anions																							
Bromide	<0.25	0.062	0.059	<0.25	<0.05	<0.25	<0.05	<0.5	<0.5	<0.5	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5
Chloride	8.6	4.43	4.08	<2.5	0.8	<2.5	0.81	8.2	8.3	8.2	22	24	18	17.4	15	20.2	14.8	13.1	<5	1	<5	<5	19.6
Fluoride	0.27	0.295	0.297	0.14	0.153	0.148	0.156	0.283	0.31	0.297	0.252	0.288	0.252	0.3	0.37	0.301	0.269	0.072	0.42	0.239	<0.2	<0.2	0.33
Sulphate	134	100	98.1	13.9	13	12.9	12.8	175	162	172	835	873	762	340	313	310	310	291	351	17.3	345	344	390
Nutrients																							
Ammonia (Total)	<0.005	0.0062	0.0052	<0.005	<0.005	0.024	<0.005	0.0375	0.0587	0.0788	0.128	0.163	0.175	1.01	1.02	1.11	1.09	0.0561	0.345	0.0565	0.089	0.119	0.103
Nitrate (as N)	<0.025	<0.005	<0.005	0.277	0.245	0.248	0.259	<0.05	<0.05	<0.05	<0.1	<0.1	<0.1	<0.05	<0.05	0.064	<0.05	<0.05	<0.05	<0.005	8.81	9.01	10.8
Nitrite (as N)	<0.005	<0.001	<0.001	<0.005	<0.001	0.0085	0.0061	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	0.155	0.167	0.635
Nitrogen (Dissolved)																			0.67	0.16	15.2	10.9	
Nitrogen (Total)																			0.67	0.139	9.17	9.18	11.7
Nitrogen Kjeldahl (Total)	0.121	0.107	0.133	0.155	0.123	0.128	0.102	0.554	0.627	0.552	0.388	0.491	0.404	2.17	2.35	2.87	2.25	0.521	0.67	0.139	0.21	<0.05	0.249
Orthophosphate (Dissolved)	0.0518	0.0593	0.0591	0.023	0.0194	0.0184	0.0231	0.135	0.115	0.119	0.043	0.0643	0.0756	0.152	0.176	0.246	0.229	0.0724	0.0668				0.0762
Phosphorus - Dissolved	0.0605	0.0612	0.0604	0.0291	0.0205	0.0251	0.025	0.148	0.112	0.16	0.0423	0.0652	0.077	0.167	0.228	0.251	0.273	0.0821	0.0707	0.0192	0.115	0.0717	
Phosphorus - Total	0.0925	0.0611	0.0628	0.109	0.037		0.025	0.202	0.184	0.21	0.165	0.181	0.196	0.201	0.301	0.339	0.356	0.0831	0.0869	0.0272	0.116	0.0751	0.0923
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																							
Aluminum	0.0074	0.0079		0.0039	0.0045	0.0034	0.0034	0.0072	0.0059	0.0058	0.0081	0.0071	0.0068	0.005	0.0045	0.0048	0.0079	0.0113	0.0092	0.0048	0.0131	0.0116	0.0105
Antimony	0.0002	0.00017	0.00017	0.00012	<0.0001	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00031	0.00026	<0.0001	0.00019	0.00012	<0.0005	0.00288	0.00021	<0.0005	0.0002
Arsenic	0.00126	0.00131	0.00133	0.00085	0.00097	0.0009	0.00093	0.00536	0.00534	0.00534	0.00621	0.00615	0.00637	0.00526	0.00599	0.00666	0.00583	0.00165	0.00252	0.00339	0.00349	0.00288	0.00302
Barium	0.0258	0.0248	0.0244	0.126	0.15	0.137	0.137	0.0322	0.0339	0.0317	0.0238	0.0256	0.0223	0.0565	0.0691	0.0835	0.0729	0.0501	<0.02	0.09	0.0187	0.022	0.0202
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.0005	<0.0005	<0.2	<0.0005
Boron	0.096	0.095	0.088	0.015	0.015	0.015	0.014	0.642	0.701	0.67	0.182	0.193	0.183	0.352	0.346	0.402	0.368	2.61	<0.1	0.014	0.057	<0.1	0.074
Cadmium	0.000011	0.000018	0.000014	0.000037	<0.00005	0.00002	0.00002	<0.00001	<0.00001	<0.00001	<0.00006	<0.00001	0.000021	<0.00003	<0.00003	<0.00001	<0.00001	<0.00001	<0.00004	0.00004	0.000042	0.000044	0.000011
Calcium	13.8	12	11.9	65	65.8	67	65.3	30.3	29.7	28.6	57.7	56.5	55.2	31.2	32.9	32.7	31.5	95.8	36	50.7	31.6	33.3	37.2
Chromium	<0.0001	<0.0001	<0.0001	0.0027	0.00267	0.00278	0.00275	<0.0001	0.00012	0.00011	<0.0001	<0.0001	0.00012	<0.0001	<0.0001	<0.0001	<0.0001	0.00024	0.0078	0.00081	0.00107	0.0021	0.00074
Cobalt	0.00036	0.00037	0.00044	0.00018	<0.0001	<0.0001	<0.0001	0.0005	0.00039	0.00027	0.00202	0.00177	0.00125	0.00107	0.00112	0.00147	0.00136	<0.0001	<0.0003	0.00079	<0.0001	<0.0003	<0.0001
Copper	0.00039	0.00184	0.00054	0.00169	0.00231	0.0009	0.00081	<0.0002	<0.0002	<0.0002	0.00043	<0.0002	<0.0002	0.00158	0.00113	0.00098	0.00063	<0.0002	0.002	0.0009	0.00092	<0.001	0.00074
Dissolved Cadmium (by saltwate					0.000035						<0.00002			<0.00002	<0.00002								
Iron	<0.01	<0.01	0.131	<0.01	<0.01	<0.01	<0.01	0.756	0.645	0.415	0.804	0.664	0.444	0.159	0.362	0.617	0.462	0.074	<0.03	<0.03	<0.03	<0.03	<0.01
Lead	<0.00005	<0.00005	<0.00005	<0.00005	0.000068	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000053	<0.00005	<0.00005	<0.00005	<0.00005	<0.0005	<0.00005	<0.00005	<0.0005	<0.00005
Lithium	0.0442	0.0436	0.0407	0.00849	0.00852	0.00854	0.00862	0.00492	0.00535	0.00504	0.00386	0.00403	0.00459	0.00889	0.00956	0.0086	0.00823	0.01	<0.005	0.00431	0.0056	0.0052	0.00513
Magnesium	6.5	6.99	7.14	54.7	56.4	56.7	56.5	44	44.1	43.3	82.5	81.6	80.8	50.2	46.3	48.5	47.2	20.9	50.3	25.5	56.9	65	66.5
Manganese	0.0785	0.0801	0.0865	0.0272	0.0105	0.00635	0.00608	0.668	0.646	0.469	1.16	1.13	0.752	0.356	0.673	1.1	0.974	0.339	0.00079	0.111	0.00891	0.0165	0.0161
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
Molybdenum	0.0069	0.00588	0.00622	0.00154	0.00145	0.00149	0.00148	0.00506	0.00444	0.00422	0.208	0.212	0.233	0.0341	0.0389	0.0338	0.0303	0.0277	0.0835	0.0117	0.0442	0.0471	0.0446
Nickel	0.00161	0.00141	0.00169	0.00112	0.00082	0.00067	0.00051	0.00265	0.00249	0.0023	0.00366	0.00326	0.00246	0.00923	0.00888	0.00984	0.00972	<0.0005	0.0012	0.00513	0.0006	<0.001	0.00106
Phosphorus	0.064	0.066	0.065	<0.05	<0.05	<0.05	<0.05	0.175	0.163	0.169	0.137	0.164	0.15	0.19	0.259	0.319	0.3	0.086	<0.3	<0.3	<0.3	<0.3	0.089
Potassium	1.27	1.12	1.24	2.24	2.44	2.35	2.3	13.9	13.9	14	33	32.2	33.6	23	24.9	21	20.8	31.3	17.7	1.35	22.9	21.5	20.6
Selenium	0.00018	0.00012	0.00017	0.00099	0.00085	0.0009	0.00092	0.00032	0.00053	0.00023	0.00013	0.00011	<0.0001	0.00046	0.00053	0.00024	0.00024	0.00138	0.0044	0.00136	0.0039	0.0048	0.00567
Silicon	7	6.99	7.18	7.52	7.51	7.53	7.71	10.6	10.9	10.3	11.5	11.4	12.4	7.61	6.69	7.24	7.62	13.2	4.96	5.03	4.4	6.1	5.97
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00002	<0.00001
Sodium	119	108	102	9.25	9.32	9.56	9.87	150	158	146	234	246	227	150	152	159	153	103	71.4	8.3	75.5	77.8	74.9
Strontium	0.835	0.836	0.87	1.48	1.53	1.51	1.49	0.791	0.809	0.811	1.23	1.26	1.18	1.02	1.14	1.02	0.923	1.64	0.693	0.867	0.736	0.824	0.825
Sulphur	42.6	32.9	32.4	4.63	4.39	4.51	4.44	81	95.4	104	253	256	251	112	101	99.4	101	415					
Thallium	0.000014	0.000012	0.000012	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	0.000021	0.000013	<0.0002	0.000011
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	0.0001	<0.0001	<0.0005	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.00347	0.00247	0.00244	0.00126	0.00113	0.00114	0.00111	0.00142	0.00138	0.00152	0.00171	0.00162	0.00138	0.00312	0.00355	0.00254	0.00231	0.000159	0.0019	0.00306	0.00109	0.00087	0.000964
Vanadium	<0.001	<0.001	<0.001	0.0034	0.0039	0.0039	0.0041	0.0011	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0014	0.0011	<0.001	<0.001	0.0029	<0.001	0.0078	0.0093	0.0074
Zinc	<0.001	0.0064	0.0034	0.0031	0.0172	0.0135	0.007	0.0019	<0.001	0.0098	0.0176	0.0039	0.0037	0.0018	<0.001	<0.001	0.0019	0.0045	<0.005	0.0047	<0.003	<0.005	0.0011
Total Metals																							
Aluminum	2.93	0.026		1.63	0.177	0.0282	0.0095	0.0198	0.019	0.0195	0.0813	0.175	0.0927	0.0948	0.0758	0.0647	0.0568	0.015	0.245	0.136	0.117	0.0509	0.267
Antimony	0.00026	0.00021	0.00015	0.00025	0.00011	0.00016	0.00012	0.00015	0.00015	0.00015	0.00011	0.00023	0.00014	0.00037	0.00032	0.0002	0.00032	0.00036	<0.0005	0.00253	0.00021	<0.0005	0.00029
Arsenic	0.0017	0.0013	0.00116	0.00152	0.00105	0.00094	0.00098	0.00576	0.00561	0.00578	0.00647	0.00663	0.00655	0.00538	0.00647	0.00667	0.00596	0.00275	0.00274	0.00347	0.00356	0.0031	0.00306
Barium	0.0383	0.025	0.0213	0.144	0.16	0.137	0.14	0.0322	0.0335	0.0323	0.0244	0.0276	0.0235	0.0653	0.0873	0.0818	0.0728	0.0496	0.024	0.0936	0.0204	0.02	0.024
Beryllium	0.00023	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.0005	<0.0005	<0.2	<0.0005
Boron	0.099	0.099	0.087	0.015	0.018	0.02	0.018	0.676	0.745	0.684	0.19	0.22	0.194	0.383	0.358	0.4	0.396	2.65	<0.1	0.015	0.063	<0.1	0.094
Cadmium	0.000057	0.000032	<0.00001	0.000065	<0.00005	0.000026	0.000023	<0.00001	<0.00001	<0.00001	<0.00012	0.000053	0.000062	<0.00006	<0.00008	0.000029	0.000032	<0.00001	<0.00004	0.000045	0.000045	0.000046	0.000031
Calcium	14.3	11.9	10.9	63.4	65.6	64.6	65.9	30.1	29	28.2	58.1	58.9	55.2	32.7	32.5	31.3	30.4	92.2	37.2	51.2	30.5	35.7	36.3
Chromium	0.00104	0.00013	<0.0001	0.00688	0.00333	0.00297	0.00301	0.00024	0.0002	0.00029	0.00263	0.00079	0.00049	0.00051	0.00057	0.00043	0.00037	0.00092	0.0085	0.00331	0.00162	0.0027	0.0111
Cobalt	0.00125	0.00039	0.00037	0.00148	0.00023	<0.0001	<0.0001	0.00076	0.00059	0.00046	0.0021	0.002	0.00141	0.00124	0.00137	0.00154	0.00151	0.00017	<0.0003	0.00084	0.00014	<0.0003	0.00042
Copper	0.00294	0.00204	<0.0005	0.0117	0.00233	0.00121	0.00099	0.00124	0.00052	<0.0005	0.00102	0.00162	0.00139	0.017	0.0164	0.0142	0.0111	<0.0005	0.0038	0.00091	0.00171	0.0019	0.00398
Iron	2.03	0.032	<0.01	2.06	0.194	0.031	0.012	0.8	0.668	0.502	0.949	0.887	0.585	0.302	0.574	0.677	0.565	0.123	0.302	0.18	0.145	0.047	0.304
Lead	0.00111	<0.00005	<0.00005	0.000464	0.000058	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000064	0.000101	0.000071	0.000219	0.000385	0.000311	0.000226	<0.00005	<0.0005	0.00009	<0.00005	<0.0005	0.000144
Lithium	0.0422	0.0448	0.0373	0.0081	0.00834	0.00846	0.00874	0.00501	0.00551	0.00528	0.00391	0.0043	0.00463	0.00886	0.00924	0.00836	0.00813	0.00961	<0.005	0.00407	0.00541	0.0055	0.00562
Magnesium	7.46	6.96	6.58	53.1	55.8	55.9	56.5	44.5	43.2	43.2	85.1	82.7	81.7	49.5	45.7	46.8	46.4	19.9	52.6	26.1	56.3	65.4	65
Manganese	0.107	0.0822	0.0771	0.0722	0.0173	0.00828	0.00643	0.689	0.656	0.511	1.2	1.19	0.789	0.355	0.697	1.05	0.951	0.348	0.0124	0.118	0.0149	0.0197	0.0345
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000032	0.000049	0.000048	0.000028	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	
Molybdenum	0.00685	0.00651	0.00589	0.00145	0.00151	0.00154	0.00154	0.00599	0.00518	0.00546	0.217	0.225	0.244	0.0349	0.0391	0.0315	0.0332	0.0774	0.0868	0.0113	0.0421	0.0489	0.0481
Nickel	0.00289	0.00152	0.0015	0.00646	0.00109	0.00074	0.00056	0.00297	0.00269	0.00245	0.00406	0.00418	0.00297	0.011	0.0105	0.0107	0.0107	0.00098	0.0017	0.00545	0.00103	<0.001	0.00726
Phosphorus	0.102	0.074	0.064	0.084	<0.05	<0.05	<0.05	0.211	0.179	0.188	0.162	0.173	0.157	0.208	0.293	0.306	0.297	0.091	<0.3	<0.3	<0.3	<0.3	0.099
Potassium	1.67	1.1	1.19	2.36	2.31	2.32	2.34	13.7	13.4	14.1	33.3	32.9	33.9	23.5	23.6	19.8	20.5	28.5	18.3	1.43	23.6	23.1	20.5
Selenium	0.00021	0.00013	0.00012	0.00087	0.00093	0.00085	0.00084	0.00014	0.00012	0.00012	0.00015	0.00012	0.0001	0.00053	0.00072	0.00037	0.00038	<0.0001	0.0046	0.00124	0.00406	0.0051	0.00558
Silicon	16.5	7.04	6.36	11	7.86	7.54	7.7	10.6	10.5	10.4	11.9	12	12.7	8	6.75	7.12	7.67	12.6	5.66	5.41	4.58	6.29	6.39
Silver	0.000016	<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000028	0.000024	0.000021	0.000025	<0.00001	<0.00002	<0.00001	<0.00001	<0.00002	0.000028
Sodium	117	104	94.3	9.07	9.5	9.87	9.96	152	160	150	237	254	231	159	154	148	143	101	73.8	8.56	77.8	83.4	77.8
Strontium	0.868	0.914	0.804	1.4	1.57	1.54	1.56	0.81	0.811	0.83	1.28	1.32	1.23	1.05	1.19	0.978	1	1.64	0.731	0.82	0.689	0.88	0.842
Sulphur	41.3	33.7	30.2	4.56	4.66	4.71	4.57	58.8	54.6	57.3	266	266	258	117	102	96.7	99.8	103					
Thallium	0.000045	<0.00001	0.00001	0.000023	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00003	0.000051	0.000032	0.00002	<0.00001	<0.0002	0.000021	0.000014	<0.0002	0.000011
Tin	0.00034	<0.0001	<0.0001	0.00024	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	0.00017	0.00011	0.00028	0.00019	0.00013	0.00021	<0.0001	0.00011	0.00015	<0.0005	0.00029	0.00011	<0.0005	0.00042
Titanium	0.059	<0.01	<0.01	0.072	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.015	<0.01	<0.01	<0.01	0.01
Total Cadmium (by saltwater extr					0.000033						0.000057			0.000033	0.000048								
Uranium	0.00358	0.00251	0.00224	0.00126	0.00118	0.00119	0.00119	0.00144	0.00137	0.00154	0.00179	0.00167	0.00143	0.00335	0.0037	0.00237	0.00237	0.000182	0.00202	0.0029	0.00105	0.00094	0.001
Vanadium	0.0046	<0.001	<0.001	0.0091	0.0048	0.0041	0.0043	0.0013	0.001	<0.001	<0.001	<0.001	<0.001	0.0015	0.0025	0.0019	0.0016	<0.001	0.0039	<0.001	0.0084	0.0099	0.0087
Zinc	0.0053	0.0069	0.0053	0.0065	0.014	0.0186	0.0098	<0.003	0.0036	0.0088	0.0115	0.0075	0.0056	0.0036	0.0056	0.0041	0.0037	<0.003	<0.005	0.0055	0.0044	<0.005	0.0051
Organics																							
Carbon Organic (Dissolved)								10.9	13.4	4.49	4.38	4.48	3.76	10.6	12.9	9.05	7.9	12.5	4.32	1.43	1.96	2.35	1.81
Carbon Organic (Total)	3.27	2.56	3.03	2.6	1.61	1.23	1.34												4.14	1.29	2	1.71	1.8
Nitrogen Organic (Dissolved)																			0.33	0.103	6.1	<2.2	
Nitrogen Organic (Total)																			0.33	0.103	<0.3	<0.06	
ALS LAB ID	**L1459061**	**L1481200**	**L1494504**	**L1459061**	**L1478436**	**L1491785**	**L1509422**	**L1488886**	**L1502282**	**L1516148**	**L1488886**	**L1502282**	**L1516148**	**L1464552**	**L1481825**	**L1502282**	**L1516148**	**L1517413**	**L1035635**	**L1074388**	**L1114029**	**L1160966**	**L1202478**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D4.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D4.2 - GROUNDWATER QUALITY DATA

Site ID	MW11-01S							
Site ID	MW11-01S	MW11-01S	MW11-01S	MW11-01S	MW11-01S	MW11-01S	MW11-01S	MW11-01S
Analytes	Dec-12	Mar-13	May-13	Aug-13	Nov-13	Mar-14	Jun-14	Sep-14
In Situ Parameters								
Conductivity µS/cm	680	625	800	808	0.948	658	740	653
Oxygen Dissolved %	3.8	1.8	0.6	1.1	2.2	1.5	4.6	3.4
Oxygen Dissolved	0.43	0.21	0.07	1.1	0.26	0.17	0.49	0.43
pH (unitless)	9.03	8.58	8.55	8.59	8.48	8.5	8.44	8.49
Redox Potential mV	19.3	105	134	212	125	3.74	67.3	115
Salinity ppt	0.49	0.46	0.58	0.56	0.47	0.48	0.48	0.46
Specific Conductivity µS/cm	979	926	1156	1125	0.655	959	966	934
Temperature °C	8.99	7.78	8.86	10.2	8.79	8.43	12.7	9.24
Total Dissolved Solids	635	605	752	730	617	627	628	607
Turbidity NTU	3.8	3.4	14	2.2	2.7	4.1	3.7	3.8
Physical Tests								
Acidity to pH 8.3 (as CaCO3)								
Alkalinity (Total as CaCO3)	159	153	152	159	146	148	161	161
Bicarbonate Alkalinity	143	143	149	154	146	141	156	158
Carbonate Alkalinity	15.5	9.9	2.9	4.4	<1	6.5	5.5	2.7
Color TCU	<5	<5	<5	<5				
Hardness as CaCO3 (Dissolved)	382	389	386	374	369	366	370	366
Hydroxide Alkalinity	<1	<1	<1	<1	<1	<1	<1	<1
pH (unitless)	8.67	8.41	8.4	8.37	8.43	8.38	8.38	8.41
Specific Conductivity µS/cm	975	1040	1040	1010	991	980	974	965
Total Dissolved Solids	697	705	700	717	662	666	669	686
Total Suspended Solids	3.7	<3	<3	<3			3.5	<3
Turbidity NTU	7.33	0.75	0.81	4.55			1.61	0.56
Dissolved Anions								
Bromide	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.25	<0.5
Chloride	<5	<5	<5	<5	<5	<5	2.8	<5
Fluoride	<0.2	0.32	<0.2	0.4	<0.2	0.4	0.191	0.199
Sulphate	356	361	371	365	361	369	359	367
Nutrients								
Ammonia (Total)	0.11	0.101	0.0819	0.0933	0.0888	0.0879	0.0974	0.102
Nitrate (as N)	9.42	11.9	11.4	9.13	6.43	3.73	2	1.37
Nitrite (as N)	0.069	0.084	0.025	0.059	0.116	0.142	0.174	0.201
Nitrogen (Dissolved)	9.98	10.8						
Nitrogen (Total)	8.72	12	11	8.68				
Nitrogen Kjeldahl (Total)	<0.05	<0.05	0.255	<0.05	<0.05	<0.05	<0.05	0.189
Orthophosphate (Dissolved)					0.0429	0.0436	0.0414	0.0441
Phosphorus - Dissolved	0.0507	0.0596	0.0588	0.0546	0.0471	0.0471	0.0442	0.0452
Phosphorus - Total	0.0568	0.0608		0.057	0.05	0.0499	0.0507	0.047
Cyanide								
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals								
Aluminum	0.0075	0.0062	0.0057	0.0055	0.0055	0.006	0.0052	0.0057
Antimony	0.00014	0.00015	0.00012	0.00014	0.00015	0.00016	0.00013	0.00014
Arsenic	0.00271	0.00243	0.00222	0.0023	0.00208	0.00201	0.00211	0.00205
Barium	0.019	0.0209	0.0211	0.0212	0.0205	0.0208	0.0211	0.021
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.073	0.08	0.066	0.067	0.074	0.071	0.068	0.068
Cadmium	<0.00001	0.000012	0.000014	0.00002	<0.00002	<0.00003	<0.00005	0.000011
Calcium	39.8	37.7	39.9	38.8	38.4	39.6	40.8	39.9
Chromium	0.00106	0.00045	0.00027	0.00048	<0.0001	0.0001	<0.0001	<0.0001
Cobalt	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001
Copper	0.00065	0.00055	0.00063	0.00052	0.00041	0.00045	0.00079	0.00045
Dissolved Cadmium (by saltwater						<0.00002	<0.00002	
Iron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.00429	0.00476	0.00422	0.00388	0.00474	0.00387	0.0036	0.00387
Magnesium	68.7	71.5	69.4	67.4	66.3	64.9	65.1	64.6
Manganese	0.0319	0.037	0.0408	0.0491	0.0485	0.0588	0.0641	0.0656
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0527	0.0467	0.0468	0.05	0.0518	0.0537	0.0591	0.0619
Nickel	<0.0005	0.00051	<0.0005	<0.0005	<0.0005	<0.0005	0.00059	<0.0005
Phosphorus	<0.05	0.066	0.059	0.053	<0.05	<0.05	0.053	<0.05
Potassium	20.1	19.6	20	18.9	19.7	19.3	20.3	20.5
Selenium	0.00489	0.00459	0.00369	0.00291	0.00197	0.00119	0.00071	0.00059
Silicon	6.64	6.59	6.84	6.85	6.85	6.79	7.19	7.64
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	77.1	74.9	72.5	76.6	72	71.5	68.9	72.1
Strontium	0.933	0.979	0.89	0.894	0.865	0.912	0.935	0.931
Sulphur	113	117	119	118	115	117	118	125
Thallium	0.000011	0.000011	0.00001	0.000011	<0.00001	0.000015	<0.00001	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.000934	0.000846	0.000834	0.00084	0.000731	0.000803	0.000786	0.000758
Vanadium	0.0083	0.0066	0.0059	0.0064	0.0063	0.0058	0.0056	0.0056
Zinc	<0.001	<0.001	<0.001	0.0013	<0.001	<0.001	0.0019	<0.001
Total Metals								
Aluminum	0.197	0.0301	0.0576	0.0437	0.0667	0.0451	0.063	0.0381
Antimony	0.00015	0.00018	0.00017	0.00018	0.0002	0.00017	0.00016	0.00018
Arsenic	0.00283	0.00249	0.00242	0.00228	0.00211	0.00202	0.00218	0.00208
Barium	0.0218	0.0215	0.0239	0.0216	0.0217	0.0217	0.0225	0.0219
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.067	0.088	0.074	0.072	0.079	0.077	0.077	0.077
Cadmium	0.000014	0.000017	0.000016	0.000025	<0.00003	<0.00004	<0.00005	0.000018
Calcium	37.5	37.4	40	38.4	39.3	38.2	40.4	39.1
Chromium	0.00181	0.00061	0.00059	0.00109	0.00067	0.00051	0.0005	0.00042
Cobalt	0.00025	<0.0001	0.00012	0.00011	0.00015	0.00013	0.00016	0.00014
Copper	0.0029	0.00094	0.00135	0.00112	0.00108	0.00143	0.00145	0.00109
Iron	0.415	0.028	0.059	0.048	0.092	0.057	0.076	0.047
Lead	0.00005	<0.00005	0.000257	0.00006	<0.00005	0.000137	0.000086	0.000074
Lithium	0.00399	0.00471	0.00428	0.00406	0.00463	0.00398	0.00349	0.00412
Magnesium	64	67.4	70.7	66.3	65.9	63.1	64.4	63.2
Manganese	0.0402	0.0395	0.0478	0.051	0.052	0.0625	0.0693	0.0702
Mercury	0.000012	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0462	0.0482	0.0494	0.0518	0.0572	0.0572	0.0615	0.0664
Nickel	0.00096	0.00062	0.00059	0.00067	0.00071	0.00078	0.0008	0.00063
Phosphorus	0.055	0.053	0.06	0.059	0.051	0.052	0.057	<0.05
Potassium	18.8	19.7	20.3	19.1	21.3	20	20.1	20.2
Selenium	0.00485	0.0045	0.00353	0.00284	0.00194	0.0011	0.00068	0.0006
Silicon	6.96	6.52	7.07	6.82	7.19	6.82	7.38	7.73
Silver	<0.00001	0.000017	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	76.2	75.9	78.5	74.6	73.4	72.1	69.7	73.4
Strontium	0.819	1	0.916	0.91	0.88	0.921	0.979	0.997
Sulphur	109	118	122	119	122	119	122	124
Thallium	0.000014	0.000014	0.000012	0.000015	<0.00001	<0.00001	<0.00001	0.00002
Tin	<0.0001	<0.0001	0.00018	<0.0001	0.00011	0.00015	0.00011	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extr						<0.00002	<0.00002	
Uranium	0.000806	0.000878	0.000893	0.000843	0.00079	0.000797	0.00084	0.000797
Vanadium	0.0092	0.0069	0.0067	0.0065	0.0069	0.0061	0.0063	0.0062
Zinc	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0033	0.0031
Organics								
Carbon Organic (Dissolved)	2.41	1.73	1.56	1.71	1.38			
Carbon Organic (Total)	2.07	1.31	1.41	1.62	1.34	1.34	1.42	1.39
Nitrogen Organic (Dissolved)	<2	<2.2						
Nitrogen Organic (Total)		<0.06						
ALS LAB ID	L1247921	L1277099	L1308855	L1348177	L1392288	L1431355	L1478436	L1517413

Site ID						MW11-02									MW1
Site ID	MW11-02	MW11-02	MW11-02	MW11-02	MW11-02	MW11-02	MW11-02	MW11-02	MW11-02	MW11-02	MW11-02	MW11-02	MW11-02	MW11-04D	MW11-04D
Analytes	Aug-11	Nov-11	Feb-12	Jun-12	Aug-12	Dec-12	Mar-13	May-13	Aug-13	Nov-13	Mar-14	Jun-14	Sep-14	Jun-12	Aug-12
In Situ Parameters															
Conductivity µS/cm	1931	1957	1830	3284	3010	1918	1841	2234	2494	2.85	3072	2030	2052	1081	1000
Oxygen Dissolved %	9.5		48.5	25.4		59	14.2	19.7	6	7.2	6.1	5	5.3	28.4	
Oxygen Dissolved	1.04	39.3	5.95	2.46	0.15	7.02	1.67	2.27	0.65	0.86	0.72	0.59	0.63	2.64	1.87
pH (unitless)	7.23	7.64	7.83	7.76	7.27	7.6	7.64	7.71	7.67	7.73	7.66	7.73	8.06	9.91	9
Redox Potential mV					-140	-99.3	-76.7	-38.6	237	1.48	-36.7	-67.4	-88.5		30
Salinity ppt					1.6	1.51	1.44	1.7	1.81	59.7	1.6	1.54	1.54		0.5
Specific Conductivity µS/cm	2643	3016	2934	2294		2893	2778	3240	3437	1.9	3029	2945	2943	795	
Temperature °C	10.9	6.62	5.23	9.08	14.7	7.36	7.33	8.76	10.7	7.51	7.13	8.74	9.14	11	13.4
Total Dissolved Solids					1930	1880	1806	2102	2234	1851	1997	1916	1911		638
Turbidity NTU	0.8	1.8	23.6	0	32.3	3.3	4.7	0	3.4	2.4	3.2	13.2	3	5.2	1.5
Physical Tests															
Acidity to pH 8.3 (as CaCO3)	5.3				4.5										<1
Alkalinity (Total as CaCO3)	220	203	218	177	186	180	195	176	165	192	176	182	173	48.9	37.1
Bicarbonate Alkalinity	220		218	177		180	195	176	165	192	176	182	173	33.3	
Carbonate Alkalinity	<2		<2	<1		<2	<2	<2	<2	<2	<2	<2	<1	15.6	
Color TCU	10.5	10.5	7.4	5.2	5.2	<5	<5	<5	<5	<5				17	11.6
Hardness as CaCO3 (Dissolved)	428	464	428	450	463	432	431	426	433		433	443	429	38.1	33.8
Hydroxide Alkalinity	<2		<2	<1		<2	<2	<2	<2	<2	<2	<2	<1	<1	
pH (unitless)	7.93	8.07	7.87	8.02	7.97	8.12	8.06	8.1	8.05	8.17	8.05	8.17	8.03	9.04	9.22
Specific Conductivity µS/cm	2870	2910	2800	2840	2870	2850	3010	2900	2900	2940	2950	2980	2950	936	905
Total Dissolved Solids	2180	2260	2170	2270	2240	2260	2240	2210	2200	2220	2260	2260	2140	644	592
Total Suspended Solids	4	11.7	26	<3	7.2	11.7	7.4	4.7	6.8			12.5	3.8	<3	<3
Turbidity NTU	4	7.14	22.2	2.07	4.07	7.54	4.24	2.32	3.18			7.82	1.17	0.93	0.84
Dissolved Anions															
Bromide	<1	<1	<1	<1	<5	<1	<1	<1	<1	<2.5	<1	<1	<1	<0.5	<0.5
Chloride	17	16	16	16	<50	16	16	17	15	16	16	17	16	26.1	26.1
Fluoride	<0.4	<0.4	<0.4	<0.4	0.13	<0.4	<0.4	<0.4	0.58	<0.4	<0.4	0.119	0.099	1.11	1.02
Sulphate	1340	1460	1360	1430	1460	1430	1440	1430	1410	1420	1480	1470	1440	356	341
Nutrients															
Ammonia (Total)	0.0458	0.0885	<0.05	0.072	0.0928	0.0835	0.0831	0.0701	0.0699	0.0687	0.0674	0.0434	0.0705	0.124	0.092
Nitrate (as N)	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.11	<0.05	<0.05
Nitrite (as N)	<0.02	<0.02	<0.02	<0.02	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.01
Nitrogen (Dissolved)	0.25	0.22	0.14	1.75		0.137	0.129							0.3	
Nitrogen (Total)	0.28	0.323	0.334	0.224	<0.51	0.19	0.13	0.15	0.133					0.3	0.189
Nitrogen Kjeldahl (Total)	0.28	0.323	0.33	0.224	0.181	0.194	0.13	0.154	0.186	0.161	0.179	0.192	0.169	0.3	0.189
Orthophosphate (Dissolved)					0.0522					0.0693	0.0721	0.0832	0.0808		0.169
Phosphorus - Dissolved	0.0426	0.0153	0.021	0.0558	0.0522	0.066	0.0639	0.0705	0.0753	0.0706	0.0728	0.079		0.247	
Phosphorus - Total	0.0558	0.0692	0.098	0.0826	0.0823	0.0987	0.0895	0.0916	0.0927	0.0926	0.0972	0.0986	0.117	0.252	0.178
Cyanide															
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.0059	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals															
Aluminum	<0.05	0.0108	<0.015	0.0106	0.0072	0.006	0.007	0.0061	0.006	0.0053	0.0047	0.0074	0.0054	0.147	0.0833
Antimony	0.0055	0.00069	0.0016	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00028	<0.0005	0.00023
Arsenic	<0.005	0.00288	0.00331	0.00306	0.00348	0.00262	0.00284	0.00258	0.00251	0.00278	0.0035	0.00321	0.00306	0.012	0.0123
Barium	0.033	0.0421	0.0395	0.0363	0.0364	0.0318	0.0314	0.0288	0.0265	0.029	0.0283	0.0286	0.0277	<0.02	0.00859
Beryllium	<0.01	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0001
Bismuth	<0.2	<0.001	<0.0025	<0.0025	<0.0025	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.2	<0.0005
Boron	1.31	1.36	1.22	1.32	1.24	1.31	1.47	1.22	1.35	1.3	1.34	1.32	1.3	2.25	1.7
Cadmium	<0.00017	<0.00002	0.000105	<0.00005	<0.00005	<0.00005	<0.00002	<0.00002	0.000022	<0.00002	<0.00002	<0.00002	<0.00002	<0.00017	<0.00006
Calcium	84.8	92.9	86.3	88.5	91.5	84.7	83.3	84.5	83.1	82.1	83.7	86	83.7	14.4	
Chromium	<0.01	<0.0002	0.00105	<0.0005	0.00124	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	0.00029
Cobalt	<0.003	0.00283	0.00259	0.00162	0.00156	0.00129	0.00125	0.00113	0.00103	0.00099	0.00102	0.00093	0.00093	<0.0003	<0.0001
Copper	<0.01	<0.001	<0.0025	<0.001	<0.001	<0.001	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.001	<0.0002
Dissolved Cadmium (by saltwater											<0.00002	<0.00002			
Iron	<0.03	0.332	0.038	0.083	0.207	0.046	0.075	0.018	0.012	0.079	0.044	0.136	0.102	<0.03	<0.01
Lead	<0.005	<0.0001	<0.00025	<0.00025	<0.00025	<0.00025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.00005
Lithium	<0.05	0.0264	0.0381	0.0435	0.0452	0.0515	0.0538	0.0607	0.0595	0.0681	0.0648	0.0637	0.0616	<0.005	0.003
Magnesium	52.6	56.3	51.6	55.6	56.9	53.6	54.3	52.2	54.9	56.1	54.5	55.3	53.3	0.51	
Manganese	1.04	1.41	1.43	1.27	1.24	1.13	1.2	1.08	1.06	1.08	1.01	0.967	0.967	0.017	0.0164
Mercury	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.014	0.0103	0.00862	0.00489	0.00462	0.00313	0.00263	0.00179	0.00166	0.00148	0.00152	0.00121	0.00124	0.216	0.218
Nickel	0.017	0.0095	0.0141	0.0041	0.0051	<0.0025	0.0029	0.0019	0.0017	0.0019	0.0017	0.0018	0.0015	0.0015	0.00093
Phosphorus	<0.3	<0.3	<0.3	<0.3	0.097	0.077	0.072	0.076	0.087	0.087	0.096	0.103	0.108	<0.3	
Potassium	2.7	2.31	2.66	1.61	1.37	1.22	1.14	1.09	1.06	1.07	1.03	1.02	0.95	10.2	6.24
Selenium	<0.01	0.00021	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	0.00026
Silicon	5.86	5.52	6.19	6.37	6.42	6.09	6.33	6.67	6.65	6.73	6.31	6.6	6.51	2.66	
Silver	<0.0002	<0.00002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001
Sodium	551	627	528	547	530	538	542	523	510	517	545	533	564	175	169
Strontium	3.07	4.03	3.45	3.55	3.68	3.75	4.02	3.62	3.96	3.47	3.82	3.75	3.98	0.235	0.212
Sulphur						455	435	464	445	442	455	459	458		
Thallium	<0.002	<0.00002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.0002	<0.00001
Tin	<0.005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0001
Titanium	<0.01	<0.01	<0.01	0.012	<0.05	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	
Uranium	0.0069	0.0034	0.0034	0.00171	0.00165	0.0014	0.00129	0.000989	0.00095	0.000857	0.000746	0.000696	0.000679	0.00026	0.000137
Vanadium	<0.01	<0.002	<0.005	<0.005	<0.005	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.0033	0.0018
Zinc	<0.005	0.0061	0.035	<0.005	0.0061	<0.005	<0.002	0.004	0.0025	0.0032	0.135	0.0062	0.0048	<0.005	<0.001
Total Metals															
Aluminum	0.184	0.14	0.617	0.085	0.15	0.264	0.164	0.0754	0.0667	0.0259	0.0405	0.381	0.0411	0.236	0.0977
Antimony	0.0055	0.00083	0.00301	<0.0005	<0.0005	<0.0005	0.00024	0.0003	0.00023	0.00022	0.00033	0.00034	0.00041	<0.0005	0.00025
Arsenic	<0.005	0.00297	0.00364	0.00298	0.00354	0.00305	0.00303	0.00279	0.00272	0.00291	0.00394	0.00351	0.00309	0.0126	0.0124
Barium	0.035	0.0441	0.0516	0.0347	0.036	0.0361	0.0319	0.0279	0.0272	0.0292	0.0288	0.0323	0.0265	<0.02	0.00845
Beryllium	<0.01	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0001
Bismuth	<0.2	<0.001	<0.0025	<0.0025	<0.0025	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.2	<0.0005
Boron	1.32	1.24	1.24	1.38	1.27	1.34	1.42	1.26	1.28	1.34	1.35	1.39	1.23	2.33	1.75
Cadmium	<0.00017	0.000077	0.000308	<0.00005	<0.00005	<0.00005	<0.00002	0.000023	0.000038	<0.00002	0.000026	0.00007	<0.00002	<0.00026	<0.00009
Calcium	84.5	97.5	81.6	86.2	89.7	84.3	83.8	81.6	81.5	81.9	82.2	86.9	80.4	16.3	
Chromium	<0.01	0.00104	0.00835	0.00076	0.00804	0.00115	0.00062	0.00152	0.00068	0.00042	0.00061	0.00104	0.00045	0.0036	0.00182
Cobalt	<0.003	0.00293	0.00296	0.00159	0.00179	0.00153	0.0014	0.00122	0.00114	0.00104	0.00105	0.0012	0.00093	<0.0003	0.00011
Copper	<0.01	0.0012	0.0049	<0.0025	<0.0025	<0.0025	<0.001	0.0021	<0.001	0.0018	0.0015	0.0027	0.0014	0.0026	0.00104
Iron	0.392	0.77	0.85	0.211	0.396	0.409	0.288	0.168	0.164	0.163	0.157	0.59	0.166	0.081	0.03
Lead	<0.005	<0.0001	0.00044	<0.00025	<0.00025	<0.00025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00016	<0.0001	<0.0005	0.000052
Lithium	<0.05	0.0241	0.0394	0.0442	0.045	0.0522	0.0516	0.0602	0.0559	0.0701	0.0649	0.0658	0.0581	<0.005	0.00324
Magnesium	52.6	57.5	51.8	56.4	56.6	53.6	54.1	52	54	55.7	54.5	57	53.2	0.63	
Manganese	0.972	1.44	1.39	1.15	1.25	1.18	1.24	1.08	1.11	1.09	1	0.996	0.909	0.0232	0.0176
Mercury	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.014	0.0104	0.00935	0.00555	0.00518	0.00324	0.00279	0.00219	0.00162	0.00186	0.00237	0.0013	0.00124	0.231	0.224
Nickel	0.018	0.0124	0.017	0.004	0.0072	0.0035	0.0032	0.0021	0.0021	0.002	0.0019	0.0023	0.0018	0.0031	0.00152
Phosphorus	<0.3	<0.3	<0.3	<0.3	0.104	0.104	0.091	0.092	0.097	0.111	0.1	0.117	0.112	<0.3	
Potassium	2.7	2.31	2.65	1.39	1.41	1.26	1.14	1.1	1.03	1.14	1.03	1.08	0.94	11.8	6.02
Selenium	<0.01	0.00028	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	0.00032
Silicon	6.08	6.21	7.54	6.49	6.78	6.62	6.63	6.75	6.82	6.92	6.42	7.45	6.42	3.01	
Silver	<0.0002	<0.00002	<0.00005	<0.00005	0.000053	<0.00005	<0.00002	<0.00002	0.000033	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	0.000011
Sodium	547	630	506	497	531	555	541	525	532	512	542	536	535	194	163
Strontium	3.06	3.9	3.55	3.56	3.59	3.88	3.88	3.72	3.72	3.64	3.86	3.95	3.81	0.265	0.21
Sulphur						466	450	461	453	459	474	476	460		
Thallium	<0.002	<0.00002	0.000056	<0.00005	<0.00005	<0.00005	<0.00002	0.000031	0.000033	<0.00002	<0.00002	0.000027	<0.00002	<0.0002	0.000015
Tin	<0.005	0.00051	0.00112	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	0.00014
Titanium	0.015	0.013	0.04	0.016	<0.05	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	0.036	<0.02	<0.01	
Total Cadmium (by saltwater extr															
Uranium	0.0067	0.00341	0.00346	0.0017	0.00175	0.00146	0.00126	0.00102	0.000927	0.000909	0.000772	0.000754	0.000656	0.00031	0.000142
Vanadium	<0.01	<0.002	<0.005	<0.005	<0.005	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	0.0029	<0.002	0.0041	0.0019
Zinc	<0.005	<0.006	0.036	<0.015	<0.015	<0.015	<0.006	<0.006	<0.006	<0.006	0.149	0.0246	0.0141	<0.005	<0.003
Organics															
Carbon Organic (Dissolved)	8.81	4.7	9.21	17.2	3.99	3.42	3.51	3.81	3.78	3.41				6.4	4.54
Carbon Organic (Total)	9.45	4.88	11.3	4.04	3.59	3.22	3.48	3.38	3.69	3.21	2.24	2.25	2.33	5.81	4.5
Nitrogen Organic (Dissolved)	0.204	0.132	0.094	1.68		0.054	<0.05							0.176	
Nitrogen Organic (Total)	0.234	0.172	0.33	0.152			<0.06							0.176	
ALS LAB ID	L1041015	L1081224	L1114029	L1159542	L1202478	L1247928	L1277099	L1307601	L1348177	L1393344	L1431355	L1474413	L1516193	L1160966	L1200094

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D4.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D4.2 - GROUNDWATER QUALITY DATA

Site ID	1-04D							MW11-04S												MW11-05D			
Site ID	MW11-04D	MW11-04D	MW11-04S	MW11-04S	MW11-04S	MW11-04S	MW11-04S	MW11-04S	MW11-04S	MW11-04S	MW11-04S	MW11-04S	MW11-04S	MW11-04S	MW11-05D	MW11-05D	MW11-05D	MW11-05D	MW11-05D	MW11-05D	MW11-05D	MW11-05D	MW11-05D
Analytes	Dec-12	Aug-13	Jul-11	Oct-11	Feb-12	Jun-12	Aug-12	Dec-12	Mar-13	May-13	Nov-13	Mar-14	Jun-14	Sep-14	Oct-11	Feb-12	Jun-12	Aug-12	Dec-12	Mar-13	May-13	Aug-13	Nov-13
In Situ Parameters																							
Conductivity µS/cm	611	1688	1609	1342	1412	2317	1970	1274	1356	1560	1.97	1783	1420	1472	971	1062	1827	1590	914	933	1016	1111	1.23
Oxygen Dissolved %	3	6.8	56.3	19	36.8	15.1		38.9	2.1	10.6	9.5	19.5	5.7	7.7		33	10.1		3.7	79.9	43.9	58.2	20.9
Oxygen Dissolved	0.36	0.75	5.45	2.43	4.26	1.44	1.65	4.56	0.25	1.21	1.14	2.27	0.64	0.9	34.4	3.96	1.04	3	0.45	9.6	5.11	6.39	2.5
pH (unitless)	9.62	7.81	7.85	7.85	7.78	8.11	9.75	7.83	7.53	7.76	7.47	7.42	7.85	8.23	9.04	7.56	7.68	6.86	7.35	7.31	7.36	7.27	7.74
Redox Potential mV		147			-298		-74	-25.3	122	92.8	96.6	97.5	50.2	61		-292		-127		-167	-184	-104	-143
Salinity ppt		1.22			1.11		1	0.96	1.28	1.14	1.01	0.91	1.04	1.07		0.81		0.8		0.71	0.75	0.77	0.801
Specific Conductivity µS/cm	9060	2360	1937	1909	2166	1679		1882	1976	2220	1.31	1219	2028	2088	1435	1610	1351		1391	1403	1482	1525	0.823
Temperature °C	7.93	10.1	16.3	9.42	6.78	10.3	12.7	8.06	8.56	9.42	8	8.43	9.29	9.56	8.06	7.16	10.1	13.8	7.03	7.47	8.55	10.8	7.61
Total Dissolved Solids		1533			1410		1260	1222	1283	1443	1283	1159	1319	1355		1047		1010		912	963	991	620
Turbidity NTU	-0.4	1.6	4	0.4	6.7	0	0.8	-0.9	-2.1	4.6	1.4	2.6	2.8	2.1	7.6	10.6	40.1	21.2	7.9	-2.7	0	9.3	3.1
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)			4.6	3.2			4								<1			14.9					
Alkalinity (Total as CaCO3)	50.5	71.1	81.9	106	99	91.8	80.9	84.5	75.7	77.1	80.1	71.7	68.7	53.8	275	313	364	431	439	441	416	419	402
Bicarbonate Alkalinity	35.7	71.1	81.9	106	99	91.8		84.5	75.7	77.1	80.1	71.7	68.7	53.8	272	313	364		439	441	416	419	402
Carbonate Alkalinity	14.8	<2	<2	<2	<2	<1		<2	<2	<2	<2	<2	<2	<1	3.2	<2	<1		<2	<2	<2	<2	<2
Color TCU	14.6	7.3	11.6	15.7	13.2	10.7	8.9	9.1	8.6	7.7	7.4	6.7			18.7	16.6	12.7	14.1	11.9	10	8.8	7.5	7.2
Hardness as CaCO3 (Dissolved)	43.2	237	257	291	259	246	246	221	236	230		237	248	248	582	626	652	675	619	619	590	569	
Hydroxide Alkalinity	<1	<2	<2	<2	<2	<1		<2	<2	<2	<2	<2	<2	<1	<1	<2	<1		<2	<2	<2	<2	<2
pH (unitless)	8.81	7.94	8.11	8.22	8.01	7.98	7.78	7.98	7.96	7.97	8	7.91	7.86	7.75	8.33	8.01	8.01	7.76	7.98	8.03	7.96	8.02	8.12
Specific Conductivity µS/cm	917	2030	2110	2150	2110	2030	1960	1920	2030	2010	2060	2000	2070	2060	1600	1510	1480	1480	1440	1460	1340	1260	1260
Total Dissolved Solids	610	1470	1500	1457	1540	1510	1440	1420	1340	1470	1470	1520	1490	1540	1190	1150	1140	1140	1080	994	958	905	876
Total Suspended Solids	4.7	<3	<3	9.7	10.4	3.3	<3	4	<3	<3		<3	<3	3.4	36	25.8	36.7	30.5	22	14.4	13.3	15.2	
Turbidity NTU	2.39	1.22	0.81	4.47	6.06	1.35	0.44	1.19	0.86	0.9		0.39	0.98	0.84	21.9	24.1	37.1	50.9	61	60.3	55.5	51.1	
Dissolved Anions																							
Bromide	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	25.7	21	23	24	28	24	23	22	22	23	25	21	21	22	27	19.7	15.5	14.4	10.8	9	8.5	5.4	8
Fluoride	0.99	0.83	0.54	0.44	0.42	0.48	0.52	0.5	0.9	0.55	0.6	0.86	0.645	0.572	<0.4	0.29	0.3	0.34	0.32	0.49	0.35	0.53	0.37
Sulphate	349	941	967	986	990	972	934	921	952	924	960	965	970	1010	597	560	518	509	456	399	380	359	353
Nutrients																							
Ammonia (Total)	0.108	0.065	0.0765	0.118	0.101	0.067	0.0744	0.0728	0.0639	0.092	0.127	0.0933	0.0677	0.0713	0.314	0.176	0.107	0.134	0.14	0.138	0.12	0.122	0.131
Nitrate (as N)	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.13	<0.1	<0.1	<0.1	<0.1	<0.1	0.13	<0.1	<0.05	<0.05	<0.05	<0.05	0.073	0.051	<0.05	<0.05
Nitrite (as N)	0.037	0.028	<0.02	0.028	0.024	<0.02	<0.02	0.024	0.044	<0.02	<0.02	<0.02	<0.02	0.023	<0.02	<0.01	0.015	<0.01	<0.01	0.017	<0.01	<0.01	<0.01
Nitrogen (Dissolved)	0.265		0.44	0.49	0.27	0.63		0.321	0.219						0.89	0.41	0.28		0.312	0.176			
Nitrogen (Total)	0.327	0.31	0.44	0.61	0.441	0.352	0.25	0.243	0.261	0.28					0.661	0.502	<0.25	0.39	<0.5	0.221	0.313	0.21	
Nitrogen Kjeldahl (Total)	0.338	0.286	0.44	0.666	0.42	0.352	0.254	0.302	0.28	0.282	0.304	0.287	0.301	0.256	0.661	0.5	<0.5	0.39	0.357	0.294	0.262	0.248	0.283
Orthophosphate (Dissolved)				0.031			0.0643				0.0837	0.09	0.0973	0.099	0.0392			<0.001					0.002
Phosphorus - Dissolved	0.264	0.0842	0.0556	0.0346	0.0496	0.0585		0.0737	0.0723	0.0886	0.0914	0.0984	0.0912		0.0368	<0.002	0.0035		<0.002	<0.002	<0.002	0.0038	<0.002
Phosphorus - Total	0.287	0.0964	0.0601	0.0547	0.0757	0.0692	0.0766	0.0848	0.0815	0.097	0.119	0.129	0.0962	0.132	0.101	0.153	0.205	0.242	0.292	0.218	0.29	0.304	0.306
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	0.0051	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.007	0.0075	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																							
Aluminum	0.175	0.0114	<0.025	0.0119	0.0146	0.043	0.0131	0.0129	0.0112	0.012	0.0111	0.0089	0.0148	0.0159	<0.003	0.0058	0.0068	0.0055	0.0047	0.0036	0.0046	0.0025	0.0058
Antimony	0.00043	<0.0002	<0.0025	0.00094	0.00075	<0.0025	0.00034	0.00026	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0006	0.00047	<0.0005	<0.0005	0.00032	0.00032	0.00033	0.00034	0.00034
Arsenic	0.00925	0.00197	<0.0025	0.00154	0.00147	<0.0025	0.00193	0.00187	0.00187	0.00182	0.00189	0.002	0.00189	0.00192	0.00496	0.00496	0.00568	0.0073	0.00661	0.00685	0.00674	0.00654	0.00729
Barium	0.0106	0.0428	0.054	0.057	0.0482	0.048	0.0413	0.0383	0.0403	0.0386	0.0419	0.0412	0.0406	0.0434	0.0536	0.0527	0.072	0.067	0.0556	0.0552	0.0511	0.0474	0.0475
Beryllium	<0.0001	<0.0002	<0.005	<0.0002	<0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.001	<0.2	<0.001	<0.001	<0.2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	1.75	1.35	1.67	1.72	1.72	1.71	1.45	1.56	1.32	1.44	1.58	1.54	1.62	1.59	0.045	0.048	<0.1	<0.1	0.068	0.055	0.06	0.055	0.064
Cadmium	<0.00007	<0.00012	<0.00085	<0.0002	0.000129	0.000219	<0.00007	0.0001	<0.0001	<0.0001	<0.00007	<0.00009	<0.00009	0.000022	0.000027	0.000015	0.000025	<0.000017	0.000011	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	16.3	82.1	87.6	100	88.6	83.8	85.4	75.5	81.7	79.5	83.3	82.6	85.9	85.8	86.9	86.8	82.4	92.8	80.3	81	76.9	73.7	75.6
Chromium	<0.0001	<0.0002	<0.005	0.0006	0.00056	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00016	0.0005	<0.001		0.00016	0.00016	0.00013	<0.0001	0.00015
Cobalt	<0.0001	0.00051	<0.0015	0.00055	0.00074	<0.0015	0.0006	0.0006	0.00045	0.00038	0.00051	0.00034	0.0004	0.00045	0.00279	0.00442	0.00536	0.00507	0.00555	0.00455	0.00408	0.00377	0.00302
Copper	0.00062	0.00069	<0.005	0.0014	0.0032	0.0224	0.00088	0.00094	0.00069	0.00041	<0.0004	0.00096	0.00066	0.00069	<0.0005	<0.0005	<0.001	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Dissolved Cadmium (by saltwater													0.00003										
Iron	<0.01	0.023	<0.03	<0.03	<0.03	<0.03	<0.01	<0.01	<0.01	<0.01	0.082	<0.01	0.013	<0.01	0.519	1.71	2.66	4.72	4.35	4.38	4.17	3.44	4.14
Lead	<0.00005	<0.0001	<0.0025	<0.0001	<0.0001	<0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	0.000066	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.00269	0.0037	<0.025	0.0073	0.0028	<0.025	0.003	0.0028	<0.001	0.0036	0.005	0.0038	0.0043	0.0037	0.0116	0.0103	0.0094	0.0104	0.00977	0.0101	0.0108	0.00996	0.014
Magnesium	0.59	7.77	9.41	9.89	9.05	8.85	7.91	7.8	7.8	7.73	8.07	7.41	8.09	8.13	88.7	99.4	108	108	102	101	96.6	93.6	98.2
Manganese	0.0158	0.564	0.118	0.158	0.363	0.337	0.371	0.439	0.543	0.537	0.547	0.514	0.516	0.519	3.21	3.61	3.81	4.12	3.62	3.31	2.89	2.63	2.31
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.204	0.222	0.165	0.145	0.158	0.165	0.198	0.201	0.206	0.21	0.22	0.2	0.2	0.212	0.0474	0.041	0.0348	0.032	0.0332	0.0304	0.0297	0.0296	0.0329
Nickel	0.0014	0.0019	<0.005	0.0082	0.0045	<0.005	0.0046	0.0024	0.0022	0.0018	0.0019	0.0017	0.0017	0.0015	0.00519	0.011	0.0085	0.0095	0.00818	0.00599	0.0055	0.00556	0.00408
Phosphorus	0.247	0.095	<0.3	<0.3	<0.3	<0.3	0.081	0.08	0.089	0.092	0.108	0.108	0.11	0.109	<0.3	<0.3	<0.3	<0.3	0.17	0.219	0.196	0.149	0.293
Potassium	9.73	7.08	8.6	11.3	8.06	7.8	7.29	7.39	7.28	7.07	7.48	6.84	7.3	6.96	53	25.9	11.5	11.4	9.99	8.43	8.15	6.36	6.05
Selenium	0.00036	<0.0002	<0.005	0.00051	0.00034	<0.005	0.00029	0.00022	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00046	0.00029	<0.001	<0.001	0.0001	0.00013	<0.0001	<0.0001	<0.0001
Silicon	2.73	3.19	3.22	3.47	3.53	3.88	3.57	3.46	3.48	3.31	3.37	3.26	3.26	3.23	9.73	12.2	14.8	14.2	14.5	15.1	15.4	15.5	16.2
Silver	<0.00001	<0.00002	<0.0001	<0.00002	<0.00002	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	170	357	391	373	357	382	340	343	343	341	351	374	347	381	134	116	113	151	120	113	97.1	88.9	81.2
Strontium	0.228	1.8	1.49	1.56	1.73	1.83	1.73	1.6	1.7	1.7	1.82	1.82	1.82	1.95	0.684	0.666	0.678	0.706	0.648	0.642	0.606	0.587	0.634
Sulphur	114	289						298	312	299	303	308	314	312					142	133	121	113	107
Thallium	0.000013	0.000034	<0.001	0.000058	0.000058	<0.001	0.000041	0.000047	0.000045	0.000029	<0.00002	0.000047	0.000026	0.000028	<0.00001	<0.00001	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0003	<0.0002	<0.0025	0.00184	<0.0002	<0.0025	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00015	0.00015	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.000282	0.000806	0.0018	0.00214	0.00202	0.0019	0.00123	0.00103	0.000982	0.000787	0.000695	0.000673	0.000595	0.000624	0.00328	0.00741	0.00577	0.00587	0.00439	0.00367	0.00302	0.00275	0.00275
Vanadium	0.003	<0.002	<0.005	<0.002	<0.002	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	<0.001	0.0023	0.0062	0.0073	0.0202	0.0054	0.0034	0.0034	0.0032	0.0031	<0.002	0.0064	0.006	0.006	<0.003	<0.003	0.0083	0.0073	0.0016	0.0025	0.0019	0.0026	0.0012
Total Metals																							
Aluminum	0.287	0.0294	0.041	0.102	0.302	0.131	0.0739	0.0407	0.0363	0.0294	0.0236	0.0199	0.0496	0.0265	0.0651	0.118	0.188	0.159	0.0569	0.0261	0.017	0.0212	0.0333
Antimony	0.00051	<0.0002	<0.0025	0.00091	0.00101	<0.0025	0.00035	0.0003	0.00022	<0.0002	<0.0002	<0.0002	0.00022	0.00022	0.00106	0.00112	0.00052	0.00058	0.00049	0.00041	0.00035	0.00041	0.00043
Arsenic	0.00879	0.00199	<0.0025	0.0015	0.00164	<0.0025	0.00196	0.00189	0.00199	0.00193	0.00203	0.0021	0.00203	0.00193	0.0044	0.00554	0.0066	0.00754	0.00699	0.00725	0.00688	0.00683	0.00753
Barium	0.0116	0.0391	0.053	0.0564	0.0562	0.05	0.0426	0.0386	0.0425	0.0399	0.0416	0.0416	0.04	0.0411	0.0471	0.0648	0.075	0.071	0.0599	0.0588	0.0524	0.0524	0.05
Beryllium	<0.0001	<0.0002	<0.005	<0.0002	<0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.001	<0.2	<0.001	<0.001	<0.2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	1.82	1.3	1.64	1.68	1.76	1.81	1.55	1.55	1.42	1.52	1.6	1.68	1.64	1.56	0.055	0.052	<0.1	<0.1	0.073	0.057	0.067	0.059	0.065
Cadmium	<0.0001	<0.00011	<0.00085	<0.00024	0.000168	0.000252	<0.00009	<0.00012	<0.0001	<0.0002	<0.00008	<0.0001	<0.00009	<0.00002	0.000094	0.000171	0.000113	0.000092	0.000049	0.000023	0.00002	0.000023	0.000028
Calcium	16.6	77.8	86	93.4	91	88.4	83.3	75.3	84.1	75.1	82	85.1	84.3	80.5	72.5	90.8	94.4	94.3	79.8	83	74.1	71.7	77.8
Chromium	0.00119	0.00044	<0.005	0.00164	0.00496	<0.005	0.00054	0.00038	0.00065	0.00026	0.00043	0.00023	0.00039	0.00048	0.00093	0.00454	0.0065	0.0152	0.00085	0.00065	0.00041	0.0005	0.00058
Cobalt	0.00014	0.00051	<0.0015	0.00066	0.00097	<0.0015	0.00065	0.00065	0.00051	0.00042	0.00051	0.00038	0.00045	0.00042	0.00231	0.00507	0.00641	0.0059	0.00559	0.00481	0.00426	0.00391	0.00327
Copper	0.00369	0.0012	<0.005	0.0028	0.0088	0.0244	0.0024	0.002	0.0035	0.0014	0.001	0.0016	0.0019	0.0011	0.00149	0.00305	0.0051	0.0056	0.00212	0.00146	0.00063	0.00067	0.00781
Iron	0.088	0.072	<0.03	0.106	0.352	0.103	0.066	0.054	0.069	0.077	0.105	0.032	0.066	0.094	1	2.35	4	5.22	5.04	5.03	4.58	4.1	4.38
Lead	0.00012	<0.0001	<0.0025	<0.0001	0.00053	<0.0025	<0.0001	0.00014	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.000088	0.00027	<0.0005	<0.0005	0.000092	0.000057	<0.00005	<0.00005	<0.00005
Lithium	0.00255	0.0038	<0.025	0.0072	0.0032	<0.025	0.0033	0.0027	0.0012	0.0038	0.0044	0.0043	0.0042	0.0038	0.0126	0.0104	0.01	0.0107	0.01	0.0105	0.0113	0.00996	0.0125
Magnesium	0.64	7.51	9.24	9.39	9.48	9.33	7.78	7.85	8	7.87	8.05	7.89	8	7.65	80.2	98.9	111	105	96.9	100	94.1	89.8	98.2
Manganese	0.0279	0.526	0.123	0.16	0.415	0.368	0.379	0.444	0.578	0.574	0.554	0.541	0.539	0.485	2.5	3.85	4.08	4.23	3.5	3.44	2.9	2.59	2.5
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.201	0.213	0.17	0.145	0.161	0.172	0.199	0.202	0.209	0.222	0.214	0.217	0.206	0.202	0.0548	0.0427	0.0368	0.0349	0.0341	0.0319	0.0308	0.0302	0.0317
Nickel	0.00211	0.0019	<0.005	0.0104	0.0082	<0.005	0.0028	0.0027	0.0026	0.002	0.0021	0.0018	0.0023	0.0016	0.00583	0.0129	0.0113	0.0146	0.00837	0.00657	0.0058	0.00594	0.00461
Phosphorus	0.255	0.097	<0.3	<0.3	<0.3	<0.3	0.084	0.09	0.107	0.102	0.105	0.117	0.119	0.129	<0.3	<0.3	<0.3	<0.3	0.257	0.284	0.28	0.27	0.299
Potassium	10	6.82	8.3	11.8	8.19	8.3	7.04	7.38	7.35	7.48	7.46	7.34	7.05	6.56	67.5	26.5	12.7	10.1	9.33	8.44	7.96	6.08	6.12
Selenium	0.00041	<0.0002	<0.005	0.00046	0.00035	<0.005	0.00026	0.00024	0.00022	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0005	0.00026	<0.001	<0.001	<0.0001	0.00011	<0.0001	<0.0001	<0.0001
Silicon	2.9	3.14	3.22	3.38	4.37	4.16	3.61	3.49	3.58	3.32	3.37	3.49	3.34	3.09	9.98	12.5	16.3	14.4	14.3	15.3	15.1	15	16.6
Silver	<0.00001	<0.00002	<0.0001	<0.00002	0.000022	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00002	0.000097	0.000021	<0.00001	0.000021	<0.00001	<0.00001
Sodium	173	336	382	358	368	403	348	340	361	336	358	381	347	348	121	118	125	143	114	114	101	89	84.4
Strontium	0.229	1.76	1.48	1.45	1.75	1.9	1.74	1.66	1.76	1.74	1.76	1.95	1.81	1.87	0.673	0.71	0.773	0.7	0.654	0.658	0.63	0.591	0.585
Sulphur	113	284						298	322	297	311	319	314	302					143	138	121	113	114
Thallium	0.000017	0.00004	<0.001	0.000056	0.000056	<0.001	0.000044	0.000049	0.000043	0.00003	<0.00002	0.000052	0.000031	0.000026	<0.00001	<0.00001	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.00041	<0.0002	<0.0025	0.00262	0.00135	<0.0025	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0009	0.00103	<0.0005	<0.0005	0.00021	0.00013	<0.0001	<0.0001	0.00011
Titanium	<0.01	<0.02	<0.01	<0.01	0.023	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	0.018	0.014	0.012	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extr													0.000033										
Uranium	0.000315	0.000779	0.0018	0.00192	0.00204	0.002	0.00128	0.00104	0.000969	0.000817	0.000709	0.000761	0.000623	0.000606	0.00334	0.0079	0.00597	0.00614	0.0045	0.00387	0.00307	0.00268	0.0026
Vanadium	0.0036	<0.002	<0.005	<0.002	<0.002	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	0.0015	0.0014	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	0.0038	<0.006	<0.005	0.0105	0.0254	0.0086	<0.006	<0.006	<0.006	<0.006	<0.006	0.0068	0.009	0.0083	0.01	0.0186	0.017	0.0183	0.0047	0.0033	0.0034	0.0036	0.0032
Organics																							
Carbon Organic (Dissolved)	4.75	6.57	7.03	8.47	7.69	10.1	6.87	6.76	6.2	6.37	6.7				33	22.7	21	20.3	17.8	17.8	13.5	11.9	11.1
Carbon Organic (Total)	4.85	6.53	6.88	8.59	8.96	7.3	6.65	6.96	6.25	6.34	6.28	11.4	4.63	5.4	31.8	23.9	21.4	20.4	18.4	19.3	13.1	12.4	11.3
Nitrogen Organic (Dissolved)	0.12		0.363	0.344	0.146	0.563		0.097	0.111						0.58	0.235	0.158		0.172	<0.05			
Nitrogen Organic (Total)			0.363	0.464	0.32	0.285			0.154						0.37	0.33	<0.5			<0.05			
ALS LAB ID	**L1248467**	**L1346553**	**L1038606**	**L1076555**	**L1115110**	**L1160966**	**L1202478**	**L1248467**	**L1277798**	**L1307601**	**L1393344**	**L1432458**	**L1474413**	**L1516193**	**L1078289**	**L1115110**	**L1160966**	**L1201474**	**L1248467**	**L1277798**	**L1307601**	**L1348177**	**L1393344**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D4.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D4.2 - GROUNDWATER QUALITY DATA

Site ID									MW11-05S												MW11-06D		
Site ID	**MW11-05D**	**MW11-05D**	**MW11-05D**	**MW11-05S**	**MW11-05S**	**MW11-05S**	**MW11-05S**	**MW11-05S**	**MW11-05S**	**MW11-05S**	**MW11-05S**	**MW11-05S**	**MW11-05S**	**MW11-05S**	**MW11-05S**	**MW11-06D**	**MW11-06D**	**MW11-06D**	**MW11-06D**	**MW11-06D**	**MW11-06D**	**MW11-06D**	**MW11-06D**
Analytes	**Mar-14**	**Jun-14**	**Sep-14**	**Nov-11**	**Feb-12**	**Jun-12**	**Aug-12**	**Dec-12**	**Mar-13**	**May-13**	**Aug-13**	**Nov-13**	**Mar-14**	**Jun-14**	**Sep-14**	**Jul-11**	**Oct-11**	**Jun-12**	**Aug-12**	**Dec-12**	**Mar-13**	**May-13**	**Aug-13**
In Situ Parameters																							
Conductivity µS/cm	1295	832	792	875	913	1732	1050	911	891	1031	1111	1.29	1303	855	854	856	709	1992	2010	771	650	927	1400
Oxygen Dissolved %	6.8	53.8	5.6		37.6	26.4		2.9	31.1	16.2	7	15.6	36	2.1	10.2	43.6		24.4		28.8	0.5	0.7	3.6
Oxygen Dissolved	0.8	6.19	0.67	115	4.75	2.56	3.47	0.35	3.73	1.86	0.77	1.88	4.29	0.24	1.17	4.18	136	2.32	2.32	3.43	0.06	0.08	0.4
pH (unitless)	7.33	7.47	7.47	7.27	7.6	7.69	6.98	7.39	7.39	7.36	7.17	7.47	7.39	7.42	7.5	7.98	8.35	8.4	8.15	8.48	8.86	8.22	8.31
Redox Potential mV	-127	-141	-145		-293		-9	-191	-154	-190	-115	0.809	-112	-136	-156				-158	-140	-210	-244	-92.5
Salinity ppt	0.65	0.6	0.58		0.74		0.5	0.69	0.67	0.75	0.78	0.65	0.63	0.62	0.62				1	0.58	0.49	0.67	0.98
Specific Conductivity µS/cm	871	1195	1157	1273	1478	1181		1369	1337	1486	1531	0.851	867	1238	1232	1005	1031	1474		1163	999	1327	1987
Temperature °C	7.85	9.02	8.47	8.41	4.97	8.25	16.9	7.49	7.52	8.95	10.6	7.49	7.5	8.76	8.54	17.3	8.67	10.9	12.3	7.35	6.72	9.2	10.9
Total Dissolved Solids	842	775	752		961		661	889	869	966	996	1310	847	806	801				1300	756	649	863	1246
Turbidity NTU	4.7	2.7	5.5	3.2	6.7	4.1	22.1	9.5	-3.3	0	5	5.1	13	9.5	14.3	0	-5.2	0	2	2.1	1.8	0	0
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)							10.3									4.4			3.3			2.3	
Alkalinity (Total as CaCO3)	398	315	375	268	286	292	318	339	330	298	284	347	337	338	330	48.2	42.9	38.6	41.3	42.3	39.7	40.4	41.2
Bicarbonate Alkalinity	398	315	375		286	292		339	330	298	284	347	337	338	330	48.2		38.6		42.3	39.7	40.4	41.2
Carbonate Alkalinity	<2	<2	<1		<2	<1		<2	<2	<2	<2	<2	<2	<2	<1	<2		<1		<2	<2	<2	<2
Color TCU				14.7	12.3	8.7	8	10.4	7.8	8.5	5.9	7				<5	<5	<5	<5	<5	<5	<5	<5
Hardness as CaCO3 (Dissolved)	569	578	547	562	607	597	609	568	597	563	554		571	559	543	157	140	424	586	195	156	205	557
Hydroxide Alkalinity	<2	<2	<1		<2	<1		<2	<2	<2	<2	<2	<2	<2	<1	<2		<1		<2	<2	<2	<2
pH (unitless)	8.15	8.19	7.93	7.97	7.95	7.91	7.75	8.01	8.04	7.97	7.95	8.1	8.04	8.1	7.92	7.8	7.9	7.7	8.02	7.85	7.92	8.03	7.67
Specific Conductivity µS/cm	1200	1210	1170	1220	1510	1510	1390	1380	1400	1320	1290	1310	1210	1260	1240	1090	987	1730	1920	1130	1080	1180	2020
Total Dissolved Solids	**853**	**847**	**814**	**930**	**1210**	**1210**	**1150**	**1060**	**968**	**963**	**948**	**678**	**887**	**922**	**920**	**720**	**675**	**1340**	**1630**	**797**	**690**	**857**	**1560**
Total Suspended Solids		14.4	11.8	23.7	7.1	14.7	7.9	4	12.7	12	17.3			15.1	16.2	<3	<3	<3	<3	<3	3.3	<3	<3
Turbidity NTU		37.8	35.9	10.7	7.58	9.34	17.6	29.8	29.6	37.4	55			49.6	34.7	0.39	1.87	0.38	0.47	0.83	0.42	0.57	0.51
Dissolved Anions																							
Bromide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5	<1
Chloride	7.8	<5	<5	14.9	25.1	26.4	16.9	15.3	12.8	13.4	9.8	11.9	7.9	9	8.8	11.8	9.1	12	12	9.8	9.1	11.7	11
Fluoride	0.63	0.397	0.343	0.24	0.25	0.26	0.3	0.28	0.45	0.3	0.48	0.33	0.63	0.342	0.326	0.63	0.38	<0.4	<0.4	0.31	0.55	0.32	0.51
Sulphate	344	339	327	437	573	573	511	489	450	433	416	415	399	415	405	476	423	918	**1040**	520	476	558	**1080**
Nutrients																							
Ammonia (Total)	0.116	0.1	0.115	<0.005	<0.05	0.0342	0.0109	0.0318	0.0367	0.0279	0.0342	0.0782	0.0564	<0.005	0.03	0.0215	0.0509	0.0707	0.0814	0.048	0.059	0.058	0.071
Nitrate (as N)	0.119	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	<0.05	0.078	<0.05	<0.05	<0.05	0.051	<0.05	0.059	<0.05	<0.05	<0.1	<0.1	<0.05	<0.05	<0.05	<0.1
Nitrite (as N)	0.026	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.017	<0.01	<0.01	0.014	0.013	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.02
Nitrogen (Dissolved)				0.33	0.2	0.79		0.23	0.136							0.19	0.1	0.28		0.072	0.074		
Nitrogen (Total)				0.406	<0.043	<0.25	0.21	<0.5	0.232	0.212	0.184					0.14	0.09	0.119	0.13	0.117	<0.071	0.108	0.17
Nitrogen Kjeldahl (Total)	0.255	0.287	0.203	0.406	<0.2	<0.5	0.21	0.28	0.307	0.212	0.219	0.307	0.347	0.332	0.264	0.14	0.128	0.119	0.127	0.117	0.066	0.123	0.165
Orthophosphate (Dissolved)	0.0046	0.0023	0.0022				0.0026					0.0023	<0.001	0.0015	<0.001				0.0116				
Phosphorus - Dissolved	<0.002	<0.002		0.0136	0.0027	<0.002	0.0026	0.0021	<0.002	<0.002	<0.002	0.0035	<0.002	<0.002		0.0214	0.0485	0.0135		0.0448	0.0348	0.0225	0.0085
Phosphorus - Total	0.305	0.211	0.336	0.0728	0.107	0.118	0.142	0.237	0.16	0.232	0.285	0.287	0.207	0.225	0.284	0.0281	0.055	0.0165	0.015	0.0496	0.038	0.0239	0.0093
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	0.0056	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																							
Aluminum	0.0053	0.006	0.0046	0.0058	0.0074	0.0071	0.0062	0.0059	0.0029	0.0039	0.0024	0.0026	0.0022	0.0023	0.0015	0.019	0.0139	0.022	<0.01	0.0078	0.0074	0.0065	0.0039
Antimony	0.00046	0.00047	0.00054	0.00037	0.0001	<0.0005	<0.0001	<0.0001	0.00011	0.0001	<0.0001	<0.0001	<0.0001	0.00015	0.00031	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.00661	0.00603	0.00683	0.00142	0.00379	0.00409	0.00501	0.00572	0.0052	0.00706	0.00761	0.00658	0.00595	0.00557	0.00569	0.0084	0.01	0.0156	0.015	0.0116	0.0122	0.0136	0.0135
Barium	0.0445	0.042	0.0414	0.0662	0.0809	0.089	0.0821	0.0719	0.0725	0.0746	0.0704	0.0694	0.0684	0.0655	0.0641	<0.02	0.015	0.022	0.023	0.0138	0.0126	0.016	0.0214
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.002	<0.0001	<0.002	<0.002	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.0005	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.054	0.056	0.049	0.05	0.042	<0.1	0.048	0.047	0.037	0.044	0.042	0.045	0.04	0.049	0.045	**0.65**	**0.612**	**0.64**	**0.59**	**0.561**	**0.545**	0.481	0.493
Cadmium	<0.00001	<0.00001	<0.00001	0.000032	0.000013	0.000045	0.000011	0.000013	<0.00001	<0.00001	0.000012	<0.00001	<0.00003	<0.00001	<0.00001	<0.0004	<0.00003	0.000071	<0.000034	<0.00003	0.000017	<0.00005	<0.00002
Calcium	73.4	75.7	70.7	103	104	93.7	100	89.7	97.7	90	89	83.8	92.1	93	88	47.6	42.5	119	164	55.7	46.9	60.4	153
Chromium	0.00012	<0.0001	<0.0001	0.00059	0.00031	<0.001	0.00016	0.00024	0.00019	0.00019	0.00016	0.00027	0.00021	<0.0001	0.0002	<0.002	<0.0001	<0.002	<0.002	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.00312	0.00275	0.00254	0.00385	0.00533	0.0043	0.00368	0.00148	0.00211	0.00191	0.00239	0.0005	0.00103	0.00135	0.00067	<0.0006	0.00016	<0.0006	<0.0006	<0.0001	<0.0001	<0.0001	<0.0001
Copper	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.001	<0.0002	<0.0002	0.0015	<0.0002	<0.0002	<0.0002	0.00029	<0.0002	0.00032	<0.004	<0.0005	0.0051	0.0025	<0.0002	<0.0002	<0.0002	<0.0002
Dissolved Cadmium (by saltwater																							
Iron	3.73	3.3	3.17	0.105	0.904	1.18	2.1	1.94	2.2	3.35	4.51	0.077	4.04	4.05	2.85	<0.03	0.043	0.095	0.098	0.058	0.057	0.044	0.074
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0005	0.000066	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.001	<0.00005	<0.001	<0.001	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0104	0.0108	0.00961	0.00433	0.00635	0.0065	0.00867	0.00901	0.00997	0.0108	0.00982	0.0183	0.0126	0.0106	0.00992	<0.01	0.00541	0.01	0.013	0.00679	0.00549	0.00704	0.012
Magnesium	93.7	94.4	89.9	73.8	84.5	88.1	86.8	83.6	85.8	82.1	80.7	56.5	82.7	79.5	78.5	9.39	8.2	31	42.9	13.7	9.53	13	42.7
Manganese	**2.15**	**1.93**	**1.76**	**2.34**	**4.29**	**4.46**	**4.52**	**4.78**	**5.07**	**4.54**	**4.26**	**3.73**	**3.87**	**3.26**	**2.71**	0.081	0.124	0.092	0.0882	0.105	0.0838	0.0725	0.0543
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	**0.0304**	**0.03**	**0.0309**	**0.0212**	**0.0258**	**0.0275**	**0.0259**	**0.0266**	**0.0307**	**0.0263**	**0.0303**	**0.0173**	**0.0234**	**0.024**	**0.0237**	**0.0777**	**0.0921**	**0.083**	**0.0833**	**0.0945**	**0.0871**	**0.0857**	**0.0769**
Nickel	0.00467	0.00473	0.00413	0.0136	0.00751	0.0048	0.00262	0.00225	0.00283	0.00177	0.00174	0.00141	0.00165	0.0026	0.00157	<0.002	<0.0005	<0.002	<0.002	<0.0005	0.00201	0.00076	<0.0005
Phosphorus	0.211	0.225	0.264	<0.3	<0.3	<0.3	0.155	0.207	0.123	0.2	0.178	0.085	0.145	0.085	0.142	<0.3	<0.3	<0.3	<0.3	0.051	<0.05	<0.05	<0.05
Potassium	6.06	5.4	4.68	10.2	7.79	6.8	7.69	7.96	7.96	7.82	6.26	1.02	7.85	5.65	5.59	<2	1.08	<2	<2	1.19	0.98	1.13	1.82
Selenium	<0.0001	<0.0001	<0.0001	0.00054	0.00044	<0.001	0.00063	0.0003	0.00022	0.00014	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.002	0.0001	<0.002	<0.002	0.00015	<0.0001	<0.0001	<0.0001
Silicon	15.8	16.8	16.9	8.74	9.76	10.3	10.9	9.66	10.4	10.4	10.2	6.59	10.4	10.6	10.8	3.32	3.78	3.9	4.04	3.66	3.51	3.71	3.69
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00004	<0.00001	<0.00004	<0.00004	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	78.4	72.8	68.2	85.4	118	133	118	118	101	99.2	90.1	93	76.3	81.3	88.4	162	156	234	269	162	148	168	240
Strontium	0.6	0.592	0.587	0.664	0.655	0.683	0.666	0.646	0.699	0.673	0.646	0.6	0.663	0.637	0.635	2.44	2.31	7.88	8.14	3.2	2.6	3.4	7.59
Sulphur	108	109	108					156	148	139	132	431	125	127	133					170	147	169	333
Thallium	<0.00001	<0.00001	<0.00001	0.000029	<0.00001	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0004	<0.00001	<0.0004	<0.0004	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0001	<0.0001	<0.0001	0.00038	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0017	0.00014	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.00236	0.00212	0.00191	**0.0116**	**0.0159**	**0.0187**	**0.0198**	**0.0214**	**0.0183**	**0.0149**	**0.0128**	**0.0114**	**0.0102**	0.00849	0.0082	<0.0004	0.00014	<0.0004	<0.0004	0.000114	0.00004	0.000025	0.000017
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001
Zinc	0.0029	0.0032	0.0027	0.0043	<0.003	0.0094	0.0031	0.0022	0.0031	0.0039	0.0036	0.0024	0.0058	0.0074	0.0068	0.0131	0.0067	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001
Total Metals																							
Aluminum	0.0267	0.0496	0.0244	0.327	0.0706	0.0723	0.0426	0.0258	0.0302	0.0196	0.0114	0.0564	0.0678	0.032	0.0568	0.02	0.113	0.036	0.024	0.0341	0.0303	0.0143	0.0067
Antimony	0.00054	0.00068	0.00072	0.0004	0.00025	<0.0005	0.0001	0.00013	0.00018	0.00015	0.00011	0.00023	0.00016	0.00026	0.0007	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	0.00012
Arsenic	0.00669	0.007	0.00643	0.00156	0.00406	0.00461	0.00512	0.00569	0.00643	0.00708	0.00807	0.00709	0.00564	0.00662	0.00651	0.008	0.00972	0.0161	0.0156	0.0122	0.0123	0.0139	0.0135
Barium	0.0465	0.0464	0.0416	0.0714	0.0858	0.088	0.0736	0.0746	0.0788	0.0722	0.0715	0.0739	0.0698	0.0705	0.0673	<0.02	0.0164	0.023	0.023	0.0145	0.0125	0.0159	0.0226
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.002	<0.0001	<0.002	<0.002	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.0005	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.056	0.062	0.051	0.058	0.047	<0.1	0.043	0.049	0.04	0.046	0.045	0.051	0.043	0.08	0.054	**0.67**	**0.617**	**0.67**	**0.61**	**0.629**	**0.576**	**0.503**	**0.515**
Cadmium	<0.00003	<0.00003	0.000014	0.000124	0.000056	0.000105	0.000043	0.000045	0.000049	0.000034	0.000037	0.000069	0.000207	0.000038	0.000037	<0.0004	<0.00003	0.000074	<0.000034	<0.00003	0.000017	<0.00005	<0.00002
Calcium	71.2	75.5	67.5	106	105	101	93.9	87.1	101	87.9	88.8	84.3	90.9	92.5	81.9	47.7	42.2	125	161	55.1	46.3	59.9	151
Chromium	0.00036	0.00057	0.00034	0.00201	0.00129	<0.001	0.00046	0.00065	0.0011	0.00059	0.00047	0.00103	0.00121	0.00082	0.00121	<0.002	0.00019	<0.002	<0.002	0.00059	0.00023	0.00011	0.00017
Cobalt	0.00325	0.003	0.00257	0.00426	0.00578	0.00469	0.00395	0.00247	0.00273	0.00218	0.00252	0.00066	0.00128	0.00161	0.00083	<0.0006	0.00022	<0.0006	<0.0006	<0.0001	0.00023	<0.0001	<0.0001
Copper	0.0037	0.00222	0.0011	0.00298	0.0013	0.0015	0.00192	0.00209	0.00208	0.00215	0.00099	0.00388	0.00357	0.00205	0.00314	<0.006	<0.0005	0.0056	0.0085	0.00058	0.00347	<0.0005	<0.0005
Iron	4.1	3.89	3.28	0.514	0.979	1.55	2.28	2.47	3.19	3.55	5.15	0.161	4.08	5.05	3.98	<0.03	0.119	0.106	0.114	0.083	0.259	0.101	0.082
Lead	0.000067	0.000165	<0.00005	0.000187	0.000142	<0.0005	0.000167	0.000139	0.000104	0.000071	0.000059	0.000148	0.000147	0.000124	0.000088	<0.001	<0.00005	<0.001	<0.001	0.000078	<0.00005	<0.00005	<0.00005
Lithium	0.0101	0.0111	0.00918	0.00422	0.00611	0.0072	0.00817	0.0089	0.0108	0.0108	0.00971	0.0189	0.0129	0.0111	0.0095	<0.01	0.00509	0.011	0.013	0.00764	0.00588	0.00743	0.0138
Magnesium	91.5	91.6	85.9	73.5	85.7	88.8	82.9	79.6	86.4	80.5	78.1	55.4	81.5	79.3	74.5	9.58	8.17	31.7	43.5	13.5	9.95	12.9	42.4
Manganese	**2.2**	**2.06**	**1.72**	**2.51**	**4.56**	**4.72**	**5.03**	**4.79**	**5.24**	**4.59**	**4.22**	**3.77**	**3.95**	**3.33**	**2.66**	0.0834	0.128	0.103	0.0927	0.107	0.0842	0.0727	0.0565
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	**0.031**	**0.0316**	**0.0306**	**0.023**	**0.0271**	**0.0296**	**0.0267**	**0.0282**	**0.034**	**0.0279**	**0.0321**	**0.0215**	**0.0253**	**0.0262**	**0.0239**	**0.0807**	**0.0964**	**0.087**	**0.0863**	**0.104**	**0.0906**	**0.0899**	**0.0814**
Nickel	0.00503	0.00539	0.00435	0.0168	0.00867	0.0054	0.00308	0.00298	0.0036	0.00196	0.00178	0.00185	0.00308	0.00331	0.00206	<0.002	<0.0005	<0.002	<0.002	0.00063	0.0022	0.00069	<0.0005
Phosphorus	0.292	0.319	0.287	<0.3	<0.3	<0.3	0.182	0.221	0.235	0.233	0.241	0.099	0.178	0.212	0.231	<0.3	<0.3	<0.3	<0.3	0.054	<0.05	<0.05	<0.05
Potassium	5.76	5.32	4.47	10.8	8	7.1	7.19	7.34	8.08	7.06	6.11	1.07	8.17	5.71	5.18	<2	1.12	<2	<2	1.18	1.06	1.11	1.84
Selenium	<0.0001	<0.0001	<0.0001	0.00067	0.00052	<0.001	0.00026	0.0002	0.0002	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.002	<0.0001	<0.002	<0.002	<0.0001	<0.0001	<0.0001	<0.0001
Silicon	15.5	16.7	16.2	9.48	9.89	10.8	10.6	9.43	10.7	10.3	10.2	6.78	10.4	10.8	10.2	3.36	3.93	4	4.09	3.7	3.59	3.69	3.72
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	0.000015	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00004	<0.00001	<0.00004	<0.00004	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	79.3	74.5	66.1	87.4	124	140	120	114	104	102	89.1	93.3	77.8	80.5	85.4	165	160	248	266	166	151	167	244
Strontium	0.595	0.605	0.574	0.694	0.673	0.733	0.685	0.642	0.709	0.665	0.63	0.643	0.684	0.643	0.623	2.46	2.38	8.23	8.05	3.44	2.65	3.6	7.78
Sulphur	108	109	105					155	156	138	133	444	127	130	126					168	154	170	333
Thallium	<0.00001	<0.00001	<0.00001	0.000035	<0.00001	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0004	<0.00001	<0.0004	<0.0004	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0001	0.00013	<0.0001	0.00112	0.0003	<0.0005	0.00011	0.00012	0.00016	<0.0001	<0.0001	0.00015	0.00015	0.00017	0.00021	0.0022	0.00023	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	0.02	0.015	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extr		0.000025																					
Uranium	0.00235	0.00218	0.00187	**0.0118**	**0.0157**	**0.0197**	**0.0215**	**0.0215**	**0.0195**	**0.0155**	**0.0128**	**0.012**	**0.0107**	0.00876	0.00802	<0.0004	0.000142	<0.0004	<0.0004	0.000118	0.000045	0.000033	0.000022
Vanadium	<0.001	<0.001	<0.001	0.0013	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001
Zinc	0.0032	0.0049	0.0048	0.007	0.0066	0.011	0.0043	0.0033	0.0056	0.0055	0.0036	0.0053	0.011	0.0106	0.0105	0.0084	<0.003	0.0484	<0.005	<0.003	0.03	0.0129	0.0046
Organics																							
Carbon Organic (Dissolved)				12.8	22.5	23	20.2	16.2	13.1	12.6	12	13.8				7.28	2.38	3.25	2.18	2.06	1.72	1.5	1.99
Carbon Organic (Total)	11.1	9.78	8.8	12.6	21.9	27.4	20.4	17.1	13.8	12.2	12.1	11.8	9.69	9.23	9.9	5.47	2.18	1.78	2.03	2.18	1.53	1.33	1.87
Nitrogen Organic (Dissolved)				0.329	0.168	0.756		0.199	<0.05							0.169	<0.05	0.209		<0.05	<0.05		
Nitrogen Organic (Total)				0.406	<0.3	<0.5			0.1							0.119	<0.05	<0.06		<0.08	<0.08		
ALS LAB ID	**L1434002**	**L1474413**	**L1516193**	**L1081224**	**L1115110**	**L1160966**	**L1202478**	**L1248467**	**L1277798**	**L1307601**	**L1348177**	**L1393344**	**L1434002**	**L1474413**	**L1516193**	**L1036785**	**L1079367**	**L1160966**	**L1201474**	**L1246516**	**L1277099**	**L1306577**	**L1346553**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D4.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D4.2 - GROUNDWATER QUALITY DATA

Site ID					MW11-06S												MW11-07D						
Site ID	**MW11-06D**	**MW11-06D**	**MW11-06D**	**MW11-06D**	**MW11-06S**	**MW11-06S**	**MW11-06S**	**MW11-06S**	**MW11-06S**	**MW11-06S**	**MW11-06S**	**MW11-06S**	**MW11-06S**	**MW11-06S**	**MW11-06S**	**MW11-06S**	**MW11-07D**	**MW11-07D**	**MW11-07D**	**MW11-07D**	**MW11-07D**	**MW11-07D**	**MW11-07D**
Analytes	**Nov-13**	**Apr-14**	**Jun-14**	**Sep-14**	**Jul-11**	**Oct-11**	**Jun-12**	**Aug-12**	**Dec-12**	**Mar-13**	**May-13**	**Aug-13**	**Nov-13**	**Apr-14**	**Jun-14**	**Sep-14**	**Jul-11**	**Oct-11**	**Feb-12**	**Jun-12**	**Aug-12**	**Dec-12**	**Mar-13**
In Situ Parameters																							
Conductivity µS/cm	2.12	1919	1597	1585	17	1664	2633	2330	1574	1545	1793	1816	2.29	1616	1758	1629	1167	945	1078	1803	1670	954	968
Oxygen Dissolved %	1.3	3.4	3.3	25.8	16.5		24.8		19.9	3.8	3	66.2	1.9	66.2	4.5	9.9	3.9	0.2	19.1	20.8		2.4	1.5
Oxygen Dissolved	0.16	0.4	0.36	2.85	1.92	39.6	2.08	2.1	2.35	0.44	0.35	7.19	0.236	7.75	0.49	1.14	0.4	0.02	2.21	2.03	0.09	0.29	0.18
pH (unitless)	8.33	8.28	8.26	8.28		7.84	7.97	6.92	8.04	8.3	7.66	7.91	7.86	7.92	8	8.02		7.8	7.92	7.9	8.36	8.06	7.91
Redox Potential mV	1.38	-152	-151	-160				63	-55.4	-106	-144	26.9	-69	-92.4	-96.4	-76.9			-199		-230	-260	-189
Salinity ppt	1.08	0.98	1.12	1.13				1.2	1.23	1.22	1.36	1.26	1.18	1.23	1.21	1.21			0.84		0.8	0.73	0.77
Specific Conductivity µS/cm	1.41	1293	2169	2195	2509	2429	2011		2384	2369	2640	2426	1.51	2382	2348	2341	1510	1466	1657	1254		1454	1528
Temperature °C	7.54	7.91	11.2	10.4	8.11	8.53	12.6	12.5	7.3	6.73	8.06	11.9	7.21	8.16	11.7	9.07	13.1	6.39	6.71	8.89	10.5	6.99	5.82
Total Dissolved Solids	1846	1248	1410	1426				1490	1553	1540	1780	1576	1486	1548	1526	1521			1079		1070	947	993
Turbidity NTU	1	-2.4	1.4	1.4	2.5	4	23.6	18.5	5.6	10.7	0	2.3	2.2	-0.5	10.4	9.1	9.9	18.2	0.001	8.6	10.1	-1.3	179
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)					6.1			4.6			2.6						5.8	4.6			2.6		7.1
Alkalinity (Total as CaCO3)	42.4	27.8	39.7	39.9	83.9	78.4	59.5	77.2	77.4	75.3	72.8	74.4	76.8	104	54.7	56.2	126	124	132	120	128	126	195
Bicarbonate Alkalinity	42.4	27.8	39.7	39.9	83.9		59.5		77.4	75.3	72.8	74.4	76.8	104	54.7	56.2	126	124	132	120		126	195
Carbonate Alkalinity	<2	<2	<1	<1	<2		<1		<2	<2	<2	<2	<2	<2	<1	<1	<2	<2	<2	<1		<2	<2
Color TCU					9.8	6.7	<5	<5	<5	<5	<5	<5					10.7	7.4	11.1	9.6	8.2	7	<5
Hardness as CaCO3 (Dissolved)	638	544	652	653	787	815	807	789	729	750	814	793	803	834	823	807	310	300	290	285	279	268	278
Hydroxide Alkalinity	<2	<2	<1	<1	<2		<1		<2	<2	<2	<2	<2	<2	<1	<1	<2	<2	<2	<1		<2	<2
pH (unitless)	7.86	7.9	7.81	7.77	7.56	7.93	7.69	7.9	7.88	7.83	7.97	7.95	7.84	7.82	7.91	7.81	7.97	8.09	8.07	8.01	8.12	8.14	8.02
Specific Conductivity µS/cm	2140	1900	2170	2210	2360	2310	2280	2230	2310	2400	2290	2360	2320	2400	2350	2330	1640	1640	1600	1560	1580	1420	1560
Total Dissolved Solids	1720	1530	1750	1740	1960	1950	1960	1970	1970	1750	1990	1910	1910	2020	1980	1830	1160	1110	1120	1160	1160	1150	1030
Total Suspended Solids		4.5	<3	<3	<3	4.2	25.3	3.9	4	11.4	9.7	7.1		8.3	33.2	5.4	7.1	7.1	3.3	<3	<3	<3	3.9
Turbidity NTU		0.35	0.34	0.57	2.61	4.97	21.2	5.18	3.7	7.74	6.95	3.76		1.91	9.04	6.11	4.27	5.05	2.3	1.47	2.25	2.76	6.43
Dissolved Anions																							
Bromide	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	<1	<0.5	<1	<1	<1	<0.5
Chloride	14	17	12	11	38	33	29	31	29	28	31	28	30	34	28	29	16.5	17	19.9	21	19	17	15.5
Fluoride	<0.4	<0.4	0.28	0.251	<0.4	<0.4	<0.4	<0.4	<0.4	0.56	<0.4	0.58	<0.4	<0.4	0.237	0.228	0.47	0.47	0.44	0.45	0.47	0.46	0.65
Sulphate	1190	1000	1220	1230	1290	1290	1270	1280	1310	1320	1340	1300	1300	1320	1330	1310	695	714	688	711	700	683	676
Nutrients																							
Ammonia (Total)	0.0904	0.08	0.0892	0.0961	0.125	0.14	0.13	0.129	0.102	0.143	0.124	0.096	0.067	0.11	0.0572	0.116	0.11	0.067	0.0564	0.0398	0.0561	0.0475	0.0372
Nitrate (as N)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.05	<0.1	<0.05	<0.1	<0.1	<0.1	<0.05
Nitrite (as N)	0.024	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	0.028	<0.01	<0.02	<0.02	<0.02	<0.01
Nitrogen (Dissolved)					0.41	0.24	0.99		0.188	0.175							0.41	0.2	0.21	0.17		0.182	0.076
Nitrogen (Total)					0.48	0.273	0.324	0.21	0.19	0.18	0.213	0.2					0.41	0.26	0.211	0.253	<0.27	0.149	0.144
Nitrogen Kjeldahl (Total)	0.167	0.146	0.205	0.169	0.48	0.273	0.324	0.208	0.192	0.181	0.202	0.203	0.165	0.215	0.194	0.308	0.41	0.233	0.211	0.25	<0.25	0.154	0.144
Orthophosphate (Dissolved)	0.0072	0.0067	0.0052	0.0038				0.0503					0.0532	0.0382	0.0433	0.0312		0.0321			0.0982		
Phosphorus - Dissolved	0.007	0.0105	0.0056		0.0134	0.0305	0.0245		0.0504	0.048	0.0494	0.0528	0.0525	0.0591	0.0442		0.0409	0.0306	0.0668	0.0914		0.082	0.0943
Phosphorus - Total	0.0089	0.0081	0.0057	0.0055	0.0329	0.0511	0.0982	0.0732	0.0735	0.0828	0.0765	0.0656	0.0712	0.0416	0.032	0.0362	0.0559	0.0743	0.111	0.162	0.129	0.136	0.138
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0054	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																							
Aluminum	0.0034	0.0046	0.0046	0.0033	<0.025	0.0061	0.013	<0.01	0.0063	0.0046	0.0043	0.0038	0.0038	0.0039	0.0054	0.0023	<0.025	0.0087	0.0107	0.0098	0.0112	0.0076	0.0066
Antimony	<0.0001	<0.0001	<0.0001	<0.0001	<0.0025	<0.0002	<0.001	<0.001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00016	<0.0001	<0.0025	<0.0002	<0.0002	<0.0002	0.00022	<0.0002	0.00012
Arsenic	0.0137	0.0138	0.0134	0.013	<0.0025	0.00146	0.0014	0.0014	0.00149	0.00165	0.00144	0.00138	0.00151	0.00136	0.00137	0.00114	<0.0025	0.00368	0.00425	0.00536	0.00606	0.00574	0.00562
Barium	0.0242	0.0229	0.0232	0.0218	0.063	0.0514	0.042	0.035	0.0353	0.0278	0.0284	0.0253	0.0282	0.0259	0.0248	0.0245	0.041	0.0386	0.0468	0.0438	0.0456	0.0432	0.0408
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.0002	<0.002	<0.002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.001	<0.2	<0.2	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005
Boron	0.555	0.507	0.424	0.49	0.27	0.269	0.3	0.28	0.279	0.292	0.253	0.245	0.294	0.286	0.238	0.257	0.3	0.314	0.305	0.29	0.281	0.288	0.283
Cadmium	<0.00003	<0.00006	<0.00005	<0.00001	<0.000085	0.00003	0.000124	<0.000034	0.000043	<0.00005	<0.00002	<0.00004	<0.00006	<0.00009	<0.00005	0.000011	0.000147	<0.00002	0.000025	<0.00002	<0.00002	<0.00002	<0.00001
Calcium	167	143	171	169	176	168	164	167	170	175	171	170	169	175	175	170	71.1	69.8	68.2	68		63.7	64.9
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.0002	<0.002	<0.002	0.00543	<0.0001	<0.0001	<0.0001	0.00023	0.00033	0.00012	0.0017	<0.005	<0.0002	0.00064	0.00021	<0.0002	0.00023	<0.0001
Cobalt	<0.0001	<0.0001	<0.0001	<0.0001	0.003	0.00176	0.00148	0.00098	0.00088	0.00066	0.00061	0.00059	0.00063	0.00059	0.00046	0.00055	<0.0015	0.00114	0.00109	0.0007	0.00057	0.00047	0.0004
Copper	<0.0002	0.00059	<0.0002	<0.0002	<0.005	<0.001	0.0051	<0.002	0.00089	<0.0002	<0.0002	<0.0002	<0.0002	0.00162	0.00034	<0.0002	<0.005	<0.001	<0.001	<0.0004	<0.0004	<0.0004	<0.0002
Dissolved Cadmium (by saltwater		<0.00002	<0.00002											<0.00002	<0.00002								
Iron	0.104	0.078	0.089	0.103	0.063	0.083	0.212	0.1	0.054	0.136	0.136	0.054	0.047	0.099	0.035	0.041	0.054	0.111	0.25	0.201	0.205	0.245	0.257
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.0025	<0.0001	<0.001	<0.001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005
Lithium	0.0137	0.0113	0.0142	0.0117	<0.025	0.0092	0.011	<0.01	0.0139	0.0132	0.0131	0.0152	0.0155	0.016	0.0192	0.0131	<0.025	0.0246	0.0241	0.0273	0.0222	0.0289	0.029
Magnesium	53.6	45.2	54.6	56.3	84.3	96.2	96.6	90.4	74.2	75.9	94.1	89.4	92.9	96.8	94.1	93	32.1	30.4	29	27.9		26.5	28.1
Manganese	0.0668	0.056	0.0553	0.0558	1.46	1.14	0.541	0.498	0.497	0.405	0.372	0.344	0.353	0.304	0.232	0.319	0.65	0.777	1.16	0.908	0.97	0.855	0.712
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0825	0.0809	0.0779	0.0809	0.0753	0.0964	0.102	0.11	0.115	0.11	0.106	0.0984	0.111	0.107	0.105	0.105	0.0354	0.0292	0.0264	0.0231	0.024	0.0228	0.0216
Nickel	<0.0005	<0.0005	0.00149	<0.0005	<0.005	0.0026	<0.002	<0.002	0.0057	0.001	0.00083	0.00086	0.00165	0.00122	0.00091	0.00109	<0.005	0.002	0.0023	0.0012	0.0014	<0.001	0.00091
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.3	<0.3	<0.3	<0.3	0.061	0.08	0.066	0.068	0.073	0.061	<0.05	<0.05	<0.3	<0.3	<0.3	<0.3		0.15	0.172
Potassium	2.05	1.96	2.15	2.2	8.9	8.67	8.3	9	8.71	7.91	8.34	8.09	8.19	8.73	8.87	7.94	4.7	3.32	3.23	2.5	4.85	3.5	2.74
Selenium	<0.0001	<0.0001	0.0001	<0.0001	<0.005	<0.0002	<0.002	<0.002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.0002	0.0003	<0.0002	<0.0002	<0.0002	0.00012
Silicon	3.82	3.99	3.85	3.79	4.51	4.5	4.48	4.5	4.52	4.36	4.46	4.26	4.38	4.59	4.37	4.44	4.15	4.83	4.92	5.01		4.58	4.78
Silver	0.00005	<0.00001	<0.00001	<0.00001	<0.0001	<0.00002	<0.00004	<0.00004	<0.00002	<0.00001	<0.00001	<0.00001	0.000035	<0.00001	<0.00001	<0.00001	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001
Sodium	256	242	253	264	288	275	272	275	261	255	255	253	257	269	264	262	255	237	261	241	260	243	214
Strontium	7.45	7.25	8.06	8.28	5.03	5.77	6.25	5.87	6.61	6.33	5.89	5.57	5.53	6.47	6.09	6.24	7.4	7.53	7.78	7.65	7.26	7.8	7.59
Sulphur	370	345	377	389					340	361	392	397	405	436	408	418						222	219
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.001	0.000036	<0.0004	<0.0004	0.000024	0.000015	0.000012	0.000014	0.000017	0.000015	<0.00001	0.000015	<0.001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0025	<0.0002	<0.001	<0.001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0025	0.00026	0.0002	<0.0002	<0.0002	<0.0002	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01		<0.02	<0.01
Uranium	0.000024	0.000023	0.000021	0.000022	0.0012	0.000749	0.0005	0.00053	0.000547	0.000378	0.000348	0.000351	0.000377	0.000341	0.000248	0.000335	0.0022	0.000993	0.000968	0.000769	0.000735	0.000673	0.000489
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.005	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001
Zinc	<0.001	<0.001	0.0024	<0.001	<0.005	<0.006	1.66	0.0529	0.0214	0.101	0.0815	0.038	0.0284	0.146	0.0236	0.323	<0.005	<0.006	<0.006	<0.002	<0.002	<0.002	<0.001
Total Metals																							
Aluminum	0.0066	0.0234	0.0098	0.0227	0.071	0.164	0.305	0.176	0.198	0.275	0.279	0.15	0.0402	0.0439	0.67	0.0805	0.189	0.117	0.0147	0.0156	0.018	0.0138	0.027
Antimony	0.00013	0.0001	<0.0001	0.00014	<0.0025	<0.0002	<0.001	<0.001	<0.0002	0.00013	<0.0001	0.00012	0.00012	<0.0001	0.00024	0.00015	<0.0025	<0.0002	<0.0002	0.0002	0.00029	<0.0002	0.00053
Arsenic	0.0141	0.015	0.0145	0.0135	<0.0025	0.003	0.0015	0.0016	0.00156	0.00193	0.0016	0.00155	0.00156	0.00143	0.00186	0.00137	0.0026	0.00362	0.00474	0.00588	0.00597	0.00591	0.00582
Barium	0.0239	0.0233	0.0237	0.0209	0.063	0.0518	0.049	0.036	0.0373	0.0313	0.0313	0.0279	0.0281	0.0253	0.031	0.0237	0.049	0.0432	0.0458	0.0457	0.0423	0.0446	0.042
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.0002	<0.002	<0.002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.001	<0.2	<0.2	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005
Boron	0.584	0.563	0.445	0.498	0.27	0.273	0.31	0.28	0.288	0.298	0.275	0.251	0.313	0.271	0.252	0.259	0.31	0.326	0.302	0.316	0.288	0.301	0.312
Cadmium	<0.00003	<0.00006	<0.00005	<0.00001	0.000125	0.000067	0.000155	0.000038	0.000063	<0.00005	<0.00004	<0.00005	<0.00009	<0.00009	<0.0001	0.000018	0.000228	0.000073	0.000022	<0.00002	<0.00002	<0.00002	0.000023
Calcium	165	136	170	159	168	170	170	164	165	171	167	168	166	165	176	157	72.4	70	67.2	73.3		66.6	66.5
Chromium	0.00011	0.00022	<0.0001	0.00016	<0.005	0.00051	<0.002	<0.002	0.00852	0.00066	0.00052	0.00049	0.00059	0.00057	0.00092	0.00293	<0.005	0.00296	0.00095	0.00057	0.00111	0.00071	0.00067
Cobalt	<0.0001	0.00013	<0.0001	<0.0001	0.0032	0.00189	0.00366	0.00116	0.0011	0.00095	0.00087	0.00072	0.00067	0.00062	0.00106	0.00067	0.0018	0.00123	0.00118	0.00081	0.0006	0.00054	0.00046
Copper	<0.0005	<0.0015	0.0005	<0.0005	<0.005	0.0017	0.0086	<0.002	0.0029	0.00551	0.00221	0.00109	0.00165	<0.0015	0.00435	0.00114	<0.005	0.0014	<0.001	<0.001	<0.001	<0.001	0.00096
Iron	0.113	0.368	0.124	0.605	0.138	0.266	2.24	0.353	0.322	0.631	0.501	0.228	0.135	0.295	0.972	0.851	0.175	0.229	0.295	0.247	0.263	0.289	0.304
Lead	<0.00005	0.000062	<0.00005	<0.00005	<0.0025	0.00011	0.0013	<0.001	0.00013	0.000136	0.000098	0.000054	0.000095	0.000091	0.000305	0.000221	<0.0025	0.00012	<0.0001	<0.0001	<0.0001	<0.0001	0.000053
Lithium	0.0142	0.0121	0.0149	0.0116	<0.025	0.0089	0.01	0.011	0.0142	0.013	0.0133	0.015	0.0154	0.0149	0.02	0.0124	<0.025	0.0239	0.0223	0.0272	0.0231	0.0298	0.032
Magnesium	53.4	43.6	56.3	54.6	82.2	95.2	96.4	90.9	75.3	76.1	92.9	89	91.8	92	97.2	86.2	33.1	30.3	28.6	28.2		27	27.8
Manganese	0.0691	0.0587	0.0589	0.0559	1.55	1.17	0.505	0.514	0.506	0.423	0.378	0.36	0.35	0.304	0.257	0.321	0.695	0.81	1.17	0.962	0.931	0.881	0.756
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0874	0.0832	0.0855	0.0778	0.0828	0.0951	0.0919	0.112	0.118	0.109	0.105	0.102	0.114	0.11	0.112	0.101	0.0384	0.0294	0.0268	0.0251	0.0251	0.0238	0.0235
Nickel	<0.0005	<0.0005	0.00204	<0.0005	<0.005	0.0031	0.0027	0.0021	0.0071	0.00157	0.00137	0.00122	0.00187	0.00127	0.00219	0.00141	<0.005	0.0025	0.0025	0.0014	0.0016	0.0011	0.00122
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.3	<0.3	<0.3	<0.3	0.069	0.058	0.081	0.077	0.071	0.06	0.099	0.054	<0.3	<0.3	<0.3	<0.3		0.151	0.182
Potassium	2.15	1.84	2.14	2.12	8.7	8.68	8.6	8.8	8.49	7.9	8.08	7.94	8.43	8.25	9	7.56	4.9	3.44	3.21	2.56	3.96	3.6	2.56
Selenium	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.0002	<0.002	<0.002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	0.00032	0.00022	<0.0002	<0.0002	<0.0002	<0.0001
Silicon	3.87	3.86	3.95	3.66	4.52	4.86	5.5	4.94	5.02	4.99	5.02	4.59	4.52	4.57	6.02	4.42	4.75	5.05	4.8	5.28		4.78	4.94
Silver	0.000049	<0.00001	<0.00001	<0.00001	<0.0001	<0.00002	<0.00004	0.000053	<0.00002	<0.00001	<0.00001	<0.00001	0.000035	<0.00001	0.000017	<0.00001	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	0.000052
Sodium	267	241	265	250	281	277	281	271	260	250	253	271	260	264	262	252	264	243	257	245	240	255	219
Strontium	7.75	7.45	8.45	8	4.85	5.7	6.52	5.76	6.89	6.21	6.01	5.86	5.48	6.23	6.36	5.99	7.68	7.5	7.72	7.85	7.36	8.13	8.34
Sulphur	377	344	393	374					351	352	392	405	411	430	429	391						225	226
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.001	0.000038	<0.0004	<0.0004	0.00003	0.000018	0.000017	0.000016	0.000018	0.000019	0.000019	0.000013	<0.001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0025	0.00031	<0.001	<0.001	<0.0002	<0.0001	<0.0001	<0.0001	0.00013	<0.0001	0.0001	<0.0001	<0.0025	0.00077	0.0002	<0.0002	<0.0002	<0.0002	0.00033
Titanium	<0.01	<0.01	<0.01	<0.01	0.012	<0.01	0.024	0.018	<0.02	0.015	0.013	<0.01	<0.01	<0.01	0.032	<0.01	0.011	0.015	<0.01	<0.01		<0.02	<0.01
Total Cadmium (by saltwater extr		<0.00002	<0.00002											<0.00002	0.000034								
Uranium	0.000025	0.000025	0.000021	0.000021	0.0013	0.000762	0.00046	0.00055	0.000543	0.000403	0.00036	0.000369	0.000392	0.000346	0.000289	0.000346	0.0023	0.00107	0.000998	0.000834	0.000766	0.00069	0.000531
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.005	<0.002	<0.002	<0.002	<0.002	0.0012	0.0011	<0.001	<0.001	<0.001	0.0025	<0.001	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001
Zinc	<0.003	0.0711	0.0062	0.0387	<0.005	<0.006	2.28	0.0628	0.0317	0.153	0.127	0.0522	0.04	0.16	0.0989	0.617	<0.005	<0.006	<0.006	<0.006	<0.006	<0.006	0.0042
Organics																							
Carbon Organic (Dissolved)	1.97	1.52			5.97	4.04	9.08	3.06	2.99	2.55	2.03	2.55	2.11	1.9			5.69	8.5	16.6	13.1	12.8	10	7.95
Carbon Organic (Total)	1.75	1.52	1.49	1.6	5.73	3.81	5.08	2.94	2.76	2.28	2	2.4	2.02	2.05	1.83	1.99	5.26	8.68	17.1	13.8	13.5	9.54	7.75
Nitrogen Organic (Dissolved)					0.285	0.1	0.86		0.085	<0.05							0.3	0.105	0.154	0.13		0.134	<0.05
Nitrogen Organic (Total)					0.355	0.09	0.194		0.089	<0.08							0.3	0.135	0.154	<0.3			0.107
ALS LAB ID	**L1392959**	**L1441050**	**L1473868**	**L1516193**	**L1037497**	**L1079375**	**L1160966**	**L1201474**	**L1246516**	**L1277099**	**L1306577**	**L1346553**	**L1392959**	**L1441050**	**L1473868**	**L1516193**	**L1038606**	**L1077032**	**L1113106**	**L1159973**	**L1200094**	**L1247928**	**L1275064**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D4.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D4.2 - GROUNDWATER QUALITY DATA

Site ID						
Site ID	MW11-07D	MW11-07D	MW11-07D	MW11-07D	MW11-07D	MW11-07D
Analytes	May-13	Aug-13	Nov-13	Mar-14	Jun-14	Sep-14
In Situ Parameters						
Conductivity µS/cm	1720	1083	1.56	1514	1106	2217
Oxygen Dissolved %	1.4	6.3	1.3	68.9	1.7	22.4
Oxygen Dissolved	0.17	0.78	0.16	8.41	0.21	2.46
pH (unitless)	8.04	7.94	8.01	7.83	7.83	7.68
Redox Potential mV	-159	-107	254	-93.9	-163	-130
Salinity ppt	0.81	0.73	0.79	0.76	0.8	1.6
Specific Conductivity µS/cm	1593	1436	1.05	980	1577	3050
Temperature °C	7.88	12.2	7.7	6.54	9.42	10.7
Total Dissolved Solids	1036	934	1015	984	1025	1983
Turbidity NTU	0	0	8.5	9.8	0.7	4.2
Physical Tests						
Acidity to pH 8.3 (as CaCO3)	1.6					
Alkalinity (Total as CaCO3)	112	119	134	128	131	134
Bicarbonate Alkalinity	112	119	134	128	131	134
Carbonate Alkalinity	<2	<2	<2	<2	<1	<1
Color TCU	<5	<5		10.2		
Hardness as CaCO3 (Dissolved)	273	266	255	263	270	272
Hydroxide Alkalinity	<2	<2	<2	<2	<1	<1
pH (unitless)	8.23	8.18	8.18	8.14	8.12	8.15
Specific Conductivity µS/cm	1530	1530	1590	1540	1610	1610
Total Dissolved Solids	1160	1100	872	1130	1150	1160
Total Suspended Solids	6.6	<3		6.7	<3	3.6
Turbidity NTU	5.26	1.22		7.83	3.09	3.82
Dissolved Anions						
Bromide	<0.5	<0.5	<0.5	<0.5	<1	<0.5
Chloride	18.4	14.7	17	15.5	16	15.5
Fluoride	0.5	0.62	0.48	0.74	0.114	0.484
Sulphate	722	678	673	670	708	673
Nutrients						
Ammonia (Total)	0.0331	0.026	0.0986	0.0891	<0.005	0.158
Nitrate (as N)	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05
Nitrite (as N)	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
Nitrogen (Dissolved)						
Nitrogen (Total)	0.139	0.108				
Nitrogen Kjeldahl (Total)	0.136	0.108	0.37	0.296	0.324	0.306
Orthophosphate (Dissolved)			0.103	0.0825	0.0748	0.0764
Phosphorus - Dissolved	0.11	0.0993	0.12	0.0806	0.075	0.081
Phosphorus - Total	0.165	0.129	0.206	0.197	0.185	0.169
Cyanide						
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals						
Aluminum	0.0062	0.0075	0.0052	0.004	0.0117	0.0171
Antimony	<0.0001	<0.0001	0.00049	0.00049	0.00072	0.00051
Arsenic	0.00542	0.00622	0.00354	0.00395	0.00448	0.0042
Barium	0.0432	0.0387	0.0439	0.0485	0.0496	0.047
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.293	0.285	0.308	0.298	0.279	0.304
Cadmium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00003	<0.00001
Calcium	65.1	62.5	58.9	62.5	63.6	64.6
Chromium	<0.0001	<0.0001	0.00024	0.0002	0.00057	0.00034
Cobalt	0.00041	0.00033	0.00024	0.00036	0.0005	0.00037
Copper	<0.0002	<0.0002	<0.0002	<0.0002	0.00035	0.00026
Dissolved Cadmium (by saltwater					<0.00002	
Iron	0.302	0.255	0.207	0.392	0.579	0.504
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.028	0.0299	0.0213	0.0186	0.027	0.0271
Magnesium	26.8	26.8	26.2	25.9	26.9	26.9
Manganese	0.737	0.547	1.1	1.24	0.908	0.831
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0214	0.0211	0.0211	0.0222	0.0253	0.0212
Nickel	0.00232	<0.0005	0.00111	0.00134	0.00212	0.00159
Phosphorus	0.16	0.125	0.167	0.161	0.174	0.177
Potassium	2.39	2.31	7.49	8.11	10	8.7
Selenium	<0.0001	<0.0001	0.00025	<0.0001	0.00011	<0.0001
Silicon	4.75	4.79	4.45	4.42	4.41	4.48
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	223	217	220	249	228	232
Strontium	7.29	6.98	7.42	7.61	7.8	7.51
Sulphur	213	210	211	214	227	220
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0001	<0.0001	0.00011	0.00018	0.00019	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.000465	0.000325	0.000726	0.000693	0.000703	0.000724
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	<0.001	<0.001	0.0011	0.0011	0.0021	0.0015
Total Metals						
Aluminum	0.0288	0.0114	0.136	0.0256	0.0048	0.0211
Antimony	0.00022	0.00011	0.00164	0.00059	0.00065	0.00074
Arsenic	0.00553	0.00621	0.00421	0.00419	0.00444	0.00439
Barium	0.0436	0.0397	0.0543	0.0507	0.0477	0.0483
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.319	0.331	0.331	0.318	0.288	0.321
Cadmium	0.000037	<0.00001	0.000168	<0.00005	<0.00003	0.00003
Calcium	67.1	62.8	65.8	64.4	61.7	65.2
Chromium	0.00104	0.00021	0.00506	0.00102	0.00052	0.00083
Cobalt	0.00048	0.00037	0.00061	0.00049	0.00047	0.00045
Copper	0.00076	<0.0005	0.00402	0.001	<0.0005	0.00052
Iron	0.363	0.281	0.659	0.56	0.54	0.538
Lead	0.00006	<0.00005	0.00029	0.000058	<0.00005	<0.00005
Lithium	0.0285	0.0322	0.0217	0.0189	0.0261	0.0272
Magnesium	27.4	26.9	27.5	26.4	26.2	27.2
Manganese	0.794	0.588	1.21	1.26	0.893	0.875
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0235	0.0225	0.0284	0.0261	0.0319	0.0223
Nickel	0.00279	<0.0005	0.00348	0.00184	0.00167	0.00192
Phosphorus	0.158	0.132	0.209	0.18	0.184	0.202
Potassium	2.48	2.29	7.69	8.05	9.48	9.07
Selenium	<0.0001	<0.0001	<0.0001	0.00012	<0.0001	<0.0001
Silicon	4.97	4.86	4.89	4.6	4.32	4.54
Silver	<0.00001	<0.00001	0.00001	<0.00001	<0.00001	<0.00001
Sodium	231	225	221	249	229	240
Strontium	7.88	7.37	7.68	7.98	7.71	7.56
Sulphur	216	214	218	222	223	218
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.00018	0.00012	0.00101	0.00038	0.00013	0.00022
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extr					<0.00002	
Uranium	0.000495	0.000329	0.000816	0.00076	0.000724	0.000759
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	<0.003	<0.003	0.0086	0.0036	<0.003	0.0036
Organics						
Carbon Organic (Dissolved)	7.04	5.01	7.57			
Carbon Organic (Total)	7.31	5.09	8.27	9.11	6.88	4.8
Nitrogen Organic (Dissolved)						
Nitrogen Organic (Total)						
ALS LAB ID	L1306577	L1345714	L1392288	L1432458	L1473868	L1513822

Site ID	MW11-07S												
Site ID	MW11-07S	MW11-07S	MW11-07S	MW11-07S	MW11-07S	MW11-07S	MW11-07S	MW11-07S	MW11-07S	MW11-07S	MW11-07S	MW11-07S	MW11-07S
Analytes	Aug-11	Oct-11	Feb-12	Jun-12	Aug-12	Dec-12	Mar-13	May-13	Aug-13	Nov-13	Mar-14	Jun-14	Sep-14
In Situ Parameters													
Conductivity µS/cm	928	958	867	1603	1480	935	786	876	1011	1.44	1506	940	2008
Oxygen Dissolved %	17.3	79.4	40.9	25.3		14.3	28.6	12.3	12	3.5	63.4	23.4	61.2
Oxygen Dissolved	1.98	9.08	5.36	2.46	1.06	1.71	3.61	1.45	1.24	0.4	7.74	2.72	6.47
pH (unitless)	7.7	7.96	8.06	7.87	7.73	7.83	7.9	7.9	7.87	7.83	8.04	7.86	7.7
Redox Potential mV			-292		-131	52.4	27.2	-57.2	119	0.933	91.4	21	20.1
Salinity ppt			0.75		0.7	0.71	0.63	0.66	0.64	0.72	0.76	0.69	1.37
Specific Conductivity µS/cm	1294	1369	1498	1107		1410	1273	1307	1281	0.974	941	1370	2639
Temperature °C	10.2	9.27	2.94	8.15	11.4	7.35	4.95	7.71	14	8.17	5.35	8.57	12.5
Total Dissolved Solids			973		944	916	828	850	833	1237	979	890	1716
Turbidity NTU	0	1.5	7.5	16.1	2.6	2	16.8	0	0	1.6	1.3	1.8	1.2
Physical Tests													
Acidity to pH 8.3 (as CaCO3)	1.7	3.2			3			<1					
Alkalinity (Total as CaCO3)	170	167	182	161	167	155	177	204	284	170	163	183	194
Bicarbonate Alkalinity	170	167	182	161		155	177	204	284	170	163	183	194
Carbonate Alkalinity	<2	<2	<2	<1		<2	<2	<1	<2	<2	<2	<1	<1
Color TCU	5.8	6.4	7.1	5.2	5.9	5.8	<5	<5	<5		<5		
Hardness as CaCO3 (Dissolved)	278	279	288	273	290	287	246	253	422	274	288	274	272
Hydroxide Alkalinity	<2	<2	<2	<1		<2	<2	<1	<2	<2	<2	<1	<1
pH (unitless)	8.17	8.19	8.26	8.1	8.11	8.03	8.14	8.34	8.24	8.25	8.22	8.2	8.26
Specific Conductivity µS/cm	1360	1430	1410	1350	1420	1400	1280	1260	897	1450	1410	1370	1370
Total Dissolved Solids	940	999	1010	962	1040	1020	853	896	610	997	985	958	946
Total Suspended Solids	3.8	<3	7.3	4	5.3	6.4	3.3	<3	12.4		<3	<3	<3
Turbidity NTU	0.62	0.35	4.09	1.36	4.27	4.86	1.83	0.15	0.64		0.53	0.38	0.26
Dissolved Anions													
Bromide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	10.9	10.5	11.2	10.8	12	11.3	9	10.7	<5	12.9	11.2	10.9	10
Fluoride	0.47	0.32	0.3	0.3	0.33	0.33	0.44	0.29	0.33	0.31	0.45	0.321	0.313
Sulphate	530	578	579	551	598	616	494	480	243	594	587	539	519
Nutrients													
Ammonia (Total)	0.0123	0.0281	<0.05	0.0157	0.0249	0.0271	0.0155	0.0161	<0.005	0.0212	0.0124	<0.005	0.0189
Nitrate (as N)	0.05	<0.05	<0.05	<0.05	<0.05	0.074	0.1	<0.05	<0.05	<0.05	<0.05	0.066	<0.05
Nitrite (as N)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen (Dissolved)	0.17	0.21	0.07	0.3		0.268	0.239						
Nitrogen (Total)	0.14	0.2	<0.043	0.261	0.151	0.26	0.314	0.13	0.075				
Nitrogen Kjeldahl (Total)	0.09	0.185	<0.2	0.261	0.151	0.25	0.259	0.095	0.075	0.118	0.128	0.176	0.123
Orthophosphate (Dissolved)		0.0355			0.0216					0.039	0.0493	0.0391	0.046
Phosphorus - Dissolved	0.0304	0.036	0.0219	0.0277		0.0399	0.0298	0.0354	0.0362	0.0418	0.0454	0.0374	0.0459
Phosphorus - Total	0.036	0.0375	0.0389	0.0383	0.0444	0.0538	0.0434	0.0397	0.0344	0.053	0.0502	0.0431	0.0466
Cyanide													
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals													
Aluminum	<0.025	0.0108	0.023	0.02	0.0082	0.0184	0.0114	0.0062	0.0012	0.0072	0.0048	0.0082	0.0063
Antimony	<0.0025	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	0.00012	<0.0001	0.00024	<0.0001	0.0001	0.00012	<0.0001
Arsenic	0.0045	0.00531	0.00383	0.0041	0.00412	0.00386	0.0054	0.00622	0.00499	0.00494	0.00373	0.00555	0.00654
Barium	0.041	0.0418	0.0431	0.041	0.041	0.0428	0.03	0.0293	0.0372	0.0372	0.037	0.036	0.0322
Beryllium	<0.005	<0.0002	<0.0002	<0.002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.2	<0.001	<0.001	<0.2	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.29	0.308	0.241	0.28	0.244	0.258	0.208	0.2	0.063	0.297	0.272	0.281	0.262
Cadmium	0.000194	0.000063	0.000119	0.000471	0.000026	0.000224	0.000098	0.000034	<0.00004	<0.00001	0.00005	0.000039	0.000023
Calcium	46.5	48.7	49.3	42.3		48.6	38.9	40.3	89.7	44.2	49.7	44.4	43.5
Chromium	<0.005	<0.0002	<0.0002	<0.002	<0.0002	0.00026	0.00029	<0.0001	0.00032	<0.0001	0.00013	0.00011	<0.0001
Cobalt	<0.0015	0.00087	0.00108	0.00098	0.001	0.00087	0.0005	0.0005	<0.0001	0.00062	0.00022	0.00062	0.00057
Copper	<0.005	<0.001	0.0013	0.0069	0.00045	0.00321	0.00199	0.00081	0.00173	0.00028	0.00235	0.00081	0.00047
Dissolved Cadmium (by saltwater													
Iron	<0.03	<0.03	<0.03	<0.03	0.081	<0.01	<0.01	0.03	<0.01	0.115	<0.01	0.021	0.031
Lead	<0.0025	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.028	0.0327	0.025	0.025	0.0228	0.0229	0.0263	0.0278	0.00386	0.0303	0.0217	0.0311	0.0283
Magnesium	39.3	38.2	40	40.7		40.3	36.2	36.9	48.2	39.8	39.8	39.7	39.8
Manganese	0.19	0.342	0.573	0.584	0.713	0.792	0.488	0.433	0.0167	0.646	0.212	0.766	0.552
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000012	<0.00001	<0.00001
Molybdenum	0.0184	0.0172	0.0155	0.0167	0.0179	0.016	0.0178	0.0161	0.127	0.0176	0.0159	0.0166	0.0166
Nickel	<0.005	0.0026	0.0041	0.0024	0.0024	0.0029	0.00172	0.00098	<0.0005	0.00103	0.00109	0.00172	0.00086
Phosphorus	<0.3	<0.3	<0.3	<0.3		<0.05	<0.05	<0.05	<0.05	0.061	0.056	<0.05	0.057
Potassium	2.7	2.03	5.79	2.2	1.65	2.2	1.41	1.25	7.61	1.44	1.72	1.63	1.31
Selenium	<0.005	<0.0002	<0.0002	<0.002	<0.0002	<0.0002	0.00024	0.0002	0.0271	<0.0001	0.00014	<0.0001	0.00012
Silicon	4.71	5.07	4.62	4.73		4.79	4.5	4.51	7.07	4.9	4.89	4.84	5.05
Silver	<0.0001	<0.00002	<0.00002	<0.00004	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	0.000019	<0.00001	<0.00001	<0.00001
Sodium	206	210	214	207	220	215	188	187	40.6	204	219	206	197
Strontium	8.11	8.4	8.55	9.48	9.19	8.68	8.9	9.11	0.68	9.71	10.3	9.68	9.21
Sulphur						197	156	142	75.8	183	194	166	166
Thallium	<0.001	0.000026	0.000025	<0.0004	<0.00002	0.000026	0.000027	0.000026	<0.00001	0.000013	0.000037	0.000025	0.00003
Tin	<0.0025	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01		<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.0046	0.00435	0.00477	0.00443	0.00402	0.00348	0.00448	0.00474	0.00403	0.00364	0.004	0.0045	0.00419
Vanadium	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	0.0033	<0.001	<0.001	<0.001	<0.001
Zinc	<0.005	<0.006	<0.006	0.0212	0.0033	0.0131	0.0035	0.0037	<0.001	0.0022	0.0062	0.004	0.0095
Total Metals													
Aluminum	0.026	0.0314	0.154	0.118	0.165	0.106	0.0627	0.0106	0.0538	0.0096	0.0145	0.0199	0.009
Antimony	<0.0025	<0.0002	0.00029	<0.001	<0.0002	0.00026	0.00035	<0.0001	0.00024	<0.0001	0.00015	0.00017	<0.0001
Arsenic	0.0045	0.00478	0.00405	0.0047	0.00475	0.00423	0.00568	0.00626	0.00466	0.0048	0.00395	0.00555	0.00654
Barium	0.042	0.0418	0.0451	0.04	0.0423	0.0458	0.0314	0.0288	0.0362	0.0373	0.0381	0.0359	0.0316
Beryllium	<0.005	<0.0002	<0.0002	<0.002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.2	<0.001	<0.001	<0.2	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.3	0.332	0.24	0.29	0.263	0.253	0.223	0.234	0.071	0.305	0.285	0.263	0.278
Cadmium	0.000097	0.000107	0.00017	0.000526	0.000065	0.000263	0.000153	0.000032	<0.00005	0.000014	0.000086	0.000107	0.000027
Calcium	46.2	47.5	48.1	44.6		48.3	39.4	39.9	88.2	44.8	48.7	43	43.3
Chromium	<0.005	0.0005	0.00137	<0.002	0.00059	0.0019	0.00251	0.00019	0.00049	0.00025	0.00031	0.00027	<0.0001
Cobalt	<0.0015	0.00098	0.00121	0.00114	0.00118	0.00101	0.00064	0.00054	0.00012	0.00066	0.00036	0.00068	0.00057
Copper	<0.005	0.0016	0.0039	0.0087	0.0033	0.0068	0.00487	0.00142	0.00325	<0.0005	0.00296	0.00174	0.00066
Iron	<0.03	0.036	0.188	0.131	0.268	0.135	0.064	0.034	0.069	0.133	0.022	0.039	0.034
Lead	<0.0025	<0.0001	0.0002	<0.001	<0.0001	0.0002	0.000149	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.029	0.0308	0.0255	0.028	0.023	0.0239	0.0286	0.0256	0.00446	0.0297	0.0228	0.0293	0.0287
Magnesium	39.8	37.2	40.5	41.2		39.5	36.4	36.1	47.2	39.5	39.5	39.1	40
Manganese	0.186	0.328	0.608	0.608	0.782	0.816	0.515	0.474	0.0499	0.688	0.363	0.796	0.555
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000013	<0.00001
Molybdenum	0.0183	0.0173	0.0156	0.0179	0.0184	0.0165	0.0186	0.0164	0.13	0.0189	0.0173	0.0181	0.0174
Nickel	<0.005	0.003	0.0059	0.003	0.004	0.004	0.00276	0.00099	0.0005	0.00124	0.00141	0.00197	0.00093
Phosphorus	<0.3	<0.3	<0.3	<0.3		0.061	<0.05	<0.05	<0.05	0.062	<0.05	0.059	<0.05
Potassium	2.2	2.08	6.94	2.1	1.7	2.19	1.53	1.21	7.82	1.53	1.66	1.59	1.36
Selenium	<0.005	<0.0002	<0.0002	<0.002	<0.0002	<0.0002	0.00025	0.00018	0.0227	<0.0001	0.00017	0.00011	0.00012
Silicon	4.82	4.91	5.07	5.08		4.89	4.68	4.49	7.14	5.03	4.91	4.87	5.11
Silver	<0.0001	<0.00002	<0.00002	<0.00004	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	0.000029	<0.00001	<0.00001	<0.00001
Sodium	212	204	212	218	220	221	195	183	42.1	220	226	205	197
Strontium	8.48	8.19	8.38	10.1	9.61	8.77	8.9	8.97	0.659	10.1	10.3	10.1	9.21
Sulphur						200	162	141	76.5	189	195	170	169
Thallium	<0.001	0.000027	0.00003	<0.0004	<0.00002	0.000027	0.000026	0.000026	<0.00001	0.000017	0.000041	0.000028	0.000031
Tin	<0.0025	0.00026	0.00021	<0.001	<0.0002	0.0003	0.00018	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	0.013	<0.01		<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extr													
Uranium	0.0046	0.00419	0.00488	0.00466	0.00429	0.0036	0.00456	0.00471	0.00408	0.00385	0.00426	0.0047	0.00441
Vanadium	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	0.0012	<0.001	0.0036	<0.001	<0.001	<0.001	<0.001
Zinc	<0.005	<0.006	0.008	0.0319	<0.006	0.0155	0.007	0.0042	<0.003	<0.003	0.0067	0.0046	0.0037
Organics													
Carbon Organic (Dissolved)	3.58	4.1	4.24	4.48	4.51	3.9	3.38	3.49	1.59	2.98			
Carbon Organic (Total)	3.22	3.93	4.22	4.01	4.68	3.64	3.25	3.23	1.39	2.91	3.2	3.16	3.58
Nitrogen Organic (Dissolved)	0.107	0.182	0.05	0.284		0.167							
Nitrogen Organic (Total)	0.077	0.172	<0.3	0.246			0.244						
ALS LAB ID	L1041015	L1076555	L1115490	L1160966	L1200094	L1247921	L1275748	L1306577	L1345714	L1392288	L1432458	L1473868	L1513822

Site ID				
Site ID	MW11-08D	MW11-08D	MW11-08D	MW11-08D
Analytes	Aug-11	Nov-11	Feb-12	Jun-12
In Situ Parameters				
Conductivity µS/cm	1448	1141	992	1776
Oxygen Dissolved %	8.8		12.8	10.2
Oxygen Dissolved	0.89	60.7	1.69	0.98
pH (unitless)	8.18		7.8	7.8
Redox Potential mV			-298	
Salinity ppt			0.84	
Specific Conductivity µS/cm	1812	1720	1683	1232
Temperature °C	14.5	7.34	3.51	8.89
Total Dissolved Solids			1093	
Turbidity NTU	8.7	4	4	0
Physical Tests				
Acidity to pH 8.3 (as CaCO3)	2.6			
Alkalinity (Total as CaCO3)	204	219	234	233
Bicarbonate Alkalinity	204		237	233
Carbonate Alkalinity	<2		<2	<1
Color TCU	17.2	15.1	16.4	20.8
Hardness as CaCO3 (Dissolved)	192	181	180	177
Hydroxide Alkalinity	<2		<2	<1
pH (unitless)	8.22	8.08	8.12	7.93
Specific Conductivity µS/cm	1790	1600	1610	1540
Total Dissolved Solids	1240	1130	1110	1150
Total Suspended Solids	13.3	13.6	6.5	<3
Turbidity NTU	6.68	8.28	6.43	1.66
Dissolved Anions				
Bromide	<1	<1	<1	<1
Chloride	15	12	15	14
Fluoride	0.49	<0.4	<0.4	<0.4
Sulphate	696	626	626	578
Nutrients				
Ammonia (Total)	0.0585	0.0245	<0.05	0.0256
Nitrate (as N)	<0.1	<0.1	<0.1	<0.1
Nitrite (as N)	<0.02	<0.02	<0.02	<0.02
Nitrogen (Dissolved)	0.46	0.66	0.32	0.24
Nitrogen (Total)	0.45	0.3	0.348	<0.26
Nitrogen Kjeldahl (Total)	0.45	0.303	0.35	<0.5
Orthophosphate (Dissolved)				
Phosphorus - Dissolved	0.0682	0.0745	0.112	0.17
Phosphorus - Total	0.099	0.119	0.153	0.227
Cyanide				
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.0054	0.0053	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005
Dissolved Metals				
Aluminum	<0.025	0.0103	0.0103	0.01
Antimony	<0.0025	0.00042	0.00027	0.00025
Arsenic	0.0028	0.00312	0.00338	0.00321
Barium	0.053	0.0576	0.0591	0.059
Beryllium	<0.005	<0.0002	<0.0002	<0.0002
Bismuth	<0.2	<0.001	<0.001	<0.001
Boron	2.69	2.55	2.51	2.28
Cadmium	<0.000085	0.000023	<0.00002	0.000051
Calcium	32.1	30.6	30.9	28.7
Chromium	<0.005	0.00032	0.00053	0.00034
Cobalt	<0.0015	0.00128	0.00102	0.00106
Copper	<0.005	<0.001	<0.001	<0.0004
Dissolved Cadmium (by saltwater				
Iron	<0.03	0.241	0.269	0.286
Lead	<0.0025	<0.0001	<0.0001	<0.0001
Lithium	<0.025	0.0011	0.0011	<0.001
Magnesium	27.1	25.5	24.9	25.5
Manganese	0.391	1.1	1.23	1.29
Mercury	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0676	0.0604	0.061	0.0605
Nickel	<0.005	0.0066	0.0062	0.0038
Phosphorus	<0.3	<0.3	<0.3	<0.3
Potassium	26.1	13.2	12.6	11.4
Selenium	<0.005	0.00023	0.00039	<0.0002
Silicon	3.48	4.04	4.01	3.91
Silver	<0.0001	<0.00002	<0.00002	<0.00002
Sodium	341	296	300	281
Strontium	1.24	1.1	1.16	1.22
Sulphur				
Thallium	<0.001	<0.00002	<0.00002	<0.00002
Tin	<0.0025	0.00067	0.00043	0.0002
Titanium	<0.01	<0.01	<0.01	<0.01
Uranium	0.0057	0.00529	0.00454	0.00457
Vanadium	<0.005	<0.002	<0.002	<0.002
Zinc	<0.005	<0.006	<0.006	<0.002
Total Metals				
Aluminum	0.389	0.286	0.179	0.0507
Antimony	<0.0025	0.00033	0.0004	0.00036
Arsenic	0.0031	0.00309	0.00341	0.00359
Barium	0.055	0.0586	0.0627	0.0594
Beryllium	<0.005	<0.0002	<0.0002	<0.0002
Bismuth	<0.2	<0.001	<0.001	<0.001
Boron	2.64	2.38	2.6	2.34
Cadmium	0.000119	0.000068	0.000068	0.000081
Calcium	31.9	28.6	31	28.7
Chromium	<0.005	0.00145	0.00171	0.00069
Cobalt	<0.0015	0.00152	0.00122	0.00119
Copper	<0.005	0.0047	0.0013	0.0011
Iron	0.21	0.51	0.43	0.368
Lead	<0.0025	0.00019	0.00017	0.00013
Lithium	<0.025	0.0012	0.0013	<0.001
Magnesium	26.9	23.9	25.5	24.9
Manganese	0.449	1.15	1.28	1.38
Mercury	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0737	0.0602	0.064	0.0664
Nickel	0.0055	0.0069	0.0093	0.0046
Phosphorus	<0.3	<0.3	<0.3	<0.3
Potassium	23.8	12.8	13.5	11.1
Selenium	<0.005	0.00037	0.0003	0.00027
Silicon	4.25	4.28	4.47	3.95
Silver	<0.0001	<0.00002	<0.00002	<0.00002
Sodium	333	286	317	283
Strontium	1.24	1.06	1.23	1.25
Sulphur				
Thallium	<0.001	<0.00002	<0.00002	<0.00002
Tin	<0.0025	0.00113	0.00097	0.00054
Titanium	0.012	0.012	<0.01	<0.01
Total Cadmium (by saltwater extr				
Uranium	0.0061	0.00505	0.00489	0.00486
Vanadium	<0.005	<0.002	0.002	<0.002
Zinc	<0.005	<0.006	<0.006	<0.006
Organics				
Carbon Organic (Dissolved)	29.6	19.8	21.8	27.5
Carbon Organic (Total)	30.1	21.2	22.3	27.1
Nitrogen Organic (Dissolved)	0.401	0.635	0.291	0.214
Nitrogen Organic (Total)	0.391	0.275	0.35	<0.5
ALS LAB ID	L1039843	L1080651	L1114498	L1159542

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D4.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D4.2 - GROUNDWATER QUALITY DATA

Site ID	MW11-08D									MW11-09D												
Site ID	MW11-08D	MW11-08D	MW11-08D	MW11-08D	MW11-08D	MW11-08D	MW11-08D	MW11-08D	MW11-08D	MW11-09D	MW11-09D	MW11-09D	MW11-09D	MW11-09D	MW11-09D	MW11-09D	MW11-09D	MW11-09D	MW11-09D	MW11-09D	MW11-09D	MW11-09S	MW11-09S
Analytes	Aug-12	Dec-12	Mar-13	May-13	Aug-13	Nov-13	Apr-14	Jun-14	Sep-14	Aug-11	Oct-11	Feb-12	Jun-12	Aug-12	Dec-12	Mar-13	May-13	Aug-13	Mar-14	Jun-14	Sep-14	Aug-11	Oct-11
In Situ Parameters																							
Conductivity µS/cm	1530	1050	992	1114	1104	1.48	998	1019	1076	1296	1340	1084	1882	1660	1020	999	1172	1289	1722	1030	1022	1486	1371
Oxygen Dissolved %		7.3	2.4	6.8	3.7	1.6	13.9	1.1	5.6	19.2		36.6	12.1		12.3	18.4	33.4	28	12.8	8.3	9.9	4.5	
Oxygen Dissolved	7.24	0.82	0.28	0.79	0.4	0.16	1.64	0.12	0.62	2.14	65.1	4.6	1.18	1.53	1.5	2.26	4.03	3.29	1.57	0.98	1.17	0.54	58.5
pH (unitless)	6.06	7.99	7.92	8.11	7.9	8.13	8.38	8.12	8.02	8.1		8.34	8.07	5.56	8.19	8.1	8.06	8.13	8.08	8.27	8.22	7.99	8.11
Redox Potential mV	-45	-220	-161	-179	-106	0.96	-174	-162	-147			-293		-42	-248	-146	-206	34.3	-157	-126	-182		
Salinity ppt	0.8	7.4E-07	0.75	0.83	0.76	0.74	0.75	0.74	0.75			0.88		0.8	0.8	0.79	0.91	0.98	0.87	0.78	0.77		
Specific Conductivity µS/cm		1462	1493	1630	1504	0.976	1483	1461	1492	1807	2133	1735	1323		1593	1565	1791	1913	1109	1549	1564	2247	2116
Temperature °C	14	10.3	7.41	8.45	11.1	7.19	7.88	9.19	10.4	10.1	5.53	5.34	9.22	8.66	6.17	6.07	6.88	7.92	6.36	7.48	7.75	7.22	6.56
Total Dissolved Solids	979	948	970	1060	979	1554	964	950	970			1129		1060	1035	1016	1165	1244	1119	1006	991		
Turbidity NTU	9.9	-1.4	-1.9	0	0.5	1.2	1.7	1.8	2.1	3.3	26.1	6.9	1.7	10.1		1.4	0	1.8	1.6	2.6	1.5	4.1	2.3
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)	2.3									<1				2.6								2.3	
Alkalinity (Total as CaCO3)	237	235	225	216	213	231	223	219	232	116	163	134	143	145	144	137	142	143	185	173	171	153	134
Bicarbonate Alkalinity		235	214	216	213	231	223	219	232	116		134	143		144	137	142	143	185	173	169	153	
Carbonate Alkalinity		<2	11.7	<1	<1	<2	<1	<1	<1	<1		<2	<1		<2	<1	<2	<2	<2	<2	1.9	<2	
Color TCU	9	11.1	9.8	<5	5.8					13.8	<5	12.5	17	15.2	14.7	12.1	11.4	10.1				6.6	8.5
Hardness as CaCO3 (Dissolved)	164	158	160	162	158	159	165	164	158	85.8	112	66.8	76	64.6	59	59.5	58.9	59.3	64.2	55.3	56.4	137	126
Hydroxide Alkalinity		<2	<1	<1	<1	<2	<1	<1	<1	<1		<2	<1		<2	<1	<2	<2	<2	<2	<1	<2	
pH (unitless)	8.18	8.23	8.33	8.3	8.32	8.2	8.37	8.38	8.23	8.34	8.16	8.19	7.97	8.06	8.18	8.32	8.2	8.23	8.03	8.27	8.3	8.19	8.24
Specific Conductivity µS/cm	1470	1470	1540	1470	1480	1400	1460	1480	1480	1770	2040	1660	1720	1610	1600	1680	1650	1630	1610	1550	1550	2240	2050
Total Dissolved Solids	1070	1040	1020	971	1010	965	1010	984	1030	1150	1470	980	1220	1110	1120	1140	1120	1140	1100	1060	1040	1490	1430
Total Suspended Solids	3.2	<3	<3	7.3	4.4		<3	<3	<3	<3	32.2	11.8	13.3	8.5	<3	4.1	<3	<3		<3	<3	3.3	8.2
Turbidity NTU	3.68	2.84	2.06	2.53	1.68		0.62	0.66	0.81	1.82	37.9	6.92	4.95	4.92	2.4	1.27	1.57	1.98		1.41	0.97	3.12	5.87
Dissolved Anions																							
Bromide	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	<0.5	<1	<1
Chloride	11	9.2	8.8	8.4	8	9.6	14.6	8.7	8.8	32	41	21	30	20	17	17	20	15	16	14	13.5	36	23
Fluoride	0.42	0.4	0.53	0.31	0.51	0.35	0.36	0.34	0.306	0.55	<0.4	<0.4	<0.4	0.44	0.41	0.75	0.41	0.87	0.75	0.398	0.375	0.46	<0.4
Sulphate	553	538	530	535	530	528	535	526	535	705	830	672	713	662	650	673	657	636	624	599	571	979	881
Nutrients																							
Ammonia (Total)	0.0238	0.0311	0.0367	0.0292	0.0349	0.037	0.0423	0.0305	0.0432	<0.005	<0.005	<0.05	0.0188	<0.005	0.0311	<0.005	<0.005	<0.005	0.0228	<0.005	0.0221	0.0112	0.029
Nitrate (as N)	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.12	<0.1	<0.1	<0.1	0.17	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.1	<0.1
Nitrite (as N)	<0.02	<0.01	0.014	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	0.056	<0.02	<0.02	<0.02	<0.02	<0.02	0.01	<0.01	0.027	<0.02
Nitrogen (Dissolved)		0.217	0.136							0.29	0.25	0.15	0.24		0.247	0.113						0.28	0.21
Nitrogen (Total)	0.18	0.195	0.153	0.134	0.153					0.27	0.488	0.256	1.24	0.51	0.237	0.15	0.17	0.148				0.33	0.287
Nitrogen Kjeldahl (Total)	0.18	0.202	0.193	0.162	0.153	0.202	0.203	0.199	0.2	0.146	0.488	0.26	1.24	0.28	0.244	0.154	0.174	0.187	0.234	0.177	0.169	0.303	0.287
Orthophosphate (Dissolved)	0.18					0.218	0.238	0.226	0.222					0.325					0.398	0.375	0.287		
Phosphorus - Dissolved		0.191	0.196	0.194	0.201	0.229	0.251	0.249		0.116	0.147	0.22	0.253		0.391	0.352	0.375	0.377	0.42	0.401	0.367	0.0549	0.061
Phosphorus - Total	0.208	0.224	0.217		0.239	0.257	0.274	0.242	0.303	0.124	0.234	0.29	0.352	0.365	0.396	0.4	0.43	0.445	0.467	0.429	0.437	0.0618	0.0804
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0086	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																							
Aluminum	0.0108	0.0095	0.01	0.0098	0.0092	0.0091	0.0087	0.011	0.0081	<0.025	0.0178	0.0232	0.0193	0.0184	0.0194	0.012	0.0168	0.01	0.0095	0.0096	0.0097	<0.025	0.0144
Antimony	<0.0002	<0.0002	0.0002	0.00019	0.00018	0.00018	0.00014	<0.0002	0.00012	<0.0025	0.00049	0.00025	<0.0002	0.00022	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0025	0.00031
Arsenic	0.00289	0.00294	0.00288	0.0035	0.00285	0.00284	0.00299	0.00274	0.00324	0.0042	0.00639	0.00464	0.00492	0.0053	0.00542	0.00534	0.00573	0.00619	0.00641	0.00588	0.00624	0.0039	0.00637
Barium	0.0548	0.0515	0.0497	0.0491	0.0452	0.0456	0.0441	0.0422	0.043	0.038	0.0527	0.0355	0.0445	0.0401	0.0399	0.0403	0.0429	0.0442	0.049	0.0411	0.0452	0.047	0.0405
Beryllium	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005	<0.0002
Bismuth	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.2	<0.001
Boron	2.36	2.35	2.14	2.34	2.42	2.42	2.31	2.5	2.33	0.49	0.461	0.518	0.481	0.415	0.456	0.441	0.441	0.447	0.472	0.471	0.461	0.49	0.465
Cadmium	<0.00002	<0.00002	<0.00005	<0.00005	<0.00002	<0.00003	<0.00002	<0.00002	<0.00001	0.00019	0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	0.000157	0.000061
Calcium	25.1	23.7	23.2	22.2	21.5	21.3	22.4	22.2	21.3	25.8	33.3	19.5	22	18.6	17	17.1	16.7	17.1	18.4	15.8	16.2	39.9	37.5
Chromium	0.00091	0.00107	0.00022	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.005	0.00033	0.00069	0.00144	0.00343	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005	<0.0002
Cobalt	0.00077	0.00075	0.0006	0.00067	0.00048	0.00043	0.00046	0.00037	0.0004	<0.0015	0.00104	0.00059	0.00058	0.00055	0.00025	0.00043	0.00031	0.00029	0.00023	<0.0002	<0.0002	<0.0015	0.00056
Copper	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0002	<0.005	<0.001	<0.001	0.00067	<0.0004	<0.0004	0.00076	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.005	<0.001
Dissolved Cadmium (by saltwater							<0.00002	<0.00002															
Iron	0.28	0.272	0.246	0.141	0.165	0.16	0.189	0.168	0.186	<0.03	0.131	0.163	0.386	0.305	0.296	0.214	0.239	0.3	0.389	0.159	0.43	<0.03	0.042
Lead	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0025	<0.0001
Lithium	<0.001	<0.001	<0.0005	<0.0005	<0.0005	0.00067	<0.0005	<0.001	<0.0005	<0.025	0.0118	0.0146	0.0145	0.0158	0.0152	0.0155	0.0197	0.0191	0.0198	0.0199	0.023	0.033	0.0258
Magnesium	24.6	23.9	24.7	25.9	25.4	25.6	26.4	26.2	25.3	5.21	7.02	4.37	5.13	4.39	4.01	4.05	4.17	4.05	4.44	3.82	3.87	9.05	7.95
Manganese	1.05	1.08	0.954	0.778	0.73	0.676	0.71	0.599	0.629	0.0629	0.8	0.691	0.945	0.787	0.817	0.795	0.831	0.912	0.955	0.682	0.862	0.201	0.26
Mercury		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005
Molybdenum	0.059	0.0578	0.0545	0.0558	0.0559	0.0525	0.0528	0.0546	0.0504	0.0404	0.0537	0.028	0.0279	0.0247	0.0191	0.0295	0.0162	0.0162	0.0149	0.0136	0.0128	0.0162	0.0184
Nickel	0.0029	0.0026	0.00209	0.00309	0.00156	0.00166	0.00113	0.0011	0.00107	<0.005	0.0056	0.0063	0.0034	0.0071	0.0028	0.0055	0.0034	0.0025	0.0014	0.0018	0.0017	<0.005	0.003
Phosphorus	0.24	0.273	0.271	0.21	0.219	0.237	0.269	0.241	0.261	<0.3	<0.3	<0.3	0.41	0.387	0.413	0.434	0.399	0.391	0.452	0.422	0.41	<0.3	<0.3
Potassium	10	9.91	10.4	10.2	9.89	11.2	9.87	10.4	9.84	3.8	3.82	1.75	1.68	1.69	1.44	1.34	1.33	1.24	1.3	1.1	1.11	<2	1.59
Selenium	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.005	0.00107	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005	0.00022
Silicon	4.29	3.98	4.25	4.15	4.08	4.31	4.12	4.25	3.92	2.86	3.43	3.4	3.88	3.69	3.41	3.57	3.6	3.59	3.89	3.9	4.03	4.06	4.09
Silver	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.0001	<0.00002
Sodium	271	284	274	274	264	254	251	243	256	381	432	331	352	320	327	318	340	325	335	303	319	456	418
Strontium	1.17	1.18	1.17	1.19	1.19	1.14	1.29	1.23	1.25	0.775	1.02	0.697	0.854	0.745	0.739	0.747	0.793	0.764	0.815	0.701	0.683	1.59	1.28
Sulphur		172	177	170	162	169	166	169	171						208	213	211	202	202	189	204		
Thallium	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.001	<0.00002
Tin	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0025	0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0025	0.00026
Titanium	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.01
Uranium	0.00304	0.00302	0.0027	0.00255	0.00243	0.00251	0.00263	0.00252	0.00257	0.0049	0.00722	0.00324	0.0035	0.00244	0.00199	0.00175	0.0014	0.00117	0.00136	0.00121	0.000757	0.0019	0.0016
Vanadium	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.002
Zinc	0.0021	0.0023	0.0013	0.0012	<0.001	<0.001	0.0012	<0.002	0.0012	<0.005	<0.006	0.0114	0.0025	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.006
Total Metals																							
Aluminum	0.209	0.0637	0.0405	0.183	0.103	0.0435	0.0233	0.0302	0.0241	0.084	0.632	0.117	0.143	0.181	0.0547	0.0369	0.0413	0.0244	0.0374	0.0258	0.0291	0.166	0.195
Antimony	0.00027	0.0002	0.00028	0.00023	0.0002	0.00019	0.00015	<0.0002	0.00019	<0.0025	0.00055	0.00044	0.00029	0.00037	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0025	0.00031
Arsenic	0.00294	0.00294	0.00287	0.00359	0.0027	0.00282	0.00295	0.00282	0.00318	0.0044	0.00805	0.00476	0.00534	0.00563	0.00539	0.0055	0.00571	0.00635	0.00639	0.00605	0.00618	0.0039	0.00559
Barium	0.053	0.0509	0.0499	0.0496	0.041	0.0432	0.0435	0.0425	0.0413	0.04	0.0654	0.0421	0.0482	0.044	0.0422	0.0434	0.0429	0.0465	0.0485	0.0433	0.0434	0.05	0.0428
Beryllium	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005	<0.0002
Bismuth	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.2	<0.001
Boron	2.51	2.26	2.45	2.38	2.33	2.42	2.29	2.57	2.38	0.51	0.451	0.543	0.504	0.496	0.411	0.461	0.449	0.459	0.47	0.498	0.516	0.5	0.473
Cadmium	0.000022	0.000023	<0.00005	<0.00005	<0.00002	<0.00003	<0.00002	<0.00002	<0.00001	0.000239	0.000147	0.000129	0.000059	0.000058	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	0.00002	<0.00002	0.000182	0.000082
Calcium	25.2	23.3	23.5	22	21	20.7	21.4	21.6	20.6	25.8	39.9	20.7	22.6	18.9	17.4	16.9	16.1	17.3	17.2	15.7	17	40.2	37.9
Chromium	0.00456	0.00309	0.00057	0.00051	0.00037	0.00018	0.0002	<0.0002	0.00026	<0.005	0.00209	0.00389	0.00429	0.0113	0.00059	0.00035	0.00122	0.00043	0.00071	0.00043	0.00045	<0.005	0.00078
Cobalt	0.00097	0.00081	0.00061	0.00079	0.00048	0.00043	0.00047	0.00041	0.00041	<0.0015	0.00152	0.00077	0.00096	0.00085	0.00036	0.0005	0.0004	0.00033	0.00029	0.00024	0.00023	<0.0015	0.00069
Copper	<0.001	<0.001	0.00083	0.0009	<0.0005	<0.0005	0.00146	<0.001	<0.0005	<0.005	0.0041	0.0079	0.0025	0.0032	0.0011	0.0011	0.002	<0.001	<0.001	0.001	0.001	<0.005	0.0019
Iron	0.442	0.309	0.278	0.272	0.219	0.187	0.209	0.189	0.207	0.056	0.781	0.441	0.541	0.564	0.371	0.37	0.358	0.44	0.458	0.342	0.55	0.128	0.284
Lead	0.00011	0.00026	0.000064	0.000105	0.000052	<0.00005	<0.00005	<0.0001	<0.00005	<0.0025	0.00054	0.00029	0.00023	0.00028	0.00013	0.0001	0.00013	0.00015	0.00014	0.00014	0.00016	<0.0025	0.00012
Lithium	<0.001	<0.001	<0.0005	0.00059	0.00079	0.00055	<0.0005	<0.001	<0.0005	<0.025	0.0118	0.0148	0.0151	0.0169	0.0135	0.0164	0.0195	0.0194	0.0192	0.021	0.0256	0.034	0.0261
Magnesium	24.5	24	24.8	26	24.6	25.4	25.1	25.7	24.7	5.27	7.16	4.4	5.21	4.46	4.06	4.07	4.05	4.11	4.15	3.79	4.13	9.21	8.04
Manganese	1.13	1.06	0.948	0.793	0.689	0.672	0.69	0.632	0.623	0.0745	0.84	0.713	0.973	0.863	0.795	0.789	0.812	0.93	0.933	0.691	0.854	0.226	0.283
Mercury		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0616	0.0585	0.0615	0.0592	0.0532	0.0549	0.0538	0.0559	0.0501	0.0462	0.0534	0.0291	0.0302	0.0267	0.0175	0.0307	0.0168	0.0172	0.0157	0.014	0.0145	0.0171	0.0189
Nickel	0.0047	0.0035	0.00232	0.00381	0.00157	0.00148	0.00129	0.0012	0.00126	<0.005	0.0072	0.0081	0.0061	0.0112	0.0035	0.0058	0.0038	0.0026	0.0021	0.0022	0.0012	<0.005	0.0039
Phosphorus	0.24	0.246	0.262	0.212	0.225	0.239	0.271	0.273	0.257	<0.3	<0.3	0.31	0.39	0.406	0.406	0.426	0.415	0.422	0.445	0.434	0.4	<0.3	<0.3
Potassium	9.96	9.86	10.4	10.2	9.48	11.2	9.34	10.1	9.61	3.8	3.63	1.77	1.74	1.68	1.49	1.37	1.31	1.16	1.21	1.08	1.18	<2	1.59
Selenium	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.005	0.0008	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005	0.00027
Silicon	4.97	4.04	4.29	4.71	4.33	4.32	4.07	4.26	3.87	3.02	4.62	3.61	3.98	4.02	3.5	3.6	3.56	3.6	3.78	3.89	4.34	4.35	4.45
Silver	0.000074	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.0001	<0.00002	<0.00002	<0.00002	0.000053	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.0001	<0.00002
Sodium	274	276	272	267	247	245	250	255	251	385	420	336	357	335	336	322	325	322	334	309	306	461	420
Strontium	1.2	1.17	1.29	1.23	1.13	1.16	1.29	1.25	1.23	0.791	1.07	0.721	0.886	0.778	0.657	0.77	0.781	0.785	0.809	0.728	0.747	1.6	1.31
Sulphur		169	179	172	162	170	166	174	167						212	215	210	204	198	188	176		
Thallium	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.001	<0.00002
Tin	<0.0002	<0.0002	0.00015	0.00012	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0025	0.00175	0.00054	0.00032	0.00033	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0025	0.00137
Titanium	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	0.029	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.01
Total Cadmium (by saltwater extr							<0.00002	<0.00002															
Uranium	0.00318	0.00309	0.00307	0.00272	0.00232	0.00257	0.00256	0.00256	0.00257	0.0055	0.0071	0.00328	0.00363	0.00253	0.00179	0.00179	0.00141	0.00125	0.00142	0.00125	0.000835	0.0021	0.00165
Vanadium	<0.002	<0.002	<0.001	0.0011	<0.001	<0.001	<0.001	<0.002	<0.001	<0.005	0.0025	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.002
Zinc	<0.006	0.0063	<0.003	<0.003	<0.003	<0.003	<0.003	<0.006	<0.003	<0.005	0.0082	0.0186	0.0067	0.0068	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.005	<0.006
Organics																							
Carbon Organic (Dissolved)	15.6	14.1	7.28	5.26	8.57	9.72				26.3	33.4	17.7	18.7	14.1	11.7	13.3	13.2	12.5				5.9	5.65
Carbon Organic (Total)	16.7	14.8	13.1	5.28	9.41	10.5	12.1	9	12	26.1	33.4	18.2	17.8	14.4	11.4	13	12.7	12.8	13.2	10.5	11.1	5.84	5.76
Nitrogen Organic (Dissolved)		0.185	0.085							0.161	0.246	0.144	0.221		0.216	0.11						0.242	0.181
Nitrogen Organic (Total)			0.102							0.141	0.496	<0.3	1.22			0.154						0.292	0.258
ALS LAB ID	**L1202478**	**L1247928**	**L1277798**	**L1308855**	**L1346553**	**L1394557**	**L1439433**	**L1475661**	**L1516193**	**L1039844**	**L1079375**	**L1115110**	**L1159973**	**L1202478**	**L1247921**	**L1277099**	**L1307601**	**L1348177**	**L1434002**	**L1475117**	**L1514758**	**L1039843**	**L1079375**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D4.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D4.2 - GROUNDWATER QUALITY DATA

Site ID	MW11-09S										MW11-10D												
Site ID	MW11-09S	MW11-09S	MW11-09S	MW11-09S	MW11-09S	MW11-09S	MW11-09S	MW11-09S	MW11-09S	MW11-09S	MW11-10D	MW11-10D	MW11-10D	MW11-10D	MW11-10D	MW11-10D	MW11-10D	MW11-10D	MW11-10D	MW11-10D	MW11-10D	MW11-10D	MW12-01
Analytes	Feb-12	Jun-12	Aug-12	Dec-12	Mar-13	May-13	Aug-13	Mar-14	Jun-14	Sep-14	Dec-11	Feb-12	Jun-12	Aug-12	Dec-12	Mar-13	May-13	Aug-13	Nov-13	Mar-14	Jun-14	Sep-14	Dec-12
In Situ Parameters																							
Conductivity µS/cm	1197	2273	2160	1238	1242	1440	1695	2074	1301	1299	1961	1856	2642	2920	2016	1946	2228	2561	2.88	3019	2057	1941	
Oxygen Dissolved %	46.1	20.8		2.9	6	19.2	18.3	67.3	38.7	11.5	5	1.9	11.7		2.9	2	1.7	8.7	1.4	7	1.9	16.3	
Oxygen Dissolved	6.18	2.03	1.38	0.36	0.74	2.36	2.12	8.41	4.66	1.36	0.56	0.22	1.03	0.05	0.33	0.23	0.19	0.94	0.16	0.84	0.21	1.87	1.8
pH (unitless)	8.25	8.11	7.78	8.1	8.04	7.98	8.11	8.11	8.21	8.28		9.07	9.01	5.95	7.65	7.5	7.5	7.4	7.54	7.48	7.53	8.35	7.25
Redox Potential mV	-296		-153		81.8	117	135	8.3	75.4	77.2	-338			-137	-198	82.7	-189	-96.3	-140	-132	-137	-195	130
Salinity ppt	1.06		1.1		0.99	1.14	1.24	1.06	1.01	1	1.45			1.5	1.49	1.51	1.68	1.83	1.5	1.58	1.5	1.46	
Specific Conductivity µS/cm	2108	1506		1931	1955	2219	2392	1312	1980	1963	2778	2747	1981		2840	2898	3200	3469	1.94	2083	2876	2795	3229
Temperature °C	2.39	7.23	8.27	6.21	5.89	6.66	9.94	5.76	7.03	7.3	9.52	8.03	12.2	11.9	9.72	7.81	9.12	11.3	7.96	8.82	10.1	9.01	8.5
Total Dissolved Solids	1361		1380		1270	1442	1557	1348	1288	1276	1.81			1870	1850	1884	2081	2252	1871	1963	1870	1817	
Turbidity NTU	8.6	0	2.1	-1.5	1.2	0	2.3	1.5	2.8	2.8	68.1	44.7	3.8	2.8	-2.1	82.7	0	3.2	2.4	1.8	1.8	4.8	
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)			2.6											3.1									
Alkalinity (Total as CaCO3)	139	121	152	117	124	123	111	110	129	122	208	152	174	228	243	245	230	247	266	245	256	245	175
Bicarbonate Alkalinity	139	121		117	124	123	111	110	129	122		152	174		243	245	230	247	266	245	256	245	
Carbonate Alkalinity	<2	<1		<2	<1	<2	<2	<1	<2	<1		<2	<1		<2	<2	<2	<2	<2	<2	<2	<1	
Color TCU	8.9	<5	11.1	6.4	7.1	6.1	6				<5	<5	<5	<5	<5	<5	<5	<5	<5				
Hardness as CaCO3 (Dissolved)	110	104	110	102	104	106	103	102	106	105	1530	1410	1540	1580	1480	1630	1610	1620		1590	1620	1520	1760
Hydroxide Alkalinity	<2	<1		<2	<1	<2	<2	<1	<2	<1		<2	<1		<2	<2	<2	<2	<2	<2	<2	<1	
pH (unitless)	8.22	8.1	8.14	8.13	8.33	8.18	8.19	8.3	8.16	8.23	8.12	8.24	8.09	8.22	7.96	7.93	8	8.04	8.07	7.89	7.99	8.01	8.05
Specific Conductivity µS/cm	2000	2010	2000	1920	2040	2010	2020	1960	2000	2010	2790	2680	2680	2690	2780	2870	2920	2900	2920	2870	2880	2820	3190
Total Dissolved Solids	1220	1440	1410	1330	1380	1400	1330	1260	1320	1370	2830	2490	2580	2740	2730	2710	2820	2860	2750	2690	2790	2640	3160
Total Suspended Solids	6.4	<3	<3	<3	<3	<3	5		<3	<3	<3	163	98.7	3.2	<3	11.3	10	11			8.9	6.6	<3
Turbidity NTU	5.79	0.79	1.46	2.18	0.8	0.7	3.45		1.28	0.64	2.57	97	90.8	2.89	8.88	11.9	12.3	11.7			10.8	8.84	0.46
Dissolved Anions																							
Bromide	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloride	23	24	23	19	19	20	19	20	21	21	<10	<10	<10	<10	<10	<10	<10	<10	10	<10	<10	<10	18
Fluoride	<0.4	<0.4	<0.4	<0.4	0.6	<0.4	0.63	0.71	0.301	0.294	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	0.67	<0.4	<0.4	0.213	0.185	<0.4
Sulphate	859	874	879	841	876	866	865	872	881	852	1720	1640	1660	1740	1700	1740	1730	1720	1760	1730	1770	1720	1670
Nutrients																							
Ammonia (Total)	<0.05	0.0219	0.0326	0.0217	0.0209	0.0186	0.0208	0.0187	0.0175	0.0118	0.0632	0.148	0.103	0.0659	0.0547	0.0518	0.0558	0.0574	0.0721	0.0546	0.0618	0.0809	<0.005
Nitrate (as N)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	88.2
Nitrite (as N)	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.024	<0.02	<0.02	<0.02	<0.02	0.042	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.334
Nitrogen (Dissolved)	0.17	0.16		0.173	0.152							0.34	0.21		0.271	0.182							
Nitrogen (Total)	0.276	0.169	<0.27	0.178	0.16	0.18	0.168				0.13	0.357	0.274	0.21	0.174	0.182	0.22	0.205					88.5
Nitrogen Kjeldahl (Total)	0.28	0.169	<0.25	0.184	0.16	0.177	0.184	0.223	0.198	0.174	0.264	0.357	0.274	0.211	0.225	0.21	0.224	0.208	0.219	0.262	0.223	0.298	<0.05
Orthophosphate (Dissolved)			0.098					0.107	0.111	0.111				<0.001					0.0011	0.001	0.0014	0.0035	0.0037
Phosphorus - Dissolved	0.086	0.0727		0.092		0.104	0.12	0.125	0.122	0.147	0.0082	0.0058	0.0021		0.0025	<0.002	<0.002	<0.002	<0.002	<0.002	0.0024		0.0047
Phosphorus - Total	0.104	0.0825	0.11	0.101	0.107	0.114	0.129	0.134	0.139	0.161	0.0105	0.0196	0.0212	0.0192	0.0215	0.0235	0.021	0.0243	0.0209	0.0219	0.022	0.0153	
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Dissolved Metals																							
Aluminum	0.0124	0.043	0.0109	0.0115	0.0144	0.0106	0.01	0.0092	0.0099	0.015	<0.006	<0.006	<0.01	<0.01	<0.002	0.0011	0.0022	<0.002	0.0017	0.0016	<0.001	0.0025	0.0022
Antimony	<0.0002	<0.0025	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00737	0.00045	<0.001	<0.001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	0.00035	0.00398
Arsenic	0.00379	0.0045	0.00433	0.00475	0.00449	0.00485	0.00487	0.00506	0.00479	0.00481	0.0056	0.00453	0.0051	0.0051	0.00543	0.00547	0.00558	0.00554	0.0056	0.00577	0.00581	0.00544	0.00578
Barium	0.0338	0.037	0.0345	0.0288	0.0281	0.0267	0.0273	0.0258	0.0266	0.0265	0.0214	0.0589	0.034	<0.02	0.00934	0.00832	0.00876	0.00752	0.00769	0.00813	0.00723	0.0102	0.0315
Beryllium	<0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.002	<0.002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002
Bismuth	<0.001	<0.2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.2	<0.2	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Boron	0.529	0.52	0.423	0.441	0.45	0.45	0.446	0.466	0.452	0.467	0.078	0.088	0.1	<0.1	0.082	0.088	0.089	0.09	0.093	0.089	0.089	0.083	0.115
Cadmium	0.000089	<0.000085	<0.00002	<0.00002	0.000039	0.000067	0.000067	0.000052	0.000029	0.000034	<0.00002	<0.00002	<0.000034	<0.000034	<0.00002	<0.00001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.0007
Calcium	32.5	29.8		29.8	30.2	30.6	29.9	29.5	30.5	30.4	262	244	265	262	272	280	284	288	299	281	291	278	245
Chromium	0.00031	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00021	<0.0002	<0.002	<0.002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002
Cobalt	0.00026	<0.0015	0.00059	0.00033	0.00023	0.00029	0.00025	0.00024	0.00029	0.00026	0.00214	<0.0002	<0.0006	<0.0006	<0.0002	0.00017	<0.0002	<0.0002	0.00013	0.00012	0.00011	0.00011	0.00192
Copper	0.0074	0.02	0.00045	<0.0004	0.00147	0.00042	<0.0004	0.00074	<0.0004	0.00087	<0.001	<0.001	<0.002	<0.002	<0.0004	0.00029	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	0.00712
Dissolved Cadmium (by saltwater																							
Iron	<0.03	<0.03	0.083	0.021	0.031	<0.01	<0.01	0.016	0.016	0.033	0.148	<0.03	0.347	0.805	0.978	0.982	0.994	1.02	1.02	1.03	1.03	0.947	<0.01
Lead	<0.0001	<0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.0001	<0.00005	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001
Lithium	0.0238	0.031	0.0158	0.0254	0.0234	0.0273	0.0253	0.0273	0.0239	0.0268	0.0097	0.0125	0.012	0.011	0.0091	0.0118	0.0114	0.0098	0.0109	0.0102	0.0102	0.00909	0.0296
Magnesium	7.04	7.16		6.78	7.01	7.12	7.01	6.88	7.2	7.14	213	195	214	224	195	226	219	218	223	217	218	201	279
Manganese	0.17	0.207	0.327	0.224	0.168	0.214	0.218	0.179	0.227	0.207	0.282	0.153	0.33	0.319	0.34	0.343	0.368	0.356	0.358	0.367	0.357	0.34	0.0875
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0188	0.0186	0.0209	0.0182	0.0367	0.021	0.0206	0.0207	0.0201	0.0224	0.0296	0.0262	0.0255	0.0272	0.0222	0.027	0.0255	0.0248	0.0249	0.0237	0.0245	0.0253	3.42
Nickel	0.0037	<0.005	0.0024	0.0011	0.0016	0.0012	0.0011	0.0011	0.0012	0.0013	0.0111	0.0023	<0.002	<0.002	<0.001	0.00138	<0.001	<0.001	0.00052	<0.0005	<0.0005	0.00089	0.0148
Phosphorus	<0.3	<0.3		0.096	0.113	0.108	0.111	0.11	0.117	0.124	<0.3	<0.3	<0.3	<0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	1.25	<2	1.15	1.03	1.14	1.03	0.99	1	1.02	1.04	14.8	17.9	15.2	14.3	14.4	13.9	14.3	14.4	13.8	14.4	13.7	14.1	41.7
Selenium	<0.0002	<0.005	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00951	<0.0002	<0.002	<0.002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	0.0405
Silicon	3.79	4.19		3.89	3.95	3.96	3.88	3.95	4.06	3.88	11	12.9	13.8	13.6	14.3	14.7	14.4	14.9	14.6	14.4	14.9	14.6	7.35
Silver	<0.00002	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00004	<0.00004	<0.00002	<0.00001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002
Sodium	399	397	428	394	387	407	398	387	374	398	161	183	163	167	169	163	166	163	161	156	159	174	151
Strontium	1.18	1.32	1.31	1.25	1.34	1.35	1.35	1.37	1.32	1.35	2.67	4.16	3.64	3.04	2.86	3.58	3.26	3.16	3.2	3.12	3.22	3.44	3.51
Sulphur				270	275	283	274	271	269	274					493	539	546	552	520	541	543	534	541
Thallium	0.000023	<0.001	<0.00002	<0.00002	0.000025	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.0004	<0.0004	<0.00002	<0.00001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002
Tin	0.00021	<0.0025	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002
Titanium	<0.01	<0.01		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.017	0.012	<0.01	<0.01	<0.02	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02
Uranium	0.00145	<0.001	0.00155	0.000739	0.000917	0.000789	0.000765	0.000657	0.000692	0.000705		0.00301	0.00277	0.00235	0.00236	0.00291	0.00276	0.00274	0.00274	0.00275	0.00281	0.00275	0.0146
Vanadium	<0.002	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.0027	<0.002	<0.002	<0.002	<0.002	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	0.004
Zinc	0.0174	<0.005	<0.002	<0.002	0.0034	0.0035	<0.002	0.0026	0.0021	0.0058	<0.006	<0.006	<0.005	<0.005	0.0043	0.0011	<0.002	<0.002	0.0014	<0.001	<0.001	0.0027	<0.002
Total Metals																							
Aluminum	0.24	0.072	0.0519	0.0276	0.055	0.0474	0.0372	0.043	0.0436	0.0696	0.0086	0.01	0.055	0.018	<0.006	0.0049	0.0103	<0.006	0.0035	0.0046	<0.003	0.0154	0.0154
Antimony	0.00033	<0.0025	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00023	0.00683	0.00043	<0.001	<0.001	<0.0002	<0.0001	<0.0002	<0.0002	0.00017	<0.0001	<0.0001	0.00048	0.00401
Arsenic	0.00385	0.0046	0.0043	0.00508	0.00466	0.00516	0.00534	0.00501	0.00501	0.00537	0.00541	0.00479	0.0056	0.0053	0.00541	0.00581	0.00552	0.0056	0.00592	0.00602	0.00546	0.00519	0.00586
Barium	0.0412	0.032	0.0358	0.0293	0.0292	0.0276	0.028	0.0254	0.0265	0.029	0.0246	0.0502	0.063	0.054	0.00983	0.0102	0.0203	0.0146	0.0117	0.0103	0.00807	0.0224	0.0312
Beryllium	<0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.002	<0.002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002
Bismuth	<0.001	<0.2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.2	<0.2	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Boron	0.56	0.53	0.44	0.441	0.458	0.48	0.46	0.459	0.459	0.497	0.084	0.092	0.11	<0.1	0.093	0.096	0.095	0.11	0.099	0.101	0.099	0.091	0.117
Cadmium	0.000137	<0.000085	0.00005	<0.00002	0.000048	0.00009	0.000053	0.000088	0.000041	0.000046	<0.00002	<0.00002	<0.000034	<0.000034	<0.00002	<0.00001	<0.00002	<0.00002	<0.00001	<0.00002	<0.00001	<0.00001	<0.0007
Calcium	32.8	31.8		29.6	30.6	30	29.7	28.9	29.7	30.8	252	259	278	272	278	288	275	276	291	275	275	263	240
Chromium	0.0021	<0.005	0.00022	<0.0002	0.00033	0.00025	0.00028	0.00039	0.00032	0.00056	0.00114	0.00108	<0.002	0.0025	0.00053	0.0001	0.00089	<0.0002	0.00019	0.00011	0.00014	0.00022	<0.0002
Cobalt	0.00047	<0.0015	0.00062	0.00038	0.00026	0.00035	0.00033	0.00024	0.00034	0.00036	0.00229	0.0003	<0.0006	<0.0006	0.0002	0.00017	<0.0002	<0.0002	0.00013	0.00013	0.00011	0.00011	0.0019
Copper	0.0163	0.021	<0.001	<0.001	0.0024	0.0019	<0.001	0.0019	0.0012	0.002	<0.001	<0.001	<0.002	0.0024	<0.001	0.00082	0.0015	<0.001	<0.0005	<0.0005	0.00059	0.00061	0.0094
Iron	0.298	0.059	0.135	0.063	0.077	0.067	0.075	0.083	0.09	0.122	0.166	0.489	0.834	1.04	1.02	1.02	1	1	1.03	1.03	1.01	0.954	0.028
Lead	0.00022	<0.0025	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	0.00021	<0.00005	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	0.000119	<0.0001
Lithium	0.0244	0.031	0.0156	0.0262	0.0238	0.0287	0.0258	0.0263	0.0254	0.0282	0.0102	0.0126	0.012	0.013	0.0108	0.0122	0.0118	0.0112	0.0104	0.011	0.0105	0.00979	0.0299
Magnesium	7.15	7.61		6.91	7.24	7.06	6.95	6.79	7.05	7.34	210	201	216	223	202	230	219	211	221	212	213	194	275
Manganese	0.214	0.22	0.34	0.241	0.171	0.232	0.236	0.175	0.242	0.239	0.289	0.285	0.346	0.331	0.36	0.356	0.369	0.365	0.379	0.368	0.349	0.337	0.0871
Mercury	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0194	0.0184	0.0213	0.019	0.0325	0.0218	0.021	0.021	0.0204	0.0231	0.0295	0.0268	0.0268	0.0286	0.026	0.0278	0.0267	0.028	0.0253	0.0251	0.0247	0.0245	3.36
Nickel	0.0053	<0.005	0.0026	0.0012	0.0019	0.0014	0.0013	0.0014	0.0013	0.0016	0.0111	0.0024	0.0021	0.0027	<0.001	0.00156	<0.001	<0.001	0.00055	<0.0005	<0.0005	0.00113	0.0148
Phosphorus	<0.3	<0.3		0.101	0.11	0.109	0.105	0.111	0.13	0.14	<0.3	<0.3	<0.3	<0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	1.31	<2	1.14	1.06	1.15	1.03	1.02	0.98	1.01	1.09	14.7	17.1	16.4	18	14.7	14.2	14	13.5	14.1	14.3	13.3	13.6	40.7
Selenium	0.00023	<0.005	0.00023	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00843	<0.0002	<0.002	<0.002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	0.0395
Silicon	4.41	4.34		3.93	4.05	4.02	3.9	3.98	4.06	4.11	10.8	13	14.4	13.7	14.7	15.2	14.3	14.4	14.8	14.4	14.1	13.9	7.33
Silver	<0.00002	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	0.000022	<0.00002	<0.00004	0.000106	<0.00002	<0.00001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002
Sodium	408	421	408	399	387	418	394	384	384	428	162	183	175	179	175	173	167	163	163	157	155	165	146
Strontium	1.2	1.43	1.34	1.27	1.39	1.44	1.35	1.35	1.31	1.41	2.68	4.12	3.89	3.41	3.31	3.66	3.45	3.6	3.08	3.23	3.13	3.35	3.46
Sulphur				276	279	282	275	268	270	281					526	570	552	547	540	550	529	518	543
Thallium	0.000026	<0.001	<0.00002	<0.00002	0.000028	<0.00002	<0.00002	<0.00002	0.000029	0.000024	<0.00002	<0.00002	<0.0004	<0.0004	<0.00002	<0.00001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	0.00002
Tin	0.0078	<0.0025	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	0.00011	<0.0002
Titanium	0.017	<0.01		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.017	0.012	0.011	0.01	<0.02	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02
Total Cadmium (by saltwater extr																				<0.00002			
Uranium	0.00149	<0.001	0.00163	0.000751	0.000963	0.000823	0.000767	0.000679	0.000702	0.000782	0.0263	0.00315	0.00284	0.00253	0.00269	0.00312	0.00286	0.00288	0.00285	0.00286	0.00279	0.00265	0.0142
Vanadium	<0.002	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.0025	<0.002	<0.002	<0.002	<0.002	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	0.004
Zinc	0.0221	<0.005	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	0.0144	<0.006	0.0108	<0.005	<0.005	<0.006	<0.003	<0.006	<0.006	<0.003	<0.003	<0.003	0.0044	<0.006
Organics																							
Carbon Organic (Dissolved)	6.6	5.28	7.55	4.3	5.27	5.22	5.88				5.09	15.4	8.26	5.15	3.96	4.66	4.17	3.85	3.38				2.69
Carbon Organic (Total)	6.58	4.76	8	4.17	5.16	4.88	5.35	4.96	5	5.42	4.8	14.1	8.11	4.6	3.96	4.22	3.57	3.8	3.39	3.25	3.27	5.24	2.69
Nitrogen Organic (Dissolved)	0.146	0.138		0.152	0.131							0.193	0.107		0.174								
Nitrogen Organic (Total)	<0.3	0.148			0.139						0.067	0.209	0.172			0.159							
ALS LAB ID	L1115110	L1160966	L1200094	L1247921	L1277099	L1307601	L1348177	L1434002	L1475117	L1514758	L1092874	L1113319	L1160966	L1201474	L1247459	L1275748	L1307601	L1348177	L1393344	L1431355	L1475117	L1516193	L1245169

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D4.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D4.2 - GROUNDWATER QUALITY DATA

Site ID	MW12-01	MW12-01	MW12-01	MW12-01	MW12-01	MW12-01	MW12-01
Analytes	**Mar-13**	**May-13**	**Aug-13**	**Nov-13**	**Mar-14**	**Jun-14**	**Sep-14**
In Situ Parameters							
Conductivity µS/cm	2229	2558	2855	3.33	3431	2379	2406
Oxygen Dissolved %	1.5	2	29.3	2.9	79.9	12	6.1
Oxygen Dissolved	0.21	0.22	3.24	0.34	9.15	1.35	0.68
pH (unitless)	7.22	7.38	7.48	7.49	7.64	7.47	7.49
Redox Potential mV	191	224	236	2.17	71.4	99.3	101
Salinity ppt	1.71	1.95	2.11	1.75	1.81	1.78	1.78
Specific Conductivity µS/cm	3265	3695	3976	2.27	2343	3385	3376
Temperature °C	8.4	8.9	10.3	8.22	8.42	9.44	9.96
Total Dissolved Solids	2121	2403	2582	38200	2230	2201	2196
Turbidity NTU	-1.8	0	1.5	-2.2	1.9	2	1.6
Physical Tests							
Acidity to pH 8.3 (as CaCO3)			<1				
Alkalinity (Total as CaCO3)	178	173	177	189	183	185	179
Bicarbonate Alkalinity	178	173	177	189	183	185	179
Carbonate Alkalinity	<2	<2	<2	<2	<2	<2	<1
Color TCU	<5	<5	<5				
Hardness as CaCO3 (Dissolved)	1620	1810		1870	1950	1860	1920
Hydroxide Alkalinity	<2	<2	<2	<2	<2	<2	<1
pH (unitless)	7.98	7.98	8.06	7.88	8.07	8.1	8.08
Specific Conductivity µS/cm	3340	3280	3260	3290	3350	3440	3410
Total Dissolved Solids	3070	3350	3270	3200	3290	3420	3300
Total Suspended Solids	<3	8.7	7.3			7.3	3
Turbidity NTU	0.43	0.19	0.19			0.5	0.15
Dissolved Anions							
Bromide	<1	<1	<1	<1	<1	<1	<1
Chloride	17	19	17	20	17	19	17
Fluoride	0.47	<0.4	0.46	<0.4	<0.4	0.189	0.165
Sulphate	1660	1700	1720	1730	1790	1790	1800
Nutrients							
Ammonia (Total)	0.0213	0.0058	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrate (as N)	80.6	88.4	89.4	88.5	90.3	88	87.1
Nitrite (as N)	0.429	0.318	0.204	0.163	0.194	0.097	0.168
Nitrogen (Dissolved)	85.9						
Nitrogen (Total)	110	83.5	83.5				
Nitrogen Kjeldahl (Total)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Orthophosphate (Dissolved)				0.0154	0.0165	0.0183	0.0164
Phosphorus - Dissolved	0.0153	0.0183	0.0192	0.0194	0.0185	0.0191	0.0191
Phosphorus - Total	0.0153		0.0182	0.0193	0.0186	0.0202	0.0169
Cyanide							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals							
Aluminum	0.0042	0.0031	0.0021	0.0023	0.0031	0.0041	0.0044
Antimony	0.00372	0.00412	0.00353	0.00372	0.00371	0.00396	0.00364
Arsenic	0.0043	0.00521	0.00503	0.00488	0.00472	0.00525	0.00494
Barium	0.0487	0.0404	0.0347	0.0364	0.0326	0.0297	0.031
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001
Boron	0.098	0.109	0.101	0.12	0.115	0.105	0.117
Cadmium	<0.001	0.000712	<0.0008	<0.0015	<0.0012	<0.001	<0.0001
Calcium	243	238	242	240	258	254	245
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002
Cobalt	0.00122	0.00092	0.00088	0.00081	0.00074	0.00073	0.00071
Copper	0.003	0.00311	0.00335	0.00301	0.00271	0.00312	0.00479
Dissolved Cadmium (by saltwater					<0.00015	<0.00015	<0.00012
Iron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.0001
Lithium	0.0328	0.0294	0.0282	0.033	0.0331	0.028	0.0318
Magnesium	247	295	296	310	317	298	318
Manganese	0.0879	0.068	0.0598	0.0545	0.0529	0.0458	0.0461
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	3.37	3.26	3.1	3.41	3.59	3.62	3.55
Nickel	0.01	0.00999	0.0124	0.0128	0.0123	0.0142	0.0136
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	41.2	41.3	44.1	49.5	46.8	45.8	46.6
Selenium	0.0425	0.0423	0.0414	0.0437	0.044	0.0463	0.0394
Silicon	6.93	6.92	7.23	7.36	7.33	7.19	7.27
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002
Sodium	147	145	144	150	151	132	148
Strontium	3.58	3.35	3.01	3.4	3.44	3.51	3.45
Sulphur	448	532	538	553	553	561	587
Thallium	0.000019	0.000015	0.000017	0.000012	0.000012	<0.00002	<0.00002
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
Uranium	0.0141	0.0138	0.0138	0.0142	0.0145	0.0153	0.0152
Vanadium	0.0026	0.0031	0.003	0.0028	0.0027	0.0029	0.0029
Zinc	0.0024	0.0022	0.0024	0.0027	0.0038	<0.002	0.0032
Total Metals							
Aluminum	0.0084	0.0072	0.0036	0.0045	0.0056	0.0168	0.0166
Antimony	0.00392	0.00434	0.00354	0.00389	0.00377	0.00412	0.00395
Arsenic	0.00434	0.0053	0.00494	0.00506	0.00486	0.00531	0.00564
Barium	0.0497	0.0422	0.0365	0.0359	0.0314	0.0284	0.0335
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001
Boron	0.104	0.124	0.108	0.132	0.127	0.112	0.132
Cadmium	<0.001	<0.0009	<0.0008	0.0016	<0.0012	<0.001	<0.0002
Calcium	247	236	242	234	254	242	257
Chromium	0.00016	<0.0002	0.00023	0.00012	<0.0002	0.00024	<0.0002
Cobalt	0.0013	0.00101	0.00093	0.00084	0.00081	0.00091	0.00081
Copper	0.00371	0.00486	0.0035	0.00346	0.00309	0.004	0.0055
Iron	0.045	0.029	0.016	0.014	0.033	0.102	0.036
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00015	0.00034	<0.0001
Lithium	0.0352	0.0336	0.0279	0.0341	0.0338	0.0287	0.0345
Magnesium	255	300	298	308	314	297	340
Manganese	0.0934	0.0751	0.0606	0.0563	0.0539	0.0499	0.0519
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	3.62	3.54	3.13	3.64	3.57	3.71	3.95
Nickel	0.0105	0.0114	0.0122	0.0131	0.0129	0.0139	0.0154
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	40.7	42.3	43.5	50.3	45.7	44.1	49.7
Selenium	0.0437	0.0447	0.0413	0.0443	0.0431	0.0454	0.0437
Silicon	7.13	6.99	7.25	7.39	7.31	7.13	7.7
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002
Sodium	153	152	144	154	145	131	161
Strontium	3.71	3.62	2.98	3.57	3.41	3.62	3.74
Sulphur	473	540	552	564	561	563	633
Thallium	0.000019	0.000023	0.000021	0.000014	0.000015	<0.00002	<0.00002
Tin	0.00026	0.00019	0.00018	0.00011	0.00046	0.00148	0.00051
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
Total Cadmium (by saltwater extr					<0.00015	<0.00015	<0.0001
Uranium	0.0148	0.0146	0.0141	0.0153	0.0148	0.016	0.0166
Vanadium	0.0027	0.0033	0.0033	0.0032	0.003	0.0032	0.0034
Zinc	0.0035	<0.003	0.0032	0.0031	<0.003	<0.006	0.0065
Organics							
Carbon Organic (Dissolved)	2.72	2.51	2.72	2.59			
Carbon Organic (Total)	2.45	2.42	2.82	2.41	2.34	2.25	2.48
Nitrogen Organic (Dissolved)	<17						
Nitrogen Organic (Total)	29						
ALS LAB ID	**L1277798**	**L1308855**	**L1348395**	**L1394557**	**L1435486**	**L1475661**	**L1514758**

Site ID	MW12-02	MW12-02	MW12-02	MW12-02	MW12-02	MW12-02	MW12-02	MW12-02
Analytes	**Dec-12**	**Mar-13**	**May-13**	**Aug-13**	**Nov-13**	**Mar-14**	**Jun-14**	**Sep-14**
In Situ Parameters								
Conductivity µS/cm		2122	2540	3924	3.25	3401	2469	2435
Oxygen Dissolved %		11.2	28.3	35.8	2.4	24.1	17.1	2
Oxygen Dissolved	3.56	1.25	3.29	4.09	0.27	2.84	1.85	0.22
pH (unitless)	7.36	7.29	7.33	7.59	7.53	7.79	7.56	7.58
Redox Potential mV	167	165	171	221	63.7	30.4	119	87.8
Salinity ppt		1.62	1.92	2.08	1.7	1.79	1.76	1.76
Specific Conductivity µS/cm	3156	3090	3640	3924	2.18	2281	3340	3343
Temperature °C	7.36	8.54	9.17	9.56	7.94	7.76	11.4	10.8
Total Dissolved Solids		2011	2366	2550	2100	2212	2172	2171
Turbidity NTU		-3.9	0	2.5	-1.9	2.1	2.7	2
Physical Tests								
Acidity to pH 8.3 (as CaCO3)				4.7				
Alkalinity (Total as CaCO3)	171	171	176	174	186	169	188	181
Bicarbonate Alkalinity		171	176	174	186	169	188	181
Carbonate Alkalinity		<2	<2	<2	<2	<2	<2	<1
Color TCU		<5	<5	<5				
Hardness as CaCO3 (Dissolved)	1730	1740	1780		1830	1890	1810	1880
Hydroxide Alkalinity		<2	<2	<2	<2	<2	<2	<1
pH (unitless)	8.1	8.05	7.95	8.09	7.92	8.1	8.13	8.09
Specific Conductivity µS/cm	3120	3290	3260	3240	3260	3340	3360	3370
Total Dissolved Solids	3390	1470	2890	3240	3130	3190	3160	3150
Total Suspended Solids	<3	<3	10	8.6			5.2	<3
Turbidity NTU	0.72	0.78	0.28	0.74			0.78	0.19
Dissolved Anions								
Bromide	<1	<1	<1	<1	<1	<1	<1	<1
Chloride	15	15	17	15	19	15	16	17
Fluoride	<0.4	0.49	<0.4	<0.4	<0.4	<0.4	0.186	0.175
Sulphate	1650	1710	1720	1740	1720	1800	1790	1760
Nutrients								
Ammonia (Total)	0.0055	0.0203	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrate (as N)	76.3	69.6	83.4	82.6	77.7	77.7	83.3	87.2
Nitrite (as N)	0.527	0.426	0.545	0.533	0.37	0.28	0.451	0.533
Nitrogen (Dissolved)		73.5						
Nitrogen (Total)	76.8	70.1	77.5	73.6				
Nitrogen Kjeldahl (Total)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Orthophosphate (Dissolved)	0.0079				0.018	0.0277	0.0269	0.0225
Phosphorus - Dissolved	0.0075	0.019	0.023	0.0185	0.0213	0.0317	0.0253	0.0248
Phosphorus - Total		0.0212		0.0206	0.0216	0.0321	0.0274	0.0195
Cyanide								
Cyanide (Free)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals								
Aluminum	<0.002	0.0017	0.0015	0.0017	0.0016	0.002	0.0041	0.0024
Antimony	0.0169	0.0108	0.0107	0.00953	0.00821	0.0075	0.0196	0.017
Arsenic	0.0229	0.0104	0.0139	0.0159	0.0138	0.011	0.0224	0.0261
Barium	0.0212	0.0334	0.0304	0.023	0.026	0.0275	0.0217	0.0224
Beryllium	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
Bismuth	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005
Boron	0.117	0.094	0.116	0.102	0.12	0.116	0.114	0.12
Cadmium	<0.00068	<0.001	<0.001	<0.0008	<0.0014	<0.0012	<0.001	<0.0002
Calcium	233	235	232	243	235	230	238	237
Chromium	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
Cobalt	0.00275	0.00187	0.00171	0.00179	0.00166	0.00098	0.00159	0.0021
Copper	0.0173	0.00744	0.00654	0.00851	0.00798	0.00331	0.00579	0.0094
Dissolved Cadmium (by saltwater						<0.00015	<0.00015	<0.00012
Iron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005
Lithium	0.0301	0.0341	0.0311	0.0288	0.0336	0.0343	0.0305	0.036
Magnesium	278	279	291	291	303	321	296	312
Manganese	0.11	0.121	0.109	0.101	0.1	0.0752	0.0845	0.0991
Mercury	0.000022	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	3.33	3.33	3.32	3.03	3.32	3.39	3.48	3.44
Nickel	0.0282	0.0265	0.0224	0.0232	0.0214	0.0271	0.0235	0.0218
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	38.1	44.8	39.4	37.9	42.4	56.9	44.2	41
Selenium	0.04	0.0396	0.0395	0.0371	0.0401	0.0418	0.0414	0.0409
Silicon	7.29	6.97	7.13	7.45	7.52	7.98	7.31	7.31
Silver	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001
Sodium	153	160	159	145	154	154	135	152
Strontium	3.65	3.46	3.63	3.28	3.61	3.47	3.69	3.72
Sulphur	539	510	529	531	553	562	550	571
Thallium	0.000042	0.000037	0.000031	0.000025	0.000025	0.00003	0.000021	0.000021
Tin	<0.0002	0.00012	0.00017	<0.0001	<0.0001	0.00015	<0.0002	<0.0001
Titanium	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
Uranium	0.0117	0.0109	0.0131	0.0127	0.0131	0.0103	0.0135	0.0147
Vanadium	0.0039	0.0018	0.0023	0.0032	0.0031	0.0022	0.0023	0.0029
Zinc	<0.002	0.001	0.0021	0.0014	0.0011	0.0016	0.0044	0.0041
Total Metals								
Aluminum	0.0264	0.0294	0.017	0.0151	0.004	0.0201	0.0406	0.009
Antimony	0.0163	0.0107	0.0109	0.00938	0.00865	0.00753	0.0191	0.0171
Arsenic	0.0226	0.0102	0.0135	0.016	0.0138	0.0112	0.0227	0.0259
Barium	0.0221	0.0328	0.0298	0.0239	0.026	0.0273	0.0225	0.0224
Beryllium	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
Bismuth	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005
Boron	0.11	0.094	0.127	0.108	0.132	0.125	0.14	0.127
Cadmium	<0.00068	<0.001	<0.001	<0.00085	<0.0015	<0.0012	<0.001	<0.0001
Calcium	225	222	228	241	228	224	233	246
Chromium	0.00037	0.00035	0.00023	0.00034	0.00015	0.00021	0.00043	0.00011
Cobalt	0.00283	0.002	0.0018	0.00182	0.0017	0.00102	0.00165	0.00215
Copper	0.0205	0.00945	0.00734	0.0102	0.00838	0.00451	0.0083	0.0105
Iron	0.036	0.043	0.026	0.024	0.012	0.029	0.082	0.011
Lead	<0.0001	<0.00005	0.000062	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005
Lithium	0.0277	0.0343	0.0342	0.0296	0.0345	0.0343	0.0325	0.0337
Magnesium	270	275	284	294	302	317	300	326
Manganese	0.111	0.123	0.114	0.103	0.101	0.0767	0.0892	0.101
Mercury	0.000056	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	3.12	3.26	3.44	3.05	3.44	3.42	3.46	3.67
Nickel	0.0293	0.0283	0.0228	0.0241	0.0222	0.028	0.0247	0.0227
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	36.4	42.5	38.6	38.2	43.2	55.4	43.3	42.9
Selenium	0.0388	0.038	0.0376	0.0377	0.0396	0.0418	0.0406	0.041
Silicon	7.16	6.9	7.12	7.67	7.55	7.96	7.43	7.69
Silver	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001
Sodium	154	162	157	150	160	156	142	161
Strontium	3.36	3.49	3.74	3.11	3.73	3.47	3.7	3.91
Sulphur	533	518	526	553	572	571	569	602
Thallium	0.000039	0.000036	0.000035	0.000026	0.000023	0.00003	0.000022	0.000021
Tin	<0.0002	0.00017	0.00027	<0.0001	<0.0001	0.00024	<0.0002	<0.0001
Titanium	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
Total Cadmium (by saltwater extr						<0.00015	<0.00015	<0.0001
Uranium	0.0112	0.0106	0.0139	0.0129	0.0132	0.0101	0.0134	0.0153
Vanadium	0.0041	0.0019	0.0025	0.0036	0.0034	0.0026	0.0028	0.003
Zinc	<0.006	0.0039	<0.003	<0.003	<0.003	<0.003	<0.006	0.0049
Organics								
Carbon Organic (Dissolved)	2.49	2.71	2.72	2.58	2.6			
Carbon Organic (Total)	2.44	2.5	2.57	2.63	2.48	2.24	2.28	2.38
Nitrogen Organic (Dissolved)		<15						
Nitrogen Organic (Total)		<14						
ALS LAB ID	**L1245169**	**L1277798**	**L1308855**	**L1348395**	**L1394557**	**L1435486**	**L1475661**	**L1514758**

Site ID	MW12-04	MW12-04	MW12-04	MW12-04	MW12-04	MW12-04	MW12-04	MW12-04
Analytes	**Dec-12**	**Mar-13**	**May-13**	**Aug-13**	**Nov-13**	**Apr-14**	**Jun-14**	**Sep-14**
In Situ Parameters								
Conductivity µS/cm		823	914	1023	1.18	840	847	832
Oxygen Dissolved %		0.4	1	56.2	1.2	48.9	16.9	
Oxygen Dissolved	0.48	0.05	0.12	6.38	0.15	5.74	1.8	
pH (unitless)	7.78	7.72	7.77	7.83	7.94	7.97	7.96	8.01
Redox Potential mV	51.6	-76.1	-116	151	-143	-160	-124	55.6
Salinity ppt		0.61	0.67	0.73	0.59	0.62	0.59	0.58
Specific Conductivity µS/cm	1159	1217	1333	1447	0.787	1237	1186	1164
Temperature °C	7	7.93	8.54	9.67	7.66	8.16	10.1	10.1
Total Dissolved Solids		791	866	941	764	806	770	756
Turbidity NTU		3.4	0	6.4	2.7	-0.4	15.7	3.1
Physical Tests								
Acidity to pH 8.3 (as CaCO3)								
Alkalinity (Total as CaCO3)	219	222	193	182	202	185	186	189
Bicarbonate Alkalinity		222	193	182	202	185	186	189
Carbonate Alkalinity		<2	<2	<2	<2	<2	<1	<1
Color TCU		7.1	<5	<5	<5			
Hardness as CaCO3 (Dissolved)	405	422	359	395		460	415	419
Hydroxide Alkalinity		<2	<2	<2	<2	<2	<1	<1
pH (unitless)	8.28	8.24	8.24	8.13	8.25	8.29	8.18	8.28
Specific Conductivity µS/cm	1150	1260	1210	1220	1260	1250	1200	1180
Total Dissolved Solids	823	772	770	851	838	899	825	791
Total Suspended Solids	7.7	16.2	16	8.1		3.3	24.8	3.7
Turbidity NTU	2.27	7.27	3.03	3.92		1	7.71	0.56
Dissolved Anions								
Bromide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	6.5	5.6	14.6	18.5	23.1	28.2	24.6	26.6
Fluoride	<0.2	0.35	0.23	0.37	<0.2	<0.2	0.203	0.038
Sulphate	436	457	436	443	471	484	436	423
Nutrients								
Ammonia (Total)	0.243	0.211	0.306	0.316	0.321	0.377	0.372	0.397
Nitrate (as N)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrite (as N)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen (Dissolved)		0.356						
Nitrogen (Total)	0.333	0.355	0.418	0.417				
Nitrogen Kjeldahl (Total)	0.333	0.4	0.449	0.443	0.43	0.446	0.582	0.536
Orthophosphate (Dissolved)	0.0688				0.14	0.126	0.127	0.111
Phosphorus - Dissolved	0.082	0.0816	0.168	0.181	0.16	0.143	0.138	0.131
Phosphorus - Total		0.0951		0.198	0.17	0.143	0.18	0.154
Cyanide								
Cyanide (Free)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals								
Aluminum	0.0068	0.0043	0.0034	0.0025	0.0025	0.0032	0.0024	0.0193
Antimony	0.00063	0.00016	0.00012	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0118	0.00711	0.00426	0.00473	0.00461	0.00375	0.00433	0.0046
Barium	0.0696	0.0983	0.0801	0.0746	0.0703	0.0627	0.0558	0.0506
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.098	0.087	0.097	0.096	0.102	0.098	0.092	0.09
Cadmium	<0.00005	<0.00005	<0.00005	<0.00005	<0.00004	<0.00003	<0.00005	<0.00001
Calcium	43.4	51.4	40.3	41.7	45.4	47.6	45.7	45.7
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.00045	0.00084	0.00064	0.00048	0.00043	0.00041	0.00045	0.00039
Copper	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00043
Dissolved Cadmium (by saltwater						<0.00002	<0.00002	
Iron	0.012	0.024	0.03	0.024	0.026	0.024	0.078	0.081
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.00255	0.00119	0.00166	0.00238	0.0035	0.0028	0.00278	0.0029
Magnesium	72	71.4	62.8	70.6	79.4	82.7	73.1	74.1
Manganese	0.092	0.394	0.346	0.3	0.272	0.24	0.256	0.206
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.204	0.181	0.166	0.148	0.145	0.12	0.125	0.101
Nickel	0.00123	0.00331	0.00188	0.00137	0.00149	0.00162	0.00146	0.00129
Phosphorus	0.067	0.088	0.165	0.17	0.162	0.135	0.153	0.121
Potassium	43.7	42.3	37.5	36.9	40.8	39	39.7	38
Selenium	0.00017	0.00012	0.00042	0.00015	<0.0001	<0.0001	<0.0001	<0.0001
Silicon	12.4	11.3	10.8	11.6	12.3	12.8	12.3	12.1
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	92.2	101	116	106	97.8	91.3	92.4	89.9
Strontium	0.276	0.272	0.257	0.287	0.318	0.351	0.341	0.324
Sulphur	143	150	136	144	149	153	142	137
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0001	0.00025	<0.0001	<0.0001	<0.0001	<0.0001	0.00017	0.00019
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.000847	0.00128	0.00133	0.00105	0.000958	0.00099	0.0011	0.000998
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	<0.001	<0.001	<0.001	<0.001	<0.001	0.0015	0.0012	0.0016
Total Metals								
Aluminum	0.216	0.352	0.299	0.175	0.0656	0.0861	0.434	0.0036
Antimony	0.00061	0.00019	0.00014	<0.0001	<0.0001	0.00013	0.00019	<0.0001
Arsenic	0.0113	0.00733	0.00436	0.00436	0.00463	0.00379	0.00445	0.00474
Barium	0.0695	0.106	0.0849	0.0737	0.0711	0.0616	0.0588	0.0515
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.1	0.089	0.1	0.1	0.119	0.102	0.096	0.101
Cadmium	<0.00006	<0.00005	<0.00005	<0.00005	<0.00005	<0.00003	<0.0001	<0.00001
Calcium	42.2	52.6	39.6	40.1	45.3	46.1	42.9	46.5
Chromium	0.00062	0.0011	0.00078	0.00054	0.00027	0.00041	0.00139	<0.0001
Cobalt	0.00061	0.00112	0.00089	0.00059	0.00051	0.0005	0.00083	0.0004
Copper	0.00216	0.00254	0.00222	0.00089	0.00085	0.00114	0.00362	<0.0005
Iron	0.304	0.516	0.415	0.261	0.104	0.145	0.697	0.056
Lead	<0.00005	0.000132	0.000127	0.000052	<0.00005	0.000161	0.000188	<0.00005
Lithium	0.00263	0.00157	0.00168	0.0025	0.00365	0.00285	0.00282	0.00303
Magnesium	70.4	72.2	64.6	67.4	78.5	76.8	68.8	75.8
Manganese	0.0996	0.418	0.364	0.292	0.287	0.251	0.269	0.211
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.208	0.194	0.172	0.149	0.154	0.127	0.124	0.111
Nickel	0.00192	0.00489	0.00311	0.00201	0.00197	0.00208	0.00344	0.00123
Phosphorus	0.077	0.114	0.186	0.178	0.161	0.155	0.179	0.127
Potassium	41.4	43.3	38.9	36.6	43.3	37.2	36.8	39
Selenium	0.00018	0.00015	0.0004	0.00017	<0.0001	<0.0001	0.0001	<0.0001
Silicon	12.5	12.5	11.7	11.7	12.4	12.5	12.5	12.3
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	91.4	104	115	101	102	90.7	88.7	93.1
Strontium	0.287	0.286	0.266	0.292	0.336	0.344	0.337	0.346
Sulphur	142	156	140	141	155	152	139	143
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.00013	0.00047	0.0002	0.00011	<0.0001	0.00056	0.00057	<0.0001
Titanium	0.012	0.024	0.02	0.011	<0.01	<0.01	0.026	<0.01
Total Cadmium (by saltwater extr						<0.00002	<0.00002	
Uranium	0.000862	0.00137	0.0014	0.00104	0.00101	0.000998	0.00105	0.00111
Vanadium	0.0013	0.0019	0.0015	<0.001	<0.001	<0.001	0.0023	<0.001
Zinc	<0.003	<0.003	0.0079	<0.003	<0.003	<0.003	0.0034	<0.003
Organics								
Carbon Organic (Dissolved)	2.6	3.81	2.6	2.5	2.48			
Carbon Organic (Total)	2	3.6	2.52	2.49	2.26	2.32	2.16	2.29
Nitrogen Organic (Dissolved)		0.144						
Nitrogen Organic (Total)		0.143						
ALS LAB ID	**L1245169**	**L1277798**	**L1308855**	**L1348177**	**L1393344**	**L1439433**	**L1478436**	**L1514758**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D4.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D4.2 - GROUNDWATER QUALITY DATA

Site ID	Residential Wells								Pumping Well	
Site ID	RES-4	RES-4	RES-6	RES-2	RES-3	RES-5	RES-1	RES-1	PW01	PW01
Analytes	Mar-13	Oct-14	Oct-14	Oct-14	Oct-14	Oct-14	Mar-13	Oct-14	Oct-14	Oct-14
In Situ Parameters										
Conductivity µS/cm		901	2403	1555	911	2935		2445		
Oxygen Dissolved %		6.2	24.6	47.8	61.3	65.8		42.2		
Oxygen Dissolved		0.69	2.67	4.83	6.63	7.18		4.46		
pH (unitless)		7.45	7.59	7.54	7.78	7.94		7.8		
Redox Potential mV		167	-28.6	21.2	143	103		56.3		
Salinity ppt		0.62	1.71	0.99	0.61	2.13		1.76		
Specific Conductivity µS/cm		1230	3254	1941	1226	4004		3342		
Temperature °C		11	11.3	14.6	11.6	11.1		10.9		
Total Dissolved Solids		0.8	2.11	1.26	0.797	2.6		2.17		
Turbidity NTU										
Physical Tests										
Acidity to pH 8.3 (as CaCO3)										
Alkalinity (Total as CaCO3)	495	427	243	285	488	24.9	450	671	63	57.1
Bicarbonate Alkalinity		427	243	285	488	24.9		671	63	57.1
Carbonate Alkalinity		<2	<2	<2	<1	<2		<20	<1	<1
Color TCU	5.1						<5			
Hardness as CaCO3 (Dissolved)	914	489	1600	1100	606	437	2580	1340	1080	1700
Hydroxide Alkalinity		<2	<2	<2	<1	<2		<20	<1	<1
pH (unitless)	7.73	8.15	8.03	7.99	8.35	7.33	7.89	8.23	7.92	7.77
Specific Conductivity µS/cm	1910	1200	3160	1910	1260	4080	4650	3260	2460	3580
Total Dissolved Solids	1290	815	3110	1790	805	3150	4380	2510	2050	3520
Total Suspended Solids		<3	<3	<3	<3	<3		20.7	<3	<3
Turbidity NTU	0.19	0.23	5.66	1.09	1.16	0.5	151	11.2	1.38	2.18
Dissolved Anions										
Bromide		<0.5	<1	<1	<0.5	<1		<1	<1	<1
Chloride	136	76.1	32	14	44.2	98	253	133	37	64
Fluoride	0.44	0.293	0.098	0.317	0.28	<0.4	0.44	0.168	0.108	0.116
Sulphate	524	200	1960	1010	209	2090	2440	1230	1440	2290
Nutrients										
Ammonia (Total)	0.0058	0.0058	0.945	<0.005	0.0073	0.106	0.0292	0.009	0.0214	0.0114
Nitrate (as N)	2.18	0.317	<0.1	<0.1	0.071	0.24	21.1	43.3	<0.1	<0.1
Nitrite (as N)	<0.02	<0.01	<0.02	<0.02	<0.01	<0.02	0.123	0.028	<0.02	<0.02
Nitrogen (Dissolved)										
Nitrogen (Total)										
Nitrogen Kjeldahl (Total)	0.37	0.502	1.05	0.12	0.602	0.169	<0.05	<0.05	0.098	0.068
Orthophosphate (Dissolved)		0.124	<0.001	0.0021	0.0656	<0.001		0.0092	<0.001	<0.001
Phosphorus - Dissolved		0.164	<0.002	0.0025	0.066	<0.002		0.0121	<0.002	<0.002
Phosphorus - Total		0.16	0.0037	0.006	0.0638	<0.002		0.0581	<0.002	<0.002
Cyanide										
Cyanide (Free)		<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005
Cyanide (Total)		<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005
Cyanide (WAD)		<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005
Dissolved Metals										
Aluminum									<0.001	<0.002
Antimony									<0.0001	<0.0002
Arsenic									0.0185	0.0289
Barium									0.0117	0.0105
Beryllium									<0.0001	<0.0002
Bismuth									<0.0005	<0.001
Boron									0.512	0.391
Cadmium									<0.00001	<0.00002
Calcium									238	377
Chromium									<0.0001	<0.0002
Cobalt									<0.0001	<0.0002
Copper									<0.0002	<0.0004
Dissolved Cadmium (by saltwate										
Iron									0.386	0.632
Lead									<0.00005	<0.0001
Lithium									0.035	0.0563
Magnesium									118	184
Manganese									0.0319	0.0575
Mercury									<0.00001	<0.00001
Molybdenum									0.278	0.188
Nickel									0.00133	<0.001
Phosphorus									<0.05	<0.05
Potassium									22.3	15.3
Selenium									<0.0001	<0.0002
Silicon									13.7	16.9
Silver									<0.00001	<0.00002
Sodium									176	281
Strontium									4.09	6.8
Sulphur									447	720
Thallium									<0.00001	<0.00002
Tin									<0.0001	<0.0002
Titanium									<0.01	<0.02
Uranium									0.000015	<0.00002
Vanadium									<0.001	<0.002
Zinc									0.0063	0.0037
Total Metals										
Aluminum	<0.01	<0.003	<0.003	<0.003	0.0034	<0.015	0.011	<0.006	0.0039	<0.006
Antimony	<0.0005	0.00018	<0.0001	0.00011	0.0002	<0.0005	<0.0005	0.00035	<0.0001	<0.0002
Arsenic	0.00375	0.0052	<0.0001	0.00093	0.00312	<0.0005	0.0129	0.00459	0.019	0.0289
Barium	0.063	0.0365	0.00798	0.0294	0.0601	0.00507	<0.02	0.00626	0.0116	0.0103
Beryllium		<0.0001	<0.0001	<0.0001	<0.0001	<0.0005		<0.0002	<0.0001	<0.0002
Bismuth		<0.0005	<0.0005	<0.0005	<0.0005	<0.0025		<0.001	<0.0005	<0.001
Boron	0.11	0.068	0.385	0.172	0.049	0.466	0.22	0.227	0.542	0.394
Cadmium	<0.0002	0.000014	<0.00001	0.000015	<0.00001	<0.00005	<0.0002	0.000034	<0.00001	<0.00002
Calcium	119	65.1	257	242	94.8	173	276	154	237	360
Chromium	<0.002	0.00019	0.00032	0.00011	0.00028	<0.0005	<0.002	0.00159	0.00026	<0.0002
Cobalt		<0.0001	<0.0001	0.00012	<0.0001	<0.0005		0.00072	<0.0001	<0.0002
Copper	0.0066	0.0125	0.00075	0.0913	0.0207	0.0063	0.0156	0.0259	0.00098	0.0016
Iron	<0.03	<0.01	0.353	0.314	0.17	0.059	22.3	0.353	0.416	0.639
Lead	<0.0005	0.000243	0.000103	0.000519	0.000439	0.00272	0.00369	0.00578	0.000102	<0.0001
Lithium		0.00799	0.0886	0.0109	0.00785	0.0066		0.0146	0.0358	0.0567
Magnesium	150	79.3	234	121	89.6	1.4	459	233	119	180
Manganese	<0.002	0.00987	0.158	0.037	0.0231	0.0136	0.31	0.0158	0.0329	0.0575
Mercury	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	<0.00001	<0.00001	<0.00001
Molybdenum		0.0236	0.0037	0.0156	0.021	0.02		0.0159	0.285	0.185
Nickel		0.00397	<0.0005	0.00191	0.0013	0.004		0.0348	0.00141	<0.001
Phosphorus		0.138	<0.05	<0.05				<0.05	<0.05	<0.05
Potassium	21.4	21.6	20.7	13.9	14.5	84.4	39.3	30.5	22.6	14.8
Selenium	0.0029	0.00038	<0.0001	0.00011	0.00081	<0.0005	0.044	0.0246	<0.0001	<0.0002
Silicon		9.08	15.1	11.4	10.3	0.933		7.78	13.8	16.2
Silver		<0.00001	<0.00001	<0.00001	<0.00001	<0.00005		<0.00002	<0.00001	<0.00002
Sodium	128	86	239	81.8	62.9	751	385	349	178	283
Strontium		0.703	6.71	2.98	0.974	4.24		2.37	4.16	6.57
Sulphur		67.5	624	327	67.7	648		411	453	702
Thallium		<0.00001	<0.00001	<0.00001	<0.00001	<0.00005		<0.00002	<0.00001	<0.00002
Tin		<0.0001	<0.0001	<0.0001	<0.0001	<0.0005		0.00042	<0.0001	<0.0002
Titanium		<0.01	<0.01	<0.01	<0.01	<0.05		<0.02	<0.01	<0.02
Total Cadmium (by saltwater ext										
Uranium	0.0046	0.00297	0.000091	0.00179	0.00282	<0.00005	0.0225	0.0146	0.000018	<0.00002
Vanadium		0.0066	<0.001	0.0018	0.0046	<0.005		0.0034	<0.001	<0.002
Zinc	<0.05	0.0094	0.02	0.0484	0.406	0.242	<0.05	0.167	0.0099	<0.006
Organics										
Carbon Organic (Dissolved)									1.81	1.88
Carbon Organic (Total)	7.11	9.33	2.45	2	11.3	0.77	5.9	3.28	1.74	1.93
Nitrogen Organic (Dissolved)										
Nitrogen Organic (Total)										
ALS LAB ID	L1281919	L1527496	L1527496	L1527496	L1528012	L1528012	L1280813	L1531115	L1537086	L1540210

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D4.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

APPENDIX D5

GWQ SUMMARY GUIDELINE WILDLIFE WATER QUALITY

(Pages D5-1 to D5-19)

TABLE D5.1 - WILDLIFE GUIDELINES

Analytes	BCWQG-Wildlife
Dissolved Anions	
Chloride	600
Fluoride	1.0 (mean); 1.5 (max)
Sulphate	
Metals	
Aluminum	5 (max; total Al)
Antimony	
Arsenic	0.025
Barium	
Beryllium	
Boron	5
Cadmium	
Chromium	
Cobalt	
Copper	0.3
Iron	
Lead	0.1 (max)
Lithium	
Manganese	
Mercury	0.00002 (19)
Molybdenum	0.05 (max)
Nickel	
Selenium	0.004
Silver	
Thallium	
Uranium	
Vanadium	
Zinc	

M:\1\01\00246\31\A\Report\3 - Baseline Water Quality - GW SW\Rev0\Appendix\Appendix D - GWQ Data Tables\[Appendix D2 D3 D4 D5 - GWQ Data Compared with Guidelines Rev0.xls

NOTES:

1. UNITS ARE mg/L UNLESS OTHERWISE STATED.
4. BRITISH COLUMBIA WATER QUALITY GUIDELINES (APPROVED AND WORKING) - MAXIMUM LIMITS (BCWQG - WILDLIFE) - WILDLIFE.
5. INDICATES THE VALUE EXCEEDS THE LIMITS OF BCWQG - WILDLIFE.
6. DETECTION LIMIT VALUES DISPLAYED WITH LESS THAN SYMBOL (<); STATISTICS CALCULATED USING THE DETECTION LIMIT VALUE.
7. HARDNESS (H) DEPENDENT GUIDELINE LIMIT (DISSOLVED).
8. pH DEPENDENT GUIDELINE LIMIT (*IN SITU* VALUE PREFFERED).
9. TEMPERATURE DEPENDENT GUIDELINE LIMIT.
10. CHLORIDE (DISSOLVED) DEPENDENT GUIDELINE LIMIT.
11. MeHg DEPENDENT GUIDELINE LIMIT (30-DAY AVERAGE).

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE B1.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D5.2 - GROUNDWATER QUALITY DATA

PAGE 1 OF 18

Site ID	MDL	AJGW01-D		AJGW02-D		AJGW02-S		AJGW03-D															
Site ID		AJGW01-DA	JGW01-DA	JGW02-DA	JGW02-DA	JGW02-SA	JGW02-SA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-DA	JGW03-D
Analytes		Mar-08	Jun-10	Jul-08	Jun-10	Jul-08	Sep-08	Jul-08	Sep-08	Jun-10	Aug-10	Nov-10	Mar-11	May-11	Jul-11	Nov-11	Feb-12	Jun-12	Aug-12	Dec-12	Mar-13	May-13	
In Situ Parameters																							
Conductivity µS/cm	...	2081	1483	732	810	3651	2317	916	893	934	1220	895	941	1.22	852		1985	1573		2571	2007	1217	
Oxygen Dissolved %	...	51.7	39.7	50.4	36	39.5	30.2	31.6	6.5	0.8	0.4	4.7	2.7	2.4	29.3		28.5	3.7		2.3	1.1	5.4	
Oxygen Dissolved	...	5.95	4.37	5.44	4.03	4.02	3.35	3.48	0.73	0.09	0.1	0.27	0.61	1.22	3.04		1.78	4.6		5.04	5.05	1.91	
pH (unitless)	...	8.57	7.74	9.33	10.5	6.81	7.38	7.46	7.56	7.61	6.16	7.75	7.03	7.74	7.68		7.17	7.68		7.33	7.97	8.12	
Redox Potential mV	...		-28.2	-172	-17.8	-29.7	-49.7	-67	-57.8	-82.3	-54	-100	36.9	101	-59.9		-50.3	-64.4		-59.4	-71.2	-75.6	
Salinity ppt	...										0.6		0.66	0.63	0.6								
Specific Conductivity µS/cm	...	1434	2034	976	1134	4442	3185	1263	1245	1288		1281	1310	0.851	1197		2758	2246		3530	2854	1807	
Temperature °C	...		10.8	11.7	10	12.8	10.7	10.6	10.3	10.6	12.2	9.26	10.2	9.01	9.91		10.3	9.28		10.8	9.45	7.99	
Total Dissolved Solids	...										779	832	852	810	778								
Turbidity NTU	...										3.7	2	0	1.2	-2.3								
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)	1	9.2	4.6	<1	<1	24	41.1	5.3	5.8	2	4.8		<1			<1	3	11	4.4	6.1	7.3	7.5	
Alkalinity (Total as CaCO3)	1 to 2	293	254	59.8	<1	469	688	292	281	277	284	279	257	289	294	93.5	134	523	82.1	121	141	155	
Bicarbonate Alkalinity	1 to 2	293	254	23.4	<1	469	688	292	281	277		279	257	289	294	93.5	134	523	82.1	121	141	155	
Carbonate Alkalinity	1 to 2	<2	<2	36.4	<1	<1	<1	<2	<2	<2		<1	<2	<2	<2	<2	<2	<1	<2	<2	<2	<2	
Color TCU	5	<5	<5	<5	<5	23	63.7	<5	<5	<5	<5	<5	<5			7.2	9.4	11.4	21.1	49.8	6.9	6.5	
Hardness as CaCO3 (Dissolved)	0.5 to 1.1	1080	1120	243	292	1090		586	588	647	629	607	558	615	618	429	506	435	1080	1060	990	976	
Hydroxide Alkalinity	1 to 2	<2	<2	<1	<1	<1	<1	<2	<2	<2		<1	<2	<2	<2	<2	<2	<1	<2	<2	<2	<2	
pH (unitless)	0.01 to 0.1	8.04	8.14	9.14	9.38	7.57	7.63	8.04	8.04	8.21	8.08	8.33	8.3	8.27	8.23	8.3	7.99	7.95	7.84	7.81	7.71	7.62	
Specific Conductivity µS/cm	2	2150	1990	920	1030	4120	3190	1250	1240	1250	1220	1240	1150	1250	1240	2750	2480	2300	2650	3070	2940	2390	
Total Dissolved Solids	1 to 2	1630	1640	661	768	4180	2970	881	881	896	984	926	853	906	960	1950	1810	1680	2220	2480	2340	2020	
Total Suspended Solids	3	338	86.5	144	24.3	151	39.3	1280	<3	4.7	11.9	10	<3		<3	1830	647	73.1	105	472	27.1	828	
Turbidity NTU	0.1	191	53.7	160	19.2	89.4	25.3	128	2.24	1.23	2.83	1.85	0.67		1.48	1610	327	93.4	91.4	323	27		
Dissolved Anions																							
Bromide	0.05 to 2.495	<2.5	<0.5	<0.05	<0.5	<2.5	<5	<0.05	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.5	<0.5	<2.5	<0.5	<2.5	<5	<2.5	
Chloride	0.5 to 1	62	41.6	3.38	<5	152	104	8.29	7.25	7.3	9.6	9.1	8.9	9.2	11	54	50.5	41	31	46	<50	30	
Fluoride	0.02 to 0.4	<1	<0.2		<0.2	1.7	8.1	0.183	0.2	<0.2	<0.2	<0.2	0.2	0.22	0.22	1.5	0.4	57	0.37	1.9	<2	<1	
Sulphate	0.5 to 1	763	835	367	484	2020	1260	415	414	446	460	466	419	462	468	1240	1100	642	1450	1620	1570	1260	
Nutrients																							
Ammonia (Total)	0.005 to 0.05	0.108	<0.01	0.122	0.265	0.603	0.064		<0.02	0.015	0.0171	0.0127	0.0473	0.0166	0.0165	0.142		0.03	<0.02		0.029	<0.005	
Nitrate (as N)	0.005 to 0.1	35.3	25.7	<0.005	0.063	0.35	<0.5	<0.005	<0.005	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.41	<0.05	<0.25	0.675	<0.25	<0.5	<0.25	
Nitrite (as N)	0.001 to 0.02	0.185	0.022	<0.001	<0.01	0.132	0.23	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.12	0.026	0.111	0.111	0.0014	0.14	0.959	
Nitrogen (Dissolved)	0.05 to 0.1											0.132											
Nitrogen (Total)	0.0025 to 0.11																						
Nitrogen Kjeldahl (Total)	0.05 to 0.2	0.87	<0.5	0.35	0.348	8.41	7.77		0.092	0.087	0.146	0.128	0.173	0.189	0.168	0.935		0.637	1.34		0.244		
Orthophosphate (Dissolved)	0.001 to 0.01	0.0421	0.0455	0.0182	0.0033	0.0605	0.0489	0.0175	0.0161		0.0161			0.017	0.0188	<0.001	0.037	0.267	<0.001	0.0054	<0.001	0.0054	
Phosphorus - Dissolved	0.002 to 0.02		0.148		0.0352							0.0148	0.0275	0.0164	0.0188							0.0108	
Phosphorus - Total	0.002 to 0.02	0.0996		0.213		0.337	0.288	0.701	0.0204	0.0214	0.0388	0.0237	0.0335	0.0236	0.0295	1.14	0.728	0.59	0.0993	0.852	0.0549	1.08	
Cyanide																							
Cyanide (Free)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		
Cyanide (Total)	0.005	0.007	<0.005	<0.005	<0.005	0.0352		<0.005		<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		0.0074	<0.005		<0.005	
Cyanide (WAD)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		
Dissolved Metals																							
Aluminum	0.001 to 0.025	<0.025	<0.025	0.016	<0.01	<0.05		0.197	<0.01	<0.01	<0.005	0.0013	0.0024	0.0016	0.0023	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
Antimony	0.0001 to 0.0025	<0.0025	<0.0025	<0.001	<0.001	<0.005		<0.001	<0.001	<0.001	<0.0005	<0.0001	0.00016	<0.0001	<0.0001	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	
Arsenic	0.0001 to 0.0025	0.0046	0.0062	0.0026	<0.001	<0.005		0.0062	0.0064	0.0066	0.00592	0.00565	0.00551	0.00574	0.00577	0.0041	0.003	0.0085	<0.0025	<0.0025	<0.0025	<0.0025	
Barium	5E-005 to 0.02	0.175	0.062	0.213	0.169	0.058		0.037	0.028	0.029	0.034	0.0281	0.0304	0.0276	0.0282	0.073	0.188	0.173	0.138	0.092	0.088	0.077	
Beryllium	0.0001 to 0.005	<0.005	<0.005	<0.002	<0.002	<0.01		<0.002	<0.002	<0.002	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Bismuth	0.0005 to 0.2										<0.2	<0.0005	<0.0005	<0.0005	<0.0005								
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	0.26		<0.1	<0.1	<0.1	<0.1	0.031	0.033	0.033	0.035	0.16	0.11	0.13	<0.1	0.12	0.13	0.11	
Cadmium	1E-005 to 8.5E-005	<0.000085	0.000119	<0.00085	<0.001	<0.00017		0.000481	<0.000034	0.000055	<0.000017	0.000012	0.000013	<0.00002	0.000018	<0.000085	<0.000085	<0.000085	<0.000085	<0.000085	<0.000085	<0.000085	
Calcium	0.05 to 0.1	135	139	53.2	96.1	177		73.3	73.8	79.3	77.8	73.9	70	75.1	77.6	79.4	124	96.8	251	225	205	196	
Chromium	0.0001 to 0.018	<0.005	<0.005	<0.002	<0.002	<0.01		<0.002	<0.002	<0.002	<0.001	0.00027	0.00021	<0.0001	<0.0001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Cobalt	0.0001 to 0.0015	0.0036	<0.0015	<0.0006	<0.0006	0.0192		<0.0006	<0.0006	<0.0006	<0.0003	0.00013	0.00043	0.00014	0.00015	<0.0015	0.0025	<0.0015	<0.0015	0.0103	0.0083	0.0043	
Copper	0.0002 to 0.006	<0.005	<0.005	<0.002	<0.002	0.093		<0.002	<0.002	<0.002	<0.001	<0.0002	<0.0002	<0.0002	0.00034	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Dissolved Cadmium (by saltwater ex	0.00002																						
Iron	0.01 to 0.03	0.041	<0.03	<0.03	<0.03	0.231		0.085	0.074	0.089	0.134	0.125	0.079	0.119	0.114	<0.03	0.763	<0.03	<0.03	<0.03	0.191	0.063	
Lead	5E-005 to 0.0025	<0.0025	<0.0025	<0.001	<0.001	<0.005		<0.001	<0.001	<0.001	<0.0005	0.00008	<0.00005	<0.00005	<0.00005	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	
Lithium	0.0005 to 0.025	<0.025	<0.025	0.013	0.011	<0.05		<0.01	<0.01	<0.01	0.0052	0.00496	0.00442	0.00516	0.0051	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
Magnesium	0.1	180	188	26.7	12.7	157		97.8	97.9	109	106	103	93.1	104	103	56.1	47.6	46.9	109	120	116	118	
Manganese	5E-005 to 0.0015	1.04	0.12	0.00335	<0.0006	1.71		0.287	0.268	0.325	0.317	0.316	0.271	0.306	0.283	0.0077	2.71	2.9	0.242	4.09	3.87	2.19	
Mercury	1E-005 to 5E-005	<0.00002	<0.00001	<0.00002	<0.00001	0.000032		<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	
Molybdenum	5E-005 to 0.005	0.556	0.593	0.492	0.377	0.231		0.0452	0.0472	0.0551	0.0513	0.0497	0.0529	0.0492	0.0505	0.103	0.0921	0.0152	0.0703	0.0889	0.0726	0.0862	
Nickel	0.0005 to 0.005	0.0235	0.0128	<0.002	<0.002	0.028		<0.002	<0.002	<0.002	<0.001	0.00075	0.00627	0.00099	0.00122	<0.005	<0.005	<0.005	0.0565	0.06	0.0435	0.016	
Phosphorus	0.05 to 0.3										<0.3	<0.05	<0.05	<0.05	<0.05								
Potassium	0.05 to 2	47.5	50.1	29.5	29.2	30.7		17.6	17.7	19.4	20.5	18.8	17.2	18.5	19.1	37.4	41.7	42.4	26	35.4	36.6	29.8	
Selenium	0.0001 to 0.006	0.0317	0.0416	<0.002	<0.002	<0.01		<0.002	<0.002	<0.002	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Silicon	0.05										9.86	9.52	9.33	9.6	9.66								
Silver	1E-005 to 0.0001	<0.0001	<0.0001	<0.00004	<0.00004	<0.0002		0.000086	<0.00004	<0.00004	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Sodium	0.05 to 2	64.2	63.3	72.1	116	280		64.6	64.2	69.1	67.1	62.3	55.6	63.3	60.8	437	422	379	217	467	344	218	
Strontium	0.0001 to 0.005										0.888	0.845	0.767	0.708	0.895								
Sulphur	0.5											150	131	142	149								
Thallium	1E-005 to 0.001	<0.001	<0.001	<0.0004	<0.0004	<0.002		<0.0004	<0.0004	<0.0004	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Tin	0.0001 to 0.0025	<0.0025	<0.0025	<0.001	<0.001	<0.005		<0.001	<0.001	<0.001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	
Titanium	0.01	<0.01	<0.01	<0.01	<0.01	<0.02		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.011	<0.01	
Uranium	1E-005 to 0.001	0.0077	0.0065	<0.0004	<0.0004	0.0077		0.00284	0.00294	0.00287	0.00278	0.00284	0.00254	0.00283	0.00301	0.0045	0.0035	<0.001	0.0017	0.0123	0.0057	0.0046	
Vanadium	0.001 to 0.03	<0.005	<0.005	<0.002	0.0034	<0.01		<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Zinc	0.001 to 0.006	<0.005	<0.005	<0.005	<0.005	<0.01		<0.005	<0.005	<0.005	<0.005	0.0017	0.0018	0.0018	0.0064	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Total Metals																							
Aluminum	0.003 to 0.025	8.22	1.98	19.5	0.712	2.63	0.245	14.3	0.143	0.055	0.171	0.0785	0.0118	0.013	0.0513	3.81	17.2	1.6	3.43	1.1	1.68	17.3	
Antimony	0.0001 to 0.0025	<0.0025	<0.0025	<0.001	<0.001	<0.005	<0.0025	<0.001	<0.001	<0.001	<0.0005	0.00013	0.00035	0.00016	0.00018	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	
Arsenic	0.0001 to 0.0025	0.0145	0.0094	0.02	0.0018	0.0055	0.0067	0.0269	0.0064	0.0067	0.00631	0.00536	0.00559	0.00576	0.00577	0.0094	0.0101	0.012	0.0029	<0.0025	0.0035	0.0096	
Barium	5E-005 to 0.02	0.236	0.082	0.643	0.237	0.147	0.067	0.216	0.029	0.029	0.033	0.0287	0.0329	0.0274	0.0288	0.116	0.412	0.195	0.223	0.121	0.112	0.439	
Beryllium	0.0001 to 0.005	<0.005	<0.005	<0.002	<0.002	<0.01	<0.005	<0.002	<0.002	<0.002	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Bismuth	0.0005 to 0.2										<0.2	<0.0005	<0.0005	<0.0005	<0.0005								
Boron	0.01 to 0.1	<0.1	<0.1	<0.1	<0.1	0.46	0.25	<0.1	<0.1	<0.1	<0.1	0.035	0.039	0.042	0.038	0.17	0.12	0.13	<0.1	0.12	0.12	0.12	
Cadmium	1E-005 to 8.5E-005	0.0006	0.000156	<0.00094	<0.0012	0.00055	<0.0004	0.000626	0.000051	0.000082	0.00018	0.00004	0.000046	<0.00004	0.00005	0.000383	0.00054	0.000162	0.000136	0.000484	0.000159	0.00123	
Calcium	0.05 to 0.1	164	138	98.4	100	241	203	128	71.9	76.3	75.5	72.2	68.1	74.6	74.9	159	157	96.8	267	221	198	224	
Chromium	0.0001 to 0.005	0.0729	0.0205	0.0579	0.0032	0.016	<0.005	0.038	0.0067	<0.002	0.0015	0.0015	0.00042	0.00021	0.00067	0.0378	0.0697	0.02	0.017	<0.005	0.0052	0.0648	
Cobalt	0.0001 to 0.0015	0.029	0.005	0.0236	0.00114	0.0296	0.0121	0.0166	<0.0006	<0.0006	0.00039	0.00026	0.00071	0.00017	0.0002	0.0143	0.0274	0.0027	0.0056	0.0118	0.0104	0.0294	
Copper	0.0005 to 0.007	0.145	0.0212	0.214	0.0132	0.607	0.363	0.0847	0.0023	<0.002	0.0023	0.00319	0.00081	<0.0005	0.00238	0.142	0.11	0.0124	0.0406	0.0113	0.0217	0.213	
Iron	0.01 to 0.03	12.4	3.05	26.8	0.974	3.46	4.36	24.5	0.324	0.168	0.416	0.249	0.067	0.137	0.207	14.8	23.7	2.45	6.41	2.21	2.97	27.7	
Lead	5E-005 to 0.0025	<0.0025	<0.0025	0.0054	<0.001	<0.005	<0.0025	0.0049	<0.001	<0.001	<0.0005	0.000153	<0.00005	<0.00005	0.000057	0.0111	0.0084	<0.0025	<0.0025	<0.0025	<0.0025	0.0064	
Lithium	0.0005 to 0.025	<0.025	<0.025	0.024	0.011	<0.05	<0.025	0.012	<0.01	<0.01	0.0056	0.00522	0.0045	0.00523	0.00477	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
Magnesium	0.1	191	187	63.6	14.7	253	211	114	96.5	104	104	98	91.4	105	102	87.3	75.2	48.6	107	118	115	134	
Manganese	5E-005 to 0.0015	1.54	0.228	0.902	0.041	2.23	2.99	1.08	0.288	0.349	0.326	0.296	0.278	0.313	0.292	1.1	3.32	2.94	0.357	4.01	3.84	2.8	
Mercury	1E-005 to 5E-005	0.000048	<0.00001	<0.00002	<0.00001	0.00028	0.000057	0.000354	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000028	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	0.000052	
Molybdenum	5E-005 to 0.005	0.485	0.598	0.499	0.399	0.279	0.293	0.0456	0.0475	0.0594	0.0551	0.0506	0.0566	0.0516	0.0503	0.0754	0.0824	0.0394	0.0591	0.0849	0.0727	0.0948	
Nickel	0.0005 to 0.005	0.215	0.0535	0.0947	0.0046	0.055	0.0224	0.0786	0.0042	0.0021	0.0036	0.00231	0.0136	0.00121	0.00176	0.125	0.162	0.0239	0.0784	0.0668	0.0506	0.0921	
Phosphorus	0.05 to 0.3										<0.3	<0.05	<0.05	<0.05	<0.05								
Potassium	0.05 to 2	47.7	48.8	34.2	28.4	54.9	25.8	20.2	17.4	18.6	20	18	17.5	19.2	18.6	45.1	44.2	40.3	25.7	34	34	30.3	
Selenium	0.0001 to 0.006	0.0318	0.0412	<0.002	<0.002	<0.01	<0.005	0.0049	<0.002	<0.002	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Silicon	0.05										10.2	9.37	9.42	9.75	9.83								
Silver	1E-005 to 0.0001	<0.0001	<0.0001	0.00015	<0.00004	0.0008	0.00011	0.000234	<0.00004	<0.00004	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00015	
Sodium	0.05 to 2	63	61.8	73.4	113	475	279	65.8	62.7	66.3	65.6	60.1	56.6	64.2	62.3	430	412	368	222	447	325	204	
Strontium	0.0001 to 0.005										0.87	0.861	0.795	0.717	0.85								
Sulphur	0.5											147	130	151	155								
Thallium	1E-005 to 0.001	<0.001	<0.001	<0.0004	<0.0004	<0.002	<0.001	<0.0004	<0.0004	<0.0004	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Tin	0.0001 to 0.0025	<0.0025	<0.0025	0.0015	0.0011	<0.005	<0.0025	<0.001	<0.001	<0.001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0025	<0.0025	<0.0025	0.0035	<0.0025	<0.0025	<0.0025	
Titanium	0.01	0.271	0.096	1.19	0.047	0.121	0.022	0.832	0.011	<0.01	0.014	<0.01	<0.01	<0.01	<0.01	0.038	0.577	0.078	0.238	0.068	0.134	1.22	
Total Cadmium (by saltwater extract	0.00002																						
Uranium	1E-005 to 0.001	0.0077	0.0066	0.00149	<0.0004	0.0094	0.007	0.00367	0.00301	0.00294	0.00277	0.00277	0.00253	0.00287	0.00283	0.0063	0.0056	<0.001	0.0021	0.0119	0.0058	0.0054	
Vanadium	0.001 to 0.03	0.0293	0.0107	0.0827	0.0069	0.017	0.0056	0.0605	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	0.0319	0.0611	0.0066	0.0161	0.0055	0.0093	0.0907	
Zinc	0.003 to 0.006	0.0194	0.0058	0.0489	<0.005	0.043	<0.005	0.0447	<0.005	<0.005	<0.005	<0.003	0.0038	<0.003	0.0087	0.0241	0.0352	<0.005	0.0142	0.0057	<0.005	0.0612	
Organics																							
Carbon Organic (Dissolved)	0.5 to 5	3.63	2.67	2.93	2.51	114		2.51	2.54	2.38	2.64	2.69	2.47	2.39		24.8	27.7	123	10.3	47.2	26.4	9.22	
Carbon Organic (Total)	0.5 to 5										2.56	2.74	2.37	2.18	2.18								
Nitrogen Organic (Dissolved)	0.05 to 0.26											0.119											
Nitrogen Organic (Total)	0.05 to 0.3											0.115											
ALS LAB ID		L613954	L894378	L655020	L894378	L653846	L678833	L655304	L678594	L893847	L1201474	L1246516	L1306577	L1392959	L1470495	L623639	L655304	L678833	L623639	L655304	L678833	L710078	

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D5.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D5.2 - GROUNDWATER QUALITY DATA

Site ID							AJGW04-D			AJGW05-S											AJGW06-D	
Site ID	AJGW03-D	AJGW03-D	AJGW03-D	AJGW03-D	AJGW03-D	AJGW03-D	AJGW04-D	AJGW04-D	AJGW05-S	AJGW05-S	AJGW05-S	AJGW05-S	AJGW06-D	AJGW06-D	AJGW06-D	AJGW06-D	AJGW06-D	AJGW06-D	AJGW06-D	AJGW06-D	AJGW06-D	AJGW06-D	AJGW06-D
Analytes	Aug-13	Nov-13	Mar-14	May-14	Jun-14	Sep-14	Sep-08	Nov-08	Apr-08	Sep-08	Nov-08	Jun-10	Apr-08	Jul-08	Sep-08	Nov-08	May-10	Aug-10	Nov-10	Mar-11	May-11	Jul-11	Dec-12
In Situ Parameters																							
Conductivity µS/cm	1701		480	671		733	688	659	629	615	689	864	631	975	887	605	541	639	0.902	903	609	583	
Oxygen Dissolved %	1.6	10.6	2.7	-1.3	27	7.5	43.2	14.3		43.9	16.1	30.4		17.2		10.5	12.7	1	6.8	9	11	8.4	1.2
Oxygen Dissolved	3.35		1.94			5.92	0.79	0.18	3.6	0.29		0.18	0.39	2	2.12	0.48	0.18	0.18	0.3	0.14	1.98	0.02	
pH (unitless)	7.94		8.66	8.22		7.68	7.59	7.24	7.81	7.68	8.16	7.92	8.04	7.98	7.89	7.94	8.33	8.17	8.19	8.17	6.93	8.29	
Redox Potential mV	-79.6		-139	-93.3		-79.1	-97.5	-130	-113	144			-294		-165	-232	-213	-240	239	-106	-183	-213	
Salinity ppt										0.42			0.45		0.4	0.41	0.38	0.44	0.45	0.45	0.42	0.39	
Specific Conductivity µS/cm	2351		673			966	903	886	902	841	961	875	911	729		847	770	894	0.604	631	847	791	
Temperature °C	10.7		9.95	9.88		12.4	12.5	11.6	9.19	10.9	10.3	9.98	8.91	11.4	14.8	10.5	9.24	10.1	9.81	9.31	10.3	11.3	
Total Dissolved Solids								757	586	546			592		568	544	501	581	538	585	551	515	
Turbidity NTU										2.5		-1.4	2	0	0	-1	2.1	0	6.3	5.6	-1.7	-3.6	
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)	5	<1	<1	2.2	4.2	2	1.8	4.2	3.9	4.1	1.8	2			2.8			<1			1.6		4.7
Alkalinity (Total as CaCO3)	174	84.9	79.9	91.8	217	208	228	218	211	230	220	232	225	219	218	222	231	207	216	211	209	182	230
Bicarbonate Alkalinity	174	84.9	72.2	91.8	217	208	228	218	211	230	220	232	225	219		222	231	207	216	211	209	178	230
Carbonate Alkalinity	<2	<1	7.7	<2	<2	<2	<2	<2	<1	<2	<2	<2	<2	<1		<2	<2	<1	<2	<1	<2	4.7	<2
Color TCU	6	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5					<5
Hardness as CaCO3 (Dissolved)	963	150	129	152	449	426	416	436	408	413	415	413	410	398	374	403	402	408	420	412	363	374	463
Hydroxide Alkalinity	<2	<1	<1	<2	<2	<2	<2	<2	<1	<2	<2	<2	<2	<1		<2	<2	<1	<2	<1	<2	<1	<2
pH (unitless)	8.07	8.48	8.55	8.13	8.09	8.18	8.19	8.12	8.1	8.08	8.2	8.27	8.22	8.07	8.18	8.13	8.28	8.33	8.25	8.36	8.2	8.34	8.05
Specific Conductivity µS/cm	2410	685	665	690	935	918	857	888	890	865	899	910	908	855	861	835	868	864	918	881	812	830	933
Total Dissolved Solids	2060	447	434	456	641	653	623	641	612	611	645	587	661	611	619	597	598	646	623	621	592	583	649
Total Suspended Solids	218	114	18.8	<3	79.5	7.3	6	4	<3	<3	<3	<3	3.3	<3	<3	<3	4.3	5.6			6.8	5	92
Turbidity NTU	110	41.5	15.5	1.74	84	7.21	4.6	6.44	8.67	7.16	10.5	22.1	8.11	5.57	8.24	5.31	15.3	19.4			22.3	15.4	54.3
Dissolved Anions																							
Bromide	<1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25		<0.5	<0.25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.25	<0.05
Chloride	20	1.51	1.55	1.56	5.85	5.94	4.3		<5	5.8	5.6	<5	5.3	5.2	13.8	<5	<5	6.8	6.3	<5	5.3	7.4	6.63
Fluoride	<0.4	0.369	0.38	0.328	0.21	0.167	0.16		<0.2	0.15	0.25	<0.2	<0.2	<0.2	2.67	<0.2	0.29	<0.2	<0.2	0.38	<0.2	0.16	0.167
Sulphate	1290	241	235	247	288	289	258		264	262	291	274	297	269	274	258	271	296	314	290	272	260	281
Nutrients																							
Ammonia (Total)	0.156	<0.02		0.031	0.03		<0.02	<0.005	<0.005	<0.005	<0.005	0.0139	0.019	0.0064	0.0072	0.0067	0.0114	0.0085	0.0136	0.0101	0.0059	0.0064	<0.02
Nitrate (as N)	<0.1	<0.005	<0.005	<0.005	0.0724	0.0264	<0.025		<0.05	<0.025	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.025	0.0383
Nitrite (as N)	<0.02	<0.001	<0.001	<0.001	<0.001	0.0021	<0.005		<0.01	<0.005	<0.01	0.014	<0.01	<0.01	0.01	0.015	<0.01	<0.01	<0.01	<0.01	<0.01	<0.005	0.003
Nitrogen (Dissolved)										0.11	0.11	0.14	0.05	1.8		0.07	<0.05						
Nitrogen (Total)																							
Nitrogen Kjeldahl (Total)	0.38	0.175		0.094	0.159		<0.05	<0.05	<0.05	0.091	0.11	0.153	0.121	0.082	0.066	0.077	0.078	0.062	0.077	0.066	0.069	0.092	0.101
Orthophosphate (Dissolved)	0.0339	0.0136	0.0236	0.0105	0.0075	0.005	0.0015	0.0012	0.0021	<0.001	<0.001	0.0026			<0.001				<0.001	0.0021	<0.001	<0.001	0.017
Phosphorus - Dissolved	0.372							0.0025		0.0022	<0.002	0.0036	0.0141	0.0047		0.0053	<0.002	<0.002	<0.002	0.0038	0.0026	<0.002	
Phosphorus - Total		0.0949	0.0523	0.0178	0.0909	0.0189	0.0168	0.0108	0.0127	0.0129	0.0108	0.0378	0.0447	0.035	0.0237	0.0228	0.0271	0.0326	0.0297	0.0347	0.0298	0.0293	0.0973
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																							
Aluminum	<0.025	0.0125	0.0399	<0.005	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.005	<0.003	<0.003	0.0012	0.0012	<0.001	0.0034	<0.001	0.0016	0.001	0.0015	0.0015	<0.01
Antimony	<0.0025	0.00131	0.0007	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0005	0.00014	0.00025	0.00021	<0.0001	0.00019	<0.0001	<0.0001	<0.0001	0.00011	<0.0001	<0.0001	<0.001
Arsenic	<0.0025	0.0159	0.0271	0.0334	0.0016	0.0021	<0.001	0.00129	0.0013	0.0013	0.0012	0.00047	0.00129	0.00117	0.00071	0.00121	0.0005	0.00057	0.00052	0.0006	0.0006	0.00069	0.0024
Barium	0.078	0.033	0.021	0.021	0.05	0.051	0.036	0.037	0.038	0.033	0.034	0.0433	0.0509	0.0441	0.0403	0.0405	0.0386	0.0414	0.0418	0.0408	0.0382	0.0376	0.043
Beryllium	<0.005	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.001	<0.002	<0.002	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.002
Bismuth										<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Boron	0.11	0.21	0.2	0.22	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.092	0.108	0.095	0.079	0.095	0.103	0.084	0.103	0.098	0.092	0.089	<0.1
Cadmium	<0.000085	<0.000017	<0.0002	<0.000017	<0.000034	<0.000034	<0.0004	<0.00025	<0.000034	<0.000034	<0.000017	<0.000015	<0.00003	<0.00005	<0.00005	0.000015	<0.00005	<0.00005	<0.00002	<0.00003	<0.00003	<0.00005	<0.000034
Calcium	186	35.7	29.9	34.8	100	92.3	90.5	94.2	88.8	89.6	90.2	86.1	86.6	83.3		84.1	83.6	84	86.1	83.4	67.1	71.5	105
Chromium	<0.005	0.0013	<0.001	<0.001	<0.002	<0.002	<0.002	<0.001	<0.002	<0.002	<0.001	0.00014	0.00023	0.00015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.002
Cobalt	0.0033	<0.0003	<0.0003	<0.0003	<0.0006	0.00076	<0.0006	<0.0003	<0.0006	<0.0006	<0.0003	<0.0001	0.00013	0.00018	<0.0001	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0006
Copper	<0.005	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.001	<0.002	<0.002	<0.001	<0.0005	<0.0005	0.00028	0.00022	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0022
Dissolved Cadmium (by saltwater e›																				<0.00002		<0.00002	
Iron	<0.03	<0.03	<0.03	<0.03	0.094	0.229	0.339	0.581	0.328	0.613	0.835	0.841	0.42	0.545	1.19	0.612	1.45	2.05	2.05	1.33	2.13	1.93	<0.03
Lead	<0.0025	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.001
Lithium	<0.025	<0.005	<0.005	<0.005	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.005	0.00525	0.00598	0.0057	0.0045	0.00544	0.0058	0.00442	0.00539	0.00613	0.00418	0.00454	<0.01
Magnesium	121	14.7	13.1	15.9	48.1	47.6	46.1	48.8	45.2	45.9	46.1	48	47.1	46.1		46.9	46.8	48.2	49.8	49.5	47.5	47.5	48.8
Manganese	1.5	0.0117	0.0319	0.0758	0.0874	0.209		0.0979	0.0839	0.079	0.104	0.159	0.19	0.127	0.144	0.107	0.141	0.234	0.237	0.189	0.21	0.215	0.0501
Mercury	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	<0.00001	<0.00002
Molybdenum	0.102	0.0494	0.0511	0.0468	0.11	0.0794	0.0797	0.0667	0.0715	0.0693	0.0718	0.0537	0.0746	0.0771	0.0617	0.0772	0.0676	0.0724	0.0733	0.0758	0.0804	0.0952	0.0981
Nickel	0.0189	<0.001	<0.001	<0.001	0.0049	0.0048	0.0042	0.0015	<0.002	<0.002	<0.001	<0.0005	0.00095	0.00218	0.001	0.00091	0.00071	0.00074	<0.0005	<0.0005	<0.0005	<0.0005	<0.002
Phosphorus										<0.3	<0.3	<0.3	<0.3	<0.3		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Potassium	32.4	2.1	2	<2	7.9	8	7.7	8.5	8.4	7.6	8	8.65	8.9	8.04	7.94	8.45	8.59	8.2	8.68	9.02	7.75	8.67	6.9
Selenium	<0.005	0.0056	0.004	<0.001	0.0234	0.0227	0.0301	0.0061	0.0203	0.0058	0.0033	0.0169	0.0236	0.0163	0.00039	0.0205	0.00012	<0.0001	0.00322	0.00876	0.0001	<0.0001	0.0179
Silicon										6.99	6.52	6.57	6.92	6.96		6.99	5.78	5.24	5.87	6.05	4.54	4.54	
Silver	<0.0001	<0.00002	<0.00002	<0.00002	<0.00004	<0.00004	<0.00004	<0.00002	<0.00004	<0.00004	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00004
Sodium	208	91.6	90	87.2	40.6	41.7	39.5	42.3	42.5	41.5	38.6	42.2	46.6	42.3	42.5	41.8	42.9	42.1	42.8	46.6	42.8	38.4	34.5
Strontium										0.591	0.586	0.63	0.674	0.621	0.604	0.585	0.609	0.664	0.647	0.676	0.582	0.597	
Sulphur																84	87.5	88.6	95.9	98.2	89.5	87.8	
Thallium	<0.001	<0.0002	<0.0002	<0.0002	<0.0004	<0.0004	<0.0004	<0.0002	<0.0004	<0.0004	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0004
Tin	<0.0025	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.012	<0.01	<0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.0037	0.00414	0.00257	0.00191	0.00206	0.00144	0.00138	0.00088	0.00107	0.00091	0.00079	0.000663	0.000999	0.000997	0.00027	0.00105	0.000245	0.000179	0.000472	0.000471	0.000146	0.000123	0.00243
Vanadium	<0.005	0.0012	0.002	<0.001	0.0027	0.0022	<0.002	0.0013	<0.002	<0.002	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0023
Zinc	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0102	<0.005	<0.005	<0.003	<0.003	<0.001	<0.001	0.0018	<0.001	<0.001	<0.001	0.0013	<0.001	<0.001	<0.005
Total Metals																							
Aluminum	7.27	1.77	0.24	0.0236	1.65	0.073	0.065	0.0063	<0.01	<0.01	<0.005	0.0118	0.0059	0.0061	0.0075	<0.003	0.0109	0.0092	0.009	0.0049	0.0068	0.011	2.16
Antimony	<0.0025	0.0012	0.0007	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0005	0.00025	0.00028	0.00024	0.00013	0.0002	0.00011	0.00011	0.00014	0.00014	<0.0001	0.00011	<0.001
Arsenic	0.0061	0.0154	0.029	0.036	0.0033	0.0023	0.0013	0.00128	0.0014	0.0014	0.00132	0.00076	0.00142	0.00139	0.00073	0.00127	0.00058	0.00065	0.00056	0.00082	0.00062	0.00077	0.0037
Barium	0.211	0.098	0.032	0.022	0.072	0.054	0.037	0.037	0.036	0.035	0.036	0.0449	0.0517	0.047	0.0393	0.0414	0.0405	0.0422	0.0432	0.0414	0.0369	0.0382	0.07
Beryllium	<0.005	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.001	<0.002	<0.002	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.002
Bismuth										<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
Boron	0.12	0.2	0.2	0.22	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.1	0.116	0.105	0.087	0.094	0.108	0.094	0.113	0.102	0.094	0.097	<0.1
Cadmium	0.00055	0.000046	<0.0003	0.000041	0.000067	<0.000034	<0.0004	<0.0003	<0.000034	<0.000034	<0.00004	<0.00006	<0.00006	<0.00005	<0.00005	0.000022	<0.00005	<0.00005	<0.00003	<0.00005	<0.00003	<0.00005	0.00009
Calcium	194	38.6	31.5	35.3	97	92.4	88.1	92.1	84.7	92.9	92.9	86.3	86.4	91.3		85.1	84.4	83.7	86.1	83.4	70.3	69.5	103
Chromium	0.0257	0.0029	0.0012	0.0066	0.0059	<0.002	0.0052	<0.001	<0.002	<0.002	<0.001	0.00055	0.00098	0.0011	0.00087	0.00042	0.00028	0.00025	0.00031	0.00017	0.00014	0.00017	0.0055
Cobalt	0.0161	0.00128	0.00067	0.00039	0.00215	0.00094	0.0007	<0.0003	<0.0006	<0.0006	<0.0003	0.00012	0.00016	0.00021	0.00011	0.00011	<0.0001	<0.0001	0.00012	<0.0001	<0.0001	<0.0001	0.00245
Copper	0.0913	0.0166	0.0011	<0.001	0.0225	0.0059	0.0051	0.0045	0.0054	0.0036	0.0033	0.00226	0.00185	0.00311	0.00527	0.00265	0.00363	0.00189	0.00212	0.00182	0.00126	0.00085	0.0306
Iron	11.1	2.58	0.461	0.08	3.15	0.703	0.606	0.665	0.84	0.769	1.03	1.32	0.647	0.775	1.24	0.768	1.58	2.13	2.18	1.86	2.37	2.08	3.28
Lead	0.0028	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	0.000072	<0.00005	<0.00005	0.000062	<0.00005	<0.00005	<0.00005	<0.001
Lithium	<0.025	<0.005	<0.005	<0.005	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.005	0.00536	0.0056	0.00588	0.0044	0.00549	0.00581	0.00474	0.00561	0.00606	0.00428	0.0045	<0.01
Magnesium	129	15.2	13.6	16.3	48	47.7	45.5	48	44.3	48.3	48.3	48.7	47.6	45.7		46.6	46.9	47.9	50	47.1	46.4	46.7	49.4
Manganese	1.93	0.0652	0.051	0.0773	0.156	0.215	0.102	0.107	0.0819	0.0826	0.112	0.174	0.203	0.137	0.145	0.11	0.149	0.245	0.251	0.19	0.217	0.221	0.126
Mercury	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002
Molybdenum	0.101	0.0463	0.0509	0.0488	0.104	0.0789	0.0835	0.0723	0.0699	0.0758	0.0722	0.0641	0.0785	0.0805	0.0639	0.0819	0.0686	0.0766	0.0807	0.0799	0.0849	0.102	0.0958
Nickel	0.0579	0.0029	0.0013	0.0039	0.0131	0.0058	0.0061	0.002	<0.002	<0.002	<0.001	0.00068	0.00143	0.00243	0.00135	0.00114	0.00137	0.00129	0.00082	0.00076	0.00062	<0.0005	0.0078
Phosphorus										<0.3	<0.3	<0.3	<0.3	<0.3		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Potassium	33.9	2.3	2.1	<2	8.1	8.1	7.6	8.3	8.2	7.9	8.3	9.04	9.06	8.53	7.87	8.86	8.8	8.32	9.53	8.81	7.99	8.33	7.5
Selenium	<0.005	0.0047	0.0046	0.0011	0.0218	0.0236	0.0206	0.0046	0.0205	0.0055	0.0032	0.0149	0.0191	0.0155	0.00063	0.0185	0.00024	0.00012	0.00276	0.00873	0.00018	<0.0001	0.0168
Silicon										7.22	6.75	6.56	6.75	7.33		7.16	5.77	5.3	5.93	6.15	4.65	4.5	
Silver	<0.0001	<0.00002	<0.00002	<0.00002	<0.00004	<0.00004	<0.00004	0.000028	<0.00004	<0.00004	0.000021	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00004
Sodium	216	86.3	91	89.4	39.2	42	39.2	41.8	41.4	43.3	40.8	43.9	49.2	44.5	41.4	42.2	43.3	43.3	45.9	46.7	43.5	39.7	34.9
Strontium										0.62	0.615	0.629	0.735	0.637	0.608	0.61	0.62	0.698	0.67	0.677	0.598	0.631	
Sulphur																87.9	89.3	91.2	99.4	97.9	91.4	89.5	
Thallium	<0.001	<0.0002	<0.0002	<0.0002	<0.0004	<0.0004	<0.0004	<0.0002	<0.0004	<0.0004	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0004
Tin	<0.0025	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Titanium	0.545	0.116	0.017	<0.01	0.119	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.013	<0.01	<0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.185
Total Cadmium (by saltwater extract																				<0.00002		<0.00002	
Uranium	0.0041	0.00407	0.0028	0.00198	0.00215	0.00143	0.00153	0.00103	0.00105	0.00101	0.00078	0.000626	0.001	0.00101	0.000276	0.0011	0.000235	0.000188	0.000511	0.000533	0.000169	0.000127	0.00252
Vanadium	0.039	0.0095	0.0029	0.0011	0.0111	0.0028	<0.002	0.0016	<0.002	<0.002	0.0012	<0.001	<0.001	0.0012	<0.001	0.0011	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0126
Zinc	0.0243	<0.005	<0.005	<0.005	0.0064	<0.005	<0.005	<0.005	0.0098	<0.005	<0.005	<0.003	0.0159	<0.003	<0.003	<0.003	<0.003	<0.003	0.003	<0.003	<0.003	<0.003	0.0066
Organics																							
Carbon Organic (Dissolved)	8.88	3.73	2.75	4.12	2.1	1.95	1.51	1.51	1.22	0.97	1.26	2.4	1.87	16.3	3.85	1.52	1.74	1.67	1.62				2.18
Carbon Organic (Total)										0.85	1.1	2.44	2.13	1.78	1.86	1.5	1.58	1.44	1.58	1.62	1.45	1.67	
Nitrogen Organic (Dissolved)										0.11	0.105	0.112	<0.05	1.79		<0.05	<0.05						
Nitrogen Organic (Total)										0.11	0.105	0.122	0.102	0.075			<0.05						
ALS LAB ID	**L894378**	**L623639**	**L655304**	**L679955**	**L623639**	**L655304**	**L892818**	**L924086**	**L957406**	**L1007006**	**L1035635**	**L1077032**	**L1113319**	**L1159973**	**L1200094**	**L1247459**	**L1276505**	**L1306577**	**L1392288**	**L1430651**	**L1452371**	**L1469742**	**L623639**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D5.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D5.2 - GROUNDWATER QUALITY DATA

Site ID								
Site ID	**AJGW06-D**	**AJGW06-D**	**AJGW06-D**	**AJGW06-D**	**AJGW06-D**	**AJGW06-D**	**AJGW06-D**	**AJGW06-D**
Analytes	**Mar-13**	**May-13**	**Aug-13**	**Nov-13**	**Mar-14**	**May-14**	**Jun-14**	**Sep-14**
In Situ Parameters								
Conductivity µS/cm	714	659	1255	713	662	644	674	615
Oxygen Dissolved %	14.5	3.9	2.3	2.3	5.6	3.7	4.9	
Oxygen Dissolved	2.69	3.2	2.69	0.62	0.67	1.27	0.81	0.47
pH (unitless)	7.43	7.56	8.23	7.51	7.66	7.66	7.57	
Redox Potential mV	-65.6	-59	-79.9	-3.3	-30.1	94.5	-32	
Salinity ppt								
Specific Conductivity µS/cm	938	910	1763	947	901	924	931	848
Temperature °C	12.5	10.6	9.2	12.1	11.1	9.12	10.5	10.6
Total Dissolved Solids					586	600	605	
Turbidity NTU								
Physical Tests								
Acidity to pH 8.3 (as CaCO3)	3.2	5.1	1.6	2.7	4.6	3.1	5.9	4.1
Alkalinity (Total as CaCO3)	268	240	254	266	270	256	256	268
Bicarbonate Alkalinity	268	240	254	266	270	256	256	268
Carbonate Alkalinity	<2	<2	<2	<2	<2	<2	<2	<2
Color TCU	<5	<5	<5	<5	<5	<5	<5	<5
Hardness as CaCO3 (Dissolved)	427	451	433	436	452	430	429	441
Hydroxide Alkalinity	<2	<2	<2	<2	<2	<2	<2	<2
pH (unitless)	8.16	8.06	7.9	8.16	8.12	8.15	8.01	8.03
Specific Conductivity µS/cm	917	921	913	893	913	910	896	903
Total Dissolved Solids	650	650	640	645	637	637	634	632
Total Suspended Solids	38.3	12.6	247	3.5	3	5.2	6	6.4
Turbidity NTU	21.4	37.2		1.17	0.36	6.24	6.57	6.66
Dissolved Anions								
Bromide	<0.05	<0.05	<0.05	<0.25	<0.5	<0.5	<1.3	<0.25
Chloride	4.92	5.18	4.89	3.8	5.7	<5	6	5.3
Fluoride	0.199	0.194	0.187	0.2	<0.2	<0.2	<0.2	0.18
Sulphate	252	258	249	255	256	251	252	254
Nutrients								
Ammonia (Total)		<0.02	<0.005	<0.02	<0.005	<0.005	<0.005	<0.005
Nitrate (as N)	<0.005	0.017	0.0174	0.025	<0.05	<0.05	<0.05	<0.025
Nitrite (as N)	<0.001	<0.001	<0.001	<0.005	<0.01	<0.01	<0.01	<0.005
Nitrogen (Dissolved)								0.09
Nitrogen (Total)								
Nitrogen Kjeldahl (Total)		0.063		<0.05	0.051	0.055	0.057	0.076
Orthophosphate (Dissolved)	0.0196	0.0173	0.0194	0.0281	0.0292	0.0263	0.0279	0.0283
Phosphorus - Dissolved			0.0186		0.029			0.029
Phosphorus - Total	0.0686	0.0369	0.282	0.033	0.0294	0.0349	0.0388	0.0449
Cyanide								
Cyanide (Free)	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals								
Aluminum	<0.01	<0.01	0.0778	<0.01	<0.005	<0.01	<0.005	<0.01
Antimony	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001
Arsenic	0.0028	0.0036	0.00407	0.0043	0.00394	0.0036	0.00385	0.004
Barium	0.052	0.048	0.085	0.04	0.043	0.046	0.042	0.042
Beryllium	<0.002	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002
Bismuth							<0.2	<0.2
Boron	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	<0.000034	<0.000034	<0.00051	<0.0004	<0.000017	<0.000034	0.000029	<0.000034
Calcium	92.3	99.8	94.2	91.7	95.3	90.8	92.5	94.3
Chromium	<0.002	<0.002	<0.001	<0.004	<0.001	<0.002	0.0012	<0.002
Cobalt	0.00115	0.00117	0.00133	<0.0006	<0.0003	<0.0006	<0.0003	<0.0006
Copper	0.0027	<0.002	0.0027	0.0022	0.0144	0.0024	<0.0035	0.0026
Dissolved Cadmium (by saltwater e›								
Iron	<0.03	0.053	0.227	<0.03	<0.03	<0.03	<0.03	<0.03
Lead	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001
Lithium	<0.01	<0.01	<0.005	<0.01	<0.005	<0.01	<0.005	<0.01
Magnesium	47.6	49.1	48.1	50.2	52	49.3	48.1	49.9
Manganese	0.241	0.257	0.368	0.0375	0.0415	0.0573	0.0626	0.0748
Mercury	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.12	0.109	0.106	0.135	0.124	0.121	0.107	0.127
Nickel	<0.002	0.0023	0.004	<0.002	0.001	<0.002	0.001	<0.002
Phosphorus							<0.3	<0.3
Potassium	7.5	7.5	8	7.6	8.6	7.7	7.6	7.6
Selenium	0.0179	0.022	0.0266	0.0396	0.0326	0.0317	0.0305	0.0286
Silicon							7.6	7.51
Silver	<0.00004	<0.00004	<0.00002	<0.00004	<0.00002	<0.00004	<0.00002	<0.00004
Sodium	42.9	41.2	41.9	44	46.9	43.7	44.7	45.8
Strontium							0.702	0.72
Sulphur								
Thallium	<0.0004	<0.0004	<0.0002	<0.0004	<0.0002	<0.0004	<0.0002	<0.0004
Tin	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001
Titanium	<0.01	<0.01	0.013	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.00308	0.00288	0.00327	0.00422	0.00405	0.00345	0.00325	0.00363
Vanadium	0.0026	0.0029	0.0027	0.0032	0.003	0.0029	0.0025	0.0028
Zinc	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Metals								
Aluminum	0.71	0.79	2.58	0.03	0.0076	0.281	0.261	0.256
Antimony	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001
Arsenic	0.003	0.0041	0.0045	0.0039	0.00359	0.0038	0.00317	0.0039
Barium	0.058	0.058	0.093	0.04	0.043	0.047	0.046	0.047
Beryllium	<0.002	<0.002	<0.001	<0.002	<0.001	<0.002	<0.001	<0.002
Bismuth							<0.2	<0.2
Boron	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	0.00006	0.000039	<0.00051	<0.0004	<0.000017	<0.000034	0.000038	<0.000034
Calcium	91.1	103	93.2	88.9	93.1	90.4	92	96.2
Chromium	<0.002	0.0068	0.0115	<0.002	<0.001	0.0021	0.0012	<0.002
Cobalt	0.00196	0.00239	0.00408	<0.0006	<0.0003	<0.0006	0.00046	<0.0006
Copper	0.0169	0.0172	0.0404	0.004	0.0034	0.0072	0.0066	0.0063
Iron	0.963	0.919	4.02	0.049	<0.03	0.404	0.369	0.352
Lead	<0.001	<0.001	0.0006	<0.001	<0.0005	<0.001	<0.0005	<0.001
Lithium	<0.01	<0.01	0.0057	<0.01	<0.005	<0.01	<0.005	<0.01
Magnesium	46.9	49.3	49.5	48.7	50.6	49.3	48.7	51.5
Manganese	0.268	0.304	0.303	0.0854	0.0542	0.152	0.0786	0.0925
Mercury	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.121	0.108	0.107	0.138	0.134	0.124	0.116	0.137
Nickel	0.0038	0.008	0.012	<0.002	<0.001	0.0023	0.0019	<0.002
Phosphorus							<0.3	<0.3
Potassium	7.4	7.4	8.6	7.6	8.5	7.8	7.8	7.9
Selenium	0.0167	0.0218	0.0206	0.029	0.0255	0.029	0.0211	0.0243
Silicon							8.31	8.31
Silver	<0.00004	<0.00004	0.000048	<0.00004	0.000021	<0.00004	<0.00002	<0.00004
Sodium	41.9	40.4	41.2	43.2	45.9	44.5	44.9	47.1
Strontium							0.716	0.743
Sulphur								
Thallium	<0.0004	<0.0004	<0.0002	<0.0004	<0.0002	<0.0004	<0.0002	<0.0004
Tin	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001
Titanium	0.054	0.047	0.228	<0.01	<0.01	0.026	0.027	0.024
Total Cadmium (by saltwater extract								
Uranium	0.00312	0.00296	0.00352	0.00443	0.00451	0.00355	0.00341	0.00388
Vanadium	0.0056	0.0064	0.0149	0.0034	0.0032	0.0044	0.0038	0.004
Zinc	<0.005	<0.005	0.0083	<0.005	<0.005	0.0089	<0.005	<0.005
Organics								
Carbon Organic (Dissolved)	2.12	1.85	2.01	1.78	1.74	2.28	1.84	1.04
Carbon Organic (Total)								1.08
Nitrogen Organic (Dissolved)								0.088
Nitrogen Organic (Total)								0.108
ALS LAB ID	**L655304**	**L678594**	**L710078**	**L892818**	**L924086**	**L956921**	**L990458**	**L1007006**

Site ID										AJGW07-D					
Site ID	**AJGW07-D**	**AJGW07-D**	**AJGW07-D**	**AJGW07-D**	**AJGW07-D**	**AJGW07-D**	**AJGW07-D**	**AJGW07-D**	**AJGW07-D**	**AJGW07-D**	**AJGW07-D**	**AJGW07-D**	**AJGW07-D**	**AJGW07-D**	**AJGW07-D**
Analytes	**Apr-08**	**Jul-08**	**Sep-08**	**Nov-08**	**Jun-10**	**Aug-10**	**Nov-10**	**Mar-11**	**May-11**	**Jul-11**	**Oct-11**	**Feb-12**	**Jun-12**	**Aug-12**	**Dec-12**
In Situ Parameters															
Conductivity µS/cm	695	662	636	1001	921	638	664	0.9	931	605	689	570	632	1128	
Oxygen Dissolved %		56.4		20.7	7.5	1.6	32.2	10	2.6		1.6	3.4	21.9		4.4
Oxygen Dissolved	0	1.69	0.83	1.41	1.62	0.61	3.92	6.5	0.29	41.6	1.61	0.07	0.26	0.0006	
pH (unitless)	7.35	7.76	7.87	7.84	8.68	8.08	7.72	7.81	7.75	8.7	7.89	9.41	9.14	9.14	
Redox Potential mV			609		-132	-104	90.4	0.587	57.6	51.2	-13	-88.2	36.1	-4.9	
Salinity ppt	0.49		0.46		0.5	0.45	0.46	0.45	0.46	0.42	0.47	0.4	0.42	8E-07	
Specific Conductivity µS/cm	990	939	937	722		915	930	0.637	657	892	939	806	850	1588	
Temperature °C	9.4	9.6	8.19	10.3	13.9	9.14	10	9.69	9.59	10.3	11.1	9.7	11.8	9.84	
Total Dissolved Solids			12.8		591	595	606	425	605	546	610	525	553	0.00103	
Turbidity NTU	48	8.2	11.8	6.4	1	4.4	35.9	6.2	1.6	5.73	8.7	0.7	0	2.5	
Physical Tests															
Acidity to pH 8.3 (as CaCO3)	2.8	<1			4		<1			2.8					7.5
Alkalinity (Total as CaCO3)	274	265	259	254	260	265	258	286	271	293	271	138	135	136	128
Bicarbonate Alkalinity	274	265	259	246		265	258	286	271	293	263	94.2	110	98.6	128
Carbonate Alkalinity	<2	<2	<2	8.7		<1	<1	<2	<1	<2	7.9	43.4	24.7	37.8	<2
Color TCU	<5	<5	<5	<5	<5	<5	<5								
Hardness as CaCO3 (Dissolved)	441	441	426	425	409	437	430	444	439	438	455	22.1	21.5	20.2	1640
Hydroxide Alkalinity	<2	<2	<2	<1		<1	<1	<2	<1	<2	<1	<1	<1	<1	<2
pH (unitless)	8.15	8.28	8.23	8.34	8.13	8.32	8.34	8.21	8.31	8.15	8.34	8.97	8.86	8.9	7.7
Specific Conductivity µS/cm	924	934	897	881	902	915	881	903	905	879	908	848	856	844	4340
Total Dissolved Solids	646	590	640	630	641	628	650	608	611	632	640	569	575	573	4230
Total Suspended Solids	42.9	13.7	8.7	3.2	3.3	3	<3			3.5	3.6	4	<3	<3	735
Turbidity NTU	43.3	9.74	7.64	0.65	1.08	1.98	0.97			1.81	1.33	3.33	2.71	1.31	277
Dissolved Anions															
Bromide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.117	<0.5	<0.5	<2.5
Chloride	<5	<5	5.9	7.9	14.5	<5	5.2	5.3	<5	<5	9.4	9.33	9.2	8.4	48
Fluoride	0.35	0.22	0.22	0.21	3.82	0.31	<0.2	0.2	0.37	0.2	0.22	0.121	0.148	0.117	<1
Sulphate	264	263	259	260	257	264	262	246	247	248	254	254	268	255	2880
Nutrients															
Ammonia (Total)	0.0098	0.0077	0.0056	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.101	0.0819	0.0828	0.101
Nitrate (as N)	0.078	<0.05	<0.05	<0.05	0.074	<0.05	<0.05	<0.05	<0.05	<0.05	0.056	<0.005	<0.05	<0.05	<0.25
Nitrite (as N)	<0.01	0.012	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.01	<0.01	<0.05
Nitrogen (Dissolved)	0.17	0.08	0.05	0.05		0.055									
Nitrogen (Total)															
Nitrogen Kjeldahl (Total)	0.092	0.071	0.051	0.076	0.061	0.071	0.06	0.071	0.066	0.079	0.101	0.222	0.247	0.209	0.61
Orthophosphate (Dissolved)	0.03	0.0312			0.0302			0.0301	0.034	0.035	0.0371	0.176	0.267	0.27	<0.001
Phosphorus - Dissolved	0.0332	0.0359	0.031	0.0292		0.032	0.0341	0.0313	0.0328	0.0354	0.0367	0.189	0.28	0.259	<0.002
Phosphorus - Total	0.087	0.0537	0.0457	0.0322	0.0329	0.0349	0.0368	0.0343	0.0328	0.0396	0.0412	0.187	0.302	0.295	0.116
Cyanide															
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals															
Aluminum	<0.005	<0.003	<0.003	0.0015	0.0013	0.0034	0.0015	0.002	0.0012	0.0027	0.0013	0.0465	0.0511	0.0592	0.0038
Antimony	<0.0005	0.00022	0.00024	0.00024	0.00023	0.00026	0.00022	0.00024	0.00025	0.00027	0.00024	<0.0002	0.00023	0.00021	0.00056
Arsenic	0.00454	0.00436	0.00473	0.00393	0.00455	0.00483	0.00454	0.00481	0.00475	0.00481	0.00478	0.00535	0.00496	0.00547	0.00284
Barium	0.042	0.0388	0.0373	0.0361	0.037	0.0359	0.0369	0.0347	0.0331	0.0356	0.0363	0.00979	0.00997	0.00906	0.0217
Beryllium	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002
Bismuth	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001
Boron	<0.1	0.066	0.07	0.066	0.062	0.076	0.06	0.071	0.063	0.068	0.061	8.13	8.9	10.1	0.218
Cadmium	<0.00005	<0.00004	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00004	<0.00006	<0.00005	<0.0001	<0.00002	<0.00002	<0.00002	0.00004
Calcium	94.3	93.5	89.4	90.8		93	90.5	91.7	93	92	97.4	5.15	5.09	4.73	385
Chromium	<0.001	0.00015	0.00014	0.00022	0.00021	0.00018	0.00028	0.00025	0.00016	0.00027	0.00023	<0.0002	<0.0002	<0.0002	<0.0002
Cobalt	<0.0003	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	0.00022	<0.0002	0.00452
Copper	0.0012	<0.0005	0.00119	0.00174	0.00166	0.00122	0.00145	0.00179	0.00181	0.00228	0.00163	<0.0004	<0.0004	<0.0004	<0.0004
Dissolved Cadmium (by saltwater e›									<0.00002		<0.00002	<0.00002	<0.00002	<0.00002	
Iron	<0.03	<0.03	<0.03	<0.01	<0.01	<0.01	<0.01	0.013	<0.01	<0.01	<0.01	<0.01	0.013	0.014	<0.01
Lead	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.0001	<0.0001	<0.0001
Lithium	<0.005	0.00406	0.00415	0.00402	0.00348	0.00464	0.00376	0.00419	0.00456	0.00392	0.00359	0.0086	0.0064	0.0075	0.0476
Magnesium	49.9	50.5	49.2	48.2		49.8	49.5	52.1	50.2	50.6	51.3	2.24	2.13	2.04	165
Manganese	0.0516	0.0614	0.0602	0.02	0.0336	0.0373	0.0188	0.0166	0.0222	0.00946	0.00973	0.0281	0.0348	0.0336	1.51
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.136	0.132	0.141	0.129	0.138	0.145	0.136	0.125	0.124	0.128	0.128	0.0172	0.0175	0.0178	0.0169
Nickel	<0.001	<0.0005	0.00064	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	0.0017	0.0013	0.0066
Phosphorus	<0.3	<0.3	<0.3	<0.3		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.182	0.284	0.292	<0.05
Potassium	8	7.52	7.68	7.07	7.32	7.82	7.76	8.02	8.05	7.59	8.32	10.2	9.95	9.45	9.94
Selenium	0.0248	0.0269	0.0252	0.0221	0.0238	0.025	0.0234	0.0266	0.0273	0.0223	0.0229	<0.0002	0.00026	0.00027	0.00035
Silicon	7.31	7.53	7.32	7.68		7.23	7.19	7.51	7.42	7.4	7.44	4.29	3.97	4.12	5.77
Silver	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	43.5	42.8	45.2	40.8	42.5	43.3	41.4	41.2	42.4	42.4	40.1	163	166	161	580
Strontium	0.705	0.679	0.728	0.667	0.694	0.724	0.699	0.682	0.685	0.706	0.716	0.168	0.155	0.159	4.82
Sulphur						86	78.6	77.7	81.3	77.3	80.6	86.9	88	85.6	827
Thallium	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002
Tin	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	0.0007
Titanium	<0.01	0.013	<0.01	<0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02
Uranium	0.00399	0.00399	0.00397	0.00343	0.0038	0.0044	0.00391	0.00386	0.00387	0.00405	0.00398	0.000532	0.00101	0.000812	0.0172
Vanadium	0.0031	0.0032	0.0033	0.003	0.0031	0.0031	0.0029	0.003	0.0033	0.003	0.0029	<0.002	<0.002	<0.002	<0.002
Zinc	<0.005	<0.003	<0.003	<0.001	0.001	<0.001	0.0011	<0.001	0.001	0.0041	0.0106	0.0025	0.0023	<0.002	0.0045
Total Metals															
Aluminum	1.84	0.517	0.268	0.0369	0.0442	0.0714	0.0408	0.0089	<0.003	0.0886	0.0632	0.202	0.309	0.111	14.3
Antimony	<0.0005	0.00025	0.00023	0.00025	0.00025	0.00029	0.00022	0.00029	0.00024	0.00029	0.00029	<0.0002	0.0003	0.0003	0.00051
Arsenic	0.00557	0.00445	0.00458	0.00399	0.00442	0.00491	0.0047	0.00465	0.00448	0.00487	0.0048	0.00533	0.00517	0.00509	0.00744
Barium	0.062	0.0449	0.04	0.037	0.0378	0.0388	0.0378	0.0352	0.0331	0.0371	0.0384	0.0107	0.0116	0.00952	0.146
Beryllium	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	0.00126
Bismuth	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001
Boron	<0.1	0.071	0.073	0.073	0.083	0.08	0.065	0.08	0.066	0.077	0.064	8.74	10.5	10.4	0.227
Cadmium	<0.00008	<0.00005	<0.00007	<0.00005	<0.00005	<0.00005	<0.00005	<0.00004	<0.00006	<0.00006	<0.0001	<0.00002	0.000028	0.000023	0.000138
Calcium	97.8	91	90.2	98.5		95.9	91	91.5	88.9	91	93.5	5.1	5.28	4.72	386
Chromium	0.0042	0.00137	0.0009	0.00042	0.00052	0.00043	0.00045	0.00041	0.00026	0.00053	0.00066	0.00119	0.00244	0.00035	0.00504
Cobalt	0.00211	0.00061	0.0004	<0.0001	0.00011	0.00017	0.0001	<0.0001	<0.0001	0.00022	0.00016	0.0003	0.00053	0.00024	0.00868
Copper	0.0217	0.00776	0.00683	0.00332	0.00275	0.00351	0.00287	0.00201	0.00185	0.00459	0.00404	<0.001	0.0017	<0.001	0.0506
Iron	2.09	0.602	0.36	0.053	0.06	0.099	0.057	0.022	<0.01	0.12	0.091	0.248	0.419	0.096	8.98
Lead	<0.0005	0.000108	0.000072	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	0.00011	<0.0001	0.00762
Lithium	<0.005	0.00435	0.00401	0.00419	0.00371	0.00468	0.00388	0.00448	0.00444	0.00416	0.0033	0.0089	0.0082	0.0075	0.0508
Magnesium	52.1	49.9	49.6	48.6		50.5	49	51	46.7	48	50.5	2.54	2.72	2.1	168
Manganese	0.154	0.129	0.0946	0.0302	0.0447	0.0899	0.039	0.0182	0.0213	0.12	0.0607	0.0338	0.0449	0.0357	1.86
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000098
Molybdenum	0.138	0.131	0.145	0.137	0.142	0.157	0.14	0.137	0.127	0.135	0.127	0.0179	0.0209	0.0184	0.0166
Nickel	0.0053	0.00164	0.00129	0.00053	0.00051	0.00059	<0.0005	<0.0005	<0.0005	0.0007	0.0007	0.0026	0.005	0.0019	0.0115
Phosphorus	<0.3	<0.3	<0.3	<0.3		<0.05	<0.05	<0.05	<0.05	0.051	<0.05	0.186	0.305	0.294	0.308
Potassium	8.5	7.67	7.72	7.27	7.29	8.1	7.98	8.6	7.73	7.32	8.15	9.73	9.97	9.28	10.8
Selenium	0.0253	0.0244	0.022	0.0216	0.0213	0.0231	0.0226	0.0248	0.0236	0.0219	0.022	0.00021	0.00029	0.0003	0.00068
Silicon	11.2	8.51	8.01	8.05		7.54	7.44	7.59	7.16	7.41	7.5	4.73	4.81	4.21	34.3
Silver	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	0.000096
Sodium	45.5	43.4	45.6	42.3	42.3	45	42.3	43.4	41.9	41.8	41.5	161	171	161	552
Strontium	0.746	0.673	0.748	0.697	0.704	0.733	0.71	0.694	0.681	0.727	0.716	0.174	0.182	0.161	4.83
Sulphur						88.5	80.4	81.8	80.9	80.4	83.4	87.4	90.4	85.1	807
Thallium	<0.0002	0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	0.000111
Tin	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	0.00139
Titanium	0.121	0.047	0.028	<0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	0.106
Total Cadmium (by saltwater extract									<0.00002		0.000029	<0.00002			
Uranium	0.00425	0.00396	0.004	0.00361	0.004	0.00444	0.00401	0.0041	0.00395	0.00421	0.00401	0.00058	0.00112	0.00085	0.0181
Vanadium	0.0102	0.0053	0.0045	0.0035	0.0033	0.0037	0.0035	0.0033	0.0033	0.0037	0.0034	0.0021	0.0025	<0.002	0.0299
Zinc	0.0055	<0.003	0.0033	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0122	<0.006	<0.006	<0.006	0.0303
Organics															
Carbon Organic (Dissolved)	1.86	1.82	1.79	2.16	1.78	1.7	1.41	1.46							
Carbon Organic (Total)	1.9	1.75	1.34	1.55	1.7	1.52	1.29	1.29	1.39	1.39	1.6	3.03	3.68	3.36	11.6
Nitrogen Organic (Dissolved)	0.082	0.06	<0.05	<0.05		0.05									
Nitrogen Organic (Total)	0.082	0.09	<0.06	0.076		0.055									
ALS LAB ID	**L1035437**	**L1077032**	**L1113319**	**L1159973**	**L1200094**	**L1276505**	**L1306577**	**L1392288**	**L1430651**	**L1452371**	**L1469742**	**L1478436**	**L1488139**	**L1508557**	**L1459061**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D5.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D5.2 - GROUNDWATER QUALITY DATA

Site ID																AJGW07-S							
Site ID	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-D	AJGW07-S	AJGW07-S	AJGW07-S	AJGW07-S	AJGW07-S	AJGW07-S	AJGW07-S	AJGW07-S	AJGW07-S	AJGW07-S	AJGW07-S	AJGW07-S	AJGW07-S	AJGW07-S	AJGW07-S	AJGW07-S	AJGW07-S
Analytes	**Mar-13**	**May-13**	**Nov-13**	**Mar-14**	**May-14**	**Jun-14**	**Apr-08**	**Jul-08**	**Sep-08**	**Nov-08**	**Jun-10**	**Aug-10**	**23/Nov/2010**	**Mar-11**	**May-11**	**Jul-11**	**Oct-11**	**Feb-12**	**Jun-12**	**Aug-12**	**Mar-13**	**May-13**	**Aug-13**
In Situ Parameters																							
Conductivity µS/cm		2029	1408	1314	1581	1446		1425	1347	1314		809	35	824		765	1452	725	625	1071	951	680	625
Oxygen Dissolved %	1.6	1.6	2.6	1.2	17.7	0.2		25.7	29	23	5.8	6.1	11.8	7.3	4.3	0	14.7	7.1	15.5		5.3	34.6	28.5
Oxygen Dissolved		9.51	0.43	0.66	2.62	0.85		0.4	0.03	5.31		0.81	1.97	1.07		0.26	8.06	6.22	0.97	1.96	1.03	0.43	0.21
pH (unitless)		7.81	7.72	7.68	7.55	7.32		5.95	7.62	5.88		10.5	7.12	6.05		5.57	10.3	8.37	8.85	9.05	6.31	9.03	8.58
Redox Potential mV		-84.2	-97.2	-86.3	-62.4	-81.8		-41	-125	19		-250	167	-45.8		-196			36.5		179	19.3	105
Salinity ppt		1.03	1.06	0.97	1.06	1.08		0.96	0.93	0.95		0.56	0.02	0.58		0.53			0.46		0.5	0.49	0.46
Specific Conductivity µS/cm		1267	2072	1910	12055	2092		1867	1819	1866		1118	39	1166		1055	2057	936	934	775		979	926
Temperature °C		5.36	8.25	8.72	13.1	8.82		12.6	11.4	9.52		10.5	20.1	9.64		10.6	9.59	13.2		10.1	13.5	8.99	7.78
Total Dissolved Solids		1320	1345	1241	1340	1362		1220	1183	1207		725	25	758		686			7.67		608	635	605
Turbidity NTU		2.3	6.3	-3.6	0.9	0		-0.6	0	0		17.8	1.1	0		0	1.8	9.8	21.8	1.4	9.1	3.8	3.4
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)	<1						10.2											1.6			<1		
Alkalinity (Total as CaCO3)	1360	219	220	213	212	221	131	194	201	195	287	334	328	320	560	209	262	129	124	148	141	159	153
Bicarbonate Alkalinity		219	220	213	212	221	131	194	201	195	281	315	315	317	<1	209		129	110	132		143	143
Carbonate Alkalinity		<2	<2	<1	<1	<2	<2	<1	<2	<1	5.8	18.6	13	2.5	52.8	<1		<2	13	15.4		15.5	9.9
Color TCU																	<5	13.5	5.9	<5	<5	<5	<5
Hardness as CaCO3 (Dissolved)	157	718	666	734	699	718	1120	484	477	471	285	273	281	273	1500	325	122	297	313	351	367	382	389
Hydroxide Alkalinity		<2	<2	<1	<1	<2	<2	<1	<2	<1	<1	<1	<1	<1	507	<1		<2	<1	<1		<1	<1
pH (unitless)	12.4	8.04	8.28	8.2	8.03	8.18	7.45	8.27	8.15	8.12	8.42	8.53	8.45	8.31	11.6	8.57	9.48	8.19	8.54	8.63	8.59	8.67	8.41
Specific Conductivity µS/cm	6520	1970	2010	2010	2030	2020	2200	1890	1880	1810	1190	1190	1170	1150	3690	1030	2040	895	928	950	941	975	1040
Total Dissolved Solids	1970	1550	1600	1580	1540	1690	1820	1400	1420	1340	778	788	796	749	2930	856	1460	600	630	672	697	697	705
Total Suspended Solids	232	<3	<3	<3	3.3	7.1	25.2	6	13.8	5.6	7.7	12.6	8.3	3	25	<3	6.8	10.3	4	4.7	8.5	3.7	<3
Turbidity NTU	69.4	1.35	0.9	1.09	1.14	2.1	16.8	3.84	5.93	3.4	5.07	5	3.78	2.79	11.6	106	2.83	5.5	3.94	1.33	4.62	7.33	0.75
Dissolved Anions																							
Bromide	<2.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	<25	<10	12	<10	<10	<10	18	22	24	18	17.4	15	20.2	14.8	<10	13.1	107	<5	<5	<5	19.6	<5	<5
Fluoride	<1	0.72	<0.4	0.301	0.281	0.258	<0.4	0.252	0.288	0.252	0.3	0.37	0.301	0.269	0.27	0.072	0.94	0.42	<0.2	<0.2	0.33	<0.2	0.32
Sulphate	297	993	995	995	974	985	1370	835	873	762	340	313	310	310	1610	291	617	351	345	344	390	356	361
Nutrients																							
Ammonia (Total)	2.07	0.0992	0.0932	0.0901	0.0936	0.084	<0.005	0.128	0.163	0.175	1.01	1.02	1.11	1.09	0.104	0.0561	0.0211	0.345	0.089	0.119	0.103	0.11	0.101
Nitrate (as N)	<0.25	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	0.064	<0.05	0.12	<0.05	<0.1	<0.05	8.81	9.01	10.8	9.42	11.9
Nitrite (as N)	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.02	<0.01	0.155	0.167	0.635	0.069	0.084
Nitrogen (Dissolved)																	2.93	0.67	15.2	10.9		9.98	10.8
Nitrogen (Total)																	1.79	0.67	9.17	9.18	11.7	8.72	12
Nitrogen Kjeldahl (Total)	3.05	0.248	0.226	0.244	0.257	0.246	0.528	0.388	0.491	0.404	2.17	2.35	2.87	2.25	0.186	0.521	1.79	0.67	0.21	<0.05	0.249	<0.05	<0.05
Orthophosphate (Dissolved)	<0.001	0.0046	0.0089	0.0088	0.0125	0.0089	0.0024	0.043	0.0643	0.0756	0.152	0.176	0.246	0.229	<0.001	0.0724		0.0668			0.0762		
Phosphorus - Dissolved	0.0035	0.0059	0.0087	0.0081	0.0127	0.0086	0.0068	0.0423	0.0652	0.077	0.167	0.228	0.251	0.273	<0.002	0.0821	0.239	0.0707	0.115	0.0717		0.0507	0.0596
Phosphorus - Total	0.0245	0.0134	0.0205	0.0162	0.0243	0.0257	0.0861	0.165	0.181	0.196	0.201	0.301	0.339	0.356	0.0054	0.0831	0.325	0.0869	0.116	0.0751	0.0923	0.0568	0.0608
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0099	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																							
Aluminum	0.219	0.0043	0.0055	0.0055	0.005	0.0038	0.0075	0.0081	0.0071	0.0068	0.005	0.0045	0.0048	0.0079	<0.005	0.0113	0.0219	0.0092	0.0131	0.0116	0.0105	0.0075	0.0062
Antimony	<0.0005	<0.0002	0.00012	0.00011	0.00015	<0.0001	0.00043	<0.0001	<0.0001	<0.0001	0.00031	0.00026	<0.0001	0.00019	<0.0005	0.00012	0.00128	<0.0005	0.00021	<0.0005	0.0002	0.00014	0.00015
Arsenic	0.00116	0.0371	0.0379	0.0387	0.036	0.0401	0.00159	0.00621	0.00615	0.00637	0.00526	0.00599	0.00666	0.00583	0.0006	0.00165	0.00554	0.00252	0.00349	0.00288	0.00302	0.00271	0.00243
Barium	0.145	0.016	0.0187	0.0173	0.0183	0.0152	0.0416	0.0238	0.0256	0.0223	0.0565	0.0691	0.0835	0.0729	0.0768	0.0501	0.0558	<0.02	0.0187	0.022	0.0202	0.019	0.0209
Beryllium	<0.0005	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0002	<0.001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0025	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0025	<0.0005	<0.001	<0.2	<0.0005	<0.2	<0.0005	<0.0005	<0.0005
Boron	3.3	0.626	0.586	0.602	0.592	0.571	0.09	0.182	0.193	0.183	0.352	0.346	0.402	0.368	0.66	2.61	0.174	<0.1	0.057	<0.1	0.074	0.073	0.08
Cadmium	<0.00005	0.000033	0.000017	0.000017	0.000011	0.000013	0.000013	<0.00006	<0.00001	0.000021	<0.00003	<0.00003	<0.00001	<0.00001	<0.00005	<0.00001	<0.0001	<0.00004	0.000042	0.000044	0.000011	<0.00001	0.000012
Calcium	62.9	71.6	66.6	71.3	70.9	70.1	208	57.7	56.5	55.2	31.2	32.9	32.7	31.5	603	95.8	29.6	36	31.6	33.3	37.2	39.8	37.7
Chromium	0.0129	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	<0.0001	<0.0001	0.00012	<0.0001	<0.0001	<0.0001	<0.0001	0.0596	0.00024	0.00186	0.0078	0.00107	0.0021	0.00074	0.00106	0.00045
Cobalt	<0.0005	0.00122	0.002	0.00146	0.00152	0.00093	0.00112	0.00202	0.00177	0.00125	0.00107	0.00112	0.00147	0.00136	<0.0005	<0.0001	0.00144	<0.0003	<0.0001	<0.0003	<0.0001	<0.0001	<0.0001
Copper	0.0044	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00043	<0.0002	<0.0002	0.00158		0.00098	0.00063	<0.001	<0.0002	0.0017	0.002	0.00092	<0.001	0.00074	0.00065	0.00055
Dissolved Cadmium (by saltwater e›	<0.00002							<0.00002			<0.00002	<0.00002			<0.00002								
Iron	<0.01	0.134	0.184	0.227	0.191	0.256	0.318	0.804	0.664	0.444	0.159	0.362	0.617	0.462	<0.01	0.074	0.054	<0.03	<0.03	<0.03	<0.01	<0.01	<0.01
Lead	<0.00025	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000053	<0.00005	<0.00005	<0.00005	<0.00025	<0.00005	0.00014	<0.0005	<0.00005	<0.0005	<0.00005	<0.00005	<0.00005
Lithium	0.089	0.0465	0.0452	0.0495	0.0448	0.0493	0.00459	0.00386	0.00403	0.00459	0.00889	0.00956	0.0086	0.00823	0.0764	0.01	0.027	<0.005	0.0056	0.0052	0.00513	0.00429	0.00476
Magnesium	<0.1	131	121	135	127	132	145	82.5	81.6	80.8	50.2	46.3	48.5	47.2	<0.1	20.9	11.8	50.3	56.9	65	66.5	68.7	71.5
Manganese	<0.00025	0.173	0.442	0.365	0.381	0.248	4.2	1.16	1.13	0.752	0.356	0.673	1.1	0.974	<0.00025	0.339	0.161	0.00079	0.00891	0.0165	0.0161	0.0319	0.037
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001
Molybdenum	0.038	0.0168	0.0162	0.0163	0.0164	0.0167	0.0196	0.208	0.212	0.233	0.0341	0.0389	0.0338	0.0303	0.0732	0.0277	0.178	0.0835	0.0442	0.0471	0.0446	0.0527	0.0467
Nickel	<0.0025	0.002	0.00244	0.00186	0.00204	0.00116	0.00582	0.00366	0.00326	0.00246	0.00923	0.00888	0.00984	0.00972	<0.0025	<0.0005	0.0196	0.0012	0.0006	<0.001	0.00106	<0.0005	0.00051
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.137	0.164	0.15	0.19	0.259	0.319	0.3	<0.05	0.086	0.35	<0.3	<0.3	<0.3	0.089	<0.05	0.066
Potassium	127	6.71	5.97	6.76	6.74	6.66	16.6	33	32.2	33.6	23	24.9	21	20.8	16.3	31.3	85.1	17.7	22.9	21.5	20.6	20.1	19.6
Selenium	<0.0005	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	0.003	0.00013	0.00011	<0.0001	0.00046	0.00053	0.00024	0.00024	0.00083	0.00138	0.00204	0.0044	0.0039	0.0048	0.00567	0.00489	0.00459
Silicon	4.81	7.32	7.12	7.36	7.16	7.36	6.29	11.5	11.4	12.4	7.61	6.69	7.24	7.62	1.61	13.2	2.76	4.96	4.4	6.1	5.97	6.64	6.59
Silver	<0.00005	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00002	<0.00002	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001
Sodium	580	226	207	218	217	208	131	234	246	227	150	152	159	153	287	103	394	71.4	75.5	77.8	74.9	77.1	74.9
Strontium	2.55	10.5	10	9.92	9.62	10.1	3.92	1.23	1.26	1.18	1.02	1.14	1.02	0.923	11.3	1.64	0.764	0.693	0.736	0.824	0.825	0.933	0.979
Sulphur	94.5	308	313	311	316	321	401	253	256	251	112	101	99.4	101	507	415						113	117
Thallium	<0.00005	<0.00002	0.000014	0.000017	0.000017	0.000015	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00002	<0.0002	0.000013	<0.0002	0.000011	0.000011	0.000011
Tin	<0.0005	0.00022	0.00018	0.00014	0.00016	<0.0001	0.00131	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	0.00096	<0.0005	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001
Titanium	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	<0.00005	0.000745	0.000961	0.000848	0.00113	0.000827	0.00326	0.00171	0.00162	0.00138	0.00312	0.00355	0.00254	0.00231	<0.00005	0.000159	0.007	0.0019	0.00109	0.00087	0.000964	0.000934	0.000846
Vanadium	0.0111	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0014	0.0011	<0.001	<0.005	<0.001	0.0054	0.0029	0.0078	0.0093	0.0074	0.0083	0.0066
Zinc	<0.005	<0.002	0.0017	0.0033	0.0019	0.0024	<0.001	0.0176	0.0039	0.0037	0.0018	<0.001	<0.001	0.0019	<0.005	0.0045	<0.006	<0.005	<0.003	<0.005	0.0011	<0.001	<0.001
Total Metals																							
Aluminum	12.5	0.0362	0.0218	0.0195	0.0247	0.0807	0.271	0.0813	0.175	0.0927	0.0948	0.0758	0.0647	0.0568	0.096	0.015	0.0429	0.245	0.117	0.0509	0.267	0.197	0.0301
Antimony	<0.0005	<0.0002	0.00019	0.00016	0.00026	0.00014	0.00045	0.00011	0.00023	0.00014	0.00037	0.00032	0.0002	0.00032	0.00216	0.00036	0.00117	<0.0005	0.00021	<0.0005	0.00029	0.00015	0.00018
Arsenic	0.0051	0.0379	0.0386	0.0411	0.0367	0.0431	0.00169	0.00647	0.00663	0.00655	0.00538	0.00647	0.00667	0.00596	0.00177	0.00275	0.00539	0.00274	0.00356	0.0031	0.00306	0.00283	0.00249
Barium	0.376	0.0172	0.0204	0.0178	0.0187	0.0164	0.045	0.0244	0.0276	0.0235	0.0653	0.0873	0.0818	0.0728	0.0853	0.0496	0.0464	0.024	0.0204	0.02	0.024	0.0218	0.0215
Beryllium	<0.0005	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0002	<0.001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0025	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0025	<0.0005	<0.001	<0.2	<0.0005	<0.2	<0.0005	<0.0005	<0.0005
Boron	3.19	0.629	0.608	0.642	0.614	0.612	0.101	0.19	0.22	0.194	0.383	0.358	0.4	0.396	0.708	2.65	0.168	<0.1	0.063	<0.1	0.094	0.067	0.088
Cadmium	0.000085	0.000027	0.000029	0.000016	0.000023	0.000023	0.000146	<0.00012	0.000053	0.000062	<0.00006	<0.00008	0.000029	0.000032	<0.00005	<0.00001	<0.0005	<0.00004	0.000045	0.000046	0.000031	0.000014	0.000017
Calcium	196	70.2	66.5	69.5	69.6	70.7	200	58.1	58.9	55.2	32.7	32.5	31.3	30.4	601	92.2	26.6	37.2	30.5	35.7	36.3	37.5	37.4
Chromium	0.0381	<0.0002	0.00016	0.00019	0.00018	0.00029	0.00127	0.00263	0.00079	0.00049	0.00051	0.00057	0.00043	0.00037	0.0637	0.00092	0.00178	0.0085	0.00162	0.0027	0.0111	0.00181	0.00061
Cobalt	0.00657	0.00124	0.002	0.00151	0.00156	0.00106	0.00608	0.0021	0.002	0.00141	0.00124	0.00137	0.00154	0.00151	<0.0005	0.00017	0.00139	<0.0003	0.00014	<0.0003	0.00042	0.00025	<0.0001
Copper	0.0251	<0.001	0.00051	0.00059	<0.0005	0.00119	<0.0015	0.00102	0.00162	0.00139	0.017		0.0142	0.0111	0.0027	<0.0005	0.007	0.0038	0.00171	0.0019	0.00398	0.0029	0.00094
Iron	10.5	0.193	0.239	0.253	0.234	0.374	0.971	0.949	0.887	0.585	0.302	0.574	0.677	0.565	0.237	0.123	0.092	0.302	0.145	0.047	0.304	0.415	0.028
Lead	0.00593	<0.0001	0.000228	<0.00005	0.000101	0.000063	0.000234	0.000064	0.000101	0.000071	0.000219	0.000385	0.000311	0.000226	<0.00025	<0.00005	0.00036	<0.0005	<0.00005	<0.0005	0.000144	0.00005	<0.00005
Lithium	0.0896	0.0469	0.0471	0.0502	0.0451	0.0505	0.00463	0.00391	0.0043	0.00463	0.00886	0.00924	0.00836	0.00813	0.0797	0.00961	0.0229	<0.005	0.00541	0.0055	0.00562	0.00399	0.00471
Magnesium	18.3	135	125	134	128	134	144	85.1	82.7	81.7	49.5	45.7	46.8	46.4	1.95	19.9	12.1	52.6	56.3	65.4	65	64	67.4
Manganese	0.221	0.171	0.433	0.375	0.4	0.262	4.24	1.2	1.19	0.789	0.355	0.697	1.05	0.951	0.0124	0.348	0.176	0.0124	0.0149	0.0197	0.0345	0.0402	0.0395
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000021	<0.00001	<0.00001	<0.00001	0.000032	0.000049	0.000048	0.000028	<0.00001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001		0.000012	<0.00001
Molybdenum	0.0468	0.0174	0.0176	0.018	0.0171	0.0179	0.0241	0.217	0.225	0.244	0.0349	0.0391	0.0315	0.0332	0.0747	0.0774	0.193	0.0868	0.0421	0.0489	0.0481	0.0462	0.0482
Nickel	0.0623	0.0019	0.00265	0.00188	0.00228	0.00147	0.0114	0.00406	0.00418	0.00297	0.011	0.0105	0.0107	0.0107	<0.0025	0.00098	0.0129	0.0017	0.00103	<0.001	0.00726	0.00096	0.00062
Phosphorus	0.177	<0.05	<0.05	<0.05	<0.05	<0.05	0.07	0.162	0.173	0.157	0.208	0.293	0.306	0.297	<0.05	0.091	<0.3	<0.3	<0.3	<0.3	0.099	0.055	0.053
Potassium	124	6.59	6.36	6.62	6.62	6.83	16	33.3	32.9	33.9	23.5	23.6	19.8	20.5	16.6	28.5	77.2	18.3	23.6	23.1	20.5	18.8	19.7
Selenium	0.00083	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	0.00057	0.00015	0.00012	0.0001	0.00053	0.00072	0.00037	0.00038	0.00086	<0.0001	0.00195	0.0046	0.00406	0.0051	0.00558	0.00485	0.0045
Silicon	47.5	7.36	7.32	7.51	7.31	7.68	6.63	11.9	12	12.7	8	6.75	7.12	7.67	2	12.6	2.92	5.66	4.58	6.29	6.39	6.96	6.52
Silver	0.000056	<0.00002	<0.00001	0.000015	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000028	0.000024	0.000021	0.000025	<0.00005	<0.00001	<0.00002	<0.00002	<0.00001	<0.00002	0.000028	<0.00001	0.000017
Sodium	617	222	210	221	218	215	128	237	254	231	159	154	148	143	292	101	389	73.8	77.8	83.4	77.8	76.2	75.9
Strontium	2.84	10.8	10.5	10.2	9.84	10.4	3.76	1.28	1.32	1.23	1.05	1.19	0.978	1	11.8	1.64	0.699	0.731	0.689	0.88	0.842	0.819	1
Sulphur	94.7	321	319	321	327	329	391	266	266	258	117	102	96.7	99.8	503	103						109	118
Thallium	<0.00005	0.000024	0.000015	0.000019	0.000019	0.000015	0.000015	<0.00001	<0.00001	<0.00001	0.00003	0.000051	0.000032	0.00002	<0.00005	<0.00001	0.000027	<0.0002	0.000014	<0.0002	0.000011	0.000014	0.000014
Tin	0.00192	0.00037	0.00038	0.00026	0.00031	0.00029	0.00275	0.00011	0.00028	0.00019	0.00013	0.00021	<0.0001	0.00011	0.00057	0.00015	0.00092	<0.0005	0.00011	<0.0005	0.00042	<0.0001	<0.0001
Titanium	0.356	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	0.015	<0.01	<0.01	0.01	<0.01	<0.01
Total Cadmium (by saltwater extract								0.000057			0.000033	0.000048			<0.00002								
Uranium	0.00134	0.000737	0.000987	0.00091	0.0012	0.000898	0.00301	0.00179	0.00167	0.00143	0.00335	0.0037	0.00237	0.00237	<0.00005	0.000182	0.00757	0.00202	0.00105	0.00094	0.001	0.000806	0.000878
Vanadium	0.039	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0015	0.0025	0.0019	0.0016	<0.005	<0.001	0.005	0.0039	0.0084	0.0099	0.0087	0.0092	0.0069
Zinc	0.03	<0.006	<0.003	0.0038	0.0042	0.0046	0.0041	0.0115	0.0075	0.0056	0.0036	0.0056	0.0041	0.0037	<0.015	<0.003	<0.006	<0.005	0.0044	<0.005	0.0051	<0.003	<0.003
Organics																							
Carbon Organic (Dissolved)								4.38	4.48	3.76	10.6	12.9	9.05	7.9	4.42	12.5	67.5	4.32	1.96	2.35	1.81	2.41	1.73
Carbon Organic (Total)	843	2.41	2.45	2.73	2.68	2.58	8.1										58	4.14	2	1.71	1.8	2.07	1.31
Nitrogen Organic (Dissolved)																	2.91	0.33	6.1	<2.2		<2	<2.2
Nitrogen Organic (Total)																	1.96	0.33	<0.3	<0.06			<0.06
ALS LAB ID	**L1459061**	**L1435549**	**L1455485**	**L1473799**	**L1486405**	**L1507004**	**L1459061**	**L1488886**	**L1502282**	**L1516148**	**L1464552**	**L1481825**	**L1502282**	**L1516148**	**L1523985**	**L1517413**	**L1079375**	**L1035635**	**L1114029**	**L1160966**	**L1202478**	**L1247921**	**L1277099**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D5.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D5.2 - GROUNDWATER QUALITY DATA

Site ID					BGC14-001D					BGC14-002D					BGC14-002S					BGC14-003D			
Site ID	AJGW07-S	AJGW07-S	AJGW07-S	AJGW07-S	BGC14-001	BGC14-001	BGC14-001	BGC14-001	BGC14-001	BGC14-002	BGC14-002	BGC14-002	BGC14-002	BGC14-002	BGC14-002	BGC14-002	BGC14-002	BGC14-002	BGC14-002	BGC14-003	BGC14-003	BGC14-003	BGC14-003
Analytes	Nov-13	Mar-14	May-14	Jun-14	Mar-14	May-14	Jun-14	Jul-14	Aug-14	Mar-14	May-14	Jun-14	Jul-14	Aug-14	Mar-14	May-14	Jun-14	Jul-14	Aug-14	Jun-14	Jul-14	Aug-14	Mar-14
In Situ Parameters																							
Conductivity µS/cm	808	0.948	658	740	653	1931	1100	723	1081	1000	611	1688	1609	1342	1412	2317	1970	1274	1356	1560	1.97	1783	1420
Oxygen Dissolved %	56.2	2.5	7.77	14.7	73.3	4.4	4.2	16.3	3.9	32.5	0	2.1	1.1	1.1	45	-0.3	2.9	2.7	9.8	0.6	2.4	5.5	43.3
Oxygen Dissolved	1.1	0.26	0.17	0.49	0.43	1.04	0.99	6.02	2.64	1.87	0.36	0.75	5.45	2.43	4.26	1.44	1.65	4.56	0.25	1.21	1.14	2.27	0.64
pH (unitless)	8.59	8.48	8.5	8.44	8.49	7.23	11.1	10.8	9.91	9	9.62	7.81	7.85	7.85	7.78	8.11	9.75	7.83	7.53	7.76	7.47	7.42	7.85
Redox Potential mV	212	125	3.74	67.3	115					30		147			-298		-74	-25.3	122	92.8	96.6	97.5	50.2
Salinity ppt	0.56	0.47	0.48	0.48	0.46					0.5		1.22			1.11		1	0.96	1.28	1.14	1.01	0.91	1.04
Specific Conductivity µS/cm	1125	0.655	959	966	934	2643	1318	925	795		9060	2360	1937	1909	2166	1679		1882	1976	2220	1.31	1219	2028
Temperature °C	10.2	8.79	8.43	12.7	9.24	10.9	16.3	13.5	11	13.4	7.93	10.1	16.3	9.42	6.78	10.3	12.7	8.06	8.56	9.42	8	8.43	9.29
Total Dissolved Solids	730	617	627	628	607					638		1533			1410		1260	1222	1283	1443	1283	1159	1319
Turbidity NTU	2.2	2.7	4.1	3.7	3.8	0.8	3.4	3.5	5.2	1.5	-0.4	1.6	4	0.4	6.7	0	0.8	-0.9	-2.1	4.6	1.4	2.6	2.8
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)						5.3	<1	<1		<1			4.6	3.2			4						
Alkalinity (Total as CaCO3)	159	146	148	161	161	220	118	102	48.9	37.1	50.5	71.1	81.9	106	99	91.8	80.9	84.5	75.7	77.1	80.1	71.7	68.7
Bicarbonate Alkalinity	154	146	141	156	158	220	<1	1.1	33.3		35.7	71.1	81.9	106	99	91.8		84.5	75.7	77.1	80.1	71.7	68.7
Carbonate Alkalinity	4.4	<1	6.5	5.5	2.7	<2	83.4	101	15.6		14.8	<2	<2	<2	<2	<1		<2	<2	<2	<2	<2	<2
Color TCU	<5					10.5	30.6	31.4	17	11.6	14.6	7.3	11.6	15.7	13.2	10.7	8.9	9.1	8.6	7.7	7.4	6.7	
Hardness as CaCO3 (Dissolved)	374	369	366	370	366	428	33.6	38.9	38.1	33.8	43.2	237	257	291	259	246	246	221	236	230		237	248
Hydroxide Alkalinity	<1	<1	<1	<1	<1	<2	34.2	<1	<1		<1	<2	<2	<2	<2	<1		<2	<2	<2	<2	<2	<2
pH (unitless)	8.37	8.43	8.38	8.38	8.41	7.93	10.8	10.2	9.04	9.22	8.81	7.94	8.11	8.22	8.01	7.98	7.78	7.98	7.96	7.97	8	7.91	7.86
Specific Conductivity µS/cm	1010	991	980	974	965	2870	1170	1110	936	905	917	2030	2110	2150	2110	2030	1960	1920	2030	2010	2060	2000	2070
Total Dissolved Solids	717	662	666	669	686	2180	679	686	644	592	610	1470	1500	1457	1540	1510	1440	1420	1340	1470	1470	1520	1490
Total Suspended Solids	<3			3.5	<3	4	4.7	3.7	<3	<3	4.7	<3	<3	9.7	10.4	3.3	<3	4	<3	<3		<3	<3
Turbidity NTU	4.55			1.61	0.56	4	2.85	3.37	0.93	0.84	2.39	1.22	0.81	4.47	6.06	1.35	0.44	1.19	0.86	0.9		0.39	0.98
Dissolved Anions																							
Bromide	<0.5	<1	<0.5	<0.25	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloride	<5	<5	<5	2.8	<5	17	25.3	24.8	26.1	26.1	25.7	21	23	24	28	24	23	22	22	23	25	21	21
Fluoride	0.4	<0.2	0.4	0.191	0.199	<0.4	1.36	1.16	1.11	1.02	0.99	0.83	0.54	0.44	0.42	0.48	0.52	0.5	0.9	0.55	0.6	0.86	0.645
Sulphate	365	361	369	359	367	1340	344	362	356	341	349	941	967	986	990	972	934	921	952	924	960	965	970
Nutrients																							
Ammonia (Total)	0.0933	0.0888	0.0879	0.0974	0.102	0.0458	0.37	0.296	0.124	0.092	0.108	0.065	0.0765	0.118	0.101	0.067	0.0744	0.0728	0.0639	0.092	0.127	0.0933	0.0677
Nitrate (as N)	9.13	6.43	3.73	2	1.37	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.13	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite (as N)	0.059	0.116	0.142	0.174	0.201	<0.02	<0.01	<0.01	<0.01	<0.01	0.037	0.028	<0.02	0.028	0.024	<0.02	<0.02	0.024	0.044	<0.02	<0.02	<0.02	<0.02
Nitrogen (Dissolved)						0.25	0.75	0.46	0.3		0.265		0.44	0.49	0.27	0.63		0.321	0.219				
Nitrogen (Total)	8.68					0.28	0.68	0.56	0.3	0.189	0.327	0.31	0.44	0.61	0.441	0.352	0.25	0.243	0.261	0.28			
Nitrogen Kjeldahl (Total)	<0.05	<0.05	<0.05	<0.05	0.189	0.28	0.68	0.61	0.3	0.189	0.338	0.286	0.44	0.666	0.42	0.352	0.254	0.302	0.28	0.282	0.304	0.287	0.301
Orthophosphate (Dissolved)		0.0429	0.0436	0.0414	0.0441			0.316		0.169				0.031			0.0643				0.0837	0.09	0.0973
Phosphorus - Dissolved	0.0546	0.0471	0.0471	0.0442	0.0452	0.0426	0.332	0.304	0.247		0.264	0.0842	0.0556	0.0346	0.0496	0.0585		0.0737	0.0723	0.0886	0.0914	0.0984	0.0912
Phosphorus - Total	0.057	0.05	0.0499	0.0507	0.047	0.0558	0.387	0.373	0.252	0.178	0.287	0.0964	0.0601	0.0547	0.0757	0.0692	0.0766	0.0848	0.0815	0.097	0.119	0.129	0.0962
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	0.0059	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0051	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																							
Aluminum	0.0055	0.0055	0.006	0.0052	0.0057	<0.05	0.641	0.553	0.147	0.0833	0.175	0.0114	<0.025	0.0119	0.0146	0.043	0.0131	0.0129	0.0112	0.012	0.0111	0.0089	0.0148
Antimony	0.00014	0.00015	0.00016	0.00013	0.00014	0.0055	<0.001	0.00066	<0.0005	0.00023	0.00043	<0.0002	<0.0025	0.00094	0.00075	<0.0025	0.00034	0.00026	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Arsenic	0.0023	0.00208	0.00201	0.00211	0.00205	<0.005	0.0206	0.0212	0.012	0.0123	0.00925	0.00197	<0.0025	0.00154	0.00147	<0.0025	0.00193	0.00187	0.00187	0.00182	0.00189	0.002	0.00189
Barium	0.0212	0.0205	0.0208	0.0211	0.021	0.033	<0.02	0.0167	<0.02	0.00859	0.0106	0.0428	0.054	0.057	0.0482	0.048	0.0413	0.0383	0.0403	0.0386	0.0419	0.0412	0.0406
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	<0.002	<0.0001	<0.001	<0.0001	<0.0001	<0.0002	<0.005	<0.0002	<0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.2	<0.0005	<0.2	<0.0005	<0.0005	<0.001	<0.2	<0.001	<0.001	<0.2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Boron	0.067	0.074	0.071	0.068	0.068	1.31	2.31	1.76	2.25	1.7	1.75	1.35	1.67	1.72	1.72	1.71	1.45	1.56	1.32	1.44	1.58	1.54	1.62
Cadmium	0.00002	<0.00002	<0.00003	<0.00005	0.000011	<0.00017	<0.00008	<0.0001	<0.00017	<0.00006	<0.00007	<0.00012	<0.00085	<0.0002	0.000129	0.000219	<0.00007	0.0001	<0.0001	<0.0001	<0.00007	<0.00009	<0.00009
Calcium	38.8	38.4	39.6	40.8	39.9	84.8	13	15	14.4		16.3	82.1	87.6	100	88.6	83.8	85.4	75.5	81.7	79.5	83.3	82.6	85.9
Chromium	0.00048	<0.0001	0.0001	<0.0001	<0.0001	<0.01	0.0042	0.00287	<0.001	0.00029	<0.0001	<0.0002	<0.005	0.0006	0.00056	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Cobalt	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.003	<0.0006	0.00022	<0.0003	<0.0001	<0.0001	0.00051	<0.0015	0.00055	0.00074	<0.0015	0.0006	0.0006	0.00045	0.00038	0.00051	0.00034	0.0004
Copper	0.00052	0.00041	0.00045	0.00079	0.00045	<0.01	<0.002	0.00161	<0.001	<0.0002	0.00062	0.00069	<0.005	0.0014	0.0032	0.0224	0.00088	0.00094	0.00069	0.00041	<0.0004	0.00096	0.00066
Dissolved Cadmium (by saltwater e›			<0.00002	<0.00002																			0.00003
Iron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.03	<0.03	<0.03	<0.03	<0.01	<0.01	0.023	<0.03	<0.03	<0.03	<0.03	<0.01	<0.01	<0.01	<0.01	0.082	<0.01	0.013
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.005	<0.001	<0.00005	<0.0005	<0.00005	<0.00005	<0.0001	<0.0025	<0.0001	<0.0001	<0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Lithium	0.00388	0.00474	0.00387	0.0036	0.00387	<0.05	0.011	0.00736	<0.005	0.003	0.00269	0.0037	<0.025	0.0073	0.0028	<0.025	0.003	0.0028	<0.001	0.0036	0.005	0.0038	0.0043
Magnesium	67.4	66.3	64.9	65.1	64.6	52.6	0.29	0.35	0.51		0.59	7.77	9.41	9.89	9.05	8.85	7.91	7.8	7.8	7.73	8.07	7.41	8.09
Manganese	0.0491	0.0485	0.0588	0.0641	0.0656	1.04	0.00597	0.0144	0.017	0.0164	0.0158	0.564	0.118	0.158	0.363	0.337	0.371	0.439	0.543	0.537	0.547	0.514	0.516
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.05	0.0518	0.0537	0.0591	0.0619	0.014	0.213	0.182	0.216	0.218	0.204	0.222	0.165	0.145	0.158	0.165	0.198	0.201	0.206	0.21	0.22	0.2	0.2
Nickel	<0.0005	<0.0005	<0.0005	0.00059	<0.0005	0.017	<0.002	0.00263	0.0015	0.00093	0.0014	0.0019	<0.005	0.0082	0.0045	<0.005	0.0046	0.0024	0.0022	0.0018	0.0019	0.0017	0.0017
Phosphorus	0.053	<0.05	<0.05	0.053	<0.05	<0.3	0.37	0.33	<0.3		0.247	0.095	<0.3	<0.3	<0.3	<0.3	0.081	0.08	0.089	0.092	0.108	0.108	0.11
Potassium	18.9	19.7	19.3	20.3	20.5	2.7	41.6	38.8	10.2	6.24	9.73	7.08	8.6	11.3	8.06	7.8	7.29	7.39	7.28	7.07	7.48	6.84	7.3
Selenium	0.00291	0.00197	0.00119	0.00071	0.00059	<0.01	<0.002	0.00094	<0.001	0.00026	0.00036	<0.0002	<0.005	0.00051	0.00034	<0.005	0.00029	0.00022	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Silicon	6.85	6.85	6.79	7.19	7.64	5.86	3.32	3.39	2.66		2.73	3.19	3.22	3.47	3.53	3.88	3.57	3.46	3.48	3.31	3.37	3.26	3.26
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	<0.00004	<0.00001	<0.00002	<0.00001	<0.00001	<0.00002	<0.0001	<0.00002	<0.00002	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	76.6	72	71.5	68.9	72.1	551	187	193	175	169	170	357	391	373	357	382	340	343	343	341	351	374	347
Strontium	0.894	0.865	0.912	0.935	0.931	3.07	0.302	0.235	0.235	0.212	0.228	1.8	1.49	1.56	1.73	1.83	1.73	1.6	1.7	1.7	1.82	1.82	1.82
Sulphur	118	115	117	118	125						114	289						298	312	299	303	308	314
Thallium	0.000011	<0.00001	0.000015	<0.00001	<0.00001	<0.002	<0.0004	0.000014	<0.0002	<0.00001	0.000013	0.000034	<0.001	0.000058	0.000058	<0.001	0.000041	0.000047	0.000045	0.000029	<0.00002	0.000047	0.000026
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.001	0.00026	<0.0005	<0.0001	0.0003	<0.0002	<0.0025	0.00184	<0.0002	<0.0025	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Uranium	0.00084	0.000731	0.000803	0.000786	0.000758	0.0069	<0.0004	0.000232	0.00026	0.000137	0.000282	0.000806	0.0018	0.00214	0.00202	0.0019	0.00123	0.00103	0.000982	0.000787	0.000695	0.000673	0.000595
Vanadium	0.0064	0.0063	0.0058	0.0056	0.0056	<0.01	0.0104	0.0122	0.0033	0.0018	0.003	<0.002	<0.005	<0.002	<0.002	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Zinc	0.0013	<0.001	<0.001	0.0019	<0.001	<0.005	<0.005	<0.003	<0.005	<0.001	<0.001	0.0023	0.0062	0.0073	0.0202	0.0054	0.0034	0.0034	0.0032	0.0031	<0.002	0.0064	0.006
Total Metals																							
Aluminum	0.0437	0.0667	0.0451	0.063	0.0381	0.184	0.723	0.624	0.236	0.0977	0.287	0.0294	0.041	0.102	0.302	0.131	0.0739	0.0407	0.0363	0.0294	0.0236	0.0199	0.0496
Antimony	0.00018	0.0002	0.00017	0.00016	0.00018	0.0055	<0.001	0.00071	<0.0005	0.00025	0.00051	<0.0002	<0.0025	0.00091	0.00101	<0.0025	0.00035	0.0003	0.00022	<0.0002	<0.0002	<0.0002	0.00022
Arsenic	0.00228	0.00211	0.00202	0.00218	0.00208	<0.005	0.0203	0.019	0.0126	0.0124	0.00879	0.00199	<0.0025	0.0015	0.00164	<0.0025	0.00196	0.00189	0.00199	0.00193	0.00203	0.0021	0.00203
Barium	0.0216	0.0217	0.0217	0.0225	0.0219	0.035	<0.02	0.0183	<0.02	0.00845	0.0116	0.0391	0.053	0.0564	0.0562	0.05	0.0426	0.0386	0.0425	0.0399	0.0416	0.0416	0.04
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	<0.002	<0.0001	<0.001	<0.0001	<0.0001	<0.0002	<0.005	<0.0002	<0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.2	<0.0005	<0.2	<0.0005	<0.0005	<0.001	<0.2	<0.001	<0.001	<0.2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Boron	0.072	0.079	0.077	0.077	0.077	1.32	2.34	1.9	2.33	1.75	1.82	1.3	1.64	1.68	1.76	1.81	1.55	1.55	1.42	1.52	1.6	1.68	1.64
Cadmium	0.000025	<0.00003	<0.00004	<0.00005	0.000018	<0.00017	<0.00012	<0.00015	<0.00026	<0.00009	<0.0001	<0.00011	<0.00085	<0.00024	0.000168	0.000252	<0.00009	<0.00012	<0.0001	<0.0002	<0.00008	<0.0001	<0.00009
Calcium	38.4	39.3	38.2	40.4	39.1	84.5	13	14.6	16.3		16.6	77.8	86	93.4	91	88.4	83.3	75.3	84.1	75.1	82	85.1	84.3
Chromium	0.00109	0.00067	0.00051	0.0005	0.00042	<0.01	0.0044	0.00317	0.0036	0.00182	0.00119	0.00044	<0.005	0.00164	0.00496	<0.005	0.00054	0.00038	0.00065	0.00026	0.00043	0.00023	0.00039
Cobalt	0.00011	0.00015	0.00013	0.00016	0.00014	<0.003	<0.0006	0.00029	<0.0003	0.00011	0.00014	0.00051	<0.0015	0.00066	0.00097	<0.0015	0.00065	0.00065	0.00051	0.00042	0.00051	0.00038	0.00045
Copper	0.00112	0.00108	0.00143	0.00145	0.00109	<0.01	0.0024	0.00244	0.0026	0.00104	0.00369	0.0012	<0.005	0.0028	0.0088	0.0244	0.0024	0.002	0.0035	0.0014	0.001	0.0016	0.0019
Iron	0.048	0.092	0.057	0.076	0.047	0.392	0.099	0.116	0.081	0.03	0.088	0.072	<0.03	0.106	0.352	0.103	0.066	0.054	0.069	0.077	0.105	0.032	0.066
Lead	0.00006	<0.00005	0.000137	0.000086	0.000074	<0.005	<0.001	0.000114	<0.0005	0.000052	0.00012	<0.0001	<0.0025	<0.0001	0.00053	<0.0025	<0.0001	0.00014	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Lithium	0.00406	0.00463	0.00398	0.00349	0.00412	<0.05	0.01	0.00793	<0.005	0.00324	0.00255	0.0038	<0.025	0.0072	0.0032	<0.025	0.0033	0.0027	0.0012	0.0038	0.0044	0.0043	0.0042
Magnesium	66.3	65.9	63.1	64.4	63.2	52.6	0.36	0.44	0.63		0.64	7.51	9.24	9.39	9.48	9.33	7.78	7.85	8	7.87	8.05	7.89	8
Manganese	0.051	0.052	0.0625	0.0693	0.0702	0.972	0.0113	0.0283	0.0232	0.0176	0.0279	0.526	0.123	0.16	0.415	0.368	0.379	0.444	0.578	0.574	0.554	0.541	0.539
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000015	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0518	0.0572	0.0572	0.0615	0.0664	0.014	0.215	0.2	0.231	0.224	0.201	0.213	0.17	0.145	0.161	0.172	0.199	0.202	0.209	0.222	0.214	0.217	0.206
Nickel	0.00067	0.00071	0.00078	0.0008	0.00063	0.018	<0.002	0.00291	0.0031	0.00152	0.00211	0.0019	<0.005	0.0104	0.0082	<0.005	0.0028	0.0027	0.0026	0.002	0.0021	0.0018	0.0023
Phosphorus	0.059	0.051	0.052	0.057	<0.05	<0.3	0.41	0.39	<0.3		0.255	0.097	<0.3	<0.3	<0.3	<0.3	0.084	0.09	0.107	0.102	0.105	0.117	0.119
Potassium	19.1	21.3	20	20.1	20.2	2.7	42.7	37	11.8	6.02	10	6.82	8.3	11.8	8.19	8.3	7.04	7.38	7.35	7.48	7.46	7.34	7.05
Selenium	0.00284	0.00194	0.0011	0.00068	0.0006	<0.01	<0.002	0.00131	<0.001	0.00032	0.00041	<0.0002	<0.005	0.00046	0.00035	<0.005	0.00026	0.00024	0.00022	<0.0002	<0.0002	<0.0002	<0.0002
Silicon	6.82	7.19	6.82	7.38	7.73	6.08	3.44	3.4	3.01		2.9	3.14	3.22	3.38	4.37	4.16	3.61	3.49	3.58	3.32	3.37	3.49	3.34
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	<0.00004	<0.00001	<0.00002	0.000011	<0.00001	<0.00002	<0.0001	<0.00002	0.000022	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	74.6	73.4	72.1	69.7	73.4	547	188	186	194	163	173	336	382	358	368	403	348	340	361	336	358	381	347
Strontium	0.91	0.88	0.921	0.979	0.997	3.06	0.308	0.263	0.265	0.21	0.229	1.76	1.48	1.45	1.75	1.9	1.74	1.66	1.76	1.74	1.76	1.95	1.81
Sulphur	119	122	119	122	124						113	284						298	322	297	311	319	314
Thallium	0.000015	<0.00001	<0.00001	<0.00001	0.00002	<0.002	<0.0004	0.00002	<0.0002	0.000015	0.000017	0.00004	<0.001	0.000056	0.000056	<0.001	0.000044	0.000049	0.000043	0.00003	<0.00002	0.000052	0.000031
Tin	<0.0001	0.00011	0.00015	0.00011	<0.0001	<0.005	<0.001	0.00042	<0.0005	0.00014	0.00041	<0.0002	<0.0025	0.00262	0.00135	<0.0025	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	0.015	<0.01	<0.01	<0.01		<0.01	<0.02	<0.01	<0.01	0.023	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Total Cadmium (by saltwater extract			<0.00002	<0.00002																			0.000033
Uranium	0.000843	0.00079	0.000797	0.00084	0.000797	0.0067	<0.0004	0.000302	0.00031	0.000142	0.000315	0.000779	0.0018	0.00192	0.00204	0.002	0.00128	0.00104	0.000969	0.000817	0.000709	0.000761	0.000623
Vanadium	0.0065	0.0069	0.0061	0.0063	0.0062	<0.01	0.0104	0.012	0.0041	0.0019	0.0036	<0.002	<0.005	<0.002	<0.002	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Zinc	<0.003	<0.003	<0.003	0.0033	0.0031	<0.005	<0.005	<0.003	<0.005	<0.003	0.0038	<0.006	<0.005	0.0105	0.0254	0.0086	<0.006	<0.006	<0.006	<0.006	<0.006	0.0068	0.009
Organics																							
Carbon Organic (Dissolved)	1.71	1.38				8.81	7.38	9.63	6.4	4.54	4.75	6.57	7.03	8.47	7.69	10.1	6.87	6.76	6.2	6.37	6.7		
Carbon Organic (Total)	1.62	1.34	1.34	1.42	1.39	9.45	6.99	9.7	5.81	4.5	4.85	6.53	6.88	8.59	8.96	7.3	6.65	6.96	6.25	6.34	6.28	11.4	4.63
Nitrogen Organic (Dissolved)						0.204	0.38	0.164	0.176		0.12		0.363	0.344	0.146	0.563		0.097	0.111				
Nitrogen Organic (Total)						0.234	0.31	0.26	0.176				0.363	0.464	0.32	0.285			0.154				
ALS LAB ID	**L1348177**	**L1392288**	**L1431355**	**L1478436**	**L1517413**	**L1041015**	**L1039844**	**L1076555**	**L1160966**	**L1200094**	**L1248467**	**L1346553**	**L1038606**	**L1076555**	**L1115110**	**L1160966**	**L1202478**	**L1248467**	**L1277798**	**L1307601**	**L1393344**	**L1432458**	**L1474413**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D5.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D5.2 - GROUNDWATER QUALITY DATA

Site ID	BGC14-003I				BGC14-003S					BGC14-005					BGC14-006D				BGC14-009				
Site ID	BGC14-003	BGC14-003	BGC14-003	BGC14-003	BGC14-003	BGC14-003	BGC14-003	BGC14-003	BGC14-003	BGC14-005	BGC14-005	BGC14-005	BGC14-005	BGC14-005	BGC14-006	BGC14-006	BGC14-006	BGC14-006	BGC14-009	BGC14-009	BGC14-009	BGC14-009	BGC14-009
Analytes	**May-14**	**Jun-14**	**Jul-14**	**Aug-14**	**Mar-14**	**May-14**	**Jun-14**	**Jul-14**	**Aug-14**	**Apr-14**	**May-14**	**Jun-14**	**Jul-14**	**Aug-14**	**May-14**	**Jul-14**	**Aug-14**	**Sep-14**	**Apr-14**	**May-14**	**Jul-14**	**Jul-14**	**Aug-14**
In Situ Parameters																							
Conductivity µS/cm	1472	971	1062	913	856	709	1992	2010	771	650	927	1400	2.12	1919	1597	1585	17	1664	1574	1545	1793	1816	2.29
Oxygen Dissolved %	12	1.3	8.3	8.1	53.3	3	1.4	1.4	101	0.31	4	1.7	2.9	4.8		6.3	20.2	15	7.6	2.2	0.6	4	7.3
Oxygen Dissolved	0.9	34.4	3.96	4.75	4.18	136	2.32	2.32	3.43	0.06	0.08	0.4	0.16	0.4	0.36	2.85	1.92	39.6	2.35	0.44	0.35	7.19	0.236
pH (unitless)	8.23	9.04	7.56	7.6	7.98	8.35	8.4	8.15	8.48	8.86	8.22	8.31	8.33	8.28	8.26	8.28	7.75	7.84	8.04	8.3	7.66	7.91	7.86
Redox Potential mV	61		-292	-293				-158	-140	-210	-244	-92.5	1.38	-152	-151	-160			-55.4	-106	-144	26.9	-69
Salinity ppt	1.07		0.81	0.74				1	0.58	0.49	0.67	0.98	1.08	0.98	1.12	1.13			1.23	1.22	1.36	1.26	1.18
Specific Conductivity µS/cm	2088	1435	1610	1478	1005	1031	1474		1163	999	1327	1987	1.41	1293	2169	2195	2509	2429	2384	2369	2640	2426	1.51
Temperature °C	9.56	8.06	7.16	4.97	17.3	8.67	10.9	12.3	7.35	6.72	9.2	10.9	7.54	7.91	11.2	10.4	8.11	8.53	7.3	6.73	8.06	11.9	7.21
Total Dissolved Solids	1355		1047	961				1300	756	649	863	1246	1846	1248	1410	1426			1553	1540	1780	1576	1486
Turbidity NTU	2.1	7.6	10.6	6.7	0	-5.2	0	2	2.1	1.8	0	0	1	-2.4	1.4	1.4	2.5	4	5.6	10.7	0	2.3	2.2
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)		<1			4.4			3.3			2.3						6.1				2.6		
Alkalinity (Total as CaCO3)	53.8	275	313	286	48.2	42.9	38.6	41.3	42.3	39.7	40.4	41.2	42.4	27.8	39.7	39.9	83.9	78.4	77.4	75.3	72.8	74.4	76.8
Bicarbonate Alkalinity	53.8	272	313	286	48.2		38.6		42.3	39.7	40.4	41.2	42.4	27.8	39.7	39.9	83.9		77.4	75.3	72.8	74.4	76.8
Carbonate Alkalinity	<1	3.2	<2	<2	<2		<1		<2	<2	<2	<2	<2	<2	<1	<1	<2		<2	<2	<2	<2	<2
Color TCU		18.7	16.6	12.3	<5	<5	<5	<5	<5	<5	<5	<5					9.8	6.7	<5	<5	<5	<5	
Hardness as CaCO3 (Dissolved)	248	582	626	607	157	140	424	586	195	156	205	557	638	544	652	653	787	815	729	750	814	793	803
Hydroxide Alkalinity	<1	<1	<2	<2	<2		<1		<2	<2	<2	<2	<2	<2	<1	<1	<2		<2	<2	<2	<2	<2
pH (unitless)	7.75	8.33	8.01	7.95	7.8	7.9	7.7	8.02	7.85	7.92	8.03	7.67	7.86	7.9	7.81	7.77	7.56	7.93	7.88	7.83	7.97	7.95	7.84
Specific Conductivity µS/cm	2060	1600	1510	1510	1090	987	1730	1920	1130	1080	1180	2020	2140	1900	2170	2210	2360	2310	2310	2400	2290	2360	2320
Total Dissolved Solids	1540	1190	1150	1210	720	675	1340	1630	797	690	857	1560	1720	1530	1750	1740	1960	1950	1970	1750	1990	1910	1910
Total Suspended Solids	3.4	36	25.8	7.1	<3	<3	<3	<3	<3	3.3	<3	<3		4.5	<3	<3	<3	4.2	4	11.4	9.7	7.1	
Turbidity NTU	0.84	21.9	24.1	7.58	0.39	1.87	0.38	0.47	0.83	0.42	0.57	0.51		0.35	0.34	0.57	2.61	4.97	3.7	7.74	6.95	3.76	
Dissolved Anions																							
Bromide	<1	<1	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloride	22	27	19.7	25.1	11.8	9.1	12	12	9.8	9.1	11.7	11	14	17	12	11	38	33	29	28	31	28	30
Fluoride	0.572	<0.4	0.29	0.25	0.63	0.38	<0.4	<0.4	0.31	0.55	0.32	0.51	<0.4	<0.4	0.28	0.251	<0.4	<0.4	<0.4	0.56	<0.4	0.58	<0.4
Sulphate	1010	597	560	573	476	423	918	1040	520	476	558	1080	1190	1000	1220	1230	1290	1290	1310	1320	1340	1300	1300
Nutrients																							
Ammonia (Total)	0.0713	0.314	0.176	<0.05	0.0215	0.0509	0.0707	0.0814	0.048	0.059	0.058	0.071	0.0904	0.08	0.0892	0.0961	0.125	0.14	0.102	0.143	0.124	0.096	0.067
Nitrate (as N)	0.13	<0.1	<0.05	<0.05	<0.05	<0.05	<0.1	<0.1	<0.05	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite (as N)	0.023	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.02	0.024	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nitrogen (Dissolved)		0.89	0.41	0.2	0.19	0.1	0.28		0.072	0.074							0.41	0.24	0.188	0.175			
Nitrogen (Total)		0.661	0.502	<0.043	0.14	0.09	0.119	0.13	0.117	<0.071	0.108	0.17					0.48	0.273	0.19	0.18	0.213	0.2	
Nitrogen Kjeldahl (Total)	0.256	0.661	0.5	<0.2	0.14	0.128	0.119	0.127	0.117	0.066	0.123	0.165	0.167	0.146	0.205	0.169	0.48	0.273	0.192	0.181	0.202	0.203	0.165
Orthophosphate (Dissolved)	0.099	0.0392						0.0116					0.0072	0.0067	0.0052	0.0038							0.0532
Phosphorus - Dissolved		0.0368	<0.002	0.0027	0.0214	0.0485	0.0135		0.0448	0.0348	0.0225	0.0085	0.007	0.0105	0.0056		0.0134	0.0305	0.0504	0.048	0.0494	0.0528	0.0525
Phosphorus - Total	0.132	0.101	0.153	0.107	0.0281	0.055	0.0165	0.015	0.0496	0.038	0.0239	0.0093	0.0089	0.0081	0.0057	0.0055	0.0329	0.0511	0.0735	0.0828	0.0765	0.0656	0.0712
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	0.007	0.0075	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																							
Aluminum	0.0159	<0.003	0.0058	0.0074	0.019	0.0139	0.022	<0.01	0.0078	0.0074	0.0065	0.0039	0.0034	0.0046	0.0046	0.0033	<0.025	0.0061	0.0063	0.0046	0.0043	0.0038	0.0038
Antimony	<0.0002	0.0006	0.00047	0.0001	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0025	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.00192	0.00496	0.00496	0.00379	0.0084	0.01	0.0156	0.015	0.0116	0.0122	0.0136	0.0135	0.0137	0.0138	0.0134	0.013	<0.0025	0.00146	0.00149	0.00165	0.00144	0.00138	0.00151
Barium	0.0434	0.0536	0.0527	0.0809	<0.02	0.015	0.022	0.023	0.0138	0.0126	0.016	0.0214	0.0242	0.0229	0.0232	0.0218	0.063	0.0514	0.0353	0.0278	0.0284	0.0253	0.0282
Beryllium	<0.0002	<0.0001	<0.0001	<0.0001	<0.002	<0.0001	<0.002	<0.002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.001	<0.0005	<0.0005	<0.0005	<0.2	<0.0005	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005
Boron	1.59	0.045	0.048	0.042	0.65	0.612	0.64	0.59	0.561	0.545	0.481	0.493	0.555	0.507	0.424	0.49	0.27	0.269	0.279	0.292	0.253	0.245	0.294
Cadmium	0.000022	0.000027	0.000015	0.000013	<0.0004	<0.00003	0.000071	<0.000034	<0.00003	0.000017	<0.00005	<0.00002	<0.00003	<0.00006	<0.00005	<0.00001	<0.000085	0.00003	0.000043	<0.00005	<0.00002	<0.00004	<0.00006
Calcium	85.8	86.9	86.8	104	47.6	42.5	119	164	55.7	46.9	60.4	153	167	143	171	169	176	168	170	175	171	170	169
Chromium	<0.0002	0.00016	0.0005	0.00031	<0.002	<0.0001	<0.002	<0.002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.0002	0.00543	<0.0001	<0.0001	<0.0001	0.00023
Cobalt	0.00045	0.00279	0.00442	0.00533	<0.0006	0.00016	<0.0006	<0.0006	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.003	0.00176	0.00088	0.00066	0.00061	0.00059	0.00063
Copper	0.00069	<0.0005	<0.0005	<0.0005	<0.004	<0.0005	0.0051	0.0025	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00059	<0.0002	<0.0002	<0.005	<0.001	0.00089	<0.0002	<0.0002	<0.0002	<0.0002
Dissolved Cadmium (by saltwater e›														<0.00002	<0.00002								
Iron	<0.01	0.519	1.71	0.904	<0.03	0.043	0.095	0.098	0.058	0.057	0.044	0.074	0.104	0.078	0.089	0.103	0.063	0.083	0.054	0.136	0.136	0.054	0.047
Lead	<0.0001	<0.00005	0.000066	<0.00005	<0.001	<0.00005	<0.001	<0.001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0025	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0037	0.0116	0.0103	0.00635	<0.01	0.00541	0.01	0.013	0.00679	0.00549	0.00704	0.012	0.0137	0.0113	0.0142	0.0117	<0.025	0.0092	0.0139	0.0132	0.0131	0.0152	0.0155
Magnesium	8.13	88.7	99.4	84.5	9.39	8.2	31	42.9	13.7	9.53	13	42.7	53.6	45.2	54.6	56.3	84.3	96.2	74.2	75.9	94.1	89.4	92.9
Manganese	0.519	3.21	3.61	4.29	0.081	0.124	0.092	0.0882	0.105	0.0838	0.0725	0.0543	0.0668	0.056	0.0553	0.0558	1.46	1.14	0.497	0.405	0.372	0.344	0.353
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.212	0.0474	0.041	0.0258	0.0777	0.0921	0.083	0.0833	0.0945	0.0871	0.0857	0.0769	0.0825	0.0809	0.0779	0.0809	0.0753	0.0964	0.115	0.11	0.106	0.0984	0.111
Nickel	0.0015	0.00519	0.011	0.00751	<0.002	<0.0005	<0.002	<0.002	<0.0005	0.00201	0.00076	<0.0005	<0.0005	<0.0005	0.00149	<0.0005	<0.005	0.0026	0.0057	0.001	0.00083	0.00086	0.00165
Phosphorus	0.109	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.051	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.3	<0.3	0.061	0.08	0.066	0.068	0.073
Potassium	6.96	53	25.9	7.79	<2	1.08	<2	<2	1.19	0.98	1.13	1.82	2.05	1.96	2.15	2.2	8.9	8.67	8.71	7.91	8.34	8.09	8.19
Selenium	<0.0002	0.00046	0.00029	0.00044	<0.002	0.0001	<0.002	<0.002	0.00015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.005	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001
Silicon	3.23	9.73	12.2	9.76	3.32	3.78	3.9	4.04	3.66	3.51	3.71	3.69	3.82	3.99	3.85	3.79	4.51	4.5	4.52	4.36	4.46	4.26	4.38
Silver	<0.00002	<0.00001	<0.00001	<0.00001	<0.00004	<0.00001	<0.00004	<0.00004	<0.00001	<0.00001	<0.00001	<0.00001	0.00005	<0.00001	<0.00001	<0.00001	<0.0001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	0.000035
Sodium	381	134	116	118	162	156	234	269	162	148	168	240	256	242	253	264	288	275	261	255	255	253	257
Strontium	1.95	0.684	0.666	0.655	2.44	2.31	7.88	8.14	3.2	2.6	3.4	7.59	7.45	7.25	8.06	8.28	5.03	5.77	6.61	6.33	5.89	5.57	5.53
Sulphur	312								170	147	169	333	370	345	377	389			340	361	392	397	405
Thallium	0.000028	<0.00001	<0.00001	<0.00001	<0.0004	<0.00001	<0.0004	<0.0004	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.001	0.000036	0.000024	0.000015	0.000012	0.000014	0.000017
Tin	<0.0002	0.00015	0.00015	<0.0001	0.0017	0.00014	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0025	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.02	<0.01	<0.01	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01
Uranium	0.000624	0.00328	0.00741	0.0159	<0.0004	0.00014	<0.0004	<0.0004	0.000114	0.00004	0.000025	0.000017	0.000024	0.000023	0.000021	0.000022	0.0012	0.000749	0.000547	0.000378	0.000348	0.000351	0.000377
Vanadium	<0.002	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001
Zinc	0.006	<0.003	<0.003	<0.003	0.0131	0.0067	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0024	<0.001	<0.005	<0.006	0.0214	0.101	0.0815	0.038	0.0284
Total Metals																							
Aluminum	0.0265	0.0651	0.118	0.0706	0.02	0.113	0.036	0.024	0.0341	0.0303	0.0143	0.0067	0.0066	0.0234	0.0098	0.0227	0.071	0.164	0.198	0.275	0.279	0.15	0.0402
Antimony	0.00022	0.00106	0.00112	0.00025	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	0.00012	0.00013	0.0001	<0.0001	0.00014	<0.0025	<0.0002	<0.0002	0.00013	<0.0001	0.00012	0.00012
Arsenic	0.00193	0.0044	0.00554	0.00406	0.008	0.00972	0.0161	0.0156	0.0122	0.0123	0.0139	0.0135	0.0141	0.015	0.0145	0.0135	<0.0025	0.003	0.00156	0.00193	0.0016	0.00155	0.00156
Barium	0.0411	0.0471	0.0648	0.0858	<0.02	0.0164	0.023	0.023	0.0145	0.0125	0.0159	0.0226	0.0239	0.0233	0.0237	0.0209	0.063	0.0518	0.0373	0.0313	0.0313	0.0279	0.0281
Beryllium	<0.0002	<0.0001	<0.0001	<0.0001	<0.002	<0.0001	<0.002	<0.002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.001	<0.0005	<0.0005	<0.0005	<0.2	<0.0005	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005
Boron	1.56	0.055	0.052	0.047	0.67	0.617	0.67	0.61	0.629	0.576	0.503	0.515	0.584	0.563	0.445	0.498	0.27	0.273	0.288	0.298	0.275	0.251	0.313
Cadmium	<0.00002	0.000094	0.000171	0.000056	<0.0004	<0.00003	0.000074	<0.000034	<0.00003	0.000017	<0.00005	<0.00002	<0.00003	<0.00006	<0.00005	<0.00001	0.000125	0.000067	0.000063	<0.00005	<0.00004	<0.00005	<0.00009
Calcium	80.5	72.5	90.8	105	47.7	42.2	125	161	55.1	46.3	59.9	151	165	136	170	159	168	170	165	171	167	168	166
Chromium	0.00048	0.00093	0.00454	0.00129	<0.002	0.00019	<0.002	<0.002	0.00059	0.00023	0.00011	0.00017	0.00011	0.00022	<0.0001	0.00016	<0.005	0.00051	0.00852	0.00066	0.00052	0.00049	0.00059
Cobalt	0.00042	0.00231	0.00507	0.00578	<0.0006	0.00022	<0.0006	<0.0006	<0.0001	0.00023	<0.0001	<0.0001	<0.0001	0.00013	<0.0001	<0.0001	0.0032	0.00189	0.0011	0.00095	0.00087	0.00072	0.00067
Copper	0.0011	0.00149	0.00305	0.0013	<0.006	<0.0005	0.0056	0.0085	0.00058	0.00347	<0.0005	<0.0005	<0.0005	<0.0015	0.0005	<0.0005	<0.005	0.0017	0.0029	0.00551	0.00221	0.00109	0.00165
Iron	0.094	1	2.35	0.979	<0.03	0.119	0.106	0.114	0.083	0.259	0.101	0.082	0.113	0.368	0.124	0.605	0.138	0.266	0.322	0.631	0.501	0.228	0.135
Lead	<0.0001	0.000088	0.00027	0.000142	<0.001	<0.00005	<0.001	<0.001	0.000078	<0.00005	<0.00005	<0.00005	<0.00005	0.000062	<0.00005	<0.00005	<0.0025	0.00011	0.00013	0.000136	0.000098	0.000054	0.000095
Lithium	0.0038	0.0126	0.0104	0.00611	<0.01	0.00509	0.011	0.013	0.00764	0.00588	0.00743	0.0138	0.0142	0.0121	0.0149	0.0116	<0.025	0.0089	0.0142	0.013	0.0133	0.015	0.0154
Magnesium	7.65	80.2	98.9	85.7	9.58	8.17	31.7	43.5	13.5	9.95	12.9	42.4	53.4	43.6	56.3	54.6	82.2	95.2	75.3	76.1	92.9	89	91.8
Manganese	0.485	2.5	3.85	4.56	0.0834	0.128	0.103	0.0927	0.107	0.0842	0.0727	0.0565	0.0691	0.0587	0.0589	0.0559	1.55	1.17	0.506	0.423	0.378	0.36	0.35
Mercury	<0.00001	<0.00001	<0.00005	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.202	0.0548	0.0427	0.0271	0.0807	0.0964	0.087	0.0863	0.104	0.0906	0.0899	0.0814	0.0874	0.0832	0.0855	0.0778	0.0828	0.0951	0.118	0.109	0.105	0.102	0.114
Nickel	0.0016	0.00583	0.0129	0.00867	<0.002	<0.0005	<0.002	<0.002	0.00063	0.0022	0.00069	<0.0005	<0.0005	<0.0005	0.00204	<0.0005	<0.005	0.0031	0.0071	0.00157	0.00137	0.00122	0.00187
Phosphorus	0.129	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.054	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.3	<0.3	0.069	0.058	0.081	0.077	0.071
Potassium	6.56	67.5	26.5	8	<2	1.12	<2	<2	1.18	1.06	1.11	1.84	2.15	1.84	2.14	2.12	8.7	8.68	8.49	7.9	8.08	7.94	8.43
Selenium	<0.0002	0.0005	0.00026	0.00052	<0.002	<0.0001	<0.002	<0.002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001
Silicon	3.09	9.98	12.5	9.89	3.36	3.93	4	4.09	3.7	3.59	3.69	3.72	3.87	3.86	3.95	3.66	4.52	4.86	5.02	4.99	5.02	4.59	4.52
Silver	<0.00002	<0.00001	<0.00001	<0.00001	<0.00004	<0.00001	<0.00004	<0.00004	<0.00001	<0.00001	<0.00001	<0.00001	0.000049	<0.00001	<0.00001	<0.00001	<0.0001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	0.000035
Sodium	348	121	118	124	165	160	248	266	166	151	167	244	267	241	265	250	281	277	260	250	253	271	260
Strontium	1.87	0.673	0.71	0.673	2.46	2.38	8.23	8.05	3.44	2.65	3.6	7.78	7.75	7.45	8.45	8	4.85	5.7	6.89	6.21	6.01	5.86	5.48
Sulphur	302								168	154	170	333	377	344	393	374			351	352	392	405	411
Thallium	0.000026	<0.00001	<0.00001	<0.00001	<0.0004	<0.00001	<0.0004	<0.0004	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.001	0.000038	0.00003	0.000018	0.000017	0.000016	0.000018
Tin	<0.0002	0.0009	0.00103	0.0003	0.0022	0.00023	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0025	0.00031	<0.0002	<0.0001	<0.0001	<0.0001	0.00013
Titanium	<0.02	<0.01	0.018	0.015	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.012	<0.01	<0.02	0.015	0.013	<0.01	<0.01
Total Cadmium (by saltwater extract														<0.00002	<0.00002								
Uranium	0.000606	0.00334	0.0079	0.0157	<0.0004	0.000142	<0.0004	<0.0004	0.000118	0.000045	0.000033	0.000022	0.000025	0.000025	0.000021	0.000021	0.0013	0.000762	0.000543	0.000403	0.00036	0.000369	0.000392
Vanadium	<0.002	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.002	<0.002	0.0012	0.0011	<0.001	<0.001
Zinc	0.0083	0.01	0.0186	0.0066	0.0084	<0.003	0.0484	<0.005	<0.003	0.03	0.0129	0.0046	<0.003	0.0711	0.0062	0.0387	<0.005	<0.006	0.0317	0.153	0.127	0.0522	0.04
Organics																							
Carbon Organic (Dissolved)		33	22.7	22.5	7.28	2.38	3.25	2.18	2.06	1.72	1.5	1.99	1.97	1.52			5.97	4.04	2.99	2.55	2.03	2.55	2.11
Carbon Organic (Total)	5.4	31.8	23.9	21.9	5.47	2.18	1.78	2.03	2.18	1.53	1.33	1.87	1.75	1.52	1.49	1.6	5.73	3.81	2.76	2.28	2	2.4	2.02
Nitrogen Organic (Dissolved)		0.58	0.235	0.168	0.169	<0.05	0.209		<0.05	<0.05							0.285	0.1	0.085	<0.05			
Nitrogen Organic (Total)		0.37	0.33	<0.3	0.119	<0.05	<0.06		<0.08	<0.08							0.355	0.09	0.089	<0.08			
ALS LAB ID	**L1516193**	**L1078289**	**L1115110**	**L1115110**	**L1036785**	**L1079367**	**L1160966**	**L1201474**	**L1246516**	**L1277099**	**L1306577**	**L1346553**	**L1392959**	**L1441050**	**L1473868**	**L1516193**	**L1037497**	**L1079375**	**L1246516**	**L1277099**	**L1306577**	**L1346553**	**L1392959**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D5.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D5.2 - GROUNDWATER QUALITY DATA

Site ID	BGC14-010					BGC14-011D				
Site ID	BGC14-010	BGC14-010	BGC14-010	BGC14-010	BGC14-010	BGC14-011	BGC14-011	BGC14-011	BGC14-011	BGC14-011
Analytes	Mar-14	May-14	Jun-14	Jul-14	Aug-14	Mar-14	May-14	Jun-14	Jul-14	Aug-14
In Situ Parameters										
Conductivity µS/cm	1616	1758	1629	1011	1448	1141	992	1776	1530	1050
Oxygen Dissolved %	6.3	5.5	17.6	2.7	14.3	13.4	0	0.8	4.3	2.1
Oxygen Dissolved	7.75	0.49	1.14	1.24	0.89	60.7	1.69	0.98	7.24	0.82
pH (unitless)	7.92	8	8.02	7.87	8.18	7.66	7.8	7.8	6.06	7.99
Redox Potential mV	-92.4	-96.4	-76.9	119			-298		-45	-220
Salinity ppt	1.23	1.21	1.21	0.64			0.84		0.8	7.4E-07
Specific Conductivity µS/cm	2382	2348	2341	1281	1812	1720	1683	1232		1462
Temperature °C	8.16	11.7	9.07	14	14.5	7.34	3.51	8.89	14	10.3
Total Dissolved Solids	1548	1526	1521	833			1093		979	948
Turbidity NTU	-0.5	10.4	9.1	0	8.7	4	4	0	9.9	-1.4
Physical Tests										
Acidity to pH 8.3 (as CaCO3)					2.6				2.3	
Alkalinity (Total as CaCO3)	104	54.7	56.2	284	204	219	234	233	237	235
Bicarbonate Alkalinity	104	54.7	56.2	284	204		237	233		235
Carbonate Alkalinity	<2	<1	<1	<2	<2		<2	<1		<2
Color TCU				<5	17.2	15.1	16.4	20.8	9	11.1
Hardness as CaCO3 (Dissolved)	834	823	807	422	192	181	180	177	164	158
Hydroxide Alkalinity	<2	<1	<1	<2	<2		<2	<1		<2
pH (unitless)	7.82	7.91	7.81	8.24	8.22	8.08	8.12	7.93	8.18	8.23
Specific Conductivity µS/cm	2400	2350	2330	897	1790	1600	1610	1540	1470	1470
Total Dissolved Solids	2020	1980	1830	610	1240	1130	1110	1150	1070	1040
Total Suspended Solids	8.3	33.2	5.4	12.4	13.3	13.6	6.5	<3	3.2	<3
Turbidity NTU	1.91	9.04	6.11	0.64	6.68	8.28	6.43	1.66	3.68	2.84
Dissolved Anions										
Bromide	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
Chloride	34	28	29	<5	15	12	15	14	11	9.2
Fluoride	<0.4	0.237	0.228	0.33	0.49	<0.4	<0.4	<0.4	0.42	0.4
Sulphate	1320	1330	1310	243	696	626	626	578	553	538
Nutrients										
Ammonia (Total)	0.11	0.0572	0.116	<0.005	0.0585	0.0245	<0.05	0.0256	0.0238	0.0311
Nitrate (as N)	<0.1	<0.1	0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05
Nitrite (as N)	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01
Nitrogen (Dissolved)					0.46	0.66	0.32	0.24		0.217
Nitrogen (Total)				0.075	0.45	0.3	0.348	<0.26	0.18	0.195
Nitrogen Kjeldahl (Total)	0.215	0.194	0.308	0.075	0.45	0.303	0.35	<0.5	0.18	0.202
Orthophosphate (Dissolved)	0.0382	0.0433	0.0312						0.18	
Phosphorus - Dissolved	0.0591	0.0442		0.0362	0.0682	0.0745	0.112	0.17		0.191
Phosphorus - Total	0.0416	0.032	0.0362	0.0344	0.099	0.119	0.153	0.227	0.208	0.224
Cyanide										
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	0.0054	0.0053	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals										
Aluminum	0.0039	0.0054	0.0023	0.0012	<0.025	0.0103	0.0103	0.01	0.0108	0.0095
Antimony	<0.0001	0.00016	<0.0001	0.00024	<0.0025	0.00042	0.00027	0.00025	<0.0002	<0.0002
Arsenic	0.00136	0.00137	0.00114	0.00499	0.0028	0.00312	0.00338	0.00321	0.00289	0.00294
Barium	0.0259	0.0248	0.0245	0.0372	0.053	0.0576	0.0591	0.059	0.0548	0.0515
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.001	<0.001	<0.001	<0.001	<0.001
Boron	0.286	0.238	0.257	0.063	2.69	2.55	2.51	2.28	2.36	2.35
Cadmium	<0.00009	<0.00005	0.000011	<0.00004	<0.000085	0.000023	<0.00002	0.000051	<0.00002	<0.00002
Calcium	175	175	170	89.7	32.1	30.6	30.9	28.7	25.1	23.7
Chromium	0.00033	0.00012	0.0017	0.00032	<0.005	0.00032	0.00053	0.00034	0.00091	0.00107
Cobalt	0.00059	0.00046	0.00055	<0.0001	<0.0015	0.00128	0.00102	0.00106	0.00077	0.00075
Copper	0.00162	0.00034	<0.0002	0.00173	<0.005	<0.001	<0.001	<0.0004	<0.0004	<0.0004
Dissolved Cadmium (by saltwater ex	<0.00002	<0.00002								
Iron	0.099	0.035	0.041	<0.01	<0.03	0.241	0.269	0.286	0.28	0.272
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Lithium	0.016	0.0192	0.0131	0.00386	<0.025	0.0011	0.0011	<0.001	<0.001	<0.001
Magnesium	96.8	94.1	93	48.2	27.1	25.5	24.9	25.5	24.6	23.9
Manganese	0.304	0.232	0.319	0.0167	0.391	1.1	1.23	1.29	1.05	1.08
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001
Molybdenum	0.107	0.105	0.105	0.127	0.0676	0.0604	0.061	0.0605	0.059	0.0578
Nickel	0.00122	0.00091	0.00109	<0.0005	<0.005	0.0066	0.0062	0.0038	0.0029	0.0026
Phosphorus	0.061	<0.05	<0.05	<0.05	<0.3	<0.3	<0.3	<0.3	0.24	0.273
Potassium	8.73	8.87	7.94	7.61	26.1	13.2	12.6	11.4	10	9.91
Selenium	<0.0001	<0.0001	<0.0001	0.0271	<0.005	0.00023	0.00039	<0.0002	<0.0002	<0.0002
Silicon	4.59	4.37	4.44	7.07	3.48	4.04	4.01	3.91	4.29	3.98
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	269	264	262	40.6	341	296	300	281	271	284
Strontium	6.47	6.09	6.24	0.68	1.24	1.1	1.16	1.22	1.17	1.18
Sulphur	436	408	418	75.8						172
Thallium	0.000015	<0.00001	0.000015	<0.00001	<0.001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0025	0.00067	0.00043	0.0002	<0.0002	<0.0002
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
Uranium	0.000341	0.000248	0.000335	0.00403	0.0057	0.00529	0.00454	0.00457	0.00304	0.00302
Vanadium	<0.001	<0.001	<0.001	0.0033	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002
Zinc	0.146	0.0236	0.323	<0.001	<0.005	<0.006	<0.006	<0.002	0.0021	0.0023
Total Metals										
Aluminum	0.0439	0.67	0.0805	0.0538	0.389	0.286	0.179	0.0507	0.209	0.0637
Antimony	<0.0001	0.00024	0.00015	0.00024	<0.0025	0.00033	0.0004	0.00036	0.00027	0.0002
Arsenic	0.00143	0.00186	0.00137	0.00466	0.0031	0.00309	0.00341	0.00359	0.00294	0.00294
Barium	0.0253	0.031	0.0237	0.0362	0.055	0.0586	0.0627	0.0594	0.053	0.0509
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.001	<0.001	<0.001	<0.001	<0.001
Boron	0.271	0.252	0.259	0.071	2.64	2.38	2.6	2.34	2.51	2.26
Cadmium	<0.00009	<0.0001	0.000018	<0.00005	0.000119	0.000068	0.000068	0.000081	0.000022	0.000023
Calcium	165	176	157	88.2	31.9	28.6	31	28.7	25.2	23.3
Chromium	0.00057	0.00092	0.00293	0.00049	<0.005	0.00145	0.00171	0.00069	0.00456	0.00309
Cobalt	0.00062	0.00106	0.00067	0.00012	<0.0015	0.00152	0.00122	0.00119	0.00097	0.00081
Copper	<0.0015	0.00435	0.00114	0.00325	<0.005	0.0047	0.0013	0.0011	<0.001	<0.001
Iron	0.295	0.972	0.851	0.069	0.21	0.51	0.43	0.368	0.442	0.309
Lead	0.000091	0.000305	0.000221	<0.00005	<0.0025	0.00019	0.00017	0.00013	0.00011	0.00026
Lithium	0.0149	0.02	0.0124	0.00446	<0.025	0.0012	0.0013	<0.001	<0.001	<0.001
Magnesium	92	97.2	86.2	47.2	26.9	23.9	25.5	24.9	24.5	24
Manganese	0.304	0.257	0.321	0.0499	0.449	1.15	1.28	1.38	1.13	1.06
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001
Molybdenum	0.11	0.112	0.101	0.13	0.0737	0.0602	0.064	0.0664	0.0616	0.0585
Nickel	0.00127	0.00219	0.00141	0.0005	0.0055	0.0069	0.0093	0.0046	0.0047	0.0035
Phosphorus	0.06	0.099	0.054	<0.05	<0.3	<0.3	<0.3	<0.3	0.24	0.246
Potassium	8.25	9	7.56	7.82	23.8	12.8	13.5	11.1	9.96	9.86
Selenium	<0.0001	<0.0001	<0.0001	0.0227	<0.005	0.00037	0.0003	0.00027	<0.0002	<0.0002
Silicon	4.57	6.02	4.42	7.14	4.25	4.28	4.47	3.95	4.97	4.04
Silver	<0.00001	0.000017	<0.00001	<0.00001	<0.0001	<0.00002	<0.00002	<0.00002	0.000074	<0.00002
Sodium	264	262	252	42.1	333	286	317	283	274	276
Strontium	6.23	6.36	5.99	0.659	1.24	1.06	1.23	1.25	1.2	1.17
Sulphur	430	429	391	76.5						169
Thallium	0.000019	0.000019	0.000013	<0.00001	<0.001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Tin	<0.0001	0.0001	<0.0001	<0.0001	<0.0025	0.00113	0.00097	0.00054	<0.0002	<0.0002
Titanium	<0.01	0.032	<0.01	<0.01	0.012	0.012	<0.01	<0.01	<0.02	<0.02
Total Cadmium (by saltwater extract	<0.00002	0.000034								
Uranium	0.000346	0.000289	0.000346	0.00408	0.0061	0.00505	0.00489	0.00486	0.00318	0.00309
Vanadium	<0.001	0.0025	<0.001	0.0036	<0.005	<0.002	0.002	<0.002	<0.002	<0.002
Zinc	0.16	0.0989	0.617	<0.003	<0.005	<0.006	<0.006	<0.006	<0.006	0.0063
Organics										
Carbon Organic (Dissolved)	1.9			1.59	29.6	19.8	21.8	27.5	15.6	14.1
Carbon Organic (Total)	2.05	1.83	1.99	1.39	30.1	21.2	22.3	27.1	16.7	14.8
Nitrogen Organic (Dissolved)					0.401	0.635	0.291	0.214		0.185
Nitrogen Organic (Total)					0.391	0.275	0.35	<0.5		
ALS LAB ID	**L1441050**	**L1473868**	**L1516193**	**L1345714**	**L1039843**	**L1080651**	**L1114498**	**L1159542**	**L1202478**	**L1247928**

Site ID	BGC14-011S					BGC14-012D					BGC14-012S		
Site ID	BGC14-011	BGC14-011	BGC14-011	BGC14-011	BGC14-011	BGC14-012	BGC14-012	BGC14-012	BGC14-012	BGC14-012	BGC14-012	BGC14-012	BGC14-012
Analytes	Mar-14	May-14	Jun-14	Jul-14	Aug-14	Mar-14	May-14	Jun-14	Jul-14	Aug-14	Mar-14	May-14	Jun-14
In Situ Parameters													
Conductivity µS/cm	992	1114	1104	1.48	998	1019	1076	1340	1084	1371	1197	1961	
Oxygen Dissolved %	14.4	0	0.5	18.6	2.8	75.5	3.7	5.7	25	7.4	18.1	5.1	2.3
Oxygen Dissolved	0.28	0.79	0.4	0.16	1.64	0.12	0.62	65.1	4.6	58.5	6.18	0.56	1.8
pH (unitless)	7.92	8.11	7.9	8.13	8.38	8.12	8.02	8.12	8.34	8.11	8.25	7.91	7.25
Redox Potential mV	-161	-179	-106	0.96	-174	-162	-147		-293		-296	-338	130
Salinity ppt	0.75	0.83	0.76	0.74	0.75	0.74	0.75		0.88		1.06	1.45	
Specific Conductivity µS/cm	1493	1630	1504	0.976	1483	1461	1492	2133	1735	2116	2108	2778	3229
Temperature °C	7.41	8.45	11.1	7.19	7.88	9.19	10.4	5.53	5.34	6.56	2.39	9.52	8.5
Total Dissolved Solids	970	1060	979	1554	964	950	970		1129		1361	1.81	
Turbidity NTU	-1.9	0	0.5	1.2	1.7	1.8	2.1	26.1	6.9	2.3	8.6	68.1	
Physical Tests													
Acidity to pH 8.3 (as CaCO3)													
Alkalinity (Total as CaCO3)	225	216	213	231	223	219	232	163	134	134	139	208	175
Bicarbonate Alkalinity	214	216	213	231	223	219	232		134		139		
Carbonate Alkalinity	11.7	<1	<1	<2	<1	<1	<1		<2		<2		
Color TCU	9.8	<5	5.8					<5	12.5	8.5	8.9	<5	
Hardness as CaCO3 (Dissolved)	160	162	158	159	165	164	158	112	66.8	126	110	1530	1760
Hydroxide Alkalinity	<1	<1	<1	<2	<1	<1	<1		<2		<2		
pH (unitless)	8.33	8.3	8.32	8.2	8.37	8.38	8.23	8.16	8.19	8.24	8.22	8.12	8.05
Specific Conductivity µS/cm	1540	1470	1480	1400	1460	1480	1480	2040	1660	2050	2000	2790	3190
Total Dissolved Solids	1020	971	1010	965	1010	984	1030	1470	980	1430	1220	2830	3160
Total Suspended Solids	<3	7.3	4.4		<3	<3	<3	32.2	11.8	8.2	6.4	<3	<3
Turbidity NTU	2.06	2.53	1.68		0.62	0.66	0.81	37.9	6.92	5.87	5.79	2.57	0.46
Dissolved Anions													
Bromide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	<1
Chloride	8.8	8.4	8	9.6	14.6	8.7	8.8	41	21	23	23	<10	18
Fluoride	0.53	0.31	0.51	0.35	0.36	0.34	0.306	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sulphate	530	535	530	528	535	526	535	830	672	881	859	1720	1670
Nutrients													
Ammonia (Total)	0.0367	0.0292	0.0349	0.037	0.0423	0.0305	0.0432	<0.005	<0.05	0.029	<0.05	0.0632	<0.005
Nitrate (as N)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	88.2
Nitrite (as N)	0.014	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	0.334
Nitrogen (Dissolved)	0.136							0.25	0.15	0.21	0.17		
Nitrogen (Total)	0.153	0.134	0.153					0.488	0.256	0.287	0.276	0.13	88.5
Nitrogen Kjeldahl (Total)	0.193	0.162	0.153	0.202	0.203	0.199	0.2	0.488	0.26	0.287	0.28	0.264	<0.05
Orthophosphate (Dissolved)				0.218	0.238	0.226	0.222						0.0037
Phosphorus - Dissolved	0.196	0.194	0.201	0.229	0.251	0.249		0.147	0.22	0.061	0.086	0.0082	0.0047
Phosphorus - Total	0.217		0.239	0.257	0.274	0.242	0.303	0.234	0.29	0.0804	0.104	0.0105	
Cyanide													
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0086	<0.005	<0.005	<0.005	<0.005	
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Dissolved Metals													
Aluminum	0.01	0.0098	0.0092	0.0091	0.0087	0.011	0.0081	0.0178	0.0232	0.0144	0.0124	<0.006	0.0022
Antimony	0.0002	0.00019	0.00018	0.00018	0.00014	<0.0002	0.00012	0.00049	0.00025	0.00031	<0.0002	0.00737	0.00398
Arsenic	0.00288	0.0035	0.00285	0.00284	0.00299	0.00274	0.00324	0.00639	0.00464	0.00637	0.00379	0.0056	0.00578
Barium	0.0497	0.0491	0.0452	0.0456	0.0441	0.0422	0.043	0.0527	0.0355	0.0405	0.0338	0.0214	0.0315
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Boron	2.14	2.34	2.42	2.42	2.31	2.5	2.33	0.461	0.518	0.465	0.529	0.078	0.115
Cadmium	<0.00005	<0.00005	<0.00002	<0.00003	<0.00002	<0.00002	<0.00001	0.00002	<0.00002	0.000061	0.000089	<0.00002	<0.0007
Calcium	23.2	22.2	21.5	21.3	22.4	22.2	21.3	33.3	19.5	37.5	32.5	262	245
Chromium	0.00022	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	0.00033	0.00069	<0.0002	0.00031	0.00021	<0.0002
Cobalt	0.0006	0.00067	0.00048	0.00043	0.00046	0.00037	0.0004	0.00104	0.00059	0.00056	0.00026	0.00214	0.00192
Copper	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0002	<0.001	<0.001	<0.001	0.0074	<0.001	0.00712
Dissolved Cadmium (by saltwater ex					<0.00002	<0.00002							
Iron	0.246	0.141	0.165	0.16	0.189	0.168	0.186	0.131	0.163	0.042	<0.03	0.148	<0.01
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Lithium	<0.0005	<0.0005	<0.0005	0.00067	<0.0005	<0.001	<0.0005	0.0118	0.0146	0.0258	0.0238	0.0097	0.0296
Magnesium	24.7	25.9	25.4	25.6	26.4	26.2	25.3	7.02	4.37	7.95	7.04	213	279
Manganese	0.954	0.778	0.73	0.676	0.71	0.599	0.629	0.8	0.691	0.26	0.17	0.282	0.0875
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001
Molybdenum	0.0545	0.0558	0.0559	0.0525	0.0528	0.0546	0.0504	0.0537	0.028	0.0184	0.0188	0.0296	3.42
Nickel	0.00209	0.00309	0.00156	0.00166	0.00113	0.0011	0.00107	0.0056	0.0063	0.003	0.0037	0.0111	0.0148
Phosphorus	0.271	0.21	0.219	0.237	0.269	0.241	0.261	<0.3	<0.3	<0.3	<0.3	<0.3	<0.05
Potassium	10.4	10.2	9.89	11.2	9.87	10.4	9.84	3.82	1.75	1.59	1.25	14.8	41.7
Selenium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	0.00107	<0.0002	0.00022	<0.0002	0.00951	0.0405
Silicon	4.25	4.15	4.08	4.31	4.12	4.25	3.92	3.43	3.4	4.09	3.79	11	7.35
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium	274	274	264	254	251	243	256	432	331	418	399	161	151
Strontium	1.17	1.19	1.19	1.14	1.29	1.23	1.25	1.02	0.697	1.28	1.18	2.67	3.51
Sulphur	177	170	162	169	166	169	171						541
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00002	<0.00002	<0.00002	0.000023	<0.00002	<0.00002
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	0.0004	<0.0002	0.00026	0.00021	<0.0002	<0.0002
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	0.017	<0.02
Uranium	0.0027	0.00255	0.00243	0.00251	0.00263	0.00252	0.00257	0.00722	0.00324	0.0016	0.00145	0.0278	0.0146
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.002	<0.002	0.0027	0.004
Zinc	0.0013	0.0012	<0.001	<0.001	0.0012	<0.002	0.0012	<0.006	0.0114	<0.006	0.0174	<0.006	<0.002
Total Metals													
Aluminum	0.0405	0.183	0.103	0.0435	0.0233	0.0302	0.0241	0.632	0.117	0.195	0.24	0.0086	0.0154
Antimony	0.00028	0.00023	0.0002	0.00019	0.00015	<0.0002	0.00019	0.00055	0.00044	0.00031	0.00033	0.00683	0.00401
Arsenic	0.00287	0.00359	0.0027	0.00282	0.00295	0.00282	0.00318	0.00805	0.00476	0.00559	0.00385	0.00541	0.00586
Barium	0.0499	0.0496	0.041	0.0432	0.0435	0.0425	0.0413	0.0654	0.0421	0.0428	0.0412	0.0246	0.0312
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Boron	2.45	2.38	2.33	2.42	2.29	2.57	2.38	0.451	0.543	0.473	0.56	0.084	0.117
Cadmium	<0.00005	<0.00005	<0.00002	<0.00003	<0.00002	<0.00002	<0.00001	0.000147	0.000129	0.000082	0.000137	<0.00002	<0.0007
Calcium	23.5	22	21	20.7	21.4	21.6	20.6	39.9	20.7	37.9	32.8	252	240
Chromium	0.00057	0.00051	0.00037	0.00018	0.0002	<0.0002	0.00026	0.00209	0.00389	0.00078	0.0021	0.00114	<0.0002
Cobalt	0.00061	0.00079	0.00048	0.00043	0.00047	0.00041	0.00041	0.00152	0.00077	0.00069	0.00047	0.00229	0.0019
Copper	0.00083	0.0009	<0.0005	<0.0005	0.00146	<0.001	<0.0005	0.0041	0.0079	0.0019	0.0163	<0.001	0.0094
Iron	0.278	0.272	0.219	0.187	0.209	0.189	0.207	0.781	0.441	0.284	0.298	0.166	0.028
Lead	0.000064	0.000105	0.000052	<0.00005	<0.00005	<0.0001	<0.00005	0.00054	0.00029	0.00012	0.00022	<0.0001	<0.0001
Lithium	<0.0005	0.00059	0.00079	0.00055	<0.0005	<0.001	<0.0005	0.0118	0.0148	0.0261	0.0244	0.0102	0.0299
Magnesium	24.8	26	24.6	25.4	25.1	25.7	24.7	7.16	4.4	8.04	7.15	210	275
Manganese	0.948	0.793	0.689	0.672	0.69	0.632	0.623	0.84	0.713	0.283	0.214	0.289	0.0871
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00005	<0.00001	<0.00001
Molybdenum	0.0615	0.0592	0.0532	0.0549	0.0538	0.0559	0.0501	0.0534	0.0291	0.0189	0.0194	0.0295	3.36
Nickel	0.00232	0.00381	0.00157	0.00148	0.00129	0.0012	0.00126	0.0072	0.0081	0.0039	0.0053	0.0111	0.0148
Phosphorus	0.262	0.212	0.225	0.239	0.271	0.273	0.257	<0.3	0.31	<0.3	<0.3	<0.3	<0.05
Potassium	10.4	10.2	9.48	11.2	9.34	10.1	9.61	3.63	1.77	1.59	1.31	14.7	40.7
Selenium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	0.0008	<0.0002	0.00027	0.00023	0.00843	0.0395
Silicon	4.29	4.71	4.33	4.32	4.07	4.26	3.87	4.62	3.61	4.45	4.41	10.8	7.33
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	0.000022	<0.00002
Sodium	272	267	247	245	250	255	251	420	336	420	408	162	146
Strontium	1.29	1.23	1.13	1.16	1.29	1.25	1.23	1.07	0.721	1.31	1.2	2.68	3.46
Sulphur	179	172	162	170	166	174	167						543
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00002	<0.00002	<0.00002	0.000026	<0.00002	0.00002
Tin	0.00015	0.00012	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	0.00175	0.00054	0.00137	0.0078	<0.0002	<0.0002
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	0.029	<0.01	<0.01	0.017	0.017	<0.02
Total Cadmium (by saltwater extract					<0.00002	<0.00002							
Uranium	0.00307	0.00272	0.00232	0.00257	0.00256	0.00256	0.00257	0.0071	0.00328	0.00165	0.00149	0.0263	0.0142
Vanadium	<0.001	0.0011	<0.001	<0.001	<0.001	<0.002	<0.001	0.0025	<0.002	<0.002	<0.002	0.0025	0.004
Zinc	<0.003	<0.003	<0.003	<0.003	<0.003	<0.006	<0.003	0.0082	0.0186	<0.006	0.0221	<0.006	<0.006
Organics													
Carbon Organic (Dissolved)	7.28	5.26	8.57	9.72				33.4	17.7	5.65	6.6	5.09	2.69
Carbon Organic (Total)	13.1	5.28	9.41	10.5	12.1	9	12	33.4	18.2	5.76	6.58	4.8	2.69
Nitrogen Organic (Dissolved)	0.085							0.246	0.144	0.181	0.146		
Nitrogen Organic (Total)	0.102							0.496	<0.3	0.258	<0.3	0.067	
ALS LAB ID	**L1277798**	**L1308855**	**L1346553**	**L1394557**	**L1439433**	**L1475661**	**L1516193**	**L1079375**	**L1115110**	**L1079375**	**L1115110**	**L1092874**	**L1245169**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D5.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D5.2 - GROUNDWATER QUALITY DATA

Site ID	S		BGC14-013					BGC14-014D			BGC14-015D				BGC14-015S				BGC14-016				
Site ID	3GC14-012	3GC14-012	BGC14-01	BGC14-01	BGC14-01	BGC14-01	BGC14-01	3GC14-014	3GC14-014	3GC14-014	3GC14-015	3GC14-015	3GC14-015	3GC14-015	3GC14-015	3GC14-015	3GC14-015	3GC14-015	BGC14-01	BGC14-01	BGC14-01	BGC14-01	BGC14-01
Analytes	**Jul-14**	**Aug-14**	**Mar-14**	**Jun-14**	**Jul-14**	**Jul-14**	**Aug-14**	**May-14**	**Jul-14**	**Aug-14**	**May-14**	**Jul-14**	**Jul-14**	**Aug-14**	**May-14**	**Jun-14**	**Jul-14**	**Aug-14**	**Mar-14**	**May-14**	**Jun-14**	**Jul-14**	**Aug-14**
In Situ Parameters																							
Conductivity µS/cm	2229	2558	2855	3.33	3431	2379	2406		2122	2540	3924	3.25	3401	2469	2435		823	914	1023	1.18	840	847	832
Oxygen Dissolved %	34.8	51.1	6.3	60.7	1.8	4.8	1.1		51.9	73.8	-0.3	0.8	8.2	30.9	2.4	1.2	2	10.7	26	2.7	0.9	-7.4	14.9
Oxygen Dissolved	0.21	0.22	3.24	0.34	9.15	1.35	0.68	3.56	1.25	3.29	4.09	0.27	2.84	1.85	0.22	0.48	0.05	0.12	6.38	0.15	5.74	1.8	
pH (unitless)	7.22	7.38	7.48	7.49	7.64	7.47	7.49	7.36	7.29	7.33	7.59	7.53	7.79	7.56	7.58	7.78	7.72	7.77	7.83	7.94	7.97	7.96	8.01
Redox Potential mV	191	224	236	2.17	71.4	99.3	101	167	165	171	221	63.7	30.4	119	87.8	51.6	-76.1	-116	151	-143	-160	-124	55.6
Salinity ppt	1.71	1.95	2.11	1.75	1.81	1.78	1.78		1.62	1.92	2.08	1.7	1.79	1.76	1.76		0.61	0.67	0.73	0.59	0.62	0.59	0.58
Specific Conductivity µS/cm	3265	3695	3976	2.27	2343	3385	3376	3156	3090	3640	3924	2.18	2281	3340	3343	1159	1217	1333	1447	0.787	1237	1186	1164
Temperature °C	8.4	8.9	10.3	8.22	8.42	9.44	9.96	7.36	8.54	9.17	9.56	7.94	7.76	11.4	10.8	7	7.93	8.54	9.67	7.66	8.16	10.1	10.1
Total Dissolved Solids	2121	2403	2582	38200	2230	2201	2196		2011	2366	2550	2100	2212	2172	2171		791	866	941	764	806	770	756
Turbidity NTU	-1.8	0	1.5	-2.2	1.9	2	1.6		-3.9	0	2.5	-1.9	2.1	2.7	2		3.4	0	6.4	2.7	-0.4	15.7	3.1
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)			<1								4.7												
Alkalinity (Total as CaCO3)	178	173	177	189	183	185	179	171	171	176	174	186	169	188	181	219	222	193	182	202	185	186	189
Bicarbonate Alkalinity	178	173	177	189	183	185	179		171	176	174	186	169	188	181		222	193	182	202	185	186	189
Carbonate Alkalinity	<2	<2	<2	<2	<2	<2	<1		<2	<2	<2	<2	<2	<2	<1		<2	<2	<2	<2	<2	<1	<1
Color TCU	<5	<5	<5						<5	<5	<5						7.1	<5	<5	<5			
Hardness as CaCO3 (Dissolved)	1620	1810		1870	1950	1860	1920	1730	1740	1780		1830	1890	1810	1880	405	422	359	395		460	415	419
Hydroxide Alkalinity	<2	<2	<2	<2	<2	<2	<1		<2	<2	<2	<2	<2	<2	<1		<2	<2	<2	<2	<2	<1	<1
pH (unitless)	7.98	7.98	8.06	7.88	8.07	8.1	8.08	8.1	8.05	7.95	8.09	7.92	8.1	8.13	8.09	8.28	8.24	8.24	8.13	8.25	8.29	8.18	8.28
Specific Conductivity µS/cm	3340	3280	3260	3290	3350	3440	3410	3120	3290	3260	3240	3260	3340	3360	3370	1150	1260	1210	1220	1260	1250	1200	1180
Total Dissolved Solids	3070	3350	3270	3200	3290	3420	3300	3390	1470	2890	3240	3130	3190	3160	3150	823	772	770	851	838	899	825	791
Total Suspended Solids	<3	8.7	7.3			7.3	3	<3	<3	10	8.6			5.2	<3	7.7	16.2	16	8.1		3.3	24.8	3.7
Turbidity NTU	0.43	0.19	0.19			0.5	0.15	0.72	0.78	0.28	0.74			0.78	0.19	2.27	7.27	3.03	3.92		1	7.71	0.56
Dissolved Anions																							
Bromide	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	17	19	17	20	17	19	17	15	15	17	15	19	15	16	17	6.5	5.6	14.6	18.5	23.1	28.2	24.6	26.6
Fluoride	0.47	<0.4	0.46	<0.4	<0.4	0.189	0.165	<0.4	0.49	<0.4	<0.4	<0.4	<0.4	0.186	0.175	<0.2	0.35	0.23	0.37	<0.2	<0.2	0.203	0.038
Sulphate	1660	1700	1720	1730	1790	1790	1800	1650	1710	1720	1740	1720	1800	1790	1760	436	457	436	443	471	484	436	423
Nutrients																							
Ammonia (Total)	0.0213	0.0058	<0.005	<0.005	<0.005	<0.005	<0.005	0.0055	0.0203	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.243	0.211	0.306	0.316	0.321	0.377	0.372	0.397
Nitrate (as N)	80.6	88.4	89.4	88.5	90.3	88	87.1	76.3	69.6	83.4	82.6	77.7	77.7	83.3	87.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrite (as N)	0.429	0.318	0.204	0.163	0.194	0.097	0.168	0.527	0.426	0.545	0.533	0.37	0.28	0.451	0.533	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen (Dissolved)	85.9								73.5								0.356						
Nitrogen (Total)	110	83.5	83.5					76.8	70.1	77.5	73.6					0.333	0.355	0.418	0.417				
Nitrogen Kjeldahl (Total)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.333	0.4	0.449	0.443	0.43	0.446	0.582	0.536
Orthophosphate (Dissolved)				0.0154	0.0165	0.0183	0.0164	0.0079				0.018	0.0277	0.0269	0.0225	0.0688				0.14	0.126	0.127	0.111
Phosphorus - Dissolved	0.0153	0.0183	0.0192	0.0194	0.0185	0.0191	0.0191	0.0075	0.019	0.023	0.0185	0.0213	0.0317	0.0253	0.0248	0.082	0.0816	0.168	0.181	0.16	0.143	0.138	0.131
Phosphorus - Total	0.0153		0.0182	0.0193	0.0186	0.0202	0.0169		0.0212		0.0206	0.0216	0.0321	0.0274	0.0195		0.0951		0.198	0.17	0.143	0.18	0.154
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																							
Aluminum	0.0042	0.0031	0.0021	0.0023	0.0031	0.0041	0.0044	<0.002	0.0017	0.0015	0.0017	0.0016	0.002	0.0041	0.0024	0.0068	0.0043	0.0034	0.0025	0.0025	0.0032	0.0024	0.0193
Antimony	0.00372	0.00412	0.00353	0.00372	0.00371	0.00396	0.00364	0.0169	0.0108	0.0107	0.00953	0.00821	0.0075	0.0196	0.017	0.00063	0.00016	0.00012	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0043	0.00521	0.00503	0.00488	0.00472	0.00525	0.00494	0.0229	0.0104	0.0139	0.0159	0.0138	0.011	0.0224	0.0261	0.0118	0.00711	0.00426	0.00473	0.00461	0.00375	0.00433	0.0046
Barium	0.0487	0.0404	0.0347	0.0364	0.0326	0.0297	0.031	0.0212	0.0334	0.0304	0.023	0.026	0.0275	0.0217	0.0224	0.0696	0.0983	0.0801	0.0746	0.0703	0.0627	0.0558	0.0506
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.098	0.109	0.101	0.12	0.115	0.105	0.117	0.117	0.094	0.116	0.102	0.12	0.116	0.114	0.12	0.098	0.087	0.097	0.096	0.102	0.098	0.092	0.09
Cadmium	<0.001	0.000712	<0.0008	<0.0015	<0.0012	<0.001	<0.0001	<0.00068	<0.001	<0.001	<0.0008	<0.0014	<0.0012	<0.001		<0.00005	<0.00005	<0.00005	<0.00005	<0.00004	<0.00003	<0.00005	<0.00001
Calcium	243	238	242	240	258	254	245	233	235	232	243	235	230	238	237	43.4	51.4	40.3	41.7	45.4	47.6	45.7	45.7
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.00122	0.00092	0.00088	0.00081	0.00074	0.00073	0.00071	0.00275	0.00187	0.00171	0.00179	0.00166	0.00098	0.00159	0.0021	0.00045	0.00084	0.00064	0.00048	0.00043	0.00041	0.00045	0.00039
Copper	0.003	0.00311	0.00335	0.00301	0.00271	0.00312	0.00479	0.0173	0.00744	0.00654	0.00851	0.00798	0.00331	0.00579	0.0094	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00043
Dissolved Cadmium (by saltwater e›					<0.00015	<0.00015	<0.00012						<0.00015	<0.00015	<0.00012						<0.00002	<0.00002	
Iron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.012	0.024	0.03	0.024	0.026	0.024	0.078	0.081
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0328	0.0294	0.0282	0.033	0.0331	0.028	0.0318	0.0301	0.0341	0.0311	0.0288	0.0336	0.0343	0.0305	0.036	0.00255	0.00119	0.00166	0.00238	0.0035	0.0028	0.00278	0.0029
Magnesium	247	295	296	310	317	298	318	278	279	291	291	303	321	296	312	72	71.4	62.8	70.6	79.4	82.7	73.1	74.1
Manganese	0.0879	0.068	0.0598	0.0545	0.0529	0.0458	0.0461	0.11	0.121	0.109	0.101	0.1	0.0752	0.0845	0.0991	0.092	0.394	0.346	0.3	0.272	0.24	0.256	0.206
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000022	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	3.37	3.26	3.1	3.41	3.59	3.62	3.55	3.33	3.33	3.32	3.03	3.32	3.39	3.48	3.44	0.204	0.181	0.166	0.148	0.145	0.12	0.125	0.101
Nickel	0.01	0.00999	0.0124	0.0128	0.0123	0.0142	0.0136	0.0282	0.0265	0.0224	0.0232	0.0214	0.0271	0.0235	0.0218	0.00123	0.00331	0.00188	0.00137	0.00149	0.00162	0.00146	0.00129
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.067	0.088	0.165	0.17	0.162	0.135	0.153	0.121
Potassium	41.2	41.3	44.1	49.5	46.8	45.8	46.6	38.1	44.8	39.4	37.9	42.4	56.9	44.2	41	43.7	42.3	37.5	36.9	40.8	39	39.7	38
Selenium	0.0425	0.0423	0.0414	0.0437	0.044	0.0463	0.0394			0.0395	0.0371	0.0401	0.0418	0.0414	0.0409	0.00017	0.00012	0.00042	0.00015	<0.0001	<0.0001	<0.0001	<0.0001
Silicon	6.93	6.92	7.23	7.36	7.33	7.19	7.27	7.29	6.97	7.13	7.45	7.52	7.98	7.31	7.31	12.4	11.3	10.8	11.6	12.3	12.8	12.3	12.1
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	147	145	144	150	151	132	148	153	160	159	145	154	154	135	152	92.2	101	116	106	97.8	91.3	92.4	89.9
Strontium	3.58	3.35	3.01	3.4	3.44	3.51	3.45	3.65	3.46	3.63	3.28	3.61	3.47	3.69	3.72	0.276	0.272	0.257	0.287	0.318	0.351	0.341	0.324
Sulphur	448	532	538	553	553	561	587	539	510	529	531	553	562	550	571	143	150	136	144	149	153	142	137
Thallium	0.000019	0.000015	0.000017	0.000012	0.000012	<0.00002	<0.00002	0.000042	0.000037	0.000031	0.000025	0.000025	0.00003	0.000021	0.000021	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	0.00012	0.00017	<0.0001	<0.0001	0.00015	<0.0002	<0.0001	<0.0001	0.00025	<0.0001	<0.0001	<0.0001	<0.0001	0.00017	0.00019
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.0141	0.0138	0.0138	0.0142	0.0145	0.0153	0.0152	0.0117	0.0109	0.0131	0.0127	0.0131	0.0103	0.0135	0.0147	0.000847	0.00128	0.00133	0.00105	0.000958	0.00099	0.0011	0.000998
Vanadium	0.0026	0.0031	0.003	0.0028	0.0027	0.0029	0.0029	0.0039	0.0018	0.0023	0.0032	0.0031	0.0022	0.0023	0.0029	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	0.0024	0.0022	0.0024	0.0027	0.0038	<0.002	0.0032	<0.002	0.001	0.0021	0.0014	0.0011	0.0016	0.0044	0.0041	<0.001	<0.001	<0.001	<0.001	<0.001	0.0015	0.0012	0.0016
Total Metals																							
Aluminum	0.0084	0.0072	0.0036	0.0045	0.0056	0.0168	0.0166	0.0264	0.0294	0.017	0.0151	0.004	0.0201	0.0406	0.009	0.216	0.352	0.299	0.175	0.0656	0.0861	0.434	0.0036
Antimony	0.00392	0.00434	0.00354	0.00389	0.00377	0.00412	0.00395	0.0163	0.0107	0.0109	0.00938	0.00865	0.00753	0.0191	0.0171	0.00061	0.00019	0.00014	<0.0001	<0.0001	0.00013	0.00019	<0.0001
Arsenic	0.00434	0.0053	0.00494	0.00506	0.00486	0.00531	0.00564	0.0226	0.0102	0.0135	0.016	0.0138	0.0112	0.0227	0.0259	0.0113	0.00733	0.00436	0.00436	0.00463	0.00379	0.00445	0.00474
Barium	0.0497	0.0422	0.0365	0.0359	0.0314	0.0284	0.0335	0.0221	0.0328	0.0298	0.0239	0.026	0.0273	0.0225	0.0224	0.0695	0.106	0.0849	0.0737	0.0711	0.0616	0.0588	0.0515
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.104	0.124	0.108	0.132	0.127	0.112	0.132	0.11	0.094	0.127	0.108	0.132	0.125	0.14	0.127	0.1	0.089	0.1	0.1	0.119	0.102	0.096	0.101
Cadmium	<0.001	<0.0009	<0.0008	0.0016	<0.0012	<0.001	<0.0002	<0.00068	<0.001	<0.001	<0.00085	<0.0015	<0.0012	<0.001		<0.00006	<0.00005	<0.00005	<0.00005	<0.00005	<0.00003	<0.0001	<0.00001
Calcium	247	236	242	234	254	242	257	225	222	228	241	228	224	233	246	42.2	52.6	39.6	40.1	45.3	46.1	42.9	46.5
Chromium	0.00016	<0.0002	0.00023	0.00012	<0.0002	0.00024	<0.0002	0.00037	0.00035	0.00023	0.00034	0.00015	0.00021	0.00043	0.00011	0.00062	0.0011	0.00078	0.00054	0.00027	0.00041	0.00139	<0.0001
Cobalt	0.0013	0.00101	0.00093	0.00084	0.00081	0.00091	0.00081	0.00283	0.002	0.0018	0.00182	0.0017	0.00102	0.00165	0.00215	0.00061	0.00112	0.00089	0.00059	0.00051	0.0005	0.00083	0.0004
Copper	0.00371	0.00486	0.0035	0.00346	0.00309	0.004	0.0055	0.0205	0.00945	0.00734	0.0102	0.00838	0.00451	0.0083	0.0105	0.00216	0.00254	0.00222	0.00089	0.00085	0.00114	0.00362	<0.0005
Iron	0.045	0.029	0.016	0.014	0.033	0.102	0.036	0.036	0.043	0.026	0.024	0.012	0.029	0.082	0.011	0.304	0.516	0.415	0.261	0.104	0.145	0.697	0.056
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00015	0.00034	<0.0001	<0.0001	<0.00005	0.000062	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005	<0.00005	0.000132	0.000127	0.000052	<0.00005	0.000161	0.000188	<0.00005
Lithium	0.0352	0.0336	0.0279	0.0341	0.0338	0.0287	0.0345	0.0277	0.0343	0.0342	0.0296	0.0345	0.0343	0.0325	0.0337	0.00263	0.00157	0.00168	0.0025	0.00365	0.00285	0.00282	0.00303
Magnesium	255	300	298	308	314	297	340	270	275	284	294	302	317	300	326	70.4	72.2	64.6	67.4	78.5	76.8	68.8	75.8
Manganese	0.0934	0.0751	0.0606	0.0563	0.0539	0.0499	0.0519	0.111	0.123	0.114	0.103	0.101	0.0767	0.0892	0.101	0.0996	0.418	0.364	0.292	0.287	0.251	0.269	0.211
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000056	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	3.62	3.54	3.13	3.64	3.57	3.71	3.95	3.12	3.26	3.44	3.05	3.44	3.42	3.46	3.67	0.208	0.194	0.172	0.149	0.154	0.127	0.124	0.111
Nickel	0.0105	0.0114	0.0122	0.0131	0.0129	0.0139	0.0154	0.0293	0.0283	0.0228	0.0241	0.0222	0.028	0.0247	0.0227	0.00192	0.00489	0.00311	0.00201	0.00197	0.00208	0.00344	0.00123
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.077	0.114	0.186	0.178	0.161	0.155	0.179	0.127
Potassium	40.7	42.3	43.5	50.3	45.7	44.1	49.7	36.4	42.5	38.6	38.2	43.2	55.4	43.3	42.9	41.4	43.3	38.9	36.6	43.3	37.2	36.8	39
Selenium	0.0437	0.0447	0.0413	0.0443	0.0431	0.0454	0.0437			0.0376	0.0377	0.0396	0.0418	0.0406	0.041	0.00018	0.00015	0.0004	0.00017	<0.0001	<0.0001	0.0001	<0.0001
Silicon	7.13	6.99	7.25	7.39	7.31	7.13	7.7	7.16	6.9	7.12	7.67	7.55	7.96	7.43	7.69	12.5	12.5	11.7	11.7	12.4	12.5	12.5	12.3
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	153	152	144	154	145	131	161	154	162	157	150	160	156	142	161	91.4	104	115	101	102	90.7	88.7	93.1
Strontium	3.71	3.62	2.98	3.57	3.41	3.62	3.74	3.36	3.49	3.74	3.11	3.73	3.47	3.7	3.91	0.287	0.286	0.266	0.292	0.336	0.344	0.337	0.346
Sulphur	473	540	552	564	561	563	633	533	518	526	553	572	571	569	602	142	156	140	141	155	152	139	143
Thallium	0.000019	0.000023	0.000021	0.000014	0.000015	<0.00002	<0.00002	0.000039	0.000036	0.000035	0.000026	0.000023	0.00003	0.000022	0.000021	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.00026	0.00019	0.00018	0.00011	0.00046	0.00148	0.00051	<0.0002	0.00017	0.00027	<0.0001	<0.0001	0.00024	<0.0002	<0.0001	0.00013	0.00047	0.0002	0.00011	<0.0001	0.00056	0.00057	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	0.012	0.024	0.02	0.011	<0.01	<0.01	0.026	<0.01
Total Cadmium (by saltwater extract					<0.00015	<0.00015	<0.0001						<0.00015	<0.00015	<0.0001						<0.00002	<0.00002	
Uranium	0.0148	0.0146	0.0141	0.0153	0.0148	0.016	0.0166	0.0112	0.0106	0.0139	0.0129	0.0132	0.0101	0.0134	0.0153	0.000862	0.00137	0.0014	0.00104	0.00101	0.000998	0.00105	0.00111
Vanadium	0.0027	0.0033	0.0033	0.0032	0.003	0.0032	0.0034	0.0041	0.0019	0.0025	0.0036	0.0034	0.0026	0.0028	0.003	0.0013	0.0019	0.0015	<0.001	<0.001	<0.001	0.0023	<0.001
Zinc	0.0035	<0.003	0.0032	0.0031	<0.003	<0.006	0.0065	<0.006	0.0039	<0.003	<0.003	<0.003	<0.003	<0.006	0.0049	<0.003	<0.003	0.0079	<0.003	<0.003	<0.003	0.0034	<0.003
Organics																							
Carbon Organic (Dissolved)	2.72	2.51	2.72	2.59				2.49	2.71	2.72	2.58	2.6				2.6	3.81	2.6	2.5	2.48			
Carbon Organic (Total)	2.45	2.42	2.82	2.41	2.34	2.25	2.48	2.44	2.5	2.57	2.63	2.48	2.24	2.28	2.38	2	3.6	2.52	2.49	2.26	2.32	2.16	2.29
Nitrogen Organic (Dissolved)	<17								<15								0.144						
Nitrogen Organic (Total)	29								<14								0.143						
ALS LAB ID	**L1277798**	**L1308855**	**L1348395**	**L1394557**	**L1435486**	**L1475661**	**L1514758**	**L1245169**	**L1277798**	**L1308855**	**L1348395**	**L1394557**	**L1435486**	**L1475661**	**L1514758**	**L1245169**	**L1277798**	**L1308855**	**L1348177**	**L1393344**	**L1439433**	**L1478436**	**L1514758**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D5.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D5.2 - GROUNDWATER QUALITY DATA

Site ID	BGC14-017D			BGC14-017S				KAX-14-107S			KAX-14-108S			KAX-14-114S				KAX-14-128					
Site ID	BGC14-017	BGC14-017	BGC14-017	BGC14-017	BGC14-017	BGC14-017	BGC14-017	KAX-14-107	KAX-14-107	KAX-14-107	KAX-14-108	KAX-14-108	KAX-14-108	KAX-14-114	KAX-14-114	KAX-14-114	KAX-14-114	KAX-14-128	MW11-01S	MW11-01S	MW11-01S	MW11-01S	MW11-01S
Analytes	**May-14**	**Jul-14**	**Jul-14**	**May-14**	**Jun-14**	**Jul-14**	**Aug-14**	**Jul-14**	**May-14**	**Sep-14**	**Jul-14**	**Aug-14**	**Sep-14**	**Jun-14**	**Jul-14**	**Aug-14**	**Sep-14**	**Sep-14**	**Jul-11**	**Oct-11**	**Feb-12**	**Jun-12**	**Aug-12**
In Situ Parameters																							
Conductivity µS/cm	457	414	483	474	445	495	491	767	738	769	1425	1347	1314		809	35	824	765	725	741	625	1071	951
Oxygen Dissolved %	11	42.6	26.5	84.5	27.1	83.6	9.5	12.8	0.8	8.3	3.8	0.3	46.9		7.3	21.7	9.7	0.9		9.3	8.1	20.2	
Oxygen Dissolved	1.29	4.61	3.03	9.7	3.16	9.3	1.06	1.42	0.08	0.94	0.4	0.03	5.31		0.81	1.97	1.07	0.26	6.22	1.01	0.97	1.96	1.03
pH (unitless)	8.23	10.2	8.61	8.26	8.04	5.4	7.55	5.5	7.41	5.91	5.95	7.62	5.88		10.5	7.12	6.05	5.57	8.37	8.4	8.85	9.05	6.31
Redox Potential mV	39	-15.9	-18.1	111	68.6	208	70.6	-134	-267	-163	-41	-125	19		-250	167	-45.8	-196			36.5		179
Salinity ppt	0.33	0.27	0.34	0.33	0.31	0.34	0.34	0.53	0.51	0.54	0.96	0.93	0.95		0.56	0.02	0.58	0.53			0.46		0.5
Specific Conductivity µS/cm	669	556	692	675	644	684	689	1062	1017	1076	1867	1819	1866		1118	39	1166	1055	936	529	934	775	
Temperature °C	8.38	11.7	9.12	9.4	8.85	10.6	10.1	10.4	10.6	10.1	12.6	11.4	9.52		10.5	20.1	9.64	10.6	13.2	10.1		10.1	13.5
Total Dissolved Solids	436	362	450	439	419	444	448	688	661	701	1220	1183	1207		725	25	758	686			7.67		608
Turbidity NTU	60.1	-3	0.3	56.8	3.9	0	0	-0.7	0	0	-0.6	0	0		17.8	1.1	0	0	9.8	9.1	21.8	1.4	9.1
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)	<1			<1															1.6				<1
Alkalinity (Total as CaCO3)	205	210	200	350	392	391	401	424	441	437	194	201	195	287	334	328	320	209	129	232	124	148	141
Bicarbonate Alkalinity	205	203	195	342	392	391	401	405	441	437	194	201	195	281	315	315	317	209	129		110	132	
Carbonate Alkalinity	<2	6.9	4.1	8.2	<1	<1	<2	19.2	<2	<1	<1	<2	<1	5.8	18.6	13	2.5	<1	<2		13	15.4	
Color TCU																			13.5	<5	5.9	<5	<5
Hardness as CaCO3 (Dissolved)	61.2	58.8	59.2	387	396	401	396	257	256	250	484	477	471	285	273	281	273	325	297	232	313	351	367
Hydroxide Alkalinity	<2	<1	<1	<1	<1	<1	<2	<1	<2	<1	<1	<2	<1	<1	<1	<1	<1	<1	<2		<1	<1	
pH (unitless)	8.27	8.5	8.36	8.31	8.17	8.22	8.08	8.46	8.28	8.24	8.27	8.15	8.12	8.42	8.53	8.45	8.31	8.57	8.19	8.3	8.54	8.63	8.59
Specific Conductivity µS/cm	635	579	580	641	673	679	659	1090	1070	1060	1890	1880	1810	1190	1190	1170	1150	1030	895	443	928	950	941
Total Dissolved Solids	426	371	366	356	366	398	366	690	759	688	1400	1420	1340	778	788	796	749	856	600	241	630	672	697
Total Suspended Solids	27	<3	<3	62	8.4	<3	<3	5.2	5.2	<3	6	13.8	5.6	7.7	12.6	8.3	3	<3	10.3	3.2	4	4.7	8.5
Turbidity NTU	46.9	0.98	2	24.8	4.47	0.96	0.17	8.19	7.78	11.6	3.84	5.93	3.4	5.07	5	3.78	2.79	106	5.5	3.64	3.94	1.33	4.62
Dissolved Anions																							
Bromide	<0.25	0.062	0.059	<0.25	<0.05	<0.25	<0.05	<0.5	<0.5	<0.5	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5
Chloride	8.6	4.43	4.08	<2.5	0.8	<2.5	0.81	8.2	8.3	8.2	22	24	18	17.4	15	20.2	14.8	13.1	<5	1	<5	<5	19.6
Fluoride	0.27	0.295	0.297	0.14	0.153	0.148	0.156	0.283	0.31	0.297	0.252	0.288	0.252	0.3	0.37	0.301	0.269	0.072	0.42	0.239	<0.2	<0.2	0.33
Sulphate	134	100	98.1	13.9	13	12.9	12.8	175	162	172	835	873	762	340	313	310	310	291	351	17.3	345	344	390
Nutrients																							
Ammonia (Total)	<0.005	0.0062	0.0052	<0.005	<0.005	0.024	<0.005	0.0375	0.0587	0.0788	0.128	0.163	0.175	1.01	1.02	1.11	1.09	0.0561	0.345	0.0565	0.089	0.119	0.103
Nitrate (as N)	<0.025	<0.005	<0.005	0.277	0.245	0.248	0.259	<0.05	<0.05	<0.05	<0.1	<0.1	<0.1	<0.05	<0.05	0.064	<0.05	<0.05	<0.05	<0.005	8.81	9.01	10.8
Nitrite (as N)	<0.005	<0.001	<0.001	<0.005	<0.001	0.0085	0.0061	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	0.155	0.167	0.635
Nitrogen (Dissolved)																			0.67	0.16	15.2	10.9	
Nitrogen (Total)																			0.67	0.139	9.17	9.18	11.7
Nitrogen Kjeldahl (Total)	0.121	0.107	0.133	0.155	0.123	0.128	0.102	0.554	0.627	0.552	0.388	0.491	0.404	2.17	2.35	2.87	2.25	0.521	0.67	0.139	0.21	<0.05	0.249
Orthophosphate (Dissolved)	0.0518	0.0593	0.0591	0.023	0.0194	0.0184	0.0231	0.135	0.115	0.119	0.043	0.0643	0.0756	0.152	0.176	0.246	0.229	0.0724	0.0668				0.0762
Phosphorus - Dissolved	0.0605	0.0612	0.0604	0.0291	0.0205	0.0251	0.025	0.148	0.112	0.16	0.0423	0.0652	0.077	0.167	0.228	0.251	0.273	0.0821	0.0707	0.0192	0.115	0.0717	
Phosphorus - Total	0.0925	0.0611	0.0628	0.109	0.037		0.025	0.202	0.184	0.21	0.165	0.181	0.196	0.201	0.301	0.339	0.356	0.0831	0.0869	0.0272	0.116	0.0751	0.0923
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																							
Aluminum	0.0074	0.0079		0.0039	0.0045	0.0034	0.0034	0.0072	0.0059	0.0058	0.0081	0.0071	0.0068	0.005	0.0045	0.0048	0.0079	0.0113	0.0092	0.0048	0.0131	0.0116	0.0105
Antimony	0.0002	0.00017	0.00017	0.00012	<0.0001	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00031	0.00026	<0.0001	0.00019	0.00012	<0.0005	0.00288	0.00021	<0.0005	0.0002
Arsenic	0.00126	0.00131	0.00133	0.00085	0.00097	0.0009	0.00093	0.00536	0.00534	0.00534	0.00621	0.00615	0.00637	0.00526	0.00599	0.00666	0.00583	0.00165	0.00252	0.00339	0.00349	0.00288	0.00302
Barium	0.0258	0.0248	0.0244	0.126	0.15	0.137	0.137	0.0322	0.0339	0.0317	0.0238	0.0256	0.0223	0.0565	0.0691	0.0835	0.0729	0.0501	<0.02	0.09	0.0187	0.022	0.0202
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.0005	<0.0005	<0.2	<0.0005
Boron	0.096	0.095	0.088	0.015	0.015	0.015	0.014	0.642	0.701	0.67	0.182	0.193	0.183	0.352	0.346	0.402	0.368	2.61	<0.1	0.014	0.057	<0.1	0.074
Cadmium	0.000011	0.000018	0.000014	0.000037	<0.00005	0.00002	0.00002	<0.00001	<0.00001	<0.00001	<0.00006	<0.00001	0.000021	<0.00003	<0.00003	<0.00001	<0.00001	<0.00001	<0.00004	0.00004	0.000042	0.000044	0.000011
Calcium	13.8	12	11.9	65	65.8	67	65.3	30.3	29.7	28.6	57.7	56.5	55.2	31.2	32.9	32.7	31.5	95.8	36	50.7	31.6	33.3	37.2
Chromium	<0.0001	<0.0001	<0.0001	0.0027	0.00267	0.00278	0.00275	<0.0001	0.00012	0.00011	<0.0001	<0.0001	0.00012	<0.0001	<0.0001	<0.0001	<0.0001	0.00024	0.0078	0.00081	0.00107	0.0021	0.00074
Cobalt	0.00036	0.00037	0.00044	0.00018	<0.0001	<0.0001	<0.0001	0.0005	0.00039	0.00027	0.00202	0.00177	0.00125	0.00107	0.00112	0.00147	0.00136	<0.0001	<0.0003	0.00079	<0.0001	<0.0003	<0.0001
Copper	0.00039	0.00184	0.00054	0.00169	0.00231	0.0009	0.00081	<0.0002	<0.0002	<0.0002	0.00043	<0.0002	<0.0002	0.00158	0.00113	0.00098	0.00063	<0.0002	0.002	0.0009	0.00092	<0.001	0.00074
Dissolved Cadmium (by saltwater e					0.000035						<0.00002			<0.00002	<0.00002								
Iron	<0.01	<0.01	0.131	<0.01	<0.01	<0.01	<0.01	0.756	0.645	0.415	0.804	0.664	0.444	0.159	0.362	0.617	0.462	0.074	<0.03	<0.03	<0.03	<0.03	<0.01
Lead	<0.00005	<0.00005	<0.00005	<0.00005	0.000068	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000053	<0.00005	<0.00005	<0.00005	<0.00005	<0.0005	<0.00005	<0.00005	<0.0005	<0.00005
Lithium	0.0442	0.0436	0.0407	0.00849	0.00852	0.00854	0.00862	0.00492	0.00535	0.00504	0.00386	0.00403	0.00459	0.00889	0.00956	0.0086	0.00823	0.01	<0.005	0.00431	0.0056	0.0052	0.00513
Magnesium	6.5	6.99	7.14	54.7	56.4	56.7	56.5	44	44.1	43.3	82.5	81.6	80.8	50.2	46.3	48.5	47.2	20.9	50.3	25.5	56.9	65	66.5
Manganese	0.0785	0.0801	0.0865	0.0272	0.0105	0.00635	0.00608	0.668	0.646	0.469	1.16	1.13	0.752	0.356	0.673	1.1	0.974	0.339	0.00079	0.111	0.00891	0.0165	0.0161
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
Molybdenum	0.0069	0.00588	0.00622	0.00154	0.00145	0.00149	0.00148	0.00506	0.00444	0.00422	0.208	0.212	0.233	0.0341	0.0389	0.0338	0.0303	0.0277	0.0835	0.0117	0.0442	0.0471	0.0446
Nickel	0.00161	0.00141	0.00169	0.00112	0.00082	0.00067	0.00051	0.00265	0.00249	0.0023	0.00366	0.00326	0.00246	0.00923	0.00888	0.00984	0.00972	<0.0005	0.0012	0.00513	0.0006	<0.001	0.00106
Phosphorus	0.064	0.066	0.065	<0.05	<0.05	<0.05	<0.05	0.175	0.163	0.169	0.137	0.164	0.15	0.19	0.259	0.319	0.3	0.086	<0.3	<0.3	<0.3	<0.3	0.089
Potassium	1.27	1.12	1.24	2.24	2.44	2.35	2.3	13.9	13.9	14	33	32.2	33.6	23	24.9	21	20.8	31.3	17.7	1.35	22.9	21.5	20.6
Selenium	0.00018	0.00012	0.00017	0.00099	0.00085	0.0009	0.00092	0.00032	0.00053	0.00023	0.00013	0.00011	<0.0001	0.00046	0.00053	0.00024	0.00024	0.00138	0.0044	0.00136	0.0039	0.0048	0.00567
Silicon	7	6.99	7.18	7.52	7.51	7.53	7.71	10.6	10.9	10.3	11.5	11.4	12.4	7.61	6.69	7.24	7.62	13.2	4.96	5.03	4.4	6.1	5.97
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00002	<0.00001
Sodium	119	108	102	9.25	9.32	9.56	9.87	150	158	146	234	246	227	150	152	159	153	103	71.4	8.3	75.5	77.8	74.9
Strontium	0.835	0.836	0.87	1.48	1.53	1.51	1.49	0.791	0.809	0.811	1.23	1.26	1.18	1.02	1.14	1.02	0.923	1.64	0.693	0.867	0.736	0.824	0.825
Sulphur	42.6	32.9	32.4	4.63	4.39	4.51	4.44	81	95.4	104	253	256	251	112	101	99.4	101	415					
Thallium	0.000014	0.000012	0.000012	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	0.000021	0.000013	<0.0002	0.000011
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	0.0001	<0.0001	<0.0005	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.00347	0.00247	0.00244	0.00126	0.00113	0.00114	0.00111	0.00142	0.00138	0.00152	0.00171	0.00162	0.00138	0.00312	0.00355	0.00254	0.00231	0.000159	0.0019	0.00306	0.00109	0.00087	0.000964
Vanadium	<0.001	<0.001	<0.001	0.0034	0.0039	0.0039	0.0041	0.0011	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0014	0.0011	<0.001	<0.001	0.0029	<0.001	0.0078	0.0093	0.0074
Zinc	<0.001	0.0064	0.0034	0.0031	0.0172	0.0135	0.007	0.0019	<0.001	0.0098	0.0176	0.0039	0.0037	0.0018	<0.001	<0.001	0.0019	0.0045	<0.005	0.0047	<0.003	<0.005	0.0011
Total Metals																							
Aluminum	2.93	0.026		1.63	0.177	0.0282	0.0095	0.0198	0.019	0.0195	0.0813	0.175	0.0927	0.0948	0.0758	0.0647	0.0568	0.015	0.245	0.136	0.117	0.0509	0.267
Antimony	0.00026	0.00021	0.00015	0.00025	0.00011	0.00016	0.00012	0.00015	0.00015	0.00015	0.00011	0.00023	0.00014	0.00037	0.00032	0.0002	0.00032	0.00036	<0.0005	0.00253	0.00021	<0.0005	0.00029
Arsenic	0.0017	0.0013	0.00116	0.00152	0.00105	0.00094	0.00098	0.00576	0.00561	0.00578	0.00647	0.00663	0.00655	0.00538	0.00647	0.00667	0.00596	0.00275	0.00274	0.00347	0.00356	0.0031	0.00306
Barium	0.0383	0.025	0.0213	0.144	0.16	0.137	0.14	0.0322	0.0335	0.0323	0.0244	0.0276	0.0235	0.0653	0.0873	0.0818	0.0728	0.0496	0.024	0.0936	0.0204	0.02	0.024
Beryllium	0.00023	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.0005	<0.0005	<0.2	<0.0005
Boron	0.099	0.099	0.087	0.015	0.018	0.02	0.018	0.676	0.745	0.684	0.19	0.22	0.194	0.383	0.358	0.4	0.396	2.65	<0.1	0.015	0.063	<0.1	0.094
Cadmium	0.000057	0.000032	<0.00001	0.000065	<0.00005	0.000026	0.000023	<0.00001	<0.00001	<0.00001	<0.00012	0.000053	0.000062	<0.00006	<0.00008	0.000029	0.000032	<0.00001	<0.00004	0.000045	0.000045	0.000046	0.000031
Calcium	14.3	11.9	10.9	63.4	65.6	64.6	65.9	30.1	29	28.2	58.1	58.9	55.2	32.7	32.5	31.3	30.4	92.2	37.2	51.2	30.5	35.7	36.3
Chromium	0.00104	0.00013	<0.0001	0.00688	0.00333	0.00297	0.00301	0.00024	0.0002	0.00029	0.00263	0.00079	0.00049	0.00051	0.00057	0.00043	0.00037	0.00092	0.0085	0.00331	0.00162	0.0027	0.0111
Cobalt	0.00125	0.00039	0.00037	0.00148	0.00023	<0.0001	<0.0001	0.00076	0.00059	0.00046	0.0021	0.002	0.00141	0.00124	0.00137	0.00154	0.00151	0.00017	<0.0003	0.00084	0.00014	<0.0003	0.00042
Copper	0.00294	0.00204	<0.0005	0.0117	0.00233	0.00121	0.00099	0.00124	0.00052	<0.0005	0.00102	0.00162	0.00139	0.017	0.0164	0.0142	0.0111	<0.0005	0.0038	0.00091	0.00171	0.0019	0.00398
Iron	2.03	0.032	<0.01	2.06	0.194	0.031	0.012	0.8	0.668	0.502	0.949	0.887	0.585	0.302	0.574	0.677	0.565	0.123	0.302	0.18	0.145	0.047	0.304
Lead	0.00111	<0.00005	<0.00005	0.000464	0.000058	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000064	0.000101	0.000071	0.000219	0.000385	0.000311	0.000226	<0.00005	<0.0005	0.00009	<0.00005	<0.0005	0.000144
Lithium	0.0422	0.0448	0.0373	0.0081	0.00834	0.00846	0.00874	0.00501	0.00551	0.00528	0.00391	0.0043	0.00463	0.00886	0.00924	0.00836	0.00813	0.00961	<0.005	0.00407	0.00541	0.0055	0.00562
Magnesium	7.46	6.96	6.58	53.1	55.8	55.9	56.5	44.5	43.2	43.2	85.1	82.7	81.7	49.5	45.7	46.8	46.4	19.9	52.6	26.1	56.3	65.4	65
Manganese	0.107	0.0822	0.0771	0.0722	0.0173	0.00828	0.00643	0.689	0.656	0.511	1.2	1.19	0.789	0.355	0.697	1.05	0.951	0.348	0.0124	0.118	0.0149	0.0197	0.0345
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000032	0.000049	0.000048	0.000028	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	
Molybdenum	0.00685	0.00651	0.00589	0.00145	0.00151	0.00154	0.00154	0.00599	0.00518	0.00546	0.217	0.225	0.244	0.0349	0.0391	0.0315	0.0332	0.0774	0.0868	0.0113	0.0421	0.0489	0.0481
Nickel	0.00289	0.00152	0.0015	0.00646	0.00109	0.00074	0.00056	0.00297	0.00269	0.00245	0.00406	0.00418	0.00297	0.011	0.0105	0.0107	0.0107	0.00098	0.0017	0.00545	0.00103	<0.001	0.00726
Phosphorus	0.102	0.074	0.064	0.084	<0.05	<0.05	<0.05	0.211	0.179	0.188	0.162	0.173	0.157	0.208	0.293	0.306	0.297	0.091	<0.3	<0.3	<0.3	<0.3	0.099
Potassium	1.67	1.1	1.19	2.36	2.31	2.32	2.34	13.7	13.4	14.1	33.3	32.9	33.9	23.5	23.6	19.8	20.5	28.5	18.3	1.43	23.6	23.1	20.5
Selenium	0.00021	0.00013	0.00012	0.00087	0.00093	0.00085	0.00084	0.00014	0.00012	0.00012	0.00015	0.00012	0.0001	0.00053	0.00072	0.00037	0.00038	<0.0001	0.0046	0.00124	0.00406	0.0051	0.00558
Silicon	16.5	7.04	6.36	11	7.86	7.54	7.7	10.6	10.5	10.4	11.9	12	12.7	8	6.75	7.12	7.67	12.6	5.66	5.41	4.58	6.29	6.39
Silver	0.000016	<0.00001	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000028	0.000024	0.000021	0.000025	<0.00001	<0.00002	<0.00001	<0.00001	<0.00002	0.000028
Sodium	117	104	94.3	9.07	9.5	9.87	9.96	152	160	150	237	254	231	159	154	148	143	101	73.8	8.56	77.8	83.4	77.8
Strontium	0.868	0.914	0.804	1.4	1.57	1.54	1.56	0.81	0.811	0.83	1.28	1.32	1.23	1.05	1.19	0.978	1	1.64	0.731	0.82	0.689	0.88	0.842
Sulphur	41.3	33.7	30.2	4.56	4.66	4.71	4.57	58.8	54.6	57.3	266	266	258	117	102	96.7	99.8	103					
Thallium	0.000045	<0.00001	0.00001	0.000023	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00003	0.000051	0.000032	0.00002	<0.00001	<0.0002	0.000021	0.000014	<0.0002	0.000011
Tin	0.00034	<0.0001	<0.0001	0.00024	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	0.00017	0.00011	0.00028	0.00019	0.00013	0.00021	<0.0001	0.00011	0.00015	<0.0005	0.00029	0.00011	<0.0005	0.00042
Titanium	0.059	<0.01	<0.01	0.072	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.015	<0.01	<0.01	<0.01	0.01
Total Cadmium (by saltwater extract					0.000033						0.000057			0.000033	0.000048								
Uranium	0.00358	0.00251	0.00224	0.00126	0.00118	0.00119	0.00119	0.00144	0.00137	0.00154	0.00179	0.00167	0.00143	0.00335	0.0037	0.00237	0.00237	0.000182	0.00202	0.0029	0.00105	0.00094	0.001
Vanadium	0.0046	<0.001	<0.001	0.0091	0.0048	0.0041	0.0043	0.0013	0.001	<0.001	<0.001	<0.001	<0.001	0.0015	0.0025	0.0019	0.0016	<0.001	0.0039	<0.001	0.0084	0.0099	0.0087
Zinc	0.0053	0.0069	0.0053	0.0065	0.014	0.0186	0.0098	<0.003	0.0036	0.0088	0.0115	0.0075	0.0056	0.0036	0.0056	0.0041	0.0037	<0.003	<0.005	0.0055	0.0044	<0.005	0.0051
Organics																							
Carbon Organic (Dissolved)								10.9	13.4	4.49	4.38	4.48	3.76	10.6	12.9	9.05	7.9	12.5	4.32	1.43	1.96	2.35	1.81
Carbon Organic (Total)	3.27	2.56	3.03	2.6	1.61	1.23	1.34												4.14	1.29	2	1.71	1.8
Nitrogen Organic (Dissolved)																			0.33	0.103	6.1	<2.2	
Nitrogen Organic (Total)																			0.33	0.103	<0.3	<0.06	
ALS LAB ID	**L1459061**	**L1481200**	**L1494504**	**L1459061**	**L1478436**	**L1491785**	**L1509422**	**L1488886**	**L1502282**	**L1516148**	**L1488886**	**L1502282**	**L1516148**	**L1464552**	**L1481825**	**L1502282**	**L1516148**	**L1517413**	**L1035635**	**L1074388**	**L1114029**	**L1160966**	**L1202478**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D5.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D5.2 - GROUNDWATER QUALITY DATA

Site ID		MW11-01S													MW11-02								MW1
Site ID	MW11-01S	MW11-01S	MW11-01S	MW11-01S	MW11-01S	MW11-01S	MW11-01S	MW11-01S	MW11-02	MW11-02	MW11-02	MW11-02	MW11-02	MW11-02	MW11-02	MW11-02	MW11-02	MW11-02	MW11-02	MW11-02	MW11-02	MW11-04D	MW11-04D
Analytes	Dec-12	Mar-13	May-13	Aug-13	Nov-13	Mar-14	Jun-14	Sep-14	Aug-11	Nov-11	Feb-12	Jun-12	Aug-12	Dec-12	Mar-13	May-13	Aug-13	Nov-13	Mar-14	Jun-14	Sep-14	Jun-12	Aug-12
In Situ Parameters																							
Conductivity µS/cm	680	625	800	808	0.948	658	740	653	1931	1957	1830	3284	3010	1918	1841	2234	2494	2.85	3072	2030	2052	1081	1000
Oxygen Dissolved %	3.8	1.8	0.6	1.1	2.2	1.5	4.6	3.4	9.5		48.5	25.4		59	14.2	19.7	6	7.2	6.1	5	5.3	28.4	
Oxygen Dissolved	0.43	0.21	0.07	1.1	0.26	0.17	0.49	0.43	1.04	39.3	5.95	2.46	0.15	7.02	1.67	2.27	0.65	0.86	0.72	0.59	0.63	2.64	1.87
pH (unitless)	9.03	8.58	8.55	8.59	8.48	8.5	8.44	8.49	7.23	7.64	7.83	7.76	7.27	7.6	7.64	7.71	7.67	7.73	7.66	7.73	8.06	9.91	9
Redox Potential mV	19.3	105	134	212	125	3.74	67.3	115					-140	-99.3	-76.7	-38.6	237	1.48	-36.7	-67.4	-88.5		30
Salinity ppt	0.49	0.46	0.58	0.56	0.47	0.48	0.48	0.46					1.6	1.51	1.44	1.7	1.81	59.7	1.6	1.54	1.54		0.5
Specific Conductivity µS/cm	979	926	1156	1125	0.655	959	966	934	2643	3016	2934	2294		2893	2778	3240	3437	1.9	3029	2945	2943	795	
Temperature °C	8.99	7.78	8.86	10.2	8.79	8.43	12.7	9.24	10.9	6.62	5.23	9.08	14.7	7.36	7.33	8.76	10.7	7.51	7.13	8.74	9.14	11	13.4
Total Dissolved Solids	635	605	752	730	617	627	628	607					1930	1880	1806	2102	2234	1851	1997	1916	1911		638
Turbidity NTU	3.8	3.4	14	2.2	2.7	4.1	3.7	3.8	0.8	1.8	23.6	0	32.3	3.3	4.7	0	3.4	2.4	3.2	13.2	3	5.2	1.5
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)									5.3				4.5										<1
Alkalinity (Total as CaCO3)	159	153	152	159	146	148	161	161	220	203	218	177	186	180	195	176	165	192	176	182	173	48.9	37.1
Bicarbonate Alkalinity	143	143	149	154	146	141	156	158	220		218	177		180	195	176	165	192	176	182	173	33.3	
Carbonate Alkalinity	15.5	9.9	2.9	4.4	<1	6.5	5.5	2.7	<2		<2	<1		<2	<2	<2	<2	<2	<2	<2	<1	15.6	
Color TCU	<5	<5	<5	<5					10.5	10.5	7.4	5.2	5.2	<5	<5	<5	<5	<5				17	11.6
Hardness as CaCO3 (Dissolved)	382	389	386	374	369	366	370	366	428	464	428	450	463	432	431	426	433		433	443	429	38.1	33.8
Hydroxide Alkalinity	<1	<1	<1	<1	<1	<1	<1	<1	<2		<2	<1		<2	<2	<2	<2	<2	<2	<2	<1	<1	
pH (unitless)	8.67	8.41	8.4	8.37	8.43	8.38	8.38	8.41	7.93	8.07	7.87	8.02	7.97	8.12	8.06	8.1	8.05	8.17	8.05	8.17	8.03	9.04	9.22
Specific Conductivity µS/cm	975	1040	1040	1010	991	980	974	965	2870	2910	2800	2840	2870	2850	3010	2900	2900	2940	2950	2980	2950	936	905
Total Dissolved Solids	697	705	700	717	662	666	669	686	2180	2260	2170	2270	2240	2260	2240	2210	2200	2220	2260	2260	2140	644	592
Total Suspended Solids	3.7	<3	<3	<3			3.5	<3	4	11.7	26	<3	7.2	11.7	7.4	4.7	6.8			12.5	3.8	<3	<3
Turbidity NTU	7.33	0.75	0.81	4.55			1.61	0.56	4	7.14	22.2	2.07	4.07	7.54	4.24	2.32	3.18			7.82	1.17	0.93	0.84
Dissolved Anions																							
Bromide	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.25	<0.5	<1	<1	<1	<1	<5	<1	<1	<1	<1	<2.5	<1	<1	<1	<0.5	<0.5
Chloride	<5	<5	<5	<5	<5	<5	2.8	<5	17	16	16	16	<50	16	16	17	15	16	16	17	16	26.1	26.1
Fluoride	<0.2	0.32	<0.2	0.4	<0.2	0.4	0.191	0.199	<0.4	<0.4	<0.4	<0.4	0.13	<0.4	<0.4	<0.4	0.58	<0.4	<0.4	0.119	0.099	1.11	1.02
Sulphate	356	361	371	365	361	369	359	367	1340	1460	1360	1430	1460	1430	1440	1430	1410	1420	1480	1470	1440	356	341
Nutrients																							
Ammonia (Total)	0.11	0.101	0.0819	0.0933	0.0888	0.0879	0.0974	0.102	0.0458	0.0885	<0.05	0.072	0.0928	0.0835	0.0831	0.0701	0.0699	0.0687	0.0674	0.0434	0.0705	0.124	0.092
Nitrate (as N)	9.42	11.9	11.4	9.13	6.43	3.73	2	1.37	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.11	<0.05	<0.05
Nitrite (as N)	0.069	0.084	0.025	0.059	0.116	0.142	0.174	0.201	<0.02	<0.02	<0.02	<0.02	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.01
Nitrogen (Dissolved)	9.98	10.8							0.25	0.22	0.14	1.75		0.137	0.129							0.3	
Nitrogen (Total)	8.72	12	11	8.68					0.28	0.323	0.334	0.224	<0.51	0.19	0.13	0.15	0.133					0.3	0.189
Nitrogen Kjeldahl (Total)	<0.05	<0.05	0.255	<0.05	<0.05	<0.05	<0.05	0.189	0.28	0.323	0.33	0.224	0.181	0.194	0.13	0.154	0.186	0.161	0.179	0.192	0.169	0.3	0.189
Orthophosphate (Dissolved)					0.0429	0.0436	0.0414	0.0441					0.0522					0.0693	0.0721	0.0832	0.0808		0.169
Phosphorus - Dissolved	0.0507	0.0596	0.0588	0.0546	0.0471	0.0471	0.0442	0.0452	0.0426	0.0153	0.021	0.0558	0.0522	0.066	0.0639	0.0705	0.0753	0.0706	0.0728	0.079		0.247	
Phosphorus - Total	0.0568	0.0608		0.057	0.05	0.0499	0.0507	0.047	0.0558	0.0692	0.098	0.0826	0.0823	0.0987	0.0895	0.0916	0.0927	0.0926	0.0972	0.0986	0.117	0.252	0.178
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0059	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																							
Aluminum	0.0075	0.0062	0.0057	0.0055	0.0055	0.006	0.0052	0.0057	<0.05	0.0108	<0.015	0.0106	0.0072	0.006	0.007	0.0061	0.006	0.0053	0.0047	0.0074	0.0054	0.147	0.0833
Antimony	0.00014	0.00015	0.00012	0.00014	0.00015	0.00016	0.00013	0.00014	0.0055	0.00069	0.0016	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00028	<0.0005	0.00023
Arsenic	0.00271	0.00243	0.00222	0.0023	0.00208	0.00201	0.00211	0.00205	<0.005	0.00288	0.00331	0.00306	0.00348	0.00262	0.00284	0.00258	0.00251	0.00278	0.0035	0.00321	0.00306	0.012	0.0123
Barium	0.019	0.0209	0.0211	0.0212	0.0205	0.0208	0.0211	0.021	0.033	0.0421	0.0395	0.0363	0.0364	0.0318	0.0314	0.0288	0.0265	0.029	0.0283	0.0286	0.0277	<0.02	0.00859
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.001	<0.0025	<0.0025	<0.0025	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.2	<0.0005
Boron	0.073	0.08	0.066	0.067	0.074	0.071	0.068	0.068	1.31	1.36	1.22	1.32	1.24	1.31	1.47	1.22	1.35	1.3	1.34	1.32	1.3	2.25	1.7
Cadmium	<0.00001	0.000012	0.000014	0.00002	<0.00002	<0.00003	<0.00005	0.000011	<0.00017	<0.00002	0.000105	<0.00005	<0.00005	<0.00005	<0.00002	<0.00002	0.000022	<0.00002	<0.00002	<0.00002	<0.00002	<0.00017	<0.00006
Calcium	39.8	37.7	39.9	38.8	38.4	39.6	40.8	39.9	84.8	92.9	86.3	88.5	91.5	84.7	83.3	84.5	83.1	82.1	83.7	86	83.7	14.4	
Chromium	0.00106	0.00045	0.00027	0.00048	<0.0001	0.0001	<0.0001	<0.0001	<0.01	<0.0002	0.00105	<0.0005	0.00124	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	0.00029
Cobalt	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.003	0.00283	0.00259	0.00162	0.00156	0.00129	0.00125	0.00113	0.00103	0.00099	0.00102	0.00093	0.00093	<0.0003	<0.0001
Copper	0.00065	0.00055	0.00063	0.00052	0.00041	0.00045	0.00079	0.00045	<0.01	<0.001	<0.0025	<0.001	<0.001	<0.001	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.001	<0.0002
Dissolved Cadmium (by saltwater e›						<0.00002	<0.00002												<0.00002	<0.00002			
Iron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.03	0.332	0.038	0.083	0.207	0.046	0.075	0.018	0.012	0.079	0.044	0.136	0.102	<0.03	<0.01
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.005	<0.0001	<0.00025	<0.00025	<0.00025	<0.00025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.00005
Lithium	0.00429	0.00476	0.00422	0.00388	0.00474	0.00387	0.0036	0.00387	<0.05	0.0264	0.0381	0.0435	0.0452	0.0515	0.0538	0.0607	0.0595	0.0681	0.0648	0.0637	0.0616	<0.005	0.003
Magnesium	68.7	71.5	69.4	67.4	66.3	64.9	65.1	64.6	52.6	56.3	51.6	55.6	56.9	53.6	54.3	52.2	54.9	56.1	54.5	55.3	53.3	0.51	
Manganese	0.0319	0.037	0.0408	0.0491	0.0485	0.0588	0.0641	0.0656	1.04	1.41	1.43	1.27	1.24	1.13	1.2	1.08	1.06	1.08	1.01	0.967	0.967	0.017	0.0164
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0527	0.0467	0.0468	0.05	0.0518	0.0537	0.0591	0.0619	0.014	0.0103	0.00862	0.00489	0.00462	0.00313	0.00263	0.00179	0.00166	0.00148	0.00152	0.00121	0.00124	0.216	0.218
Nickel	<0.0005	0.00051	<0.0005	<0.0005	<0.0005	<0.0005	0.00059	<0.0005	0.017	0.0095	0.0141	0.0041	0.0051	<0.0025	0.0029	0.0019	0.0017	0.0019	0.0017	0.0018	0.0015	0.0015	0.00093
Phosphorus	<0.05	0.066	0.059	0.053	<0.05	<0.05	0.053	<0.05	<0.3	<0.3	<0.3	<0.3	0.097	0.077	0.072	0.076	0.087	0.087	0.096	0.103	0.108	<0.3	
Potassium	20.1	19.6	20	18.9	19.7	19.3	20.3	20.5	2.7	2.31	2.66	1.61	1.37	1.22	1.14	1.09	1.06	1.07	1.03	1.02	0.95	10.2	6.24
Selenium	0.00489	0.00459	0.00369	0.00291	0.00197	0.00119	0.00071	0.00059	<0.01	0.00021	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	0.00026
Silicon	6.64	6.59	6.84	6.85	6.85	6.79	7.19	7.64	5.86	5.52	6.19	6.37	6.42	6.09	6.33	6.67	6.65	6.73	6.31	6.6	6.51	2.66	
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	<0.00002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001
Sodium	77.1	74.9	72.5	76.6	72	71.5	68.9	72.1	551	627	528	547	530	538	542	523	510	517	545	533	564	175	169
Strontium	0.933	0.979	0.89	0.894	0.865	0.912	0.935	0.931	3.07	4.03	3.45	3.55	3.68	3.75	4.02	3.62	3.96	3.47	3.82	3.75	3.98	0.235	0.212
Sulphur	113	117	119	118	115	117	118	125						455	435	464	445	442	455	459	458		
Thallium	0.000011	0.000011	0.00001	0.000011	<0.00001	0.000015	<0.00001	<0.00001	<0.002	<0.00002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.0002	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.012	<0.05	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	
Uranium	0.000934	0.000846	0.000834	0.00084	0.000731	0.000803	0.000786	0.000758	0.0069	0.0034	0.0034	0.00171	0.00165	0.0014	0.00129	0.000989	0.00095	0.000857	0.000746	0.000696	0.000679	0.00026	0.000137
Vanadium	0.0083	0.0066	0.0059	0.0064	0.0063	0.0058	0.0056	0.0056	<0.01	<0.002	<0.005	<0.005	<0.005	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.0033	0.0018
Zinc	<0.001	<0.001	<0.001	0.0013	<0.001	<0.001	0.0019	<0.001	<0.005	0.0061	0.035	<0.005	0.0061	<0.005	<0.002	0.004	0.0025	0.0032	0.135	0.0062	0.0048	<0.005	<0.001
Total Metals																							
Aluminum	0.197	0.0301	0.0576	0.0437	0.0667	0.0451	0.063	0.0381	0.184	0.14	0.617	0.085	0.15	0.264	0.164	0.0754	0.0667	0.0259	0.0405	0.381	0.0411	0.236	0.0977
Antimony	0.00015	0.00018	0.00017	0.00018	0.0002	0.00017	0.00016	0.00018	0.0055	0.00083	0.00301	<0.0005	<0.0005	<0.0005	0.00024	0.0003	0.00023	0.00022	0.00033	0.00034	0.00041	<0.0005	0.00025
Arsenic	0.00283	0.00249	0.00242	0.00228	0.00211	0.00202	0.00218	0.00208	<0.005	0.00297	0.00364	0.00298	0.00354	0.00305	0.00303	0.00279	0.00272	0.00291	0.00394	0.00351	0.00309	0.0126	0.0124
Barium	0.0218	0.0215	0.0239	0.0216	0.0217	0.0217	0.0225	0.0219	0.035	0.0441	0.0516	0.0347	0.036	0.0361	0.0319	0.0279	0.0272	0.0292	0.0288	0.0323	0.0265	<0.02	0.00845
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.001	<0.0025	<0.0025	<0.0025	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.2	<0.0005
Boron	0.067	0.088	0.074	0.072	0.079	0.077	0.077	0.077	1.32	1.24	1.24	1.38	1.27	1.34	1.42	1.26	1.28	1.34	1.35	1.39	1.23	2.33	1.75
Cadmium	0.000014	0.000017	0.000016	0.000025	<0.00003	<0.00004	<0.00005	0.000018	<0.00017	0.000077	0.000308	<0.00005	<0.00005	<0.00005	<0.00002	0.000023	0.000038	<0.00002	0.000026	0.00007	<0.00002	<0.00026	<0.00009
Calcium	37.5	37.4	40	38.4	39.3	38.2	40.4	39.1	84.5	97.5	81.6	86.2	89.7	84.3	83.8	81.6	81.5	81.9	82.2	86.9	80.4	16.3	
Chromium	0.00181	0.00061	0.00059	0.00109	0.00067	0.00051	0.0005	0.00042	<0.01	0.00104	0.00835	0.00076	0.00804	0.00115	0.00062	0.00152	0.00068	0.00042	0.00061	0.00104	0.00045	0.0036	0.00182
Cobalt	0.00025	<0.0001	0.00012	0.00011	0.00015	0.00013	0.00016	0.00014	<0.003	0.00293	0.00296	0.00159	0.00179	0.00153	0.0014	0.00122	0.00114	0.00104	0.00105	0.0012	0.00093	<0.0003	0.00011
Copper	0.0029	0.00094	0.00135	0.00112	0.00108	0.00143	0.00145	0.00109	<0.01	0.0012	0.0049	<0.0025	<0.0025	<0.0025	<0.001	0.0021	<0.001	0.0018	0.0015	0.0027	0.0014	0.0026	0.00104
Iron	0.415	0.028	0.059	0.048	0.092	0.057	0.076	0.047	0.392	0.77	0.85	0.211	0.396	0.409	0.288	0.168	0.164	0.163	0.157	0.59	0.166	0.081	0.03
Lead	0.00005	<0.00005	0.000257	0.00006	<0.00005	0.000137	0.000086	0.000074	<0.005	<0.0001	0.00044	<0.00025	<0.00025	<0.00025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00016	<0.0001	<0.0005	0.000052
Lithium	0.00399	0.00471	0.00428	0.00406	0.00463	0.00398	0.00349	0.00412	<0.05	0.0241	0.0394	0.0442	0.045	0.0522	0.0516	0.0602	0.0559	0.0701	0.0649	0.0658	0.0581	<0.005	0.00324
Magnesium	64	67.4	70.7	66.3	65.9	63.1	64.4	63.2	52.6	57.5	51.8	56.4	56.6	53.6	54.1	52	54	55.7	54.5	57	53.2	0.63	
Manganese	0.0402	0.0395	0.0478	0.051	0.052	0.0625	0.0693	0.0702	0.972	1.44	1.39	1.15	1.25	1.18	1.24	1.08	1.11	1.09	1	0.996	0.909	0.0232	0.0176
Mercury	0.000012	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0462	0.0482	0.0494	0.0518	0.0572	0.0572	0.0615	0.0664	0.014	0.0104	0.00935	0.00555	0.00518	0.00324	0.00279	0.00219	0.00162	0.00186	0.00237	0.0013	0.00124	0.231	0.224
Nickel	0.00096	0.00062	0.00059	0.00067	0.00071	0.00078	0.0008	0.00063	0.018	0.0124	0.017	0.004	0.0072	0.0035	0.0032	0.0021	0.0021	0.002	0.0019	0.0023	0.0018	0.0031	0.00152
Phosphorus	0.055	0.053	0.06	0.059	0.051	0.052	0.057	<0.05	<0.3	<0.3	<0.3	<0.3	0.104	0.104	0.091	0.092	0.097	0.111	0.1	0.117	0.112	<0.3	
Potassium	18.8	19.7	20.3	19.1	21.3	20	20.1	20.2	2.7	2.31	2.65	1.39	1.41	1.26	1.14	1.1	1.03	1.14	1.03	1.08	0.94	11.8	6.02
Selenium	0.00485	0.0045	0.00353	0.00284	0.00194	0.0011	0.00068	0.0006	<0.01	0.00028	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	0.00032
Silicon	6.96	6.52	7.07	6.82	7.19	6.82	7.38	7.73	6.08	6.21	7.54	6.49	6.78	6.62	6.63	6.75	6.82	6.92	6.42	7.45	6.42	3.01	
Silver	<0.00001	0.000017	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	<0.00002	<0.00005	<0.00005	0.000053	<0.00005	<0.00002	<0.00002	0.000033	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	0.000011
Sodium	76.2	75.9	78.5	74.6	73.4	72.1	69.7	73.4	547	630	506	497	531	555	541	525	532	512	542	536	535	194	163
Strontium	0.819	1	0.916	0.91	0.88	0.921	0.979	0.997	3.06	3.9	3.55	3.56	3.59	3.88	3.88	3.72	3.72	3.64	3.86	3.95	3.81	0.265	0.21
Sulphur	109	118	122	119	122	119	122	124						466	450	461	453	459	474	476	460		
Thallium	0.000014	0.000014	0.000012	0.000015	<0.00001	<0.00001	<0.00001	0.00002	<0.002	<0.00002	0.000056	<0.00005	<0.00005	<0.00005	<0.00002	0.000031	0.000033	<0.00002	<0.00002	0.000027	<0.00002	<0.0002	0.000015
Tin	<0.0001	<0.0001	0.00018	<0.0001	0.00011	0.00015	0.00011	<0.0001	<0.005	0.00051	0.00112	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	0.00014
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.015	0.013	0.04	0.016	<0.05	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	0.036	<0.02	<0.01	
Total Cadmium (by saltwater extract						<0.00002	<0.00002																
Uranium	0.000806	0.000878	0.000893	0.000843	0.00079	0.000797	0.00084	0.000797	0.0067	0.00341	0.00346	0.0017	0.00175	0.00146	0.00126	0.00102	0.000927	0.000909	0.000772	0.000754	0.000656	0.00031	0.000142
Vanadium	0.0092	0.0069	0.0067	0.0065	0.0069	0.0061	0.0063	0.0062	<0.01	<0.002	<0.005	<0.005	<0.005	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	0.0029	<0.002	0.0041	0.0019
Zinc	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0033	0.0031	<0.005	<0.006	0.036	<0.015	<0.015	<0.015	<0.006	<0.006	<0.006	<0.006	0.149	0.0246	0.0141	<0.005	<0.003
Organics																							
Carbon Organic (Dissolved)	2.41	1.73	1.56	1.71	1.38				8.81	4.7	9.21	17.2	3.99	3.42	3.51	3.81	3.78	3.41				6.4	4.54
Carbon Organic (Total)	2.07	1.31	1.41	1.62	1.34	1.34	1.42	1.39	9.45	4.88	11.3	4.04	3.59	3.22	3.48	3.38	3.69	3.21	2.24	2.25	2.33	5.81	4.5
Nitrogen Organic (Dissolved)	<2	<2.2							0.204	0.132	0.094	1.68		0.054	<0.05							0.176	
Nitrogen Organic (Total)		<0.06							0.234	0.172	0.33	0.152			<0.06							0.176	
ALS LAB ID	**L1247921**	**L1277099**	**L1308855**	**L1348177**	**L1392288**	**L1431355**	**L1478436**	**L1517413**	**L1041015**	**L1081224**	**L1114029**	**L1159542**	**L1202478**	**L1247928**	**L1277099**	**L1307601**	**L1348177**	**L1393344**	**L1431355**	**L1474413**	**L1516193**	**L1160966**	**L1200094**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D5.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D5.2 - GROUNDWATER QUALITY DATA

Site ID	1-04D							MW11-04S												MW11-05D			
Site ID	**MW11-04D**	**MW11-04D**	**MW11-04S**	**MW11-04S**	**MW11-04S**	**MW11-04S**	**MW11-04S**	**MW11-04S**	**MW11-04S**	**MW11-04S**	**MW11-04S**	**MW11-04S**	**MW11-04S**	**MW11-04S**	**MW11-05D**	**MW11-05D**	**MW11-05D**	**MW11-05D**	**MW11-05D**	**MW11-05D**	**MW11-05D**	**MW11-05D**	**MW11-05D**
Analytes	**Dec-12**	**Aug-13**	**Jul-11**	**Oct-11**	**Feb-12**	**Jun-12**	**Aug-12**	**Dec-12**	**Mar-13**	**May-13**	**Nov-13**	**Mar-14**	**Jun-14**	**Sep-14**	**Oct-11**	**Feb-12**	**Jun-12**	**Aug-12**	**Dec-12**	**Mar-13**	**May-13**	**Aug-13**	**Nov-13**
In Situ Parameters																							
Conductivity µS/cm	611	1688	1609	1342	1412	2317	1970	1274	1356	1560	1.97	1783	1420	1472	971	1062	1827	1590	914	933	1016	1111	1.23
Oxygen Dissolved %	3	6.8	56.3	19	36.8	15.1		38.9	2.1	10.6	9.5	19.5	5.7	7.7		33	10.1		3.7	79.9	43.9	58.2	20.9
Oxygen Dissolved	0.36	0.75	5.45	2.43	4.26	1.44	1.65	4.56	0.25	1.21	1.14	2.27	0.64	0.9	34.4	3.96	1.04	3	0.45	9.6	5.11	6.39	2.5
pH (unitless)	9.62	7.81	7.85	7.85	7.78	8.11	9.75	7.83	7.53	7.76	7.47	7.42	7.85	8.23	9.04	7.56	7.68	6.86	7.35	7.31	7.36	7.27	7.74
Redox Potential mV		147			-298		-74	-25.3	122	92.8	96.6	97.5	50.2	61		-292		-127		-167	-184	-104	-143
Salinity ppt		1.22			1.11		1	0.96	1.28	1.14	1.01	0.91	1.04	1.07		0.81		0.8		0.71	0.75	0.77	0.801
Specific Conductivity µS/cm	9060	2360	1937	1909	2166	1679		1882	1976	2220	1.31	1219	2028	2088	1435	1610	1351		1391	1403	1482	1525	0.823
Temperature °C	7.93	10.1	16.3	9.42	6.78	10.3	12.7	8.06	8.56	9.42	8	8.43	9.29	9.56	8.06	7.16	10.1	13.8	7.03	7.47	8.55	10.8	7.61
Total Dissolved Solids		1533			1410		1260	1222	1283	1443	1283	1159	1319	1355		1047		1010		912	963	991	620
Turbidity NTU	-0.4	1.6	4	0.4	6.7	0	0.8	-0.9	-2.1	4.6	1.4	2.6	2.8	2.1	7.6	10.6	40.1	21.2	7.9	-2.7	0	9.3	3.1
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)			4.6	3.2			4								<1			14.9					
Alkalinity (Total as CaCO3)	50.5	71.1	81.9	106	99	91.8	80.9	84.5	75.7	77.1	80.1	71.7	68.7	53.8	275	313	364	431	439	441	416	419	402
Bicarbonate Alkalinity	35.7	71.1	81.9	106	99	91.8		84.5	75.7	77.1	80.1	71.7	68.7	53.8	272	313	364		439	441	416	419	402
Carbonate Alkalinity	14.8	<2	<2	<2	<2	<1		<2	<2	<2	<2	<2	<2	<1	3.2	<2	<1		<2	<2	<2	<2	<2
Color TCU	14.6	7.3	11.6	15.7	13.2	10.7	8.9	9.1	8.6	7.7	7.4	6.7			18.7	16.6	12.7	14.1	11.9	10	8.8	7.5	7.2
Hardness as CaCO3 (Dissolved)	43.2	237	257	291	259	246	246	221	236	230		237	248	248	582	626	652	675	619	619	590	569	
Hydroxide Alkalinity	<1	<2	<2	<2	<2	<1		<2	<2	<2	<2	<2	<2	<1	<1	<2	<1		<2	<2	<2	<2	<2
pH (unitless)	8.81	7.94	8.11	8.22	8.01	7.98	7.78	7.98	7.96	7.97	8	7.91	7.86	7.75	8.33	8.01	8.01	7.76	7.98	8.03	7.96	8.02	8.12
Specific Conductivity µS/cm	917	2030	2110	2150	2110	2030	1960	1920	2030	2010	2060	2000	2070	2060	1600	1510	1480	1480	1440	1460	1340	1260	1260
Total Dissolved Solids	610	1470	1500	1457	1540	1510	1440	1420	1340	1470	1470	1520	1490	1540	1190	1150	1140	1140	1080	994	958	905	876
Total Suspended Solids	4.7	<3	<3	9.7	10.4	3.3	<3	4	<3	<3		<3	<3	3.4	36	25.8	36.7	30.5	22	14.4	13.3	15.2	
Turbidity NTU	2.39	1.22	0.81	4.47	6.06	1.35	0.44	1.19	0.86	0.9		0.39	0.98	0.84	21.9	24.1	37.1	50.9	61	60.3	55.5	51.1	
Dissolved Anions																							
Bromide	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	25.7	21	23	24	28	24	23	22	22	23	25	21	21	22	27	19.7	15.5	14.4	10.8	9	8.5	5.4	8
Fluoride	0.99	0.83	0.54	0.44	0.42	0.48	0.52	0.5	0.9	0.55	0.6	0.86	0.645	0.572	<0.4	0.29	0.3	0.34	0.32	0.49	0.35	0.53	0.37
Sulphate	349	941	967	986	990	972	934	921	952	924	960	965	970	1010	597	560	518	509	456	399	380	359	353
Nutrients																							
Ammonia (Total)	0.108	0.065	0.0765	0.118	0.101	0.067	0.0744	0.0728	0.0639	0.092	0.127	0.0933	0.0677	0.0713	0.314	0.176	0.107	0.134	0.14	0.138	0.12	0.122	0.131
Nitrate (as N)	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.13	<0.1	<0.1	<0.1	<0.1	<0.1	0.13	<0.1	<0.05	<0.05	<0.05	<0.05	0.073	0.051	<0.05	<0.05
Nitrite (as N)	0.037	0.028	<0.02	0.028	0.024	<0.02	<0.02	0.024	0.044	<0.02	<0.02	<0.02	<0.02	0.023	<0.02	<0.01	0.015	<0.01	<0.01	0.017	<0.01	<0.01	<0.01
Nitrogen (Dissolved)	0.265		0.44	0.49	0.27	0.63		0.321	0.219						0.89	0.41	0.28		0.312	0.176			
Nitrogen (Total)	0.327	0.31	0.44	0.61	0.441	0.352	0.25	0.243	0.261	0.28					0.661	0.502	<0.25	0.39	<0.5	0.221	0.313	0.21	
Nitrogen Kjeldahl (Total)	0.338	0.286	0.44	0.666	0.42	0.352	0.254	0.302	0.28	0.282	0.304	0.287	0.301	0.256	0.661	0.5	<0.5	0.39	0.357	0.294	0.262	0.248	0.283
Orthophosphate (Dissolved)				0.031			0.0643				0.0837	0.09	0.0973	0.099	0.0392			<0.001					0.002
Phosphorus - Dissolved	0.264	0.0842	0.0556	0.0346	0.0496	0.0585		0.0737	0.0723	0.0886	0.0914	0.0984	0.0912		0.0368	<0.002	0.0035		<0.002	<0.002	<0.002	0.0038	<0.002
Phosphorus - Total	0.287	0.0964	0.0601	0.0547	0.0757	0.0692	0.0766	0.0848	0.0815	0.097	0.119	0.129	0.0962	0.132	0.101	0.153	0.205	0.242	0.292	0.218	0.29	0.304	0.306
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	0.0051	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.007	0.0075	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																							
Aluminum	0.175	0.0114	<0.025	0.0119	0.0146	0.043	0.0131	0.0129	0.0112	0.012	0.0111	0.0089	0.0148	0.0159	<0.003	0.0058	0.0068	0.0055	0.0047	0.0036	0.0046	0.0025	0.0058
Antimony	0.00043	<0.0002	<0.0025	0.00094	0.00075	<0.0025	0.00034	0.00026	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0006	0.00047	<0.0005	<0.0005	0.00032	0.00032	0.00033	0.00034	0.00034
Arsenic	0.00925	0.00197	<0.0025	0.00154	0.00147	<0.0025	0.00193	0.00187	0.00187	0.00182	0.00189	0.002	0.00189	0.00192	0.00496	0.00496	0.00568	0.0073	0.00661	0.00685	0.00674	0.00654	0.00729
Barium	0.0106	0.0428	0.054	0.057	0.0482	0.048	0.0413	0.0383	0.0403	0.0386	0.0419	0.0412	0.0406	0.0434	0.0536	0.0527	0.072	0.067	0.0556	0.0552	0.0511	0.0474	0.0475
Beryllium	<0.0001	<0.0002	<0.005	<0.0002	<0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.001	<0.2	<0.001	<0.001	<0.2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	1.75	1.35	1.67	1.72	1.72	1.71	1.45	1.56	1.32	1.44	1.58	1.54	1.62	1.59	0.045	0.048	<0.1	<0.1	0.068	0.055	0.06	0.055	0.064
Cadmium	<0.00007	<0.00012	<0.00085	<0.0002	0.000129	0.000219	<0.00007	0.0001	<0.0001	<0.0001	<0.00007	<0.00009	<0.00009	0.000022	0.000027	0.000015	0.000025	<0.000017	0.000011	<0.00001	<0.00001	<0.00001	<0.00001
Calcium	16.3	82.1	87.6	100	88.6	83.8	85.4	75.5	81.7	79.5	83.3	82.6	85.9	85.8	86.9	86.8	82.4	92.8	80.3	81	76.9	73.7	75.6
Chromium	<0.0001	<0.0002	<0.005	0.0006	0.00056	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00016	0.0005	<0.001		0.00016	0.00016	0.00013	<0.0001	0.00015
Cobalt	<0.0001	0.00051	<0.0015	0.00055	0.00074	<0.0015	0.0006	0.0006	0.00045	0.00038	0.00051	0.00034	0.0004	0.00045	0.00279	0.00442	0.00536	0.00507	0.00555	0.00455	0.00408	0.00377	0.00302
Copper	0.00062	0.00069	<0.005	0.0014	0.0032	0.0224	0.00088	0.00094	0.00069	0.00041	<0.0004	0.00096	0.00066	0.00069	<0.0005	<0.0005	<0.001	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Dissolved Cadmium (by saltwater e›													0.00003										
Iron	<0.01	0.023	<0.03	<0.03	<0.03	<0.03	<0.01	<0.01	<0.01	<0.01	0.082	<0.01	0.013	<0.01	0.519	1.71	2.66	4.72	4.35	4.38	4.17	3.44	4.14
Lead	<0.00005	<0.0001	<0.0025	<0.0001	<0.0001	<0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	0.000066	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.00269	0.0037	<0.025	0.0073	0.0028	<0.025	0.003	0.0028	<0.001	0.0036	0.005	0.0038	0.0043	0.0037	0.0116	0.0103	0.0094	0.0104	0.00977	0.0101	0.0108	0.00996	0.014
Magnesium	0.59	7.77	9.41	9.89	9.05	8.85	7.91	7.8	7.8	7.73	8.07	7.41	8.09	8.13	88.7	99.4	108	108	102	101	96.6	93.6	98.2
Manganese	0.0158	0.564	0.118	0.158	0.363	0.337	0.371	0.439	0.543	0.537	0.547	0.514	0.516	0.519	3.21	3.61	3.81	4.12	3.62	3.31	2.89	2.63	2.31
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.204	0.222	0.165	0.145	0.158	0.165	0.198	0.201	0.206	0.21	0.22	0.2	0.2	0.212	0.0474	0.041	0.0348	0.032	0.0332	0.0304	0.0297	0.0296	0.0329
Nickel	0.0014	0.0019	<0.005	0.0082	0.0045	<0.005	0.0046	0.0024	0.0022	0.0018	0.0019	0.0017	0.0017	0.0015	0.00519	0.011	0.0085	0.0095	0.00818	0.00599	0.0055	0.00556	0.00408
Phosphorus	0.247	0.095	<0.3	<0.3	<0.3	<0.3	0.081	0.08	0.089	0.092	0.108	0.108	0.11	0.109	<0.3	<0.3	<0.3	<0.3	0.17	0.219	0.196	0.149	0.293
Potassium	9.73	7.08	8.6	11.3	8.06	7.8	7.29	7.39	7.28	7.07	7.48	6.84	7.3	6.96	53	25.9	11.5	11.4	9.99	8.43	8.15	6.36	6.05
Selenium	0.00036	<0.0002	<0.005	0.00051	0.00034	<0.005	0.00029	0.00022	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00046	0.00029	<0.001	<0.001	0.0001	0.00013	<0.0001	<0.0001	<0.0001
Silicon	2.73	3.19	3.22	3.47	3.53	3.88	3.57	3.46	3.48	3.31	3.37	3.26	3.26	3.23	9.73	12.2	14.8	14.2	14.5	15.1	15.4	15.5	16.2
Silver	<0.00001	<0.00002	<0.0001	<0.00002	<0.00002	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	170	357	391	373	357	382	340	343	343	341	351	374	347	381	134	116	113	151	120	113	97.1	88.9	81.2
Strontium	0.228	1.8	1.49	1.56	1.73	1.83	1.73	1.6	1.7	1.7	1.82	1.82	1.82	1.95	0.684	0.666	0.678	0.706	0.648	0.642	0.606	0.587	0.634
Sulphur	114	289						298	312	299	303	308	314	312					142	133	121	113	107
Thallium	0.000013	0.000034	<0.001	0.000058	0.000058	<0.001	0.000041	0.000047	0.000045	0.000029	<0.00002	0.000047	0.000026	0.000028	<0.00001	<0.00001	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.0003	<0.0002	<0.0025	0.00184	<0.0002	<0.0025	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00015	0.00015	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.000282	0.000806	0.0018	0.00214	0.00202	0.0019	0.00123	0.00103	0.000982	0.000787	0.000695	0.000673	0.000595	0.000624	0.00328	0.00741	0.00577	0.00587	0.00439	0.00367	0.00302	0.00275	0.00275
Vanadium	0.003	<0.002	<0.005	<0.002	<0.002	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	<0.001	0.0023	0.0062	0.0073	0.0202	0.0054	0.0034	0.0034	0.0032	0.0031	<0.002	0.0064	0.006	0.006	<0.003	<0.003	0.0083	0.0073	0.0016	0.0025	0.0019	0.0026	0.0012
Total Metals																							
Aluminum	0.287	0.0294	0.041	0.102	0.302	0.131	0.0739	0.0407	0.0363	0.0294	0.0236	0.0199	0.0496	0.0265	0.0651	0.118	0.188	0.159	0.0569	0.0261	0.017	0.0212	0.0333
Antimony	0.00051	<0.0002	<0.0025	0.00091	0.00101	<0.0025	0.00035	0.0003	0.00022	<0.0002	<0.0002	<0.0002	0.00022	0.00022	0.00106	0.00112	0.00052	0.00058	0.00049	0.00041	0.00035	0.00041	0.00043
Arsenic	0.00879	0.00199	<0.0025	0.0015	0.00164	<0.0025	0.00196	0.00189	0.00199	0.00193	0.00203	0.0021	0.00203	0.00193	0.0044	0.00554	0.0066	0.00754	0.00699	0.00725	0.00688	0.00683	0.00753
Barium	0.0116	0.0391	0.053	0.0564	0.0562	0.05	0.0426	0.0386	0.0425	0.0399	0.0416	0.0416	0.04	0.0411	0.0471	0.0648	0.075	0.071	0.0599	0.0588	0.0524	0.0524	0.05
Beryllium	<0.0001	<0.0002	<0.005	<0.0002	<0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.001	<0.2	<0.001	<0.001	<0.2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	1.82	1.3	1.64	1.68	1.76	1.81	1.55	1.55	1.42	1.52	1.6	1.68	1.64	1.56	0.055	0.052	<0.1	<0.1	0.073	0.057	0.067	0.059	0.065
Cadmium	<0.0001	<0.00011	<0.00085	<0.00024	0.000168	0.000252	<0.00009	<0.00012	<0.0001	<0.0002	<0.00008	<0.0001	<0.00009	<0.00002	0.000094	0.000171	0.000113	0.000092	0.000049	0.000023	0.00002	0.000023	0.000028
Calcium	16.6	77.8	86	93.4	91	88.4	83.3	75.3	84.1	75.1	82	85.1	84.3	80.5	72.5	90.8	94.4	94.3	79.8	83	74.1	71.7	77.8
Chromium	0.00119	0.00044	<0.005	0.00164	0.00496	<0.005	0.00054	0.00038	0.00065	0.00026	0.00043	0.00023	0.00039	0.00048	0.00093	0.00454	0.0065	0.0152	0.00085	0.00065	0.00041	0.0005	0.00058
Cobalt	0.00014	0.00051	<0.0015	0.00066	0.00097	<0.0015	0.00065	0.00065	0.00051	0.00042	0.00051	0.00038	0.00045	0.00042	0.00231	0.00507	0.00641	0.0059	0.00559	0.00481	0.00426	0.00391	0.00327
Copper	0.00369	0.0012	<0.005	0.0028	0.0088	0.0244	0.0024	0.002	0.0035	0.0014	0.001	0.0016	0.0019	0.0011	0.00149	0.00305	0.0051	0.0056	0.00212	0.00146	0.00063	0.00067	0.00781
Iron	0.088	0.072	<0.03	0.106	0.352	0.103	0.066	0.054	0.069	0.077	0.105	0.032	0.066	0.094	1	2.35	4	5.22	5.04	5.03	4.58	4.1	4.38
Lead	0.00012	<0.0001	<0.0025	<0.0001	0.00053	<0.0025	<0.0001	0.00014	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.000088	0.00027	<0.0005	<0.0005	0.000092	0.000057	<0.00005	<0.00005	<0.00005
Lithium	0.00255	0.0038	<0.025	0.0072	0.0032	<0.025	0.0033	0.0027	0.0012	0.0038	0.0044	0.0043	0.0042	0.0038	0.0126	0.0104	0.01	0.0107	0.01	0.0105	0.0113	0.00996	0.0125
Magnesium	0.64	7.51	9.24	9.39	9.48	9.33	7.78	7.85	8	7.87	8.05	7.89	8	7.65	80.2	98.9	111	105	96.9	100	94.1	89.8	98.2
Manganese	0.0279	0.526	0.123	0.16	0.415	0.368	0.379	0.444	0.578	0.574	0.554	0.541	0.539	0.485	2.5	3.85	4.08	4.23	3.5	3.44	2.9	2.59	2.5
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.201	0.213	0.17	0.145	0.161	0.172	0.199	0.202	0.209	0.222	0.214	0.217	0.206	0.202	0.0548	0.0427	0.0368	0.0349	0.0341	0.0319	0.0308	0.0302	0.0317
Nickel	0.00211	0.0019	<0.005	0.0104	0.0082	<0.005	0.0028	0.0027	0.0026	0.002	0.0021	0.0018	0.0023	0.0016	0.00583	0.0129	0.0113	0.0146	0.00837	0.00657	0.0058	0.00594	0.00461
Phosphorus	0.255	0.097	<0.3	<0.3	<0.3	<0.3	0.084	0.09	0.107	0.102	0.105	0.117	0.119	0.129	<0.3	<0.3	<0.3	<0.3	0.257	0.284	0.28	0.27	0.299
Potassium	10	6.82	8.3	11.8	8.19	8.3	7.04	7.38	7.35	7.48	7.46	7.34	7.05	6.56	67.5	26.5	12.7	10.1	9.33	8.44	7.96	6.08	6.12
Selenium	0.00041	<0.0002	<0.005	0.00046	0.00035	<0.005	0.00026	0.00024	0.00022	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0005	0.00026	<0.001	<0.001	<0.0001	0.00011	<0.0001	<0.0001	<0.0001
Silicon	2.9	3.14	3.22	3.38	4.37	4.16	3.61	3.49	3.58	3.32	3.37	3.49	3.34	3.09	9.98	12.5	16.3	14.4	14.3	15.3	15.1	15	16.6
Silver	<0.00001	<0.00002	<0.0001	<0.00002	0.000022	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00002	0.000097	0.000021	<0.00001	0.000021	<0.00001	<0.00001
Sodium	173	336	382	358	368	403	348	340	361	336	358	381	347	348	121	118	125	143	114	114	101	89	84.4
Strontium	0.229	1.76	1.48	1.45	1.75	1.9	1.74	1.66	1.76	1.74	1.76	1.95	1.81	1.87	0.673	0.71	0.773	0.7	0.654	0.658	0.63	0.591	0.585
Sulphur	113	284						298	322	297	311	319	314	302					143	138	121	113	114
Thallium	0.000017	0.00004	<0.001	0.000056	0.000056	<0.001	0.000044	0.000049	0.000043	0.00003	<0.00002	0.000052	0.000031	0.000026	<0.00001	<0.00001	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.00041	<0.0002	<0.0025	0.00262	0.00135	<0.0025	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0009	0.00103	<0.0005	<0.0005	0.00021	0.00013	<0.0001	<0.0001	0.00011
Titanium	<0.01	<0.02	<0.01	<0.01	0.023	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	0.018	0.014	0.012	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extract													0.000033										
Uranium	0.000315	0.000779	0.0018	0.00192	0.00204	0.002	0.00128	0.00104	0.000969	0.000817	0.000709	0.000761	0.000623	0.000606	0.00334	0.0079	0.00597	0.00614	0.0045	0.00387	0.00307	0.00268	0.0026
Vanadium	0.0036	<0.002	<0.005	<0.002	<0.002	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	0.0015	0.0014	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	0.0038	<0.006	<0.005	0.0105	0.0254	0.0086	<0.006	<0.006	<0.006	<0.006	<0.006	0.0068	0.009	0.0083	0.01	0.0186	0.017	0.0183	0.0047	0.0033	0.0034	0.0036	0.0032
Organics																							
Carbon Organic (Dissolved)	4.75	6.57	7.03	8.47	7.69	10.1	6.87	6.76	6.2	6.37	6.7				33	22.7	21	20.3	17.8	17.8	13.5	11.9	11.1
Carbon Organic (Total)	4.85	6.53	6.88	8.59	8.96	7.3	6.65	6.96	6.25	6.34	6.28	11.4	4.63	5.4	31.8	23.9	21.4	20.4	18.4	19.3	13.1	12.4	11.3
Nitrogen Organic (Dissolved)	0.12		0.363	0.344	0.146	0.563		0.097	0.111						0.58	0.235	0.158		0.172	<0.05			
Nitrogen Organic (Total)			0.363	0.464	0.32	0.285			0.154						0.37	0.33	<0.5			<0.05			
ALS LAB ID	**L1248467**	**L1346553**	**L1038606**	**L1076555**	**L1115110**	**L1160966**	**L1202478**	**L1248467**	**L1277798**	**L1307601**	**L1393344**	**L1432458**	**L1474413**	**L1516193**	**L1078289**	**L1115110**	**L1160966**	**L1201474**	**L1248467**	**L1277798**	**L1307601**	**L1348177**	**L1393344**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D5.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D5.2 - GROUNDWATER QUALITY DATA

Site ID										MW11-05S												MW11-06D	
Site ID	MW11-05D	MW11-05D	MW11-05D	MW11-05S	MW11-05S	MW11-05S	MW11-05S	MW11-05S	MW11-05S	MW11-05S	MW11-05S	MW11-05S	MW11-05S	MW11-05S	MW11-05S	MW11-06D	MW11-06D	MW11-06D	MW11-06D	MW11-06D	MW11-06D	MW11-06D	MW11-06D
Analytes	Mar-14	Jun-14	Sep-14	Nov-11	Feb-12	Jun-12	Aug-12	Dec-12	Mar-13	May-13	Aug-13	Nov-13	Mar-14	Jun-14	Sep-14	Jul-11	Oct-11	Jun-12	Aug-12	Dec-12	Mar-13	May-13	Aug-13
In Situ Parameters																							
Conductivity µS/cm	1295	832	792	875	913	1732	1050	911	891	1031	1111	1.29	1303	855	854	856	709	1992	2010	771	650	927	1400
Oxygen Dissolved %	6.8	53.8	5.6		37.6	26.4		2.9	31.1	16.2	7	15.6	36	2.1	10.2	43.6		24.4		28.8	0.5	0.7	3.6
Oxygen Dissolved	0.8	6.19	0.67	115	4.75	2.56	3.47	0.35	3.73	1.86	0.77	1.88	4.29	0.24	1.17	4.18	136	2.32	2.32	3.43	0.06	0.08	0.4
pH (unitless)	7.33	7.47	7.47	7.27	7.6	7.69	6.98	7.39	7.39	7.36	7.17	7.47	7.39	7.42	7.5	7.98	8.35	8.4	8.15	8.48	8.86	8.22	8.31
Redox Potential mV	-127	-141	-145		-293		-9	-191	-154	-190	-115	0.809	-112	-136	-156				-158	-140	-210	-244	-92.5
Salinity ppt	0.65	0.6	0.58		0.74		0.5	0.69	0.67	0.75	0.78	0.65	0.63	0.62	0.62				1	0.58	0.49	0.67	0.98
Specific Conductivity µS/cm	871	1195	1157	1273	1478	1181		1369	1337	1486	1531	0.851	867	1238	1232	1005	1031	1474		1163	999	1327	1987
Temperature °C	7.85	9.02	8.47	8.41	4.97	8.25	16.9	7.49	7.52	8.95	10.6	7.49	7.5	8.76	8.54	17.3	8.67	10.9	12.3	7.35	6.72	9.2	10.9
Total Dissolved Solids	842	775	752		961		661	889	869	966	996	1310	847	806	801				1300	756	649	863	1246
Turbidity NTU	4.7	2.7	5.5	3.2	6.7	4.1	22.1	9.5	-3.3	0	5	5.1	13	9.5	14.3	0	-5.2	0	2	2.1	1.8	0	0
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)							10.3									4.4			3.3			2.3	
Alkalinity (Total as CaCO3)	398	315	375	268	286	292	318	339	330	298	284	347	337	338	330	48.2	42.9	38.6	41.3	42.3	39.7	40.4	41.2
Bicarbonate Alkalinity	398	315	375		286	292		339	330	298	284	347	337	338	330	48.2		38.6		42.3	39.7	40.4	41.2
Carbonate Alkalinity	<2	<2	<1		<2	<1		<2	<2	<2	<2	<2	<2	<2	<1	<2		<1		<2	<2	<2	<2
Color TCU				14.7	12.3	8.7	8	10.4	7.8	8.5	5.9	7				<5	<5	<5	<5	<5	<5	<5	<5
Hardness as CaCO3 (Dissolved)	569	578	547	562	607	597	609	568	597	563	554		571	559	543	157	140	424	586	195	156	205	557
Hydroxide Alkalinity	<2	<2	<1		<2	<1		<2	<2	<2	<2	<2	<2	<2	<1	<2		<1		<2	<2	<2	<2
pH (unitless)	8.15	8.19	7.93	7.97	7.95	7.91	7.75	8.01	8.04	7.97	7.95	8.1	8.04	8.1	7.92	7.8	7.9	7.7	8.02	7.85	7.92	8.03	7.67
Specific Conductivity µS/cm	1200	1210	1170	1220	1510	1510	1390	1380	1400	1320	1290	1310	1210	1260	1240	1090	987	1730	1920	1130	1080	1180	2020
Total Dissolved Solids	853	847	814	930	1210	1210	1150	1060	968	963	948	678	887	922	920	720	675	1340	1630	797	690	857	1560
Total Suspended Solids		14.4	11.8	23.7	7.1	14.7	7.9	4	12.7	12	17.3			15.1	16.2	<3	<3	<3	<3	<3	3.3	<3	<3
Turbidity NTU		37.8	35.9	10.7	7.58	9.34	17.6	29.8	29.6	37.4	55			49.6	34.7	0.39	1.87	0.38	0.47	0.83	0.42	0.57	0.51
Dissolved Anions																							
Bromide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5	<1
Chloride	7.8	<5	<5	14.9	25.1	26.4	16.9	15.3	12.8	13.4	9.8	11.9	7.9	9	8.8	11.8	9.1	12	12	9.8	9.1	11.7	11
Fluoride	0.63	0.397	0.343	0.24	0.25	0.26	0.3	0.28	0.45	0.3	0.48	0.33	0.63	0.342	0.326	0.63	0.38	<0.4	<0.4	0.31	0.55	0.32	0.51
Sulphate	344	339	327	437	573	573	511	489	450	433	416	415	399	415	405	476	423	918	1040	520	476	558	1080
Nutrients																							
Ammonia (Total)	0.116	0.1	0.115	<0.005	<0.05	0.0342	0.0109	0.0318	0.0367	0.0279	0.0342	0.0782	0.0564	<0.005	0.03	0.0215	0.0509	0.0707	0.0814	0.048	0.059	0.058	0.071
Nitrate (as N)	0.119	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	<0.05	0.078	<0.05	<0.05	<0.05	0.051	<0.05	0.059	<0.05	<0.05	<0.1	<0.1	<0.05	<0.05	<0.05	<0.1
Nitrite (as N)	0.026	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.017	<0.01	<0.01	0.014	0.013	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.02
Nitrogen (Dissolved)				0.33	0.2	0.79		0.23	0.136							0.19	0.1	0.28		0.072	0.074		
Nitrogen (Total)				0.406	<0.043	<0.25	0.21	<0.5	0.232	0.212	0.184					0.14	0.09	0.119	0.13	0.117	<0.071	0.108	0.17
Nitrogen Kjeldahl (Total)	0.255	0.287	0.203	0.406	<0.2	<0.5	0.21	0.28	0.307	0.212	0.219	0.307	0.347	0.332	0.264	0.14	0.128	0.119	0.127	0.117	0.066	0.123	0.165
Orthophosphate (Dissolved)	0.0046	0.0023	0.0022				0.0026					0.0023	<0.001	0.0015	<0.001				0.0116				
Phosphorus - Dissolved	<0.002	<0.002		0.0136	0.0027	<0.002	0.0026	0.0021	<0.002	<0.002	<0.002	0.0035	<0.002	<0.002		0.0214	0.0485	0.0135		0.0448	0.0348	0.0225	0.0085
Phosphorus - Total	0.305	0.211	0.336	0.0728	0.107	0.118	0.142	0.237	0.16	0.232	0.285	0.287	0.207	0.225	0.284	0.0281	0.055	0.0165	0.015	0.0496	0.038	0.0239	0.0093
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	0.0056	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																							
Aluminum	0.0053	0.006	0.0046	0.0058	0.0074	0.0071	0.0062	0.0059	0.0029	0.0039	0.0024	0.0026	0.0022	0.0023	0.0015	0.019	0.0139	0.022	<0.01	0.0078	0.0074	0.0065	0.0039
Antimony	0.00046	0.00047	0.00054	0.00037	0.0001	<0.0005	<0.0001	<0.0001	0.00011	0.0001	<0.0001	<0.0001	<0.0001	0.00015	0.00031	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.00661	0.00603	0.00683	0.00142	0.00379	0.00409	0.00501	0.00572	0.0052	0.00706	0.00761	0.00658	0.00595	0.00557	0.00569	0.0084	0.01	0.0156	0.015	0.0116	0.0122	0.0136	0.0135
Barium	0.0445	0.042	0.0414	0.0662	0.0809	0.089	0.0821	0.0719	0.0725	0.0746	0.0704	0.0694	0.0684	0.0655	0.0641	<0.02	0.015	0.022	0.023	0.0138	0.0126	0.016	0.0214
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.002	<0.0001	<0.002	<0.002	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.0005	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.054	0.056	0.049	0.05	0.042	<0.1	0.048	0.047	0.037	0.044	0.042	0.045	0.04	0.049	0.045	0.65	0.612	0.64	0.59	0.561	0.545	0.481	0.493
Cadmium	<0.00001	<0.00001	<0.00001	0.000032	0.000013	0.000045	0.000011	0.000013	<0.00001	<0.00001	0.000012	<0.00001	<0.00003	<0.00001	<0.00001	<0.0004	<0.00003	0.000071	<0.000034	<0.00003	0.000017	<0.00005	<0.00002
Calcium	73.4	75.7	70.7	103	104	93.7	100	89.7	97.7	90	89	83.8	92.1	93	88	47.6	42.5	119	164	55.7	46.9	60.4	153
Chromium	0.00012	<0.0001	<0.0001	0.00059	0.00031	<0.001	0.00016	0.00024	0.00019	0.00019	0.00016	0.00027	0.00021	<0.0001	0.0002	<0.002	<0.0001	<0.002	<0.002	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.00312	0.00275	0.00254	0.00385	0.00533	0.0043	0.00368	0.00148	0.00211	0.00191	0.00239	0.0005	0.00103	0.00135	0.00067	<0.0006	0.00016	<0.0006	<0.0006	<0.0001	<0.0001	<0.0001	<0.0001
Copper	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.001	<0.0002	<0.0002	0.0015	<0.0002	<0.0002	<0.0002	0.00029	<0.0002	0.00032	<0.004	<0.0005	0.0051	0.0025	<0.0002	<0.0002	<0.0002	<0.0002
Dissolved Cadmium (by saltwater e›																							
Iron	3.73	3.3	3.17	0.105	0.904	1.18	2.1	1.94	2.2	3.35	4.51	0.077	4.04	4.05	2.85	<0.03	0.043	0.095	0.098	0.058	0.057	0.044	0.074
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0005	0.000066	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.001	<0.00005	<0.001	<0.001	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0104	0.0108	0.00961	0.00433	0.00635	0.0065	0.00867	0.00901	0.00997	0.0108	0.00982	0.0183	0.0126	0.0106	0.00992	<0.01	0.00541	0.01	0.013	0.00679	0.00549	0.00704	0.012
Magnesium	93.7	94.4	89.9	73.8	84.5	88.1	86.8	83.6	85.8	82.1	80.7	56.5	82.7	79.5	78.5	9.39	8.2	31	42.9	13.7	9.53	13	42.7
Manganese	2.15	1.93	1.76	2.34	4.29	4.46	4.52	4.78	5.07	4.54	4.26	3.73	3.87	3.26	2.71	0.081	0.124	0.092	0.0882	0.105	0.0838	0.0725	0.0543
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0304	0.03	0.0309	0.0212	0.0258	0.0275	0.0259	0.0266	0.0307	0.0263	0.0303	0.0173	0.0234	0.024	0.0237	0.0777	0.0921	0.083	0.0833	0.0945	0.0871	0.0857	0.0769
Nickel	0.00467	0.00473	0.00413	0.0136	0.00751	0.0048	0.00262	0.00225	0.00283	0.00177	0.00174	0.00141	0.00165	0.0026	0.00157	<0.002	<0.0005	<0.002	<0.002	<0.0005	0.00201	0.00076	<0.0005
Phosphorus	0.211	0.225	0.264	<0.3	<0.3	<0.3	0.155	0.207	0.123	0.2	0.178	0.085	0.145	0.085	0.142	<0.3	<0.3	<0.3	<0.3	0.051	<0.05	<0.05	<0.05
Potassium	6.06	5.4	4.68	10.2	7.79	6.8	7.69	7.96	7.96	7.82	6.26	1.02	7.85	5.65	5.59	<2	1.08	<2	<2	1.19	0.98	1.13	1.82
Selenium	<0.0001	<0.0001	<0.0001	0.00054	0.00044	<0.001	0.00063	0.0003	0.00022	0.00014	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.002	0.0001	<0.002	<0.002	0.00015	<0.0001	<0.0001	<0.0001
Silicon	15.8	16.8	16.9	8.74	9.76	10.3	10.9	9.66	10.4	10.4	10.2	6.59	10.4	10.6	10.8	3.32	3.78	3.9	4.04	3.66	3.51	3.71	3.69
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00004	<0.00001	<0.00004	<0.00004	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	78.4	72.8	68.2	85.4	118	133	118	118	101	99.2	90.1	93	76.3	81.3	88.4	162	156	234	269	162	148	168	240
Strontium	0.6	0.592	0.587	0.664	0.655	0.683	0.666	0.646	0.699	0.673	0.646	0.6	0.663	0.637	0.635	2.44	2.31	7.88	8.14	3.2	2.6	3.4	7.59
Sulphur	108	109	108					156	148	139	132	431	125	127	133					170	147	169	333
Thallium	<0.00001	<0.00001	<0.00001	0.000029	<0.00001	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0004	<0.00001	<0.0004	<0.0004	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0001	<0.0001	<0.0001	0.00038	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0017	0.00014	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.00236	0.00212	0.00191	0.0116	0.0159	0.0187	0.0198	0.0214	0.0183	0.0149	0.0128	0.0114	0.0102	0.00849	0.0082	<0.0004	0.00014	<0.0004	<0.0004	0.000114	0.00004	0.000025	0.000017
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001
Zinc	0.0029	0.0032	0.0027	0.0043	<0.003	0.0094	0.0031	0.0022	0.0031	0.0039	0.0036	0.0024	0.0058	0.0074	0.0068	0.0131	0.0067	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001
Total Metals																							
Aluminum	0.0267	0.0496	0.0244	0.327	0.0706	0.0723	0.0426	0.0258	0.0302	0.0196	0.0114	0.0564	0.0678	0.032	0.0568	0.02	0.113	0.036	0.024	0.0341	0.0303	0.0143	0.0067
Antimony	0.00054	0.00068	0.00072	0.0004	0.00025	<0.0005	0.0001	0.00013	0.00018	0.00015	0.00011	0.00023	0.00016	0.00026	0.0007	<0.001	<0.0001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	0.00012
Arsenic	0.00669	0.007	0.00643	0.00156	0.00406	0.00461	0.00512	0.00569	0.00643	0.00708	0.00807	0.00709	0.00564	0.00662	0.00651	0.008	0.00972	0.0161	0.0156	0.0122	0.0123	0.0139	0.0135
Barium	0.0465	0.0464	0.0416	0.0714	0.0858	0.088	0.0736	0.0746	0.0788	0.0722	0.0715	0.0739	0.0698	0.0705	0.0673	<0.02	0.0164	0.023	0.023	0.0145	0.0125	0.0159	0.0226
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.002	<0.0001	<0.002	<0.002	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.0005	<0.2	<0.2	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.056	0.062	0.051	0.058	0.047	<0.1	0.043	0.049	0.04	0.046	0.045	0.051	0.043	0.08	0.054	0.67	0.617	0.67	0.61	0.629	0.576	0.503	0.515
Cadmium	<0.00003	<0.00003	0.000014	0.000124	0.000056	0.000105	0.000043	0.000045	0.000049	0.000034	0.000037	0.000069	0.000207	0.000038	0.000037	<0.0004	<0.00003	0.000074	<0.000034	<0.00003	0.000017	<0.00005	<0.00002
Calcium	71.2	75.5	67.5	106	105	101	93.9	87.1	101	87.9	88.8	84.3	90.9	92.5	81.9	47.7	42.2	125	161	55.1	46.3	59.9	151
Chromium	0.00036	0.00057	0.00034	0.00201	0.00129	<0.001	0.00046	0.00065	0.0011	0.00059	0.00047	0.00103	0.00121	0.00082	0.00121	<0.002	0.00019	<0.002	<0.002	0.00059	0.00023	0.00011	0.00017
Cobalt	0.00325	0.003	0.00257	0.00426	0.00578	0.00469	0.00395	0.00247	0.00273	0.00218	0.00252	0.00066	0.00128	0.00161	0.00083	<0.0006	0.00022	<0.0006	<0.0006	<0.0001	0.00023	<0.0001	<0.0001
Copper	0.0037	0.00222	0.0011	0.00298	0.0013	0.0015	0.00192	0.00209	0.00208	0.00215	0.00099	0.00388	0.00357	0.00205	0.00314	<0.006	<0.0005	0.0056	0.0085	0.00058	0.00347	<0.0005	<0.0005
Iron	4.1	3.89	3.28	0.514	0.979	1.55	2.28	2.47	3.19	3.55	5.15	0.161	4.08	5.05	3.98	<0.03	0.119	0.106	0.114	0.083	0.259	0.101	0.082
Lead	0.000067	0.000165	<0.00005	0.000187	0.000142	<0.0005	0.000167	0.000139	0.000104	0.000071	0.000059	0.000148	0.000147	0.000124	0.000088	<0.001	<0.00005	<0.001	<0.001	0.000078	<0.00005	<0.00005	<0.00005
Lithium	0.0101	0.0111	0.00918	0.00422	0.00611	0.0072	0.00817	0.0089	0.0108	0.0108	0.00971	0.0189	0.0129	0.0111	0.0095	<0.01	0.00509	0.011	0.013	0.00764	0.00588	0.00743	0.0138
Magnesium	91.5	91.6	85.9	73.5	85.7	88.8	82.9	79.6	86.4	80.5	78.1	55.4	81.5	79.3	74.5	9.58	8.17	31.7	43.5	13.5	9.95	12.9	42.4
Manganese	2.2	2.06	1.72	2.51	4.56	4.72	5.03	4.79	5.24	4.59	4.22	3.77	3.95	3.33	2.66	0.0834	0.128	0.103	0.0927	0.107	0.0842	0.0727	0.0565
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.031	0.0316	0.0306	0.023	0.0271	0.0296	0.0267	0.0282	0.034	0.0279	0.0321	0.0215	0.0253	0.0262	0.0239	0.0807	0.0964	0.087	0.0863	0.104	0.0906	0.0899	0.0814
Nickel	0.00503	0.00539	0.00435	0.0168	0.00867	0.0054	0.00308	0.00298	0.0036	0.00196	0.00178	0.00185	0.00308	0.00331	0.00206	<0.002	<0.0005	<0.002	<0.002	0.00063	0.0022	0.00069	<0.0005
Phosphorus	0.292	0.319	0.287	<0.3	<0.3	<0.3	0.182	0.221	0.235	0.233	0.241	0.099	0.178	0.212	0.231	<0.3	<0.3	<0.3	<0.3	0.054	<0.05	<0.05	<0.05
Potassium	5.76	5.32	4.47	10.8	8	7.1	7.19	7.34	8.08	7.06	6.11	1.07	8.17	5.71	5.18	<2	1.12	<2	<2	1.18	1.06	1.11	1.84
Selenium	<0.0001	<0.0001	<0.0001	0.00067	0.00052	<0.001	0.00026	0.0002	0.0002	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.002	<0.0001	<0.002	<0.002	<0.0001	<0.0001	<0.0001	<0.0001
Silicon	15.5	16.7	16.2	9.48	9.89	10.8	10.6	9.43	10.7	10.3	10.2	6.78	10.4	10.8	10.2	3.36	3.93	4	4.09	3.7	3.59	3.69	3.72
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001	0.000015	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00004	<0.00001	<0.00004	<0.00004	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	79.3	74.5	66.1	87.4	124	140	120	114	104	102	89.1	93.3	77.8	80.5	85.4	165	160	248	266	166	151	167	244
Strontium	0.595	0.605	0.574	0.694	0.673	0.733	0.685	0.642	0.709	0.665	0.63	0.643	0.684	0.643	0.623	2.46	2.38	8.23	8.05	3.44	2.65	3.6	7.78
Sulphur	108	109	105					155	156	138	133	444	127	130	126					168	154	170	333
Thallium	<0.00001	<0.00001	<0.00001	0.000035	<0.00001	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0004	<0.00001	<0.0004	<0.0004	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0001	0.00013	<0.0001	0.00112	0.0003	<0.0005	0.00011	0.00012	0.00016	<0.0001	<0.0001	0.00015	0.00015	0.00017	0.00021	0.0022	0.00023	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	0.02	0.015	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extract		0.000025																					
Uranium	0.00235	0.00218	0.00187	0.0118	0.0157	0.0197	0.0215	0.0215	0.0195	0.0155	0.0128	0.012	0.0107	0.00876	0.00802	<0.0004	0.000142	<0.0004	<0.0004	0.000118	0.000045	0.000033	0.000022
Vanadium	<0.001	<0.001	<0.001	0.0013	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001
Zinc	0.0032	0.0049	0.0048	0.007	0.0066	0.011	0.0043	0.0033	0.0056	0.0055	0.0036	0.0053	0.011	0.0106	0.0105	0.0084	<0.003	0.0484	<0.005	<0.003	0.03	0.0129	0.0046
Organics																							
Carbon Organic (Dissolved)				12.8	22.5	23	20.2	16.2	13.1	12.6	12	13.8				7.28	2.38	3.25	2.18	2.06	1.72	1.5	1.99
Carbon Organic (Total)	11.1	9.78	8.8	12.6	21.9	27.4	20.4	17.1	13.8	12.2	12.1	11.8	9.69	9.23	9.9	5.47	2.18	1.78	2.03	2.18	1.53	1.33	1.87
Nitrogen Organic (Dissolved)				0.329	0.168	0.756		0.199	<0.05							0.169	<0.05	0.209		<0.05	<0.05		
Nitrogen Organic (Total)				0.406	<0.3	<0.5			0.1							0.119	<0.05	<0.06		<0.08	<0.08		
ALS LAB ID	**L1434002**	**L1474413**	**L1516193**	**L1081224**	**L1115110**	**L1160966**	**L1202478**	**L1248467**	**L1277798**	**L1307601**	**L1348177**	**L1393344**	**L1434002**	**L1474413**	**L1516193**	**L1036785**	**L1079367**	**L1160966**	**L1201474**	**L1246516**	**L1277099**	**L1306577**	**L1346553**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D5.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D5.2 - GROUNDWATER QUALITY DATA

Site ID	MW11-06D	MW11-06D	MW11-06D	MW11-06D
Analytes	Nov-13	Apr-14	Jun-14	Sep-14
In Situ Parameters				
Conductivity µS/cm	2.12	1919	1597	1585
Oxygen Dissolved %	1.3	3.4	3.3	25.8
Oxygen Dissolved	0.16	0.4	0.36	2.85
pH (unitless)	8.33	8.28	8.26	8.28
Redox Potential mV	1.38	-152	-151	-160
Salinity ppt	1.08	0.98	1.12	1.13
Specific Conductivity µS/cm	1.41	1293	2169	2195
Temperature °C	7.54	7.91	11.2	10.4
Total Dissolved Solids	1846	1248	1410	1426
Turbidity NTU	1	-2.4	1.4	1.4
Physical Tests				
Acidity to pH 8.3 (as CaCO3)				
Alkalinity (Total as CaCO3)	42.4	27.8	39.7	39.9
Bicarbonate Alkalinity	42.4	27.8	39.7	39.9
Carbonate Alkalinity	<2	<2	<1	<1
Color TCU				
Hardness as CaCO3 (Dissolved)	638	544	652	653
Hydroxide Alkalinity	<2	<2	<1	<1
pH (unitless)	7.86	7.9	7.81	7.77
Specific Conductivity µS/cm	2140	1900	2170	2210
Total Dissolved Solids	1720	1530	1750	1740
Total Suspended Solids		4.5	<3	<3
Turbidity NTU		0.35	0.34	0.57
Dissolved Anions				
Bromide	<1	<1	<1	<1
Chloride	14	17	12	11
Fluoride	<0.4	<0.4	0.28	0.251
Sulphate	1190	1000	1220	1230
Nutrients				
Ammonia (Total)	0.0904	0.08	0.0892	0.0961
Nitrate (as N)	<0.1	<0.1	<0.1	<0.1
Nitrite (as N)	0.024	<0.02	<0.02	<0.02
Nitrogen (Dissolved)				
Nitrogen (Total)				
Nitrogen Kjeldahl (Total)	0.167	0.146	0.205	0.169
Orthophosphate (Dissolved)	0.0072	0.0067	0.0052	0.0038
Phosphorus - Dissolved	0.007	0.0105	0.0056	
Phosphorus - Total	0.0089	0.0081	0.0057	0.0055
Cyanide				
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005
Dissolved Metals				
Aluminum	0.0034	0.0046	0.0046	0.0033
Antimony	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0137	0.0138	0.0134	0.013
Barium	0.0242	0.0229	0.0232	0.0218
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.555	0.507	0.424	0.49
Cadmium	<0.00003	<0.00006	<0.00005	<0.00001
Calcium	167	143	171	169
Chromium	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	<0.0001	<0.0001	<0.0001	<0.0001
Copper	<0.0002	0.00059	<0.0002	<0.0002
Dissolved Cadmium (by saltwater e›		<0.00002	<0.00002	
Iron	0.104	0.078	0.089	0.103
Lead	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.0137	0.0113	0.0142	0.0117
Magnesium	53.6	45.2	54.6	56.3
Manganese	0.0668	0.056	0.0553	0.0558
Mercury	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0825	0.0809	0.0779	0.0809
Nickel	<0.0005	<0.0005	0.00149	<0.0005
Phosphorus	<0.05	<0.05	<0.05	<0.05
Potassium	2.05	1.96	2.15	2.2
Selenium	<0.0001	<0.0001	0.0001	<0.0001
Silicon	3.82	3.99	3.85	3.79
Silver	0.00005	<0.00001	<0.00001	<0.00001
Sodium	256	242	253	264
Strontium	7.45	7.25	8.06	8.28
Sulphur	370	345	377	389
Thallium	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01
Uranium	0.000024	0.000023	0.000021	0.000022
Vanadium	<0.001	<0.001	<0.001	<0.001
Zinc	<0.001	<0.001	0.0024	<0.001
Total Metals				
Aluminum	0.0066	0.0234	0.0098	0.0227
Antimony	0.00013	0.0001	<0.0001	0.00014
Arsenic	0.0141	0.015	0.0145	0.0135
Barium	0.0239	0.0233	0.0237	0.0209
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.584	0.563	0.445	0.498
Cadmium	<0.00003	<0.00006	<0.00005	<0.00001
Calcium	165	136	170	159
Chromium	0.00011	0.00022	<0.0001	0.00016
Cobalt	<0.0001	0.00013	<0.0001	<0.0001
Copper	<0.0005	<0.0015	0.0005	<0.0005
Iron	0.113	0.368	0.124	0.605
Lead	<0.00005	0.000062	<0.00005	<0.00005
Lithium	0.0142	0.0121	0.0149	0.0116
Magnesium	53.4	43.6	56.3	54.6
Manganese	0.0691	0.0587	0.0589	0.0559
Mercury	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0874	0.0832	0.0855	0.0778
Nickel	<0.0005	<0.0005	0.00204	<0.0005
Phosphorus	<0.05	<0.05	<0.05	<0.05
Potassium	2.15	1.84	2.14	2.12
Selenium	<0.0001	<0.0001	<0.0001	<0.0001
Silicon	3.87	3.86	3.95	3.66
Silver	0.000049	<0.00001	<0.00001	<0.00001
Sodium	267	241	265	250
Strontium	7.75	7.45	8.45	8
Sulphur	377	344	393	374
Thallium	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01
Total Cadmium (by saltwater extract		<0.00002	<0.00002	
Uranium	0.000025	0.000025	0.000021	0.000021
Vanadium	<0.001	<0.001	<0.001	<0.001
Zinc	<0.003	0.0711	0.0062	0.0387
Organics				
Carbon Organic (Dissolved)	1.97	1.52		
Carbon Organic (Total)	1.75	1.52	1.49	1.6
Nitrogen Organic (Dissolved)				
Nitrogen Organic (Total)				
ALS LAB ID	**L1392959**	**L1441050**	**L1473868**	**L1516193**

Site ID	MW11-06S	MW11-06S	MW11-06S	MW11-06S	MW11-06S	MW11-06S	MW11-06S	MW11-06S	MW11-06S	MW11-06S	MW11-06S	MW11-06S
Analytes	Jul-11	Oct-11	Jun-12	Aug-12	Dec-12	Mar-13	May-13	Aug-13	Nov-13	Apr-14	Jun-14	Sep-14
In Situ Parameters												
Conductivity µS/cm	17	1664	2633	2330	1574	1545	1793	1816	2.29	1616	1758	1629
Oxygen Dissolved %	16.5		24.8		19.9	3.8	3	66.2	1.9	66.2	4.5	9.9
Oxygen Dissolved	1.92	39.6	2.08	2.1	2.35	0.44	0.35	7.19	0.236	7.75	0.49	1.14
pH (unitless)	7.75	7.84	7.97		8.04	8.3	7.66	7.91	7.86	7.92	8	8.02
Redox Potential mV				63	-55.4	-106	-144	26.9	-69	-92.4	-96.4	-76.9
Salinity ppt				1.2	1.23	1.22	1.36	1.26	1.18	1.23	1.21	1.21
Specific Conductivity µS/cm	2509	2429	2011		2384	2369	2640	2426	1.51	2382	2348	2341
Temperature °C	8.11	8.53	12.6	12.5	7.3	6.73	8.06	11.9	7.21	8.16	11.7	9.07
Total Dissolved Solids				1490	1553	1540	1780	1576	1486	1548	1526	1521
Turbidity NTU	2.5	4	23.6	18.5	5.6	10.7	0	2.3	2.2	-0.5	10.4	9.1
Physical Tests												
Acidity to pH 8.3 (as CaCO3)	6.1			4.6			2.6					
Alkalinity (Total as CaCO3)	83.9	78.4	59.5	77.2	77.4	75.3	72.8	74.4	76.8	104	54.7	56.2
Bicarbonate Alkalinity	83.9		59.5		77.4	75.3	72.8	74.4	76.8	104	54.7	56.2
Carbonate Alkalinity	<2		<1		<2	<2	<2	<2	<2	<2	<1	<1
Color TCU	9.8	6.7	<5	<5	<5	<5	<5	<5				
Hardness as CaCO3 (Dissolved)	787	815	807	789	729	750	814	793	803	834	823	807
Hydroxide Alkalinity	<2		<1		<2	<2	<2	<2	<2	<2	<1	<1
pH (unitless)	7.56	7.93	7.69	7.9	7.88	7.83	7.97	7.95	7.84	7.82	7.91	7.81
Specific Conductivity µS/cm	2360	2310	2280	2230	2310	2400	2290	2360	2320	2400	2350	2330
Total Dissolved Solids	1960	1950	1960	1970	1970	1750	1990	1910	1910	2020	1980	1830
Total Suspended Solids	<3	4.2	25.3	3.9	4	11.4	9.7	7.1		8.3	33.2	5.4
Turbidity NTU	2.61	4.97	21.2	5.18	3.7	7.74	6.95	3.76		1.91	9.04	6.11
Dissolved Anions												
Bromide	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloride	38	33	29	31	29	28	31	28	30	34	28	29
Fluoride	<0.4	<0.4	<0.4	<0.4	<0.4	0.56	<0.4	0.58	<0.4	<0.4	0.237	0.228
Sulphate	1290	1290	1270	1280	1310	1320	1340	1300	1300	1320	1330	1310
Nutrients												
Ammonia (Total)	0.125	0.14	0.13	0.129	0.102	0.143	0.124	0.096	0.067	0.11	0.0572	0.116
Nitrate (as N)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1
Nitrite (as N)	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nitrogen (Dissolved)	0.41	0.24	0.99		0.188	0.175						
Nitrogen (Total)	0.48	0.273	0.324	0.21	0.19	0.18	0.213	0.2				
Nitrogen Kjeldahl (Total)	0.48	0.273	0.324	0.208	0.192	0.181	0.202	0.203	0.165	0.215	0.194	0.308
Orthophosphate (Dissolved)				0.0503					0.0532	0.0382	0.0433	0.0312
Phosphorus - Dissolved	0.0134	0.0305	0.0245		0.0504	0.048	0.0494	0.0528	0.0525	0.0591	0.0442	
Phosphorus - Total	0.0329	0.0511	0.0982	0.0732	0.0735	0.0828	0.0765	0.0656	0.0712	0.0416	0.032	0.0362
Cyanide												
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals												
Aluminum	<0.025	0.0061	0.013	<0.01	0.0063	0.0046	0.0043	0.0038	0.0038	0.0039	0.0054	0.0023
Antimony	<0.0025	<0.0002	<0.001	<0.001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00016	<0.0001
Arsenic	<0.0025	0.00146	0.0014	0.0014	0.00149	0.00165	0.00144	0.00138	0.00151	0.00136	0.00137	0.00114
Barium	0.063	0.0514	0.042	0.035	0.0353	0.0278	0.0284	0.0253	0.0282	0.0259	0.0248	0.0245
Beryllium	<0.005	<0.0002	<0.002	<0.002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.2	<0.001	<0.2	<0.2	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.27	0.269	0.3	0.28	0.279	0.292	0.253	0.245	0.294	0.286	0.238	0.257
Cadmium	<0.000085	0.00003	0.000124	<0.000034	0.000043	<0.00005	<0.00002	<0.00004	<0.00006	<0.00009	<0.00005	0.000011
Calcium	176	168	164	167	170	175	171	170	169	175	175	170
Chromium	<0.005	<0.0002	<0.002	<0.002	0.00543	<0.0001	<0.0001	<0.0001	0.00023	0.00033	0.00012	0.0017
Cobalt	0.003	0.00176	0.00148	0.00098	0.00088	0.00066	0.00061	0.00059	0.00063	0.00059	0.00046	0.00055
Copper	<0.005	<0.001	0.0051	<0.002	0.00089	<0.0002	<0.0002	<0.0002	<0.0002	0.00162	0.00034	<0.0002
Dissolved Cadmium (by saltwater e›										<0.00002	<0.00002	
Iron	0.063	0.083	0.212	0.1	0.054	0.136	0.136	0.054	0.047	0.099	0.035	0.041
Lead	<0.0025	<0.0001	<0.001	<0.001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	<0.025	0.0092	0.011	<0.01	0.0139	0.0132	0.0131	0.0152	0.0155	0.016	0.0192	0.0131
Magnesium	84.3	96.2	96.6	90.4	74.2	75.9	94.1	89.4	92.9	96.8	94.1	93
Manganese	1.46	1.14	0.541	0.498	0.497	0.405	0.372	0.344	0.353	0.304	0.232	0.319
Mercury	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0753	0.0964	0.102	0.11	0.115	0.11	0.106	0.0984	0.111	0.107	0.105	0.105
Nickel	<0.005	0.0026	<0.002	<0.002	0.0057	0.001	0.00083	0.00086	0.00165	0.00122	0.00091	0.00109
Phosphorus	<0.3	<0.3	<0.3	<0.3	0.061	0.08	0.066	0.068	0.073	0.061	<0.05	<0.05
Potassium	8.9	8.67	8.3	9	8.71	7.91	8.34	8.09	8.19	8.73	8.87	7.94
Selenium	<0.005	<0.0002	<0.002	<0.002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Silicon	4.51	4.5	4.48	4.5	4.52	4.36	4.46	4.26	4.38	4.59	4.37	4.44
Silver	<0.0001	<0.00002	<0.00004	<0.00004	<0.00002	<0.00001	<0.00001	<0.00001	0.000035	<0.00001	<0.00001	<0.00001
Sodium	288	275	272	275	261	255	255	253	257	269	264	262
Strontium	5.03	5.77	6.25	5.87	6.61	6.33	5.89	5.57	5.53	6.47	6.09	6.24
Sulphur					340	361	392	397	405	436	408	418
Thallium	<0.001	0.000036	<0.0004	<0.0004	0.000024	0.000015	0.000012	0.000014	0.000017	0.000015	<0.00001	0.000015
Tin	<0.0025	<0.0002	<0.001	<0.001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.0012	0.000749	0.0005	0.00053	0.000547	0.000378	0.000348	0.000351	0.000377	0.000341	0.000248	0.000335
Vanadium	<0.005	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	<0.005	<0.006	1.66	0.0529	0.0214	0.101	0.0815	0.038	0.0284	0.146	0.0236	0.323
Total Metals												
Aluminum	0.071	0.164	0.305	0.176	0.198	0.275	0.279	0.15	0.0402	0.0439	0.67	0.0805
Antimony	<0.0025	<0.0002	<0.001	<0.001	<0.0002	0.00013	<0.0001	0.00012	0.00012	<0.0001	0.00024	0.00015
Arsenic	<0.0025	0.003	0.0015	0.0016	0.00156	0.00193	0.0016	0.00155	0.00156	0.00143	0.00186	0.00137
Barium	0.063	0.0518	0.049	0.036	0.0373	0.0313	0.0313	0.0279	0.0281	0.0253	0.031	0.0237
Beryllium	<0.005	<0.0002	<0.002	<0.002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.2	<0.001	<0.2	<0.2	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.27	0.273	0.31	0.28	0.288	0.298	0.275	0.251	0.313	0.271	0.252	0.259
Cadmium	0.000125	0.000067	0.000155	0.000038	0.000063	<0.00005	<0.00004	<0.00005	<0.00009	<0.00009	<0.0001	0.000018
Calcium	168	170	170	164	165	171	167	168	166	165	176	157
Chromium	<0.005	0.00051	<0.002	<0.002	0.00852	0.00066	0.00052	0.00049	0.00059	0.00057	0.00092	0.00293
Cobalt	0.0032	0.00189	0.00366	0.00116	0.0011	0.00095	0.00087	0.00072	0.00067	0.00062	0.00106	0.00067
Copper	<0.005	0.0017	0.0086	<0.002	0.0029	0.00551	0.00221	0.00109	0.00165	<0.0015	0.00435	0.00114
Iron	0.138	0.266	2.24	0.353	0.322	0.631	0.501	0.228	0.135	0.295	0.972	0.851
Lead	<0.0025	0.00011	0.0013	<0.001	0.00013	0.000136	0.000098	0.000054	0.000095	0.000091	0.000305	0.000221
Lithium	<0.025	0.0089	0.01	0.011	0.0142	0.013	0.0133	0.015	0.0154	0.0149	0.02	0.0124
Magnesium	82.2	95.2	96.4	90.9	75.3	76.1	92.9	89	91.8	92	97.2	86.2
Manganese	1.55	1.17	0.505	0.514	0.506	0.423	0.378	0.36	0.35	0.304	0.257	0.321
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0828	0.0951	0.0919	0.112	0.118	0.109	0.105	0.102	0.114	0.11	0.112	0.101
Nickel	<0.005	0.0031	0.0027	0.0021	0.0071	0.00157	0.00137	0.00122	0.00187	0.00127	0.00219	0.00141
Phosphorus	<0.3	<0.3	<0.3	<0.3	0.069	0.058	0.081	0.077	0.071	0.06	0.099	0.054
Potassium	8.7	8.68	8.6	8.8	8.49	7.9	8.08	7.94	8.43	8.25	9	7.56
Selenium	<0.005	<0.0002	<0.002	<0.002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Silicon	4.52	4.86	5.5	4.94	5.02	4.99	5.02	4.59	4.52	4.57	6.02	4.42
Silver	<0.0001	<0.00002	<0.00004	0.000053	<0.00002	<0.00001	<0.00001	<0.00001	0.000035	<0.00001	0.000017	<0.00001
Sodium	281	277	281	271	260	250	253	271	260	264	262	252
Strontium	4.85	5.7	6.52	5.76	6.89	6.21	6.01	5.86	5.48	6.23	6.36	5.99
Sulphur					351	352	392	405	411	430	429	391
Thallium	<0.001	0.000038	<0.0004	<0.0004	0.00003	0.000018	0.000017	0.000016	0.000018	0.000019	0.000019	0.000013
Tin	<0.0025	0.00031	<0.001	<0.001	<0.0002	<0.0001	<0.0001	<0.0001	0.00013	<0.0001	0.0001	<0.0001
Titanium	0.012	<0.01	0.024	0.018	<0.02	0.015	0.013	<0.01	<0.01	<0.01	0.032	<0.01
Total Cadmium (by saltwater extract										<0.00002	0.000034	
Uranium	0.0013	0.000762	0.00046	0.00055	0.000543	0.000403	0.00036	0.000369	0.000392	0.000346	0.000289	0.000346
Vanadium	<0.005	<0.002	<0.002	<0.002	<0.002	0.0012	0.0011	<0.001	<0.001	<0.001	0.0025	<0.001
Zinc	<0.005	<0.006	2.28	0.0628	0.0317	0.153	0.127	0.0522	0.04	0.16	0.0989	0.617
Organics												
Carbon Organic (Dissolved)	5.97	4.04	9.08	3.06	2.99	2.55	2.03	2.55	2.11	1.9		
Carbon Organic (Total)	5.73	3.81	5.08	2.94	2.76	2.28	2	2.4	2.02	2.05	1.83	1.99
Nitrogen Organic (Dissolved)	0.285	0.1	0.86		0.085	<0.05						
Nitrogen Organic (Total)	0.355	0.09	0.194		0.089	<0.08						
ALS LAB ID	**L1037497**	**L1079375**	**L1160966**	**L1201474**	**L1246516**	**L1277099**	**L1306577**	**L1346553**	**L1392959**	**L1441050**	**L1473868**	**L1516193**

Site ID	MW11-07D	MW11-07D	MW11-07D	MW11-07D	MW11-07D	MW11-07D	MW11-07D
Analytes	Jul-11	Oct-11	Feb-12	Jun-12	Aug-12	Dec-12	Mar-13
In Situ Parameters							
Conductivity µS/cm	1167	945	1078	1803	1670	954	968
Oxygen Dissolved %	3.9	0.2	19.1	20.8		2.4	1.5
Oxygen Dissolved	0.4	0.02	2.21	2.03	0.09	0.29	0.18
pH (unitless)		7.8	7.92	7.9	8.36	8.06	7.91
Redox Potential mV			-199		-230	-260	-189
Salinity ppt			0.84		0.8	0.73	0.77
Specific Conductivity µS/cm	1510	1466	1657	1254		1454	1528
Temperature °C	13.1	6.39	6.71	8.89	10.5	6.99	5.82
Total Dissolved Solids			1079		1070	947	993
Turbidity NTU	9.9	18.2	0.001	8.6	10.1	-1.3	179
Physical Tests							
Acidity to pH 8.3 (as CaCO3)	5.8	4.6			2.6		7.1
Alkalinity (Total as CaCO3)	126	124	132	120	128	126	195
Bicarbonate Alkalinity	126	124	132	120		126	195
Carbonate Alkalinity	<2	<2	<2	<1		<2	<2
Color TCU	10.7	7.4	11.1	9.6	8.2	7	<5
Hardness as CaCO3 (Dissolved)	310	300	290	285	279	268	278
Hydroxide Alkalinity	<2	<2	<2	<1		<2	<2
pH (unitless)	7.97	8.09	8.07	8.01	8.12	8.14	8.02
Specific Conductivity µS/cm	1640	1640	1600	1560	1580	1420	1560
Total Dissolved Solids	1160	1110	1120	1160	1160	1150	1030
Total Suspended Solids	7.1	7.1	3.3	<3	<3	<3	3.9
Turbidity NTU	4.27	5.05	2.3	1.47	2.25	2.76	6.43
Dissolved Anions							
Bromide	<0.5	<1	<0.5	<1	<1	<1	<0.5
Chloride	16.5	17	19.9	21	19	17	15.5
Fluoride	0.47	0.47	0.44	0.45	0.47	0.46	0.65
Sulphate	695	714	688	711	700	683	676
Nutrients							
Ammonia (Total)	0.11	0.067	0.0564	0.0398	0.0561	0.0475	0.0372
Nitrate (as N)	<0.05	<0.1	<0.05	<0.1	<0.1	<0.1	<0.05
Nitrite (as N)	<0.01	0.028	<0.01	<0.02	<0.02	<0.02	<0.01
Nitrogen (Dissolved)	0.41	0.2	0.21	0.17		0.182	0.076
Nitrogen (Total)	0.41	0.26	0.211	0.253	<0.27	0.149	0.144
Nitrogen Kjeldahl (Total)	0.41	0.233	0.211	0.25	<0.25	0.154	0.144
Orthophosphate (Dissolved)		0.0321			0.0982		
Phosphorus - Dissolved	0.0409	0.0306	0.0668	0.0914		0.082	0.0943
Phosphorus - Total	0.0559	0.0743	0.111	0.162	0.129	0.136	0.138
Cyanide							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	0.0054	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals							
Aluminum	<0.025	0.0087	0.0107	0.0098	0.0112	0.0076	0.0066
Antimony	<0.0025	<0.0002	<0.0002	<0.0002	0.00022	<0.0002	0.00012
Arsenic	<0.0025	0.00368	0.00425	0.00536	0.00606	0.00574	0.00562
Barium	0.041	0.0386	0.0468	0.0438	0.0456	0.0432	0.0408
Beryllium	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001
Bismuth	<0.2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005
Boron	0.3	0.314	0.305	0.29	0.281	0.288	0.283
Cadmium	0.000147	<0.00002	0.000025	<0.00002	<0.00002	<0.00002	<0.00001
Calcium	71.1	69.8	68.2	68		63.7	64.9
Chromium	<0.005	<0.0002	0.00064	0.00021	<0.0002	0.00023	<0.0001
Cobalt	<0.0015	0.00114	0.00109	0.0007	0.00057	0.00047	0.0004
Copper	<0.005	<0.001	<0.001	<0.0004	<0.0004	<0.0004	<0.0002
Dissolved Cadmium (by saltwater e›							
Iron	0.054	0.111	0.25	0.201	0.205	0.245	0.257
Lead	<0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005
Lithium	<0.025	0.0246	0.0241	0.0273	0.0222	0.0289	0.029
Magnesium	32.1	30.4	29	27.9		26.5	28.1
Manganese	0.65	0.777	1.16	0.908	0.97	0.855	0.712
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0354	0.0292	0.0264	0.0231	0.024	0.0228	0.0216
Nickel	<0.005	0.002	0.0023	0.0012	0.0014	<0.001	0.00091
Phosphorus	<0.3	<0.3	<0.3	<0.3		0.15	0.172
Potassium	4.7	3.32	3.23	2.5	4.85	3.5	2.74
Selenium	<0.005	<0.0002	0.0003	<0.0002	<0.0002	<0.0002	0.00012
Silicon	4.15	4.83	4.92	5.01		4.58	4.78
Silver	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001
Sodium	255	237	261	241	260	243	214
Strontium	7.4	7.53	7.78	7.65	7.26	7.8	7.59
Sulphur						222	219
Thallium	<0.001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001
Tin	<0.0025	0.00026	0.0002	<0.0002	<0.0002	<0.0002	<0.0001
Titanium	<0.01	0.01	<0.01	<0.01		<0.02	<0.01
Uranium	0.0022	0.000993	0.000968	0.000769	0.000735	0.000673	0.000489
Vanadium	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001
Zinc	<0.005	<0.006	<0.006	<0.002	<0.002	<0.002	<0.001
Total Metals							
Aluminum	0.189	0.117	0.0147	0.0156	0.018	0.0138	0.027
Antimony	<0.0025	<0.0002	<0.0002	0.0002	0.00029	<0.0002	0.00053
Arsenic	0.0026	0.00362	0.00474	0.00588	0.00597	0.00591	0.00582
Barium	0.049	0.0432	0.0458	0.0457	0.0423	0.0446	0.042
Beryllium	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001
Bismuth	<0.2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005
Boron	0.31	0.326	0.302	0.316	0.288	0.301	0.312
Cadmium	0.000228	0.000073	0.000022	<0.00002	<0.00002	<0.00002	0.000023
Calcium	72.4	70	67.2	73.3		66.6	66.5
Chromium	<0.005	0.00296	0.00095	0.00057	0.00111	0.00071	0.00067
Cobalt	0.0018	0.00123	0.00118	0.00081	0.0006	0.00054	0.00046
Copper	<0.005	0.0014	<0.001	<0.001	<0.001	<0.001	0.00096
Iron	0.175	0.229	0.295	0.247	0.263	0.289	0.304
Lead	<0.0025	0.00012	<0.0001	<0.0001	<0.0001	<0.0001	0.000053
Lithium	<0.025	0.0239	0.0223	0.0272	0.0231	0.0298	0.032
Magnesium	33.1	30.3	28.6	28.2		27	27.8
Manganese	0.695	0.81	1.17	0.962	0.931	0.881	0.756
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0384	0.0294	0.0268	0.0251	0.0251	0.0238	0.0235
Nickel	<0.005	0.0025	0.0025	0.0014	0.0016	0.0011	0.00122
Phosphorus	<0.3	<0.3	<0.3	<0.3		0.151	0.182
Potassium	4.9	3.44	3.21	2.56	3.96	3.6	2.56
Selenium	<0.005	0.00032	0.00022	<0.0002	<0.0002	<0.0002	<0.0001
Silicon	4.75	5.05	4.8	5.28		4.78	4.94
Silver	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	0.000052
Sodium	264	243	257	245	240	255	219
Strontium	7.68	7.5	7.72	7.85	7.36	8.13	8.34
Sulphur						225	226
Thallium	<0.001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001
Tin	<0.0025	0.00077	0.0002	<0.0002	<0.0002	<0.0002	0.00033
Titanium	0.011	0.015	<0.01	<0.01		<0.02	<0.01
Total Cadmium (by saltwater extract							
Uranium	0.0023	0.00107	0.000998	0.000834	0.000766	0.00069	0.000531
Vanadium	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001
Zinc	<0.005	<0.006	<0.006	<0.006	<0.006	<0.006	0.0042
Organics							
Carbon Organic (Dissolved)	5.69	8.5	16.6	13.1	12.8	10	7.95
Carbon Organic (Total)	5.26	8.68	17.1	13.8	13.5	9.54	7.75
Nitrogen Organic (Dissolved)	0.3	0.105	0.154	0.13		0.134	<0.05
Nitrogen Organic (Total)	0.3	0.135	0.154	<0.3			0.107
ALS LAB ID	**L1038606**	**L1077032**	**L1113106**	**L1159973**	**L1200094**	**L1247928**	**L1275064**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D5.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D5.2 - GROUNDWATER QUALITY DATA

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Site ID												MW11-07S										
Site ID	**MW11-07D**	**MW11-07D**	**MW11-07D**	**MW11-07D**	**MW11-07D**	**MW11-07D**	**MW11-07S**	**MW11-07S**	**MW11-07S**	**MW11-07S**	**MW11-07S**	**MW11-07S**	**MW11-07S**	**MW11-07S**	**MW11-07S**	**MW11-07S**	**MW11-07S**	**MW11-07S**	**MW11-07S**	**MW11-08D**	**MW11-08D**	**MW11-08D**	**MW11-08D**
Analytes	**May-13**	**Aug-13**	**Nov-13**	**Mar-14**	**Jun-14**	**Sep-14**	**Aug-11**	**Oct-11**	**Feb-12**	**Jun-12**	**Aug-12**	**Dec-12**	**Mar-13**	**May-13**	**Aug-13**	**Nov-13**	**Mar-14**	**Jun-14**	**Sep-14**	**Aug-11**	**Nov-11**	**Feb-12**	**Jun-12**
In Situ Parameters																							
Conductivity µS/cm	1720	1083	1.56	1514	1106	2217	928	958	867	1603	1480	935	786	876	1011	1.44	1506	940	2008	1448	1141	992	1776
Oxygen Dissolved %	1.4	6.3	1.3	68.9	1.7	22.4	17.3	79.4	40.9	25.3		14.3	28.6	12.3	12	3.5	63.4	23.4	61.2	8.8		12.8	10.2
Oxygen Dissolved	0.17	0.78	0.16	8.41	0.21	2.46	1.98	9.08	5.36	2.46	1.06	1.71	3.61	1.45	1.24	0.4	7.74	2.72	6.47	0.89	60.7	1.69	0.98
pH (unitless)	8.04	7.94	8.01	7.83	7.83	7.68	7.7	7.96	8.06	7.87	7.73	7.83	7.9	7.9	7.87	7.83	8.04	7.86	7.7	8.18	7.66	7.8	7.8
Redox Potential mV	-159	-107	254	-93.9	-163	-130			-292		-131	52.4	27.2	-57.2	119	0.933	91.4	21	20.1			-298	
Salinity ppt	0.81	0.73	0.79	0.76	0.8	1.6			0.75		0.7	0.71	0.63	0.66	0.64	0.72	0.76	0.69	1.37			0.84	
Specific Conductivity µS/cm	1593	1436	1.05	980	1577	3050	1294	1369	1498	1107		1410	1273	1307	1281	0.974	941	1370	2639	1812	1720	1683	1232
Temperature °C	7.88	12.2	7.7	6.54	9.42	10.7	10.2	9.27	2.94	8.15	11.4	7.35	4.95	7.71	14	8.17	5.35	8.57	12.5	14.5	7.34	3.51	8.89
Total Dissolved Solids	1036	934	1015	984	1025	1983			973		944	916	828	850	833	1237	979	890	1716			1093	
Turbidity NTU	0	0	8.5	9.8	0.7	4.2	0	1.5	7.5	16.1	2.6	2	16.8	0	0	1.6	1.3	1.8	1.2	8.7	4	4	0
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)	1.6						1.7	3.2			3			<1						2.6			
Alkalinity (Total as CaCO3)	112	119	134	128	131	134	170	167	182	161	167	155	177	204	284	170	163	183	194	204	219	234	233
Bicarbonate Alkalinity	112	119	134	128	131	134	170	167	182	161		155	177	204	284	170	163	183	194	204		237	233
Carbonate Alkalinity	<2	<2	<2	<2	<1	<1	<2	<2	<2	<1		<2	<2	<1	<2	<2	<2	<1	<1	<2		<2	<1
Color TCU	<5	<5		10.2			5.8	6.4	7.1	5.2	5.9	5.8	<5	<5	<5		<5			17.2	15.1	16.4	20.8
Hardness as CaCO3 (Dissolved)	273	266	255	263	270	272	278	279	288	273	290	287	246	253	422	274	288	274	272	192	181	180	177
Hydroxide Alkalinity	<2	<2	<2	<2	<1	<1	<2	<2	<2	<1		<2	<2	<1	<2	<2	<2	<1	<1	<2		<2	<1
pH (unitless)	8.23	8.18	8.18	8.14	8.12	8.15	8.17	8.19	8.26	8.1	8.11	8.03	8.14	8.34	8.24	8.25	8.22	8.2	8.26	8.22	8.08	8.12	7.93
Specific Conductivity µS/cm	1530	1530	1590	1540	1610	1610	1360	1430	1410	1350	1420	1400	1280	1260	897	1450	1410	1370	1370	1790	1600	1610	1540
Total Dissolved Solids	1160	1100	872	1130	1150	1160	940	999	1010	962	1040	1020	853	896	610	997	985	958	946	1240	1130	1110	1150
Total Suspended Solids	6.6	<3		6.7	<3	3.6	3.8	<3	7.3	4	5.3	6.4	3.3	<3	12.4		<3	<3	<3	13.3	13.6	6.5	<3
Turbidity NTU	5.26	1.22		7.83	3.09	3.82	0.62	0.35	4.09	1.36	4.27	4.86	1.83	0.15	0.64		0.53	0.38	0.26	6.68	8.28	6.43	1.66
Dissolved Anions																							
Bromide	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<1	<1
Chloride	18.4	14.7	17	15.5	16	15.5	10.9	10.5	11.2	10.8	12	11.3	9	10.7	<5	12.9	11.2	10.9	10	15	12	15	14
Fluoride	0.5	0.62	0.48	0.74	0.114	0.484	0.47	0.32	0.3	0.3	0.33	0.33	0.44	0.29	0.33	0.31	0.45	0.321	0.313	0.49	<0.4	<0.4	<0.4
Sulphate	722	678	673	670	708	673	530	578	579	551	598	616	494	480	243	594	587	539	519	696	626	626	578
Nutrients																							
Ammonia (Total)	0.0331	0.026	0.0986	0.0891	<0.005	0.158	0.0123	0.0281	<0.05	0.0157	0.0249	0.0271	0.0155	0.0161	<0.005	0.0212	0.0124	<0.005	0.0189	0.0585	0.0245	<0.05	0.0256
Nitrate (as N)	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	0.074	0.1	<0.05	<0.05	<0.05	<0.05	0.066	<0.05	<0.1	<0.1	<0.1	<0.1
Nitrite (as N)	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02
Nitrogen (Dissolved)							0.17	0.21	0.07	0.3		0.268	0.239							0.46	0.66	0.32	0.24
Nitrogen (Total)	0.139	0.108					0.14	0.2	<0.043	0.261	0.151	0.26	0.314	0.13	0.075					0.45	0.3	0.348	<0.26
Nitrogen Kjeldahl (Total)	0.136	0.108	0.37	0.296	0.324	0.306	0.09	0.185	<0.2	0.261	0.151	0.25	0.259	0.095	0.075	0.118	0.128	0.176	0.123	0.45	0.303	0.35	<0.5
Orthophosphate (Dissolved)			0.103	0.0825	0.0748	0.0764		0.0355			0.0216					0.039	0.0493	0.0391	0.046				
Phosphorus - Dissolved	0.11	0.0993	0.12	0.0806	0.075	0.081	0.0304	0.036	0.0219	0.0277		0.0399	0.0298	0.0354	0.0362	0.0418	0.0454	0.0374	0.0459	0.0682	0.0745	0.112	0.17
Phosphorus - Total	0.165	0.129	0.206	0.197	0.185	0.169	0.036	0.0375	0.0389	0.0383	0.0444	0.0538	0.0434	0.0397	0.0344	0.053	0.0502	0.0431	0.0466	0.099	0.119	0.153	0.227
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0054	0.0053	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals																							
Aluminum	0.0062	0.0075	0.0052	0.004	0.0117	0.0171	<0.025	0.0108	0.023	0.02	0.0082	0.0184	0.0114	0.0062	0.0012	0.0072	0.0048	0.0082	0.0063	<0.025	0.0103	0.0103	0.01
Antimony	<0.0001	<0.0001	0.00049	0.00049	0.00072	0.00051	<0.0025	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	0.00012	<0.0001	0.00024	<0.0001	0.0001	0.00012	<0.0001	<0.0025	0.00042	0.00027	0.00025
Arsenic	0.00542	0.00622	0.00354	0.00395	0.00448	0.0042	0.0045	0.00531	0.00383	0.0041	0.00412	0.00386	0.0054	0.00622	0.00499	0.00494	0.00373	0.00555	0.00654	0.0028	0.00312	0.00338	0.00321
Barium	0.0432	0.0387	0.0439	0.0485	0.0496	0.047	0.041	0.0418	0.0431	0.041	0.041	0.0428	0.03	0.0293	0.0372	0.0372	0.037	0.036	0.0322	0.053	0.0576	0.0591	0.059
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.0002	<0.0002	<0.002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.0002	<0.0002	<0.0002
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.001	<0.001	<0.2	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.001	<0.001	<0.001
Boron	0.293	0.285	0.308	0.298	0.279	0.304	0.29	0.308	0.241	0.28	0.244	0.258	0.208	0.2	0.063	0.297	0.272	0.281	0.262	2.69	2.55	2.51	2.28
Cadmium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00003	<0.00001	0.000194	0.000063	0.000119	0.000471	0.000026	0.000224	0.000098	0.000034	<0.00004	<0.00001	0.00005	0.000039	0.000023	<0.000085	0.000023	<0.00002	0.000051
Calcium	65.1	62.5	58.9	62.5	63.6	64.6	46.5	48.7	49.3	42.3		48.6	38.9	40.3	89.7	44.2	49.7	44.4	43.5	32.1	30.6	30.9	28.7
Chromium	<0.0001	<0.0001	0.00024	0.0002	0.00057	0.00034	<0.005	<0.0002	<0.0002	<0.002	<0.0002	0.00026	0.00029	<0.0001	0.00032	<0.0001	0.00013	0.00011	<0.0001	<0.005	0.00032	0.00053	0.00034
Cobalt	0.00041	0.00033	0.00024	0.00036	0.0005	0.00037	<0.0015	0.00087	0.00108	0.00098	0.001	0.00087	0.0005	0.0005	<0.0001	0.00062	0.00022	0.00062	0.00057	<0.0015	0.00128	0.00102	0.00106
Copper	<0.0002	<0.0002	<0.0002	<0.0002	0.00035	0.00026	<0.005	<0.001	0.0013	0.0069	0.00045	0.00321	0.00199	0.00081	0.00173	0.00028	0.00235	0.00081	0.00047	<0.005	<0.001	<0.001	<0.0004
Dissolved Cadmium (by saltwater e›					<0.00002																		
Iron	0.302	0.255	0.207	0.392	0.579	0.504	<0.03	<0.03	<0.03	<0.03	0.081	<0.01	<0.01	0.03	<0.01	0.115	<0.01	0.021	0.031	<0.03	0.241	0.269	0.286
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0025	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0025	<0.0001	<0.0001	<0.0001
Lithium	0.028	0.0299	0.0213	0.0186	0.027	0.0271	0.028	0.0327	0.025	0.025	0.0228	0.0229	0.0263	0.0278	0.00386	0.0303	0.0217	0.0311	0.0283	<0.025	0.0011	0.0011	<0.001
Magnesium	26.8	26.8	26.2	25.9	26.9	26.9	39.3	38.2	40	40.7		40.3	36.2	36.9	48.2	39.8	39.8	39.7	39.8	27.1	25.5	24.9	25.5
Manganese	0.737	0.547	1.1	1.24	0.908	0.831	0.19	0.342	0.573	0.584	0.713	0.792	0.488	0.433	0.0167	0.646	0.212	0.766	0.552	0.391	1.1	1.23	1.29
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000012	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0214	0.0211	0.0211	0.0222	0.0253	0.0212	0.0184	0.0172	0.0155	0.0167	0.0179	0.016	0.0178	0.0161	0.127	0.0176	0.0159	0.0166	0.0166	0.0676	0.0604	0.061	0.0605
Nickel	0.00232	<0.0005	0.00111	0.00134	0.00212	0.00159	<0.005	0.0026	0.0041	0.0024	0.0024	0.0029	0.00172	0.00098	<0.0005	0.00103	0.00109	0.00172	0.00086	<0.005	0.0066	0.0062	0.0038
Phosphorus	0.16	0.125	0.167	0.161	0.174	0.177	<0.3	<0.3	<0.3	<0.3		<0.05	<0.05	<0.05	<0.05	0.061	0.056	<0.05	0.057	<0.3	<0.3	<0.3	<0.3
Potassium	2.39	2.31	7.49	8.11	10	8.7	2.7	2.03	5.79	2.2	1.65	2.2	1.41	1.25	7.61	1.44	1.72	1.63	1.31	26.1	13.2	12.6	11.4
Selenium	<0.0001	<0.0001	0.00025	<0.0001	0.00011	<0.0001	<0.005	<0.0002	<0.0002	<0.002	<0.0002	<0.0002	0.00024	0.0002	0.0271	<0.0001	0.00014	<0.0001	0.00012	<0.005	0.00023	0.00039	<0.0002
Silicon	4.75	4.79	4.45	4.42	4.41	4.48	4.71	5.07	4.62	4.73		4.79	4.5	4.51	7.07	4.9	4.89	4.84	5.05	3.48	4.04	4.01	3.91
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0001	<0.00002	<0.00002	<0.00004	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	0.000019	<0.00001	<0.00001	<0.00001	<0.0001	<0.00002	<0.00002	<0.00002
Sodium	223	217	220	249	228	232	206	210	214	207	220	215	188	187	40.6	204	219	206	197	341	296	300	281
Strontium	7.29	6.98	7.42	7.61	7.8	7.51	8.11	8.4	8.55	9.48	9.19	8.68	8.9	9.11	0.68	9.71	10.3	9.68	9.21	1.24	1.1	1.16	1.22
Sulphur	213	210	211	214	227	220						197	156	142	75.8	183	194	166	166				
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.001	0.000026	0.000025	<0.0004	<0.00002	0.000026	0.000027	0.000026	<0.00001	0.000013	0.000037	0.000025	0.00003	<0.001	<0.00002	<0.00002	<0.00002
Tin	<0.0001	<0.0001	0.00011	0.00018	0.00019	<0.0001	<0.0025	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0025	0.00067	0.00043	0.0002
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.000465	0.000325	0.000726	0.000693	0.000703	0.000724	0.0046	0.00435	0.00477	0.00443	0.00402	0.00348	0.00448	0.00474	0.00403	0.00364	0.004	0.0045	0.00419	0.0057	0.00529	0.00454	0.00457
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	0.0033	<0.001	<0.001	<0.001	<0.001	<0.005	<0.002	<0.002	<0.002
Zinc	<0.001	<0.001	0.0011	0.0011	0.0021	0.0015	<0.005	<0.006	<0.006	0.0212	0.0033	0.0131	0.0035	0.0037	<0.001	0.0022	0.0062	0.004	0.0095	<0.005	<0.006	<0.006	<0.002
Total Metals																							
Aluminum	0.0288	0.0114	0.136	0.0256	0.0048	0.0211	0.026	0.0314	0.154	0.118	0.165	0.106	0.0627	0.0106	0.0538	0.0096	0.0145	0.0199	0.009	0.389	0.286	0.179	0.0507
Antimony	0.00022	0.00011	0.00164	0.00059	0.00065	0.00074	<0.0025	<0.0002	0.00029	<0.001	<0.0002	0.00026	0.00035	<0.0001	0.00024	<0.0001	0.00015	0.00017	<0.0001	<0.0025	0.00033	0.0004	0.00036
Arsenic	0.00553	0.00621	0.00421	0.00419	0.00444	0.00439	0.0045	0.00478	0.00405	0.0047	0.00475	0.00423	0.00568	0.00626	0.00466	0.0048	0.00395	0.00555	0.00654	0.0031	0.00309	0.00341	0.00359
Barium	0.0436	0.0397	0.0543	0.0507	0.0477	0.0483	0.042	0.0418	0.0451	0.04	0.0423	0.0458	0.0314	0.0288	0.0362	0.0373	0.0381	0.0359	0.0316	0.055	0.0586	0.0627	0.0594
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.0002	<0.0002	<0.002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.0002	<0.0002	<0.0002
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.001	<0.001	<0.2	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.2	<0.001	<0.001	<0.001
Boron	0.319	0.331	0.331	0.318	0.288	0.321	0.3	0.332	0.24	0.29	0.263	0.253	0.223	0.234	0.071	0.305	0.285	0.263	0.278	2.64	2.38	2.6	2.34
Cadmium	0.000037	<0.00001	0.000168	<0.00005	<0.00003	0.00003	0.000097	0.000107	0.00017	0.000526	0.000065	0.000263	0.000153	0.000032	<0.00005	0.000014	0.000086	0.000107	0.000027	0.000119	0.000068	0.000068	0.000081
Calcium	67.1	62.8	65.8	64.4	61.7	65.2	46.2	47.5	48.1	44.6		48.3	39.4	39.9	88.2	44.8	48.7	43	43.3	31.9	28.6	31	28.7
Chromium	0.00104	0.00021	0.00506	0.00102	0.00052	0.00083	<0.005	0.0005	0.00137	<0.002	0.00059	0.0019	0.00251	0.00019	0.00049	0.00025	0.00031	0.00027	<0.0001	<0.005	0.00145	0.00171	0.00069
Cobalt	0.00048	0.00037	0.00061	0.00049	0.00047	0.00045	<0.0015	0.00098	0.00121	0.00114	0.00118	0.00101	0.00064	0.00054	0.00012	0.00066	0.00036	0.00068	0.00057	<0.0015	0.00152	0.00122	0.00119
Copper	0.00076	<0.0005	0.00402	0.001	<0.0005	0.00052	<0.005	0.0016	0.0039	0.0087	0.0033	0.0068	0.00487	0.00142	0.00325	<0.0005	0.00296	0.00174	0.00066	<0.005	0.0047	0.0013	0.0011
Iron	0.363	0.281	0.659	0.56	0.54	0.538	<0.03	0.036	0.188	0.131	0.268	0.135	0.064	0.034	0.069	0.133	0.022	0.039	0.034	0.21	0.51	0.43	0.368
Lead	0.00006	<0.00005	0.00029	0.000058	<0.00005	<0.00005	<0.0025	<0.0001	0.0002	<0.001	<0.0001	0.0002	0.000149	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0025	0.00019	0.00017	0.00013
Lithium	0.0285	0.0322	0.0217	0.0189	0.0261	0.0272	0.029	0.0308	0.0255	0.028	0.023	0.0239	0.0286	0.0256	0.00446	0.0297	0.0228	0.0293	0.0287	<0.025	0.0012	0.0013	<0.001
Magnesium	27.4	26.9	27.5	26.4	26.2	27.2	39.8	37.2	40.5	41.2		39.5	36.4	36.1	47.2	39.5	39.5	39.1	40	26.9	23.9	25.5	24.9
Manganese	0.794	0.588	1.21	1.26	0.893	0.875	0.186	0.328	0.608	0.608	0.782	0.816	0.515	0.474	0.0499	0.688	0.363	0.796	0.555	0.449	1.15	1.28	1.38
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000013	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0235	0.0225	0.0284	0.0261	0.0319	0.0223	0.0183	0.0173	0.0156	0.0179	0.0184	0.0165	0.0186	0.0164	0.13	0.0189	0.0173	0.0181	0.0174	0.0737	0.0602	0.064	0.0664
Nickel	0.00279	<0.0005	0.00348	0.00184	0.00167	0.00192	<0.005	0.003	0.0059	0.003	0.004	0.004	0.00276	0.00099	0.0005	0.00124	0.00141	0.00197	0.00093	0.0055	0.0069	0.0093	0.0046
Phosphorus	0.158	0.132	0.209	0.18	0.184	0.202	<0.3	<0.3	<0.3	<0.3		0.061	<0.05	<0.05	<0.05	0.062	<0.05	0.059	<0.05	<0.3	<0.3	<0.3	<0.3
Potassium	2.48	2.29	7.69	8.05	9.48	9.07	2.2	2.08	6.94	2.1	1.7	2.19	1.53	1.21	7.82	1.53	1.66	1.59	1.36	23.8	12.8	13.5	11.1
Selenium	<0.0001	<0.0001	<0.0001	0.00012	<0.0001	<0.0001	<0.005	<0.0002	<0.0002	<0.002	<0.0002	<0.0002	0.00025	0.00018	0.0227	<0.0001	0.00017	0.00011	0.00012	<0.005	0.00037	0.0003	0.00027
Silicon	4.97	4.86	4.89	4.6	4.32	4.54	4.82	4.91	5.07	5.08		4.89	4.68	4.49	7.14	5.03	4.91	4.87	5.11	4.25	4.28	4.47	3.95
Silver	<0.00001	<0.00001	0.00001	<0.00001	<0.00001	<0.00001	<0.0001	<0.00002	<0.00002	<0.00004	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	0.000029	<0.00001	<0.00001	<0.00001	<0.0001	<0.00002	<0.00002	<0.00002
Sodium	231	225	221	249	229	240	212	204	212	218	220	221	195	183	42.1	220	226	205	197	333	286	317	283
Strontium	7.88	7.37	7.68	7.98	7.71	7.56	8.48	8.19	8.38	10.1	9.61	8.77	8.9	8.97	0.659	10.1	10.3	10.1	9.21	1.24	1.06	1.23	1.25
Sulphur	216	214	218	222	223	218						200	162	141	76.5	189	195	170	169				
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.001	0.000027	0.00003	<0.0004	<0.00002	0.000027	0.000026	0.000026	<0.00001	0.000017	0.000041	0.000028	0.000031	<0.001	<0.00002	<0.00002	<0.00002
Tin	0.00018	0.00012	0.00101	0.00038	0.00013	0.00022	<0.0025	0.00026	0.00021	<0.001	<0.0002	0.0003	0.00018	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0025	0.00113	0.00097	0.00054
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.013	<0.01		<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.012	0.012	<0.01	<0.01
Total Cadmium (by saltwater extract					<0.00002																		
Uranium	0.000495	0.000329	0.000816	0.00076	0.000724	0.000759	0.0046	0.00419	0.00488	0.00466	0.00429	0.0036	0.00456	0.00471	0.00408	0.00385	0.00426	0.0047	0.00441	0.0061	0.00505	0.00489	0.00486
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	0.0012	<0.001	0.0036	<0.001	<0.001	<0.001	<0.001	<0.005	<0.002	0.002	<0.002
Zinc	<0.003	<0.003	0.0086	0.0036	<0.003	0.0036	<0.005	<0.006	0.008	0.0319	<0.006	0.0155	0.007	0.0042	<0.003	<0.003	0.0067	0.0046	0.0037	<0.005	<0.006	<0.006	<0.006
Organics																							
Carbon Organic (Dissolved)	7.04	5.01	7.57				3.58	4.1	4.24	4.48	4.51	3.9	3.38	3.49	1.59	2.98				29.6	19.8	21.8	27.5
Carbon Organic (Total)	7.31	5.09	8.27	9.11	6.88	4.8	3.22	3.93	4.22	4.01	4.68	3.64	3.25	3.23	1.39	2.91	3.2	3.16	3.58	30.1	21.2	22.3	27.1
Nitrogen Organic (Dissolved)							0.107	0.182	0.05	0.284		0.167								0.401	0.635	0.291	0.214
Nitrogen Organic (Total)							0.077	0.172	<0.3	0.246			0.244							0.391	0.275	0.35	<0.5
ALS LAB ID	**L1306577**	**L1345714**	**L1392288**	**L1432458**	**L1473868**	**L1513822**	**L1041015**	**L1076555**	**L1115490**	**L1160966**	**L1200094**	**L1247921**	**L1275748**	**L1306577**	**L1345714**	**L1392288**	**L1432458**	**L1473868**	**L1513822**	**L1039843**	**L1080651**	**L1114498**	**L1159542**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D5.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D5.2 - GROUNDWATER QUALITY DATA

MW11-08D

Site ID	MW11-08D	MW11-08D	MW11-08D	MW11-08D	MW11-08D	MW11-08D	MW11-08D	MW11-08D	MW11-08D
Analytes	**Aug-12**	**Dec-12**	**Mar-13**	**May-13**	**Aug-13**	**Nov-13**	**Apr-14**	**Jun-14**	**Sep-14**
In Situ Parameters									
Conductivity µS/cm	1530	1050	992	1114	1104	1.48	998	1019	1076
Oxygen Dissolved %		7.3	2.4	6.8	3.7	1.6	13.9	1.1	5.6
Oxygen Dissolved	7.24	0.82	0.28	0.79	0.4	0.16	1.64	0.12	0.62
pH (unitless)		7.99	7.92	8.11	7.9	8.13	8.38	8.12	8.02
Redox Potential mV	-45	-220	-161	-179	-106	0.96	-174	-162	-147
Salinity ppt	0.8	7.4E-07	0.75	0.83	0.76	0.74	0.75	0.74	0.75
Specific Conductivity µS/cm		1462	1493	1630	1504	0.976	1483	1461	1492
Temperature °C	14	10.3	7.41	8.45	11.1	7.19	7.88	9.19	10.4
Total Dissolved Solids	979	948	970	1060	979	1554	964	950	970
Turbidity NTU	9.9	-1.4	-1.9	0	0.5	1.2	1.7	1.8	2.1
Physical Tests									
Acidity to pH 8.3 (as CaCO3)	2.3								
Alkalinity (Total as CaCO3)	237	235	225	216	213	231	223	219	232
Bicarbonate Alkalinity		235	214	216	213	231	223	219	232
Carbonate Alkalinity		<2	11.7	<1	<1	<2	<1	<1	<1
Color TCU	9	11.1	9.8	<5	5.8				
Hardness as CaCO3 (Dissolved)	164	158	160	162	158	159	165	164	158
Hydroxide Alkalinity		<2	<1	<1	<1	<2	<1	<1	<1
pH (unitless)	8.18	8.23	8.33	8.3	8.32	8.2	8.37	8.38	8.23
Specific Conductivity µS/cm	1470	1470	1540	1470	1480	1400	1460	1480	1480
Total Dissolved Solids	1070	1040	1020	971	1010	965	1010	984	1030
Total Suspended Solids	3.2	<3	<3	7.3	4.4		<3	<3	<3
Turbidity NTU	3.68	2.84	2.06	2.53	1.68		0.62	0.66	0.81
Dissolved Anions									
Bromide	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	11	9.2	8.8	8.4	8	9.6	14.6	8.7	8.8
Fluoride	0.42	0.4	0.53	0.31	0.51	0.35	0.36	0.34	0.306
Sulphate	553	538	530	535	530	528	535	526	535
Nutrients									
Ammonia (Total)	0.0238	0.0311	0.0367	0.0292	0.0349	0.037	0.0423	0.0305	0.0432
Nitrate (as N)	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrite (as N)	<0.02	<0.01	0.014	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen (Dissolved)		0.217	0.136						
Nitrogen (Total)	0.18	0.195	0.153	0.134	0.153				
Nitrogen Kjeldahl (Total)	0.18	0.202	0.193	0.162	0.153	0.202	0.203	0.199	0.2
Orthophosphate (Dissolved)	0.18					0.218	0.238	0.226	0.222
Phosphorus - Dissolved		0.191	0.196	0.194	0.201	0.229	0.251	0.249	
Phosphorus - Total	0.208	0.224	0.217		0.239	0.257	0.274	0.242	0.303
Cyanide									
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals									
Aluminum	0.0108	0.0095	0.01	0.0098	0.0092	0.0091	0.0087	0.011	0.0081
Antimony	<0.0002	<0.0002	0.0002	0.00019	0.00018	0.00018	0.00014	<0.0002	0.00012
Arsenic	0.00289	0.00294	0.00288	0.0035	0.00285	0.00284	0.00299	0.00274	0.00324
Barium	0.0548	0.0515	0.0497	0.0491	0.0452	0.0456	0.0441	0.0422	0.043
Beryllium	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
Bismuth	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005
Boron	2.36	2.35	2.14	2.34	2.42	2.42	2.31	2.5	2.33
Cadmium	<0.00002	<0.00002	<0.00005	<0.00005	<0.00002	<0.00003	<0.00002	<0.00002	<0.00001
Calcium	25.1	23.7	23.2	22.2	21.5	21.3	22.4	22.2	21.3
Chromium	0.00091	0.00107	0.00022	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
Cobalt	0.00077	0.00075	0.0006	0.00067	0.00048	0.00043	0.00046	0.00037	0.0004
Copper	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0002
Dissolved Cadmium (by saltwater e›							<0.00002	<0.00002	
Iron	0.28	0.272	0.246	0.141	0.165	0.16	0.189	0.168	0.186
Lead	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005
Lithium	<0.001	<0.001	<0.0005	<0.0005	<0.0005	0.00067	<0.0005	<0.001	<0.0005
Magnesium	24.6	23.9	24.7	25.9	25.4	25.6	26.4	26.2	25.3
Manganese	1.05	1.08	0.954	0.778	0.73	0.676	0.71	0.599	0.629
Mercury		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.059	0.0578	0.0545	0.0558	0.0559	0.0525	0.0528	0.0546	0.0504
Nickel	0.0029	0.0026	0.00209	0.00309	0.00156	0.00166	0.00113	0.0011	0.00107
Phosphorus	0.24	0.273	0.271	0.21	0.219	0.237	0.269	0.241	0.261
Potassium	10	9.91	10.4	10.2	9.89	11.2	9.87	10.4	9.84
Selenium	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
Silicon	4.29	3.98	4.25	4.15	4.08	4.31	4.12	4.25	3.92
Silver	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001
Sodium	271	284	274	274	264	254	251	243	256
Strontium	1.17	1.18	1.17	1.19	1.19	1.14	1.29	1.23	1.25
Sulphur		172	177	170	162	169	166	169	171
Thallium	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001
Tin	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
Titanium	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
Uranium	0.00304	0.00302	0.0027	0.00255	0.00243	0.00251	0.00263	0.00252	0.00257
Vanadium	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001
Zinc	0.0021	0.0023	0.0013	0.0012	<0.001	<0.001	0.0012	<0.002	0.0012
Total Metals									
Aluminum	0.209	0.0637	0.0405	0.183	0.103	0.0435	0.0233	0.0302	0.0241
Antimony	0.00027	0.0002	0.00028	0.00023	0.0002	0.00019	0.00015	<0.0002	0.00019
Arsenic	0.00294	0.00294	0.00287	0.00359	0.0027	0.00282	0.00295	0.00282	0.00318
Barium	0.053	0.0509	0.0499	0.0496	0.041	0.0432	0.0435	0.0425	0.0413
Beryllium	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
Bismuth	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005
Boron	2.51	2.26	2.45	2.38	2.33	2.42	2.29	2.57	2.38
Cadmium	0.000022	0.000023	<0.00005	<0.00005	<0.00002	<0.00003	<0.00002	<0.00002	<0.00001
Calcium	25.2	23.3	23.5	22	21	20.7	21.4	21.6	20.6
Chromium	0.00456	0.00309	0.00057	0.00051	0.00037	0.00018	0.0002	<0.0002	0.00026
Cobalt	0.00097	0.00081	0.00061	0.00079	0.00048	0.00043	0.00047	0.00041	0.00041
Copper	<0.001	<0.001	0.00083	0.0009	<0.0005	<0.0005	0.00146	<0.001	<0.0005
Iron	0.442	0.309	0.278	0.272	0.219	0.187	0.209	0.189	0.207
Lead	0.00011	0.00026	0.000064	0.000105	0.000052	<0.00005	<0.00005	<0.0001	<0.00005
Lithium	<0.001	<0.001	<0.0005	0.00059	0.00079	0.00055	<0.0005	<0.001	<0.0005
Magnesium	24.5	24	24.8	26	24.6	25.4	25.1	25.7	24.7
Manganese	1.13	1.06	0.948	0.793	0.689	0.672	0.69	0.632	0.623
Mercury		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0616	0.0585	0.0615	0.0592	0.0532	0.0549	0.0538	0.0559	0.0501
Nickel	0.0047	0.0035	0.00232	0.00381	0.00157	0.00148	0.00129	0.0012	0.00126
Phosphorus	0.24	0.246	0.262	0.212	0.225	0.239	0.271	0.273	0.257
Potassium	9.96	9.86	10.4	10.2	9.48	11.2	9.34	10.1	9.61
Selenium	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
Silicon	4.97	4.04	4.29	4.71	4.33	4.32	4.07	4.26	3.87
Silver	0.000074	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001
Sodium	274	276	272	267	247	245	250	255	251
Strontium	1.2	1.17	1.29	1.23	1.13	1.16	1.29	1.25	1.23
Sulphur		169	179	172	162	170	166	174	167
Thallium	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001
Tin	<0.0002	<0.0002	0.00015	0.00012	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
Titanium	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
Total Cadmium (by saltwater extract							<0.00002	<0.00002	
Uranium	0.00318	0.00309	0.00307	0.00272	0.00232	0.00257	0.00256	0.00256	0.00257
Vanadium	<0.002	<0.002	<0.001	0.0011	<0.001	<0.001	<0.001	<0.002	<0.001
Zinc	<0.006	0.0063	<0.003	<0.003	<0.003	<0.003	<0.003	<0.006	<0.003
Organics									
Carbon Organic (Dissolved)	15.6	14.1	7.28	5.26	8.57	9.72			
Carbon Organic (Total)	16.7	14.8	13.1	5.28	9.41	10.5	12.1	9	12
Nitrogen Organic (Dissolved)		0.185	0.085						
Nitrogen Organic (Total)			0.102						
ALS LAB ID	**L1202478**	**L1247928**	**L1277798**	**L1308855**	**L1346553**	**L1394557**	**L1439433**	**L1475661**	**L1516193**

MW11-09D / MW11-09S

Site ID	MW11-09D	MW11-09D	MW11-09D	MW11-09D	MW11-09D	MW11-09D	MW11-09D	MW11-09D	MW11-09D	MW11-09D	MW11-09D	MW11-09D	MW11-09S	MW11-09S
Analytes	**Aug-11**	**Oct-11**	**Feb-12**	**Jun-12**	**Aug-12**	**Dec-12**	**Mar-13**	**May-13**	**Aug-13**	**Mar-14**	**Jun-14**	**Sep-14**	**Aug-11**	**Oct-11**
In Situ Parameters														
Conductivity µS/cm	1296	1340	1084	1882	1660	1020	999	1172	1289	1722	1030	1022	1486	1371
Oxygen Dissolved %	19.2		36.6	12.1		12.3	18.4	33.4	28	12.8	8.3	9.9	4.5	
Oxygen Dissolved	2.14	65.1	4.6	1.18	1.53	1.5	2.26	4.03	3.29	1.57	0.98	1.17	0.54	58.5
pH (unitless)	8.1	8.12	8.34	8.07		8.19	8.1	8.06	8.13	8.08	8.27	8.22	7.99	8.11
Redox Potential mV			-293		-42	-248	-146	-206	34.3	-157	-126	-182		
Salinity ppt			0.88		0.8	0.8	0.79	0.91	0.98	0.87	0.78	0.77		
Specific Conductivity µS/cm	1807	2133	1735	1323		1593	1565	1791	1913	1109	1549	1564	2247	2116
Temperature °C	10.1	5.53	5.34	9.22	8.66	6.17	6.07	6.88	7.92	6.36	7.48	7.75	7.22	6.56
Total Dissolved Solids			1129		1060	1035	1016	1165	1244	1119	1006	991		
Turbidity NTU	3.3	26.1	6.9	1.7	10.1		1.4	0	1.8	1.6	2.6	1.5	4.1	2.3
Physical Tests														
Acidity to pH 8.3 (as CaCO3)	<1				2.6								2.3	
Alkalinity (Total as CaCO3)	116	163	134	143	145	144	137	142	143	185	173	171	153	134
Bicarbonate Alkalinity	116		134	143		144	137	142	143	185	173	169	153	
Carbonate Alkalinity	<1		<2	<1		<2	<1	<2	<2	<2	<2	1.9	<2	
Color TCU	13.8	<5	12.5	17	15.2	14.7	12.1	11.4	10.1				6.6	8.5
Hardness as CaCO3 (Dissolved)	85.8	112	66.8	76	64.6	59	59.5	58.9	59.3	64.2	55.3	56.4	137	126
Hydroxide Alkalinity	<1		<2	<1		<2	<1	<2	<2	<2	<2	<1	<2	
pH (unitless)	8.34	8.16	8.19	7.97	8.06	8.18	8.32	8.2	8.23	8.03	8.27	8.3	8.19	8.24
Specific Conductivity µS/cm	1770	2040	1660	1720	1610	1600	1680	1650	1630	1610	1550	1550	2240	2050
Total Dissolved Solids	1150	1470	980	1220	1110	1120	1140	1120	1140	1100	1060	1040	1490	1430
Total Suspended Solids	<3	32.2	11.8	13.3	8.5	<3	4.1	<3	<3		<3	<3	3.3	8.2
Turbidity NTU	1.82	37.9	6.92	4.95	4.92	2.4	1.27	1.57	1.98		1.41	0.97	3.12	5.87
Dissolved Anions														
Bromide	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	<0.5	<1	<1
Chloride	32	41	21	30	20	17	17	20	15	16	14	13.5	36	23
Fluoride	0.55	<0.4	<0.4	<0.4	0.44	0.41	0.75	0.41	0.87	0.75	0.398	0.375	0.46	<0.4
Sulphate	705	830	672	713	662	650	673	657	636	624	599	571	979	881
Nutrients														
Ammonia (Total)	<0.005	<0.005	<0.05	0.0188	<0.005	0.0311	<0.005	<0.005	<0.005	0.0228	<0.005	0.0221	0.0112	0.029
Nitrate (as N)	0.12	<0.1	<0.1	<0.1	0.17	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.1	<0.1
Nitrite (as N)	<0.02	<0.02	<0.02	<0.02	0.056	<0.02	<0.02	<0.02	<0.02	<0.02	0.01	<0.01	0.027	<0.02
Nitrogen (Dissolved)	0.29	0.25	0.15	0.24		0.247	0.113						0.28	0.21
Nitrogen (Total)	0.27	0.488	0.256	1.24	0.51	0.237	0.15	0.17	0.148				0.33	0.287
Nitrogen Kjeldahl (Total)	0.146	0.488	0.26	1.24	0.28	0.244	0.154	0.174	0.187	0.234	0.177	0.169	0.303	0.287
Orthophosphate (Dissolved)					0.325					0.398	0.375	0.287		
Phosphorus - Dissolved	0.116	0.147	0.22	0.253		0.391	0.352	0.375	0.377	0.42	0.401	0.367	0.0549	0.061
Phosphorus - Total	0.124	0.234	0.29	0.352	0.365	0.396	0.4	0.43	0.445	0.467	0.429	0.437	0.0618	0.0804
Cyanide														
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	0.0086	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals														
Aluminum	<0.025	0.0178	0.0232	0.0193	0.0184	0.0194	0.012	0.0168	0.01	0.0095	0.0096	0.0097	<0.025	0.0144
Antimony	<0.0025	0.00049	0.00025	<0.0002	0.00022	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0025	0.00031
Arsenic	0.0042	0.00639	0.00464	0.00492	0.0053	0.00542	0.00534	0.00573	0.00619	0.00641	0.00588	0.00624	0.0039	0.00637
Barium	0.038	0.0527	0.0355	0.0445	0.0401	0.0399	0.0403	0.0429	0.0442	0.049	0.0411	0.0452	0.047	0.0405
Beryllium	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005	<0.0002
Bismuth	<0.2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.2	<0.001
Boron	0.49	0.461	0.518	0.481	0.415	0.456	0.441	0.441	0.447	0.472	0.471	0.461	0.49	0.465
Cadmium	0.00019	0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	0.000157	0.000061
Calcium	25.8	33.3	19.5	22	18.6	17	17.1	16.7	17.1	18.4	15.8	16.2	39.9	37.5
Chromium	<0.005	0.00033	0.00069	0.00144	0.00343	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005	<0.0002
Cobalt	<0.0015	0.00104	0.00059	0.00058	0.00055	0.00025	0.00043	0.00031	0.00029	0.00023	<0.0002	<0.0002	<0.0015	0.00056
Copper	<0.005	<0.001	<0.001	0.00067	<0.0004	<0.0004	0.00076	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.005	<0.001
Dissolved Cadmium (by saltwater e›														
Iron	<0.03	0.131	0.163	0.386	0.305	0.296	0.214	0.239	0.3	0.389	0.159	0.43	<0.03	0.042
Lead	<0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0025	<0.0001
Lithium	<0.025	0.0118	0.0146	0.0145	0.0158	0.0152	0.0155	0.0197	0.0191	0.0198	0.0199	0.023	0.033	0.0258
Magnesium	5.21	7.02	4.37	5.13	4.39	4.01	4.05	4.17	4.05	4.44	3.82	3.87	9.05	7.95
Manganese	0.0629	0.8	0.691	0.945	0.787	0.817	0.795	0.831	0.912	0.955	0.682	0.862	0.201	0.26
Mercury	<0.00001	<0.00005	<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005
Molybdenum	0.0404	0.0537	0.028	0.0279	0.0247	0.0191	0.0295	0.0162	0.0162	0.0149	0.0136	0.0128	0.0162	0.0184
Nickel	<0.005	0.0056	0.0063	0.0034	0.0071	0.0028	0.0055	0.0034	0.0025	0.0014	0.0018	0.0017	<0.005	0.003
Phosphorus	<0.3	<0.3	<0.3	0.41	0.387	0.413	0.434	0.399	0.391	0.452	0.422	0.41	<0.3	<0.3
Potassium	3.8	3.82	1.75	1.68	1.69	1.44	1.34	1.33	1.24	1.3	1.1	1.11	<2	1.59
Selenium	<0.005	0.00107	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005	0.00022
Silicon	2.86	3.43	3.4	3.88	3.69	3.41	3.57	3.6	3.59	3.89	3.9	4.03	4.06	4.09
Silver	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.0001	<0.00002
Sodium	381	432	331	352	320	327	318	340	325	335	303	319	456	418
Strontium	0.775	1.02	0.697	0.854	0.745	0.739	0.747	0.793	0.764	0.815	0.701	0.683	1.59	1.28
Sulphur						208	213	211	202	202	189	204		
Thallium	<0.001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.001	<0.00002
Tin	<0.0025	0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0025	0.00026
Titanium	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.01
Uranium	0.0049	0.00722	0.00324	0.0035	0.00244	0.00199	0.00175	0.0014	0.00117	0.00136	0.00121	0.000757	0.0019	0.0016
Vanadium	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.002
Zinc	<0.005	<0.006	0.0114	0.0025	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.006
Total Metals														
Aluminum	0.084	0.632	0.117	0.143	0.181	0.0547	0.0369	0.0413	0.0244	0.0374	0.0258	0.0291	0.166	0.195
Antimony	<0.0025	0.00055	0.00044	0.00029	0.00037	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0025	0.00031
Arsenic	0.0044	0.00805	0.00476	0.00534	0.00563	0.00539	0.0055	0.00571	0.00635	0.00639	0.00605	0.00618	0.0039	0.00559
Barium	0.04	0.0654	0.0421	0.0482	0.044	0.0422	0.0434	0.0429	0.0465	0.0485	0.0433	0.0434	0.05	0.0428
Beryllium	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005	<0.0002
Bismuth	<0.2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.2	<0.001
Boron	0.51	0.451	0.543	0.504	0.496	0.411	0.461	0.449	0.459	0.47	0.498	0.516	0.5	0.473
Cadmium	0.000239	0.000147	0.000129	0.000059	0.000058	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	0.00002	<0.00002	0.000182	0.000082
Calcium	25.8	39.9	20.7	22.6	18.9	17.4	16.9	16.1	17.3	17.2	15.7	17	40.2	37.9
Chromium	<0.005	0.00209	0.00389	0.00429	0.0113	0.00059	0.00035	0.00122	0.00043	0.00071	0.00043	0.00045	<0.005	0.00078
Cobalt	<0.0015	0.00152	0.00077	0.00096	0.00085	0.00036	0.0005	0.0004	0.00033	0.00029	0.00024	0.00023	<0.0015	0.00069
Copper	<0.005	0.0041	0.0079	0.0025	0.0032	0.0011	0.0011	0.002	<0.001	<0.001	0.001	0.001	<0.005	0.0019
Iron	0.056	0.781	0.441	0.541	0.564	0.371	0.37	0.358	0.44	0.458	0.342	0.55	0.128	0.284
Lead	<0.0025	0.00054	0.00029	0.00023	0.00028	0.00013	0.0001	0.00013	0.00015	0.00014	0.00014	0.00016	<0.0025	0.00012
Lithium	<0.025	0.0118	0.0148	0.0151	0.0169	0.0135	0.0164	0.0195	0.0194	0.0192	0.021	0.0256	0.034	0.0261
Magnesium	5.27	7.16	4.4	5.21	4.46	4.06	4.07	4.05	4.11	4.15	3.79	4.13	9.21	8.04
Manganese	0.0745	0.84	0.713	0.973	0.863	0.795	0.789	0.812	0.93	0.933	0.691	0.854	0.226	0.283
Mercury	<0.00001	<0.00001	<0.00005	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0462	0.0534	0.0291	0.0302	0.0267	0.0175	0.0307	0.0168	0.0172	0.0157	0.014	0.0145	0.0171	0.0189
Nickel	<0.005	0.0072	0.0081	0.0061	0.0112	0.0035	0.0058	0.0038	0.0026	0.0021	0.0022	0.0012	<0.005	0.0039
Phosphorus	<0.3	<0.3	0.31	0.39	0.406	0.406	0.426	0.415	0.422	0.445	0.434	0.4	<0.3	<0.3
Potassium	3.8	3.63	1.77	1.74	1.68	1.49	1.37	1.31	1.16	1.21	1.08	1.18	<2	1.59
Selenium	<0.005	0.0008	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005	0.00027
Silicon	3.02	4.62	3.61	3.98	4.02	3.5	3.6	3.56	3.6	3.78	3.89	4.34	4.35	4.45
Silver	<0.0001	<0.00002	<0.00002	<0.00002	0.000053	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.0001	<0.00002
Sodium	385	420	336	357	335	336	322	325	322	334	309	306	461	420
Strontium	0.791	1.07	0.721	0.886	0.778	0.657	0.77	0.781	0.785	0.809	0.728	0.747	1.6	1.31
Sulphur						212	215	210	204	198	188	176		
Thallium	<0.001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.001	<0.00002
Tin	<0.0025	0.00175	0.00054	0.00032	0.00033	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0025	0.00137
Titanium	<0.01	0.029	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.01
Total Cadmium (by saltwater extract														
Uranium	0.0055	0.0071	0.00328	0.00363	0.00253	0.00179	0.00179	0.00141	0.00125	0.00142	0.00125	0.000835	0.0021	0.00165
Vanadium	<0.005	0.0025	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.002
Zinc	<0.005	0.0082	0.0186	0.0067	0.0068	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.005	<0.006
Organics														
Carbon Organic (Dissolved)	26.3	33.4	17.7	18.7	14.1	11.7	13.3	13.2	12.5				5.9	5.65
Carbon Organic (Total)	26.1	33.4	18.2	17.8	14.4	11.4	13	12.7	12.8	13.2	10.5	11.1	5.84	5.76
Nitrogen Organic (Dissolved)	0.161	0.246	0.144	0.221		0.216	0.11						0.242	0.181
Nitrogen Organic (Total)	0.141	0.496	<0.3	1.22			0.154						0.292	0.258
ALS LAB ID	**L1039844**	**L1079375**	**L1115110**	**L1159973**	**L1202478**	**L1247921**	**L1277099**	**L1307601**	**L1348177**	**L1434002**	**L1475117**	**L1514758**	**L1039843**	**L1079375**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D5.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D5.2 - GROUNDWATER QUALITY DATA

Site ID	MW11-09S										MW11-10D												
Site ID	**MW11-09S**	**MW11-09S**	**MW11-09S**	**MW11-09S**	**MW11-09S**	**MW11-09S**	**MW11-09S**	**MW11-09S**	**MW11-09S**	**MW11-09S**	**MW11-10D**	**MW11-10D**	**MW11-10D**	**MW11-10D**	**MW11-10D**	**MW11-10D**	**MW11-10D**	**MW11-10D**	**MW11-10D**	**MW11-10D**	**MW11-10D**	**MW11-10D**	**MW12-01**
Analytes	**Feb-12**	**Jun-12**	**Aug-12**	**Dec-12**	**Mar-13**	**May-13**	**Aug-13**	**Mar-14**	**Jun-14**	**Sep-14**	**Dec-11**	**Feb-12**	**Jun-12**	**Aug-12**	**Dec-12**	**Mar-13**	**May-13**	**Aug-13**	**Nov-13**	**Mar-14**	**Jun-14**	**Sep-14**	**Dec-12**
In Situ Parameters																							
Conductivity µS/cm	1197	2273	2160	1238	1242	1440	1695	2074	1301	1299	1961	1856	2642	2920	2016	1946	2228	2561	2.88	3019	2057	1941	
Oxygen Dissolved %	46.1	20.8		2.9	6	19.2	18.3	67.3	38.7	11.5	5	1.9	11.7		2.9	2	1.7	8.7	1.4	7	1.9	16.3	
Oxygen Dissolved	6.18	2.03	1.38	0.36	0.74	2.36	2.12	8.41	4.66	1.36	0.56	0.22	1.03	0.05	0.33	0.23	0.19	0.94	0.16	0.84	0.21	1.87	1.8
pH (unitless)	8.25	8.11	7.78	8.1	8.04	7.98	8.11	8.11	8.21	8.28	7.91	9.07	9.01		7.65	7.5	7.5	7.4	7.54	7.48	7.53	8.35	7.25
Redox Potential mV	-296		-153		81.8	117	135	8.3	75.4	77.2	-338			-137	-198	82.7	-189	-96.3	-140	-132	-137	-195	130
Salinity ppt	1.06		1.1		0.99	1.14	1.24	1.06	1.01	1	1.45			1.5	1.49	1.51	1.68	1.83	1.5	1.58	1.5	1.46	
Specific Conductivity µS/cm	2108	1506		1931	1955	2219	2392	1312	1980	1963	2778	2747	1981		2840	2898	3200	3469	1.94	2083	2876	2795	3229
Temperature °C	2.39	7.23	8.27	6.21	5.89	6.66	9.94	5.76	7.03	7.3	9.52	8.03	12.2	11.9	9.72	7.81	9.12	11.3	7.96	8.82	10.1	9.01	8.5
Total Dissolved Solids	1361		1380		1270	1442	1557	1348	1288	1276	1.81			1870	1850	1884	2081	2252	1871	1963	1870	1817	
Turbidity NTU	8.6	0	2.1	-1.5	1.2	0	2.3	1.5	2.8	2.8	68.1	44.7	3.8	2.8	-2.1	82.7	0	3.2	2.4	1.8	1.8	4.8	
Physical Tests																							
Acidity to pH 8.3 (as CaCO3)			2.6											3.1									
Alkalinity (Total as CaCO3)	139	121	152	117	124	123	111	110	129	122	208	152	174	228	243	245	230	247	266	245	256	245	175
Bicarbonate Alkalinity	139	121		117	124	123	111	110	129	122		152	174		243	245	230	247	266	245	256	245	
Carbonate Alkalinity	<2	<1		<2	<1	<2	<2	<1	<2	<1		<2	<1		<2	<2	<2	<2	<2	<2	<2	<1	
Color TCU	8.9	<5	11.1	6.4	7.1	6.1	6				<5	<5	<5	<5	<5	<5	<5	<5	<5				
Hardness as CaCO3 (Dissolved)	110	104	110	102	104	106	103	102	106	105	1530	1410	1540	1580	1480	1630	1610	1620		1590	1620	1520	1760
Hydroxide Alkalinity	<2	<1		<2	<1	<2	<2	<1	<2	<1		<2	<1		<2	<2	<2	<2	<2	<2	<2	<1	
pH (unitless)	8.22	8.1	8.14	8.13	8.33	8.18	8.19	8.3	8.16	8.23	8.12	8.24	8.09	8.22	7.96	7.93	8	8.04	8.07	7.89	7.99	8.01	8.05
Specific Conductivity µS/cm	2000	2010	2000	1920	2040	2010	2020	1960	2000	2010	2790	2680	2680	2690	2780	2870	2920	2900	2920	2870	2880	2820	3190
Total Dissolved Solids	1220	1440	1410	1330	1380	1400	1330	1260	1320	1370	2830	2490	2580	2740	2730	2710	2820	2860	2750	2690	2790	2640	3160
Total Suspended Solids	6.4	<3	<3	<3	<3	<3	5		<3	<3	<3	163	98.7	3.2	<3	11.3	10	11			8.9	6.6	<3
Turbidity NTU	5.79	0.79	1.46	2.18	0.8	0.7	3.45		1.28	0.64	2.57	97	90.8	2.89	8.88	11.9	12.3	11.7			10.8	8.84	0.46
Dissolved Anions																							
Bromide	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloride	23	24	23	19	19	20	19	20	21	21	<10	<10	<10	<10	<10	<10	<10	<10	10	<10	<10	<10	18
Fluoride	<0.4	<0.4	<0.4	<0.4	0.6	<0.4	0.63	0.71	0.301	0.294	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	0.67	<0.4	<0.4	0.213	0.185	<0.4
Sulphate	859	874	879	841	876	866	865	872	881	852	1720	1640	1660	1740	1700	1740	1730	1720	1760	1730	1770	1720	1670
Nutrients																							
Ammonia (Total)	<0.05	0.0219	0.0326	0.0217	0.0209	0.0186	0.0208	0.0187	0.0175	0.0118	0.0632	0.148	0.103	0.0659	0.0547	0.0518	0.0558	0.0574	0.0721	0.0546	0.0618	0.0809	<0.005
Nitrate (as N)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	88.2
Nitrite (as N)	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.024	<0.02	<0.02	<0.02	<0.02	0.042	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.334
Nitrogen (Dissolved)	0.17	0.16		0.173	0.152							0.34	0.21		0.271	0.182							
Nitrogen (Total)	0.276	0.169	<0.27	0.178	0.16	0.18	0.168				0.13	0.357	0.274	0.21	0.174	0.182	0.22	0.205					88.5
Nitrogen Kjeldahl (Total)	0.28	0.169	<0.25	0.184	0.16	0.177	0.184	0.223	0.198	0.174	0.264	0.357	0.274	0.211	0.225	0.21	0.224	0.208	0.219	0.262	0.223	0.298	<0.05
Orthophosphate (Dissolved)			0.098					0.107	0.111	0.111				<0.001					0.0011	0.001	0.0014	0.0035	0.0037
Phosphorus - Dissolved	0.086	0.0727		0.092		0.104	0.12	0.125	0.122	0.147	0.0082	0.0058	0.0021		0.0025	<0.002	<0.002	<0.002	<0.002	<0.002	0.0024		0.0047
Phosphorus - Total	0.104	0.0825	0.11	0.101	0.107	0.114	0.129	0.134	0.139	0.161	0.0105	0.0196	0.0212	0.0192	0.0215	0.0235	0.021	0.0243	0.0209	0.0219	0.022	0.0153	
Cyanide																							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Dissolved Metals																							
Aluminum	0.0124	0.043	0.0109	0.0115	0.0144	0.0106	0.01	0.0092	0.0099	0.015	<0.006	<0.006	<0.01	<0.01	<0.002	0.0011	0.0022	<0.002	0.0017	0.0016	<0.001	0.0025	0.0022
Antimony	<0.0002	<0.0025	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00737	0.00045	<0.001	<0.001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	0.00035	0.00398
Arsenic	0.00379	0.0045	0.00433	0.00475	0.00449	0.00485	0.00487	0.00506	0.00479	0.00481	0.0056	0.00453	0.0051	0.0051	0.00543	0.00547	0.00558	0.00554	0.0056	0.00577	0.00581	0.00544	0.00578
Barium	0.0338	0.037	0.0345	0.0288	0.0281	0.0267	0.0273	0.0258	0.0266	0.0265	0.0214	0.0589	0.034	<0.02	0.00934	0.00832	0.00876	0.00752	0.00769	0.00813	0.00723	0.0102	0.0315
Beryllium	<0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.002	<0.002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002
Bismuth	<0.001	<0.2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.2	<0.2	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Boron	0.529	0.52	0.423	0.441	0.45	0.45	0.446	0.466	0.452	0.467	0.078	0.088	0.1	<0.1	0.082	0.088	0.089	0.09	0.093	0.089	0.089	0.083	0.115
Cadmium	0.000089	<0.000085	<0.00002	<0.00002	0.000039	0.000067	0.000067	0.000052	0.000029	0.000034	<0.00002	<0.00002	<0.000034	<0.000034	<0.00002	<0.00001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.0007
Calcium	32.5	29.8		29.8	30.2	30.6	29.9	29.5	30.5	30.4	262	244	265	262	272	280	284	288	299	281	291	278	245
Chromium	0.00031	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00021	<0.0002	<0.002	<0.002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002
Cobalt	0.00026	<0.0015	0.00059	0.00033	0.00023	0.00029	0.00025	0.00024	0.00029	0.00026	0.00214	<0.0002	<0.0006	<0.0006	<0.0002	0.00017	<0.0002	<0.0002	0.00013	0.00012	0.00011	0.00011	0.00192
Copper	0.0074	0.02	0.00045	<0.0004	0.00147	0.00042	<0.0004	0.00074	<0.0004	0.00087	<0.001	<0.001	<0.002	<0.002	<0.0004	0.00029	<0.0004	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	0.00712
Dissolved Cadmium (by saltwater ex																							
Iron	<0.03	<0.03	0.083	0.021	0.031	<0.01	<0.01	0.016	0.016	0.033	0.148	<0.03	0.347	0.805	0.978	0.982	0.994	1.02	1.02	1.03	1.03	0.947	<0.01
Lead	<0.0001	<0.0025	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.0001	<0.00005	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001
Lithium	0.0238	0.031	0.0158	0.0254	0.0234	0.0273	0.0253	0.0273	0.0239	0.0268	0.0097	0.0125	0.012	0.011	0.0091	0.0118	0.0114	0.0098	0.0109	0.0102	0.0102	0.00909	0.0296
Magnesium	7.04	7.16		6.78	7.01	7.12	7.01	6.88	7.2	7.14	213	195	214	224	195	226	219	218	223	217	218	201	279
Manganese	0.17	0.207	0.327	0.224	0.168	0.214	0.218	0.179	0.227	0.207	0.282	0.153	0.33	0.319	0.34	0.343	0.368	0.356	0.358	0.367	0.357	0.34	0.0875
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0188	0.0186	0.0209	0.0182	0.0367	0.021	0.0206	0.0207	0.0201	0.0224	0.0296	0.0262	0.0255	0.0272	0.0222	0.027	0.0255	0.0248	0.0249	0.0237	0.0245	0.0253	3.42
Nickel	0.0037	<0.005	0.0024	0.0011	0.0016	0.0012	0.0011	0.0011	0.0012	0.0013	0.0111	0.0023	<0.002	<0.002	<0.001	0.00138	<0.001	<0.001	0.00052	<0.0005	<0.0005	0.00089	0.0148
Phosphorus	<0.3	<0.3		0.096	0.113	0.108	0.111	0.11	0.117	0.124	<0.3	<0.3	<0.3	<0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	1.25	<2	1.15	1.03	1.14	1.03	0.99	1	1.02	1.04	14.8	17.9	15.2	14.3	14.4	13.9	14.3	14.4	13.8	14.4	13.7	14.1	41.7
Selenium	<0.0002	<0.005	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00951	<0.0002	<0.002	<0.002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	0.0405
Silicon	3.79	4.19		3.89	3.95	3.96	3.88	3.95	4.06	3.88	11	12.9	13.8	13.6	14.3	14.7	14.4	14.9	14.6	14.4	14.9	14.6	7.35
Silver	<0.00002	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00004	<0.00004	<0.00002	<0.00001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002
Sodium	399	397	428	394	387	407	398	387	374	398	161	183	163	167	169	163	166	163	161	156	159	174	151
Strontium	1.18	1.32	1.31	1.25	1.34	1.35	1.35	1.37	1.32	1.35	2.67	4.16	3.64	3.04	2.86	3.58	3.26	3.16	3.2	3.12	3.22	3.44	3.51
Sulphur				270	275	283	274	271	269	274					493	539	546	552	520	541	543	534	541
Thallium	0.000023	<0.001	<0.00002	<0.00002	0.000025	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.0004	<0.0004	<0.00002	<0.00001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002
Tin	0.00021	<0.0025	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002
Titanium	<0.01	<0.01		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.017	0.012	<0.01	<0.01	<0.02	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02
Uranium	0.00145	<0.001	0.00155	0.000739	0.000917	0.000789	0.000765	0.000657	0.000692	0.000705		0.00301	0.00277	0.00235	0.00236	0.00291	0.00276	0.00274	0.00274	0.00275	0.00281	0.00275	0.0146
Vanadium	<0.002	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.0027	<0.002	<0.002	<0.002	<0.002	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	0.004
Zinc	0.0174	<0.005	<0.002	<0.002	0.0034	0.0035	<0.002	0.0026	0.0021	0.0058	<0.006	<0.006	<0.005	<0.005	0.0043	0.0011	<0.002	<0.002	0.0014	<0.001	<0.001	0.0027	<0.002
Total Metals																							
Aluminum	0.24	0.072	0.0519	0.0276	0.055	0.0474	0.0372	0.043	0.0436	0.0696	0.0086	0.01	0.055	0.018	<0.006	0.0049	0.0103	<0.006	0.0035	0.0046	<0.003	0.0154	0.0154
Antimony	0.00033	<0.0025	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00023	0.00683	0.00043	<0.001	<0.001	<0.0002	<0.0001	<0.0002	<0.0002	0.00017	<0.0001	<0.0001	0.00048	0.00401
Arsenic	0.00385	0.0046	0.0043	0.00508	0.00466	0.00516	0.00534	0.00501	0.00501	0.00537	0.00541	0.00479	0.0056	0.0053	0.00541	0.00581	0.00552	0.0056	0.00592	0.00602	0.00546	0.00519	0.00586
Barium	0.0412	0.032	0.0358	0.0293	0.0292	0.0276	0.028	0.0254	0.0265	0.029	0.0246	0.0502	0.063	0.054	0.00983	0.0102	0.0203	0.0146	0.0117	0.0103	0.00807	0.0224	0.0312
Beryllium	<0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.002	<0.002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002
Bismuth	<0.001	<0.2	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.2	<0.2	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.001
Boron	0.56	0.53	0.44	0.441	0.458	0.48	0.46	0.459	0.459	0.497	0.084	0.092	0.11	<0.1	0.093	0.096	0.095	0.11	0.099	0.101	0.099	0.091	0.117
Cadmium	0.000137	<0.000085	0.00005	<0.00002	0.000048	0.00009	0.000053	0.000088	0.000041	0.000046	<0.00002	<0.00002	<0.000034	<0.000034	<0.00002	<0.00001	<0.00002	<0.00002	<0.00001	<0.00002	<0.00001	<0.00001	<0.0007
Calcium	32.8	31.8		29.6	30.6	30	29.7	28.9	29.7	30.8	252	259	278	272	278	288	275	276	291	275	275	263	240
Chromium	0.0021	<0.005	0.00022	<0.0002	0.00033	0.00025	0.00028	0.00039	0.00032	0.00056	0.00114	0.00108	<0.002	0.0025	0.00053	0.0001	0.00089	<0.0002	0.00019	0.00011	0.00014	0.00022	<0.0002
Cobalt	0.00047	<0.0015	0.00062	0.00038	0.00026	0.00035	0.00033	0.00024	0.00034	0.00036	0.00229	0.0003	<0.0006	<0.0006	0.0002	0.00017	<0.0002	<0.0002	0.00013	0.00013	0.00011	0.00011	0.0019
Copper	0.0163	0.021	<0.001	<0.001	0.0024	0.0019	<0.001	0.0019	0.0012	0.002	<0.001	<0.001	<0.002	0.0024	<0.001	0.00082	0.0015	<0.001	<0.0005	<0.0005	0.00059	0.00061	0.0094
Iron	0.298	0.059	0.135	0.063	0.077	0.067	0.075	0.083	0.09	0.122	0.166	0.489	0.834	1.04	1.02	1.02	1	1	1.03	1.03	1.01	0.954	0.028
Lead	0.00022	<0.0025	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	0.00021	<0.00005	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	0.000119	<0.0001
Lithium	0.0244	0.031	0.0156	0.0262	0.0238	0.0287	0.0258	0.0263	0.0254	0.0282	0.0102	0.0126	0.012	0.013	0.0108	0.0122	0.0118	0.0112	0.0104	0.011	0.0105	0.00979	0.0299
Magnesium	7.15	7.61		6.91	7.24	7.06	6.95	6.79	7.05	7.34	210	201	216	223	202	230	219	211	221	212	213	194	275
Manganese	0.214	0.22	0.34	0.241	0.171	0.232	0.236	0.175	0.242	0.239	0.289	0.285	0.346	0.331	0.36	0.356	0.369	0.365	0.379	0.368	0.349	0.337	0.0871
Mercury	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.0194	0.0184	0.0213	0.019	0.0325	0.0218	0.021	0.021	0.0204	0.0231	0.0295	0.0268	0.0268	0.0286	0.026	0.0278	0.0267	0.028	0.0253	0.0251	0.0247	0.0245	3.36
Nickel	0.0053	<0.005	0.0026	0.0012	0.0019	0.0014	0.0013	0.0014	0.0013	0.0016	0.0111	0.0024	0.0021	0.0027	<0.001	0.00156	<0.001	<0.001	0.00055	<0.0005	<0.0005	0.00113	0.0148
Phosphorus	<0.3	<0.3		0.101	0.11	0.109	0.105	0.111	0.13	0.14	<0.3	<0.3	<0.3	<0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	1.31	<2	1.14	1.06	1.15	1.03	1.02	0.98	1.01	1.09	14.7	17.1	16.4	18	14.7	14.2	14	13.5	14.1	14.3	13.3	13.6	40.7
Selenium	0.00023	<0.005	0.00023	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00843	<0.0002	<0.002	<0.002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	0.0395
Silicon	4.41	4.34		3.93	4.05	4.02	3.9	3.98	4.06	4.11	10.8	13	14.4	13.7	14.7	15.2	14.3	14.4	14.8	14.4	14.1	13.9	7.33
Silver	<0.00002	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	0.000022	<0.00002	<0.00004	0.000106	<0.00002	<0.00001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002
Sodium	408	421	408	399	387	418	394	384	384	428	162	183	175	179	175	173	167	163	163	157	155	165	146
Strontium	1.2	1.43	1.34	1.27	1.39	1.44	1.35	1.35	1.31	1.41	2.68	4.12	3.89	3.41	3.31	3.66	3.45	3.6	3.08	3.23	3.13	3.35	3.46
Sulphur				276	279	282	275	268	270	281					526	570	552	547	540	550	529	518	543
Thallium	0.000026	<0.001	<0.00002	<0.00002	0.000028	<0.00002	<0.00002	<0.00002	0.000029	0.000024	<0.00002	<0.00002	<0.0004	<0.0004	<0.00002	<0.00001	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	0.00002
Tin	0.0078	<0.0025	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	0.00011	<0.0002
Titanium	0.017	<0.01		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.017	0.012	0.011	0.01	<0.02	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02
Total Cadmium (by saltwater extract																				<0.00002			
Uranium	0.00149	<0.001	0.00163	0.000751	0.000963	0.000823	0.000767	0.000679	0.000702	0.000782	0.0263	0.00315	0.00284	0.00253	0.00269	0.00312	0.00286	0.00288	0.00285	0.00286	0.00279	0.00265	0.0142
Vanadium	<0.002	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.0025	<0.002	<0.002	<0.002	<0.002	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	0.004
Zinc	0.0221	<0.005	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	0.0144	<0.006	0.0108	<0.005	<0.005	<0.006	<0.003	<0.006	<0.006	<0.003	<0.003	<0.003	0.0044	<0.006
Organics																							
Carbon Organic (Dissolved)	6.6	5.28	7.55	4.3	5.27	5.22	5.88				5.09	15.4	8.26	5.15	3.96	4.66	4.17	3.85	3.38				2.69
Carbon Organic (Total)	6.58	4.76	8	4.17	5.16	4.88	5.35	4.96	5	5.42	4.8	14.1	8.11	4.6	3.96	4.22	3.57	3.8	3.39	3.25	3.27	5.24	2.69
Nitrogen Organic (Dissolved)	0.146	0.138		0.152	0.131							0.193	0.107		0.174								
Nitrogen Organic (Total)	<0.3	0.148			0.139						0.067	0.209	0.172			0.159							
ALS LAB ID	**L1115110**	**L1160966**	**L1200094**	**L1247921**	**L1277099**	**L1307601**	**L1348177**	**L1434002**	**L1475117**	**L1514758**	**L1092874**	**L1113319**	**L1160966**	**L1201474**	**L1247459**	**L1275748**	**L1307601**	**L1348177**	**L1393344**	**L1431355**	**L1475117**	**L1516193**	**L1245169**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D5.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D5.2 - GROUNDWATER QUALITY DATA

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Site ID	MW12-01						
Site ID	**MW12-01**	**MW12-01**	**MW12-01**	**MW12-01**	**MW12-01**	**MW12-01**	**MW12-01**
Analytes	**Mar-13**	**May-13**	**Aug-13**	**Nov-13**	**Mar-14**	**Jun-14**	**Sep-14**
In Situ Parameters							
Conductivity µS/cm	2229	2558	2855	3.33	3431	2379	2406
Oxygen Dissolved %	1.5	2	29.3	2.9	79.9	12	6.1
Oxygen Dissolved	0.21	0.22	3.24	0.34	9.15	1.35	0.68
pH (unitless)	7.22	7.38	7.48	7.49	7.64	7.47	7.49
Redox Potential mV	191	224	236	2.17	71.4	99.3	101
Salinity ppt	1.71	1.95	2.11	1.75	1.81	1.78	1.78
Specific Conductivity µS/cm	3265	3695	3976	2.27	2343	3385	3376
Temperature °C	8.4	8.9	10.3	8.22	8.42	9.44	9.96
Total Dissolved Solids	2121	2403	2582	38200	2230	2201	2196
Turbidity NTU	-1.8	0	1.5	-2.2	1.9	2	1.6
Physical Tests							
Acidity to pH 8.3 (as CaCO3)			<1				
Alkalinity (Total as CaCO3)	178	173	177	189	183	185	179
Bicarbonate Alkalinity	178	173	177	189	183	185	179
Carbonate Alkalinity	<2	<2	<2	<2	<2	<2	<1
Color TCU	<5	<5	<5				
Hardness as CaCO3 (Dissolved)	1620	1810		1870	1950	1860	1920
Hydroxide Alkalinity	<2	<2	<2	<2	<2	<2	<1
pH (unitless)	7.98	7.98	8.06	7.88	8.07	8.1	8.08
Specific Conductivity µS/cm	3340	3280	3260	3290	3350	3440	3410
Total Dissolved Solids	3070	3350	3270	3200	3290	3420	3300
Total Suspended Solids	<3	8.7	7.3			7.3	3
Turbidity NTU	0.43	0.19	0.19			0.5	0.15
Dissolved Anions							
Bromide	<1	<1	<1	<1	<1	<1	<1
Chloride	17	19	17	20	17	19	17
Fluoride	0.47	<0.4	0.46	<0.4	<0.4	0.189	0.165
Sulphate	1660	1700	1720	1730	1790	1790	1800
Nutrients							
Ammonia (Total)	0.0213	0.0058	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrate (as N)	80.6	88.4	89.4	88.5	90.3	88	87.1
Nitrite (as N)	0.429	0.318	0.204	0.163	0.194	0.097	0.168
Nitrogen (Dissolved)	85.9						
Nitrogen (Total)	110	83.5	83.5				
Nitrogen Kjeldahl (Total)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Orthophosphate (Dissolved)				0.0154	0.0165	0.0183	0.0164
Phosphorus - Dissolved	0.0153	0.0183	0.0192	0.0194	0.0185	0.0191	0.0191
Phosphorus - Total	0.0153		0.0182	0.0193	0.0186	0.0202	0.0169
Cyanide							
Cyanide (Free)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals							
Aluminum	0.0042	0.0031	0.0021	0.0023	0.0031	0.0041	0.0044
Antimony	0.00372	0.00412	0.00353	0.00372	0.00371	0.00396	0.00364
Arsenic	0.0043	0.00521	0.00503	0.00488	0.00472	0.00525	0.00494
Barium	0.0487	0.0404	0.0347	0.0364	0.0326	0.0297	0.031
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001
Boron	0.098	0.109	0.101	0.12	0.115	0.105	0.117
Cadmium	<0.001	0.000712	<0.0008	<0.0015	<0.0012	<0.001	<0.0001
Calcium	243	238	242	240	258	254	245
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002
Cobalt	0.00122	0.00092	0.00088	0.00081	0.00074	0.00073	0.00071
Copper	0.003	0.00311	0.00335	0.00301	0.00271	0.00312	0.00479
Dissolved Cadmium (by saltwater e›					<0.00015	<0.00015	<0.00012
Iron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.0001
Lithium	0.0328	0.0294	0.0282	0.033	0.0331	0.028	0.0318
Magnesium	247	295	296	310	317	298	318
Manganese	0.0879	0.068	0.0598	0.0545	0.0529	0.0458	0.0461
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	3.37	3.26	3.1	3.41	3.59	3.62	3.55
Nickel	0.01	0.00999	0.0124	0.0128	0.0123	0.0142	0.0136
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	41.2	41.3	44.1	49.5	46.8	45.8	46.6
Selenium	0.0425	0.0423	0.0414	0.0437	0.044	0.0463	0.0394
Silicon	6.93	6.92	7.23	7.36	7.33	7.19	7.27
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002
Sodium	147	145	144	150	151	132	148
Strontium	3.58	3.35	3.01	3.4	3.44	3.51	3.45
Sulphur	448	532	538	553	553	561	587
Thallium	0.000019	0.000015	0.000017	0.000012	0.000012	<0.00002	<0.00002
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
Uranium	0.0141	0.0138	0.0138	0.0142	0.0145	0.0153	0.0152
Vanadium	0.0026	0.0031	0.003	0.0028	0.0027	0.0029	0.0029
Zinc	0.0024	0.0022	0.0024	0.0027	0.0038	<0.002	0.0032
Total Metals							
Aluminum	0.0084	0.0072	0.0036	0.0045	0.0056	0.0168	0.0166
Antimony	0.00392	0.00434	0.00354	0.00389	0.00377	0.00412	0.00395
Arsenic	0.00434	0.0053	0.00494	0.00506	0.00486	0.00531	0.00564
Barium	0.0497	0.0422	0.0365	0.0359	0.0314	0.0284	0.0335
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001
Boron	0.104	0.124	0.108	0.132	0.127	0.112	0.132
Cadmium	<0.001	<0.0009	<0.0008	0.0016	<0.0012	<0.001	<0.0002
Calcium	247	236	242	234	254	242	257
Chromium	0.00016	<0.0002	0.00023	0.00012	<0.0002	0.00024	<0.0002
Cobalt	0.0013	0.00101	0.00093	0.00084	0.00081	0.00091	0.00081
Copper	0.00371	0.00486	0.0035	0.00346	0.00309	0.004	0.0055
Iron	0.045	0.029	0.016	0.014	0.033	0.102	0.036
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00015	0.00034	<0.0001
Lithium	0.0352	0.0336	0.0279	0.0341	0.0338	0.0287	0.0345
Magnesium	255	300	298	308	314	297	340
Manganese	0.0934	0.0751	0.0606	0.0563	0.0539	0.0499	0.0519
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	3.62	3.54	3.13	3.64	3.57	3.71	3.95
Nickel	0.0105	0.0114	0.0122	0.0131	0.0129	0.0139	0.0154
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	40.7	42.3	43.5	50.3	45.7	44.1	49.7
Selenium	0.0437	0.0447	0.0413	0.0443	0.0431	0.0454	0.0437
Silicon	7.13	6.99	7.25	7.39	7.31	7.13	7.7
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002
Sodium	153	152	144	154	145	131	161
Strontium	3.71	3.62	2.98	3.57	3.41	3.62	3.74
Sulphur	473	540	552	564	561	563	633
Thallium	0.000019	0.000023	0.000021	0.000014	0.000015	<0.00002	<0.00002
Tin	0.00026	0.00019	0.00018	0.00011	0.00046	0.00148	0.00051
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
Total Cadmium (by saltwater extract					<0.00015	<0.00015	<0.0001
Uranium	0.0148	0.0146	0.0141	0.0153	0.0148	0.016	0.0166
Vanadium	0.0027	0.0033	0.0033	0.0032	0.003	0.0032	0.0034
Zinc	0.0035	<0.003	0.0032	0.0031	<0.003	<0.006	0.0065
Organics							
Carbon Organic (Dissolved)	2.72	2.51	2.72	2.59			
Carbon Organic (Total)	2.45	2.42	2.82	2.41	2.34	2.25	2.48
Nitrogen Organic (Dissolved)	<17						
Nitrogen Organic (Total)	29						
ALS LAB ID	**L1277798**	**L1308855**	**L1348395**	**L1394557**	**L1435486**	**L1475661**	**L1514758**

Site ID	MW12-02							
Site ID	**MW12-02**	**MW12-02**	**MW12-02**	**MW12-02**	**MW12-02**	**MW12-02**	**MW12-02**	**MW12-02**
Analytes	**Dec-12**	**Mar-13**	**May-13**	**Aug-13**	**Nov-13**	**Mar-14**	**Jun-14**	**Sep-14**
In Situ Parameters								
Conductivity µS/cm		2122	2540	3924	3.25	3401	2469	2435
Oxygen Dissolved %		11.2	28.3	35.8	2.4	24.1	17.1	2
Oxygen Dissolved	3.56	1.25	3.29	4.09	0.27	2.84	1.85	0.22
pH (unitless)	7.36	7.29	7.33	7.59	7.53	7.79	7.56	7.58
Redox Potential mV	167	165	171	221	63.7	30.4	119	87.8
Salinity ppt		1.62	1.92	2.08	1.7	1.79	1.76	1.76
Specific Conductivity µS/cm	3156	3090	3640	3924	2.18	2281	3340	3343
Temperature °C	7.36	8.54	9.17	9.56	7.94	7.76	11.4	10.8
Total Dissolved Solids		2011	2366	2550	2100	2212	2172	2171
Turbidity NTU		-3.9	0	2.5	-1.9	2.1	2.7	2
Physical Tests								
Acidity to pH 8.3 (as CaCO3)				4.7				
Alkalinity (Total as CaCO3)	171	171	176	174	186	169	188	181
Bicarbonate Alkalinity		171	176	174	186	169	188	181
Carbonate Alkalinity		<2	<2	<2	<2	<2	<2	<1
Color TCU		<5	<5	<5				
Hardness as CaCO3 (Dissolved)	1730	1740	1780		1830	1890	1810	1880
Hydroxide Alkalinity		<2	<2	<2	<2	<2	<2	<1
pH (unitless)	8.1	8.05	7.95	8.09	7.92	8.1	8.13	8.09
Specific Conductivity µS/cm	3120	3290	3260	3240	3260	3340	3360	3370
Total Dissolved Solids	3390	1470	2890	3240	3130	3190	3160	3150
Total Suspended Solids	<3	<3	10	8.6			5.2	<3
Turbidity NTU	0.72	0.78	0.28	0.74			0.78	0.19
Dissolved Anions								
Bromide	<1	<1	<1	<1	<1	<1	<1	<1
Chloride	15	15	17	15	19	15	16	17
Fluoride	<0.4	0.49	<0.4	<0.4	<0.4	<0.4	0.186	0.175
Sulphate	1650	1710	1720	1740	1720	1800	1790	1760
Nutrients								
Ammonia (Total)	0.0055	0.0203	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrate (as N)	76.3	69.6	83.4	82.6	77.7	77.7	83.3	87.2
Nitrite (as N)	0.527	0.426	0.545	0.533	0.37	0.28	0.451	0.533
Nitrogen (Dissolved)		73.5						
Nitrogen (Total)	76.8	70.1	77.5	73.6				
Nitrogen Kjeldahl (Total)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Orthophosphate (Dissolved)	0.0079				0.018	0.0277	0.0269	0.0225
Phosphorus - Dissolved	0.0075	0.019	0.023	0.0185	0.0213	0.0317	0.0253	0.0248
Phosphorus - Total		0.0212		0.0206	0.0216	0.0321	0.0274	0.0195
Cyanide								
Cyanide (Free)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals								
Aluminum	<0.002	0.0017	0.0015	0.0017	0.0016	0.002	0.0041	0.0024
Antimony	0.0169	0.0108	0.0107	0.00953	0.00821	0.0075	0.0196	0.017
Arsenic	0.0229	0.0104	0.0139	0.0159	0.0138	0.011	0.0224	0.0261
Barium	0.0212	0.0334	0.0304	0.023	0.026	0.0275	0.0217	0.0224
Beryllium	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
Bismuth	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005
Boron	0.117	0.094	0.116	0.102	0.12	0.116	0.114	0.12
Cadmium	<0.00068	<0.001	<0.001	<0.0008	<0.0014	<0.0012	<0.001	<0.0002
Calcium	233	235	232	243	235	230	238	237
Chromium	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
Cobalt	0.00275	0.00187	0.00171	0.00179	0.00166	0.00098	0.00159	0.0021
Copper	0.0173	0.00744	0.00654	0.00851	0.00798	0.00331	0.00579	0.0094
Dissolved Cadmium (by saltwater e›						<0.00015	<0.00015	<0.00012
Iron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005
Lithium	0.0301	0.0341	0.0311	0.0288	0.0336	0.0343	0.0305	0.036
Magnesium	278	279	291	291	303	321	296	312
Manganese	0.11	0.121	0.109	0.101	0.1	0.0752	0.0845	0.0991
Mercury	0.000022	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	3.33	3.33	3.32	3.03	3.32	3.39	3.48	3.44
Nickel	0.0282	0.0265	0.0224	0.0232	0.0214	0.0271	0.0235	0.0218
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	38.1	44.8	39.4	37.9	42.4	56.9	44.2	41
Selenium	0.04	0.0396	0.0395	0.0371	0.0401	0.0418	0.0414	0.0409
Silicon	7.29	6.97	7.13	7.45	7.52	7.98	7.31	7.31
Silver	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001
Sodium	153	160	159	145	154	154	135	152
Strontium	3.65	3.46	3.63	3.28	3.61	3.47	3.69	3.72
Sulphur	539	510	529	531	553	562	550	571
Thallium	0.000042	0.000037	0.000031	0.000025	0.000025	0.00003	0.000021	0.000021
Tin	<0.0002	0.00012	0.00017	<0.0001	<0.0001	0.00015	<0.0002	<0.0001
Titanium	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
Uranium	0.0117	0.0109	0.0131	0.0127	0.0131	0.0103	0.0135	0.0147
Vanadium	0.0039	0.0018	0.0023	0.0032	0.0031	0.0022	0.0023	0.0029
Zinc	<0.002	0.001	0.0021	0.0014	0.0011	0.0016	0.0044	0.0041
Total Metals								
Aluminum	0.0264	0.0294	0.017	0.0151	0.004	0.0201	0.0406	0.009
Antimony	0.0163	0.0107	0.0109	0.00938	0.00865	0.00753	0.0191	0.0171
Arsenic	0.0226	0.0102	0.0135	0.016	0.0138	0.0112	0.0227	0.0259
Barium	0.0221	0.0328	0.0298	0.0239	0.026	0.0273	0.0225	0.0224
Beryllium	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
Bismuth	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005
Boron	0.11	0.094	0.127	0.108	0.132	0.125	0.14	0.127
Cadmium	<0.00068	<0.001	<0.001	<0.00085	<0.0015	<0.0012	<0.001	<0.0001
Calcium	225	222	228	241	228	224	233	246
Chromium	0.00037	0.00035	0.00023	0.00034	0.00015	0.00021	0.00043	0.00011
Cobalt	0.00283	0.002	0.0018	0.00182	0.0017	0.00102	0.00165	0.00215
Copper	0.0205	0.00945	0.00734	0.0102	0.00838	0.00451	0.0083	0.0105
Iron	0.036	0.043	0.026	0.024	0.012	0.029	0.082	0.011
Lead	<0.0001	<0.00005	0.000062	<0.00005	<0.00005	<0.00005	<0.0001	<0.00005
Lithium	0.0277	0.0343	0.0342	0.0296	0.0345	0.0343	0.0325	0.0337
Magnesium	270	275	284	294	302	317	300	326
Manganese	0.111	0.123	0.114	0.103	0.101	0.0767	0.0892	0.101
Mercury	0.000056	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	3.12	3.26	3.44	3.05	3.44	3.42	3.46	3.67
Nickel	0.0293	0.0283	0.0228	0.0241	0.0222	0.028	0.0247	0.0227
Phosphorus	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	36.4	42.5	38.6	38.2	43.2	55.4	43.3	42.9
Selenium	0.0388	0.038	0.0376	0.0377	0.0396	0.0418	0.0406	0.041
Silicon	7.16	6.9	7.12	7.67	7.55	7.96	7.43	7.69
Silver	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00001
Sodium	154	162	157	150	160	156	142	161
Strontium	3.36	3.49	3.74	3.11	3.73	3.47	3.7	3.91
Sulphur	533	518	526	553	572	571	569	602
Thallium	0.000039	0.000036	0.000035	0.000026	0.000023	0.00003	0.000022	0.000021
Tin	<0.0002	0.00017	0.00027	<0.0001	<0.0001	0.00024	<0.0002	<0.0001
Titanium	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01
Total Cadmium (by saltwater extract						<0.00015	<0.00015	<0.0001
Uranium	0.0112	0.0106	0.0139	0.0129	0.0132	0.0101	0.0134	0.0153
Vanadium	0.0041	0.0019	0.0025	0.0036	0.0034	0.0026	0.0028	0.003
Zinc	<0.006	0.0039	<0.003	<0.003	<0.003	<0.003	<0.006	0.0049
Organics								
Carbon Organic (Dissolved)	2.49	2.71	2.72	2.58	2.6			
Carbon Organic (Total)	2.44	2.5	2.57	2.63	2.48	2.24	2.28	2.38
Nitrogen Organic (Dissolved)		<15						
Nitrogen Organic (Total)		<14						
ALS LAB ID	**L1245169**	**L1277798**	**L1308855**	**L1348395**	**L1394557**	**L1435486**	**L1475661**	**L1514758**

Site ID	MW12-04							
Site ID	**MW12-04**	**MW12-04**	**MW12-04**	**MW12-04**	**MW12-04**	**MW12-04**	**MW12-04**	**MW12-04**
Analytes	**Dec-12**	**Mar-13**	**May-13**	**Aug-13**	**Nov-13**	**Apr-14**	**Jun-14**	**Sep-14**
In Situ Parameters								
Conductivity µS/cm		823	914	1023	1.18	840	847	832
Oxygen Dissolved %		0.4	1	56.2	1.2	48.9	16.9	
Oxygen Dissolved	0.48	0.05	0.12	6.38	0.15	5.74	1.8	
pH (unitless)	7.78	7.72	7.77	7.83	7.94	7.97	7.96	8.01
Redox Potential mV	51.6	-76.1	-116	151	-143	-160	-124	55.6
Salinity ppt		0.61	0.67	0.73	0.59	0.62	0.59	0.58
Specific Conductivity µS/cm	1159	1217	1333	1447	0.787	1237	1186	1164
Temperature °C	7	7.93	8.54	9.67	7.66	8.16	10.1	10.1
Total Dissolved Solids		791	866	941	764	806	770	756
Turbidity NTU		3.4	0	6.4	2.7	-0.4	15.7	3.1
Physical Tests								
Acidity to pH 8.3 (as CaCO3)								
Alkalinity (Total as CaCO3)	219	222	193	182	202	185	186	189
Bicarbonate Alkalinity		222	193	182	202	185	186	189
Carbonate Alkalinity		<2	<2	<2	<2	<2	<1	<1
Color TCU		7.1	<5	<5	<5			
Hardness as CaCO3 (Dissolved)	405	422	359	395		460	415	419
Hydroxide Alkalinity		<2	<2	<2	<2	<2	<1	<1
pH (unitless)	8.28	8.24	8.24	8.13	8.25	8.29	8.18	8.28
Specific Conductivity µS/cm	1150	1260	1210	1220	1260	1250	1200	1180
Total Dissolved Solids	823	772	770	851	838	899	825	791
Total Suspended Solids	7.7	16.2	16	8.1		3.3	24.8	3.7
Turbidity NTU	2.27	7.27	3.03	3.92		1	7.71	0.56
Dissolved Anions								
Bromide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride	6.5	5.6	14.6	18.5	23.1	28.2	24.6	26.6
Fluoride	<0.2	0.35	0.23	0.37	<0.2	<0.2	0.203	0.038
Sulphate	436	457	436	443	471	484	436	423
Nutrients								
Ammonia (Total)	0.243	0.211	0.306	0.316	0.321	0.377	0.372	0.397
Nitrate (as N)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrite (as N)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrogen (Dissolved)		0.356						
Nitrogen (Total)	0.333	0.355	0.418	0.417				
Nitrogen Kjeldahl (Total)	0.333	0.4	0.449	0.443	0.43	0.446	0.582	0.536
Orthophosphate (Dissolved)	0.0688				0.14	0.126	0.127	0.111
Phosphorus - Dissolved	0.082	0.0816	0.168	0.181	0.16	0.143	0.138	0.131
Phosphorus - Total		0.0951		0.198	0.17	0.143	0.18	0.154
Cyanide								
Cyanide (Free)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (Total)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cyanide (WAD)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Metals								
Aluminum	0.0068	0.0043	0.0034	0.0025	0.0025	0.0032	0.0024	0.0193
Antimony	0.00063	0.00016	0.00012	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic	0.0118	0.00711	0.00426	0.00473	0.00461	0.00375	0.00433	0.0046
Barium	0.0696	0.0983	0.0801	0.0746	0.0703	0.0627	0.0558	0.0506
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.098	0.087	0.097	0.096	0.102	0.098	0.092	0.09
Cadmium	<0.00005	<0.00005	<0.00005	<0.00005	<0.00004	<0.00003	<0.00005	<0.00001
Calcium	43.4	51.4	40.3	41.7	45.4	47.6	45.7	45.7
Chromium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	0.00045	0.00084	0.00064	0.00048	0.00043	0.00041	0.00045	0.00039
Copper	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00043
Dissolved Cadmium (by saltwater e›						<0.00002	<0.00002	
Iron	0.012	0.024	0.03	0.024	0.026	0.024	0.078	0.081
Lead	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium	0.00255	0.00119	0.00166	0.00238	0.0035	0.0028	0.00278	0.0029
Magnesium	72	71.4	62.8	70.6	79.4	82.7	73.1	74.1
Manganese	0.092	0.394	0.346	0.3	0.272	0.24	0.256	0.206
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.204	0.181	0.166	0.148	0.145	0.12	0.125	0.101
Nickel	0.00123	0.00331	0.00188	0.00137	0.00149	0.00162	0.00146	0.00129
Phosphorus	0.067	0.088	0.165	0.17	0.162	0.135	0.153	0.121
Potassium	43.7	42.3	37.5	36.9	40.8	39	39.7	38
Selenium	0.00017	0.00012	0.00042	0.00015	<0.0001	<0.0001	<0.0001	<0.0001
Silicon	12.4	11.3	10.8	11.6	12.3	12.8	12.3	12.1
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	92.2	101	116	106	97.8	91.3	92.4	89.9
Strontium	0.276	0.272	0.257	0.287	0.318	0.351	0.341	0.324
Sulphur	143	150	136	144	149	153	142	137
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	<0.0001	0.00025	<0.0001	<0.0001	<0.0001	<0.0001	0.00017	0.00019
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	0.000847	0.00128	0.00133	0.00105	0.000958	0.00099	0.0011	0.000998
Vanadium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	<0.001	<0.001	<0.001	<0.001	<0.001	0.0015	0.0012	0.0016
Total Metals								
Aluminum	0.216	0.352	0.299	0.175	0.0656	0.0861	0.434	0.0036
Antimony	0.00061	0.00019	0.00014	<0.0001	<0.0001	0.00013	0.00019	<0.0001
Arsenic	0.0113	0.00733	0.00436	0.00436	0.00463	0.00379	0.00445	0.00474
Barium	0.0695	0.106	0.0849	0.0737	0.0711	0.0616	0.0588	0.0515
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron	0.1	0.089	0.1	0.1	0.119	0.102	0.096	0.101
Cadmium	<0.00006	<0.00005	<0.00005	<0.00005	<0.00005	<0.00003	<0.0001	<0.00001
Calcium	42.2	52.6	39.6	40.1	45.3	46.1	42.9	46.5
Chromium	0.00062	0.0011	0.00078	0.00054	0.00027	0.00041	0.00139	<0.0001
Cobalt	0.00061	0.00112	0.00089	0.00059	0.00051	0.0005	0.00083	0.0004
Copper	0.00216	0.00254	0.00222	0.00089	0.00085	0.00114	0.00362	<0.0005
Iron	0.304	0.516	0.415	0.261	0.104	0.145	0.697	0.056
Lead	<0.00005	0.000132	0.000127	0.000052	<0.00005	0.000161	0.000188	<0.00005
Lithium	0.00263	0.00157	0.00168	0.0025	0.00365	0.00285	0.00282	0.00303
Magnesium	70.4	72.2	64.6	67.4	78.5	76.8	68.8	75.8
Manganese	0.0996	0.418	0.364	0.292	0.287	0.251	0.269	0.211
Mercury	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	0.208	0.194	0.172	0.149	0.154	0.127	0.124	0.111
Nickel	0.00192	0.00489	0.00311	0.00201	0.00197	0.00208	0.00344	0.00123
Phosphorus	0.077	0.114	0.186	0.178	0.161	0.155	0.179	0.127
Potassium	41.4	43.3	38.9	36.6	43.3	37.2	36.8	39
Selenium	0.00018	0.00015	0.0004	0.00017	<0.0001	<0.0001	0.0001	<0.0001
Silicon	12.5	12.5	11.7	11.7	12.4	12.5	12.5	12.3
Silver	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium	91.4	104	115	101	102	90.7	88.7	93.1
Strontium	0.287	0.286	0.266	0.292	0.336	0.344	0.337	0.346
Sulphur	142	156	140	141	155	152	139	143
Thallium	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin	0.00013	0.00047	0.0002	0.00011	<0.0001	0.00056	0.00057	<0.0001
Titanium	0.012	0.024	0.02	0.011	<0.01	<0.01	0.026	<0.01
Total Cadmium (by saltwater extract						<0.00002	<0.00002	
Uranium	0.000862	0.00137	0.0014	0.00104	0.00101	0.000998	0.00105	0.00111
Vanadium	0.0013	0.0019	0.0015	<0.001	<0.001	<0.001	0.0023	<0.001
Zinc	<0.003	<0.003	0.0079	<0.003	<0.003	<0.003	0.0034	<0.003
Organics								
Carbon Organic (Dissolved)	2.6	3.81	2.6	2.5	2.48			
Carbon Organic (Total)	2	3.6	2.52	2.49	2.26	2.32	2.16	2.29
Nitrogen Organic (Dissolved)		0.144						
Nitrogen Organic (Total)		0.143						
ALS LAB ID	**L1245169**	**L1277798**	**L1308855**	**L1348177**	**L1393344**	**L1439433**	**L1478436**	**L1514758**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D5.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

TABLE D5.2 - GROUNDWATER QUALITY DATA

Site ID				Residential Wells					Pumping Well	
Site ID	RES-4	RES-4	RES-6	RES-2	RES-3	RES-5	RES-1	RES-1	PW01	PW01
Analytes	Mar-13	Oct-14	Oct-14	Oct-14	Oct-14	Oct-14	Mar-13	Oct-14	Oct-14	Oct-14
In Situ Parameters										
Conductivity µS/cm		901	2403	1555	911	2935		2445		
Oxygen Dissolved %		6.2	24.6	47.8	61.3	65.8		42.2		
Oxygen Dissolved		0.69	2.67	4.83	6.63	7.18		4.46		
pH (unitless)		7.45	7.59	7.54	7.78	7.94		7.8		
Redox Potential mV		167	-28.6	21.2	143	103		56.3		
Salinity ppt		0.62	1.71	0.99	0.61	2.13		1.76		
Specific Conductivity µS/cm		1230	3254	1941	1226	4004		3342		
Temperature °C		11	11.3	14.6	11.6	11.1		10.9		
Total Dissolved Solids		0.8	2.11	1.26	0.797	2.6		2.17		
Turbidity NTU										
Physical Tests										
Acidity to pH 8.3 (as CaCO3)										
Alkalinity (Total as CaCO3)	495	427	243	285	488	24.9	450	671	63	57.1
Bicarbonate Alkalinity		427	243	285	488	24.9		671	63	57.1
Carbonate Alkalinity	5.1	<2	<2	<2	<1	<2	<5	<20	<1	<1
Color TCU										
Hardness as CaCO3 (Dissolved)		489	1600	1100	606	437	2580	1340	1080	1700
Hydroxide Alkalinity		<2	<2	<2	<1	<2		<20	<1	<1
pH (unitless)	7.73	8.15	8.03	7.99	8.35	7.33	7.89	8.23	7.92	7.77
Specific Conductivity µS/cm	1910	1200	3160	1910	1260	4080	4650	3260	2460	3580
Total Dissolved Solids	1290	815	3110	1790	805	3150	4380	2510	2050	3520
Total Suspended Solids		<3	<3	<3	<3	<3		20.7	<3	<3
Turbidity NTU	0.19	0.23	5.66	1.09	1.16	0.5	151	11.2	1.38	2.18
Dissolved Anions										
Bromide		<0.5	<1	<1	<0.5	<1		<1	<1	<1
Chloride	136	76.1	32	14	44.2	98	253	133	37	64
Fluoride	0.44	0.293	0.098	0.317	0.28	<0.4	0.44	0.168	0.108	0.116
Sulphate	524	200	1960	1010	209	2090	2440	1230	1440	2290
Nutrients										
Ammonia (Total)	0.0058	0.0058	0.945	<0.005	0.0073	0.106	0.0292	0.009	0.0214	0.0114
Nitrate (as N)	2.18	0.317	<0.1	<0.1	0.071	0.24	21.1	43.3	<0.1	<0.1
Nitrite (as N)	<0.02	<0.01	<0.02	<0.02	<0.01	<0.02	0.123	0.028	<0.02	<0.02
Nitrogen (Dissolved)										
Nitrogen (Total)										
Nitrogen Kjeldahl (Total)	0.37	0.502	1.05	0.12	0.602	0.169	<0.05	<0.05	0.098	0.068
Orthophosphate (Dissolved)		0.124	<0.001	0.0021	0.0656	<0.001		0.0092	<0.001	<0.001
Phosphorus - Dissolved		0.164	<0.002	0.0025	0.066	<0.002		0.0121	<0.002	<0.002
Phosphorus - Total		0.16	0.0037	0.006	0.0638	<0.002		0.0581	<0.002	<0.002
Cyanide										
Cyanide (Free)		<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005
Cyanide (Total)		<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005
Cyanide (WAD)		<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005
Dissolved Metals										
Aluminum									<0.001	<0.002
Antimony									<0.0001	<0.0002
Arsenic									0.0185	0.0289
Barium									0.0117	0.0105
Beryllium									<0.0001	<0.0002
Bismuth									<0.0005	<0.001
Boron									0.512	0.391
Cadmium									<0.00001	<0.00002
Calcium									238	377
Chromium									<0.0001	<0.0002
Cobalt									<0.0001	<0.0002
Copper									<0.0002	<0.0004
Dissolved Cadmium (by saltwater e										
Iron									0.386	0.632
Lead									<0.00005	<0.0001
Lithium									0.035	0.0563
Magnesium									118	184
Manganese									0.0319	0.0575
Mercury									<0.00001	<0.00001
Molybdenum									0.278	0.188
Nickel									0.00133	<0.001
Phosphorus									<0.05	<0.05
Potassium									22.3	15.3
Selenium									<0.0001	<0.0002
Silicon									13.7	16.9
Silver									<0.00001	<0.00002
Sodium									176	281
Strontium									4.09	6.8
Sulphur									447	720
Thallium									<0.00001	<0.00002
Tin									<0.0001	<0.0002
Titanium									<0.01	<0.02
Uranium									0.000015	<0.00002
Vanadium									<0.001	<0.002
Zinc									0.0063	0.0037
Total Metals										
Aluminum	<0.01	<0.003	<0.003	<0.003	0.0034	<0.015	0.011	<0.006	0.0039	<0.006
Antimony	<0.0005	0.00018	<0.0001	0.00011	0.0002	<0.0005	<0.0005	0.00035	<0.0001	<0.0002
Arsenic	0.00375	0.0052	<0.0001	0.00093	0.00312	<0.0005	0.0129	0.00459	0.019	0.0289
Barium	0.063	0.0365	0.00798	0.0294	0.0601	0.00507	<0.02	0.00626	0.0116	0.0103
Beryllium		<0.0001	<0.0001	<0.0001	<0.0001	<0.0005		<0.0002	<0.0001	<0.0002
Bismuth		<0.0005	<0.0005	<0.0005	<0.0005	<0.0025		<0.001	<0.0005	<0.001
Boron	0.11	0.068	0.385	0.172	0.049	0.466	0.22	0.227	0.542	0.394
Cadmium	<0.0002	0.000014	<0.00001	0.000015	<0.00001	<0.00005	<0.0002	0.000034	<0.00001	<0.00002
Calcium	119	65.1	257	242	94.8	173	276	154	237	360
Chromium	<0.002	0.00019	0.00032	0.00011	0.00028	<0.0005	<0.002	0.00159	0.00026	<0.0002
Cobalt		<0.0001	<0.0001	0.00012	<0.0001	<0.0005		0.00072	<0.0001	<0.0002
Copper	0.0066	0.0125	0.00075	0.0913	0.0207	0.0063	0.0156	0.0259	0.00098	0.0016
Iron	<0.03	<0.01	0.353	0.314	0.17	0.059	22.3	0.353	0.416	0.639
Lead	<0.0005	0.000243	0.000103	0.000519	0.000439	0.00272	0.00369	0.00578	0.000102	<0.0001
Lithium		0.00799	0.0886	0.0109	0.00785	0.0066		0.0146	0.0358	0.0567
Magnesium	150	79.3	234	121	89.6	1.4	459	233	119	180
Manganese	<0.002	0.00987	0.158	0.037	0.0231	0.0136	0.31	0.0158	0.0329	0.0575
Mercury	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	<0.00001	<0.00001	<0.00001
Molybdenum		0.0236	0.0037	0.0156	0.021	0.02		0.0159	0.285	0.185
Nickel		0.00397	<0.0005	0.00191	0.0013	0.004		0.0348	0.00141	<0.001
Phosphorus		0.138	<0.05	<0.05				<0.05	<0.05	<0.05
Potassium	21.4	21.6	20.7	13.9	14.5	84.4	39.3	30.5	22.6	14.8
Selenium	0.0029	0.00038	<0.0001	0.00011	0.00081	<0.0005	0.044	0.0246	<0.0001	<0.0002
Silicon		9.08	15.1	11.4	10.3	0.933		7.78	13.8	16.2
Silver		<0.00001	<0.00001	<0.00001	<0.00001	<0.00005		<0.00002	<0.00001	<0.00002
Sodium	128	86	239	81.8	62.9	751	385	349	178	283
Strontium		0.703	6.71	2.98	0.974	4.24		2.37	4.16	6.57
Sulphur		67.5	624	327	67.7	648		411	453	702
Thallium		<0.00001	<0.00001	<0.00001	<0.00001	<0.00005		<0.00002	<0.00001	<0.00002
Tin		<0.0001	<0.0001	<0.0001	<0.0001	<0.0005		0.00042	<0.0001	<0.0002
Titanium		<0.01	<0.01	<0.01	<0.01	<0.05		<0.02	<0.01	<0.02
Total Cadmium (by saltwater extrac										
Uranium	0.0046	0.00297	0.000091	0.00179	0.00282	<0.00005	0.0225	0.0146	0.000018	<0.00002
Vanadium		0.0066	<0.001	0.0018	0.0046	<0.005		0.0034	<0.001	<0.002
Zinc	<0.05	0.0094	0.02	0.0484	0.406	0.242	<0.05	0.167	0.0099	<0.006
Organics										
Carbon Organic (Dissolved)									1.81	1.88
Carbon Organic (Total)	7.11	9.33	2.45	2	11.3	0.77	5.9	3.28	1.74	1.93
Nitrogen Organic (Dissolved)										
Nitrogen Organic (Total)										
ALS LAB ID	**L1281919**	**L1527496**	**L1527496**	**L1527496**	**L1528012**	**L1528012**	**L1280813**	**L1531115**	**L1537086**	**L1540210**

NOTES:
1. UNITS ARE IN mg/L UNLESS OTHERWISE STATED.
2. REFER TO TABLE D5.1 FOR DETAILED FOOTNOTES ON CELL SHADING.

APPENDIX D6

GWQ SUMMARY STATISTICS

(Pages D6-1 to D6-46)

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.1 - AJGW01-D

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	21	843	852	887	913	1040	1220	1325	975	141	1.4E-01
Oxygen Dissolved %	20	-1	0	1	3	8	29	32	8	11	1.3E+00
Oxygen Dissolved	21	-0.1	0.0	0.1	0.3	0.8	3.2	3.5	0.9	1.2	1.3E+00
pH (unitless)	21	6.2	6.5	7.5	7.6	7.7	7.8	7.9	7.4	0.5	6.4E-02
Redox Potential mV	18	-287	-140	-75	-59	-14	83	101	-51	83	-1.6E+00
Salinity ppt	11	0.60	0.60	0.61	0.63	0.64	0.72	0.77	0.64	0.05	7.5E-02
Specific Conductivity µS/cm	20	851	878	1238	1261	1283	1386	1517	1224	160	1.3E-01
Temperature °C	21	7.3	8.6	9.3	10.1	10.6	12.1	12.2	10.0	1.1	1.1E-01
Total Dissolved Solids	15	778	779	806	819	836	945	987	834	55	6.6E-02
Turbidity NTU	14	-5.8	-3.5	0.0	1.1	1.9	8.9	18.6	1.5	5.4	3.6E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	12	0.5	1.3	4.0	5.1	5.8	6.2	6.3	4.5	1.8	4.0E-01
Alkalinity (Total as CaCO3)	21	257	272	275	279	287	293	294	281	9	3.1E-02
Bicarbonate Alkalinity	19	257	271	276	279	288	293	294	281	9	3.2E-02
Carbonate Alkalinity	19	0.5	0.5	1.0	1.0	1.0	1.0	1.0	0.9	0.2	2.0E-01
Color TCU	16	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	-	-
Hardness as CaCO3 (Dissolved)	21	558	586	596	609	618	633	647	608	19	3.1E-02
Hydroxide Alkalinity	19	0.5	0.5	1.0	1.0	1.0	1.0	1.0	0.9	0.2	2.0E-01
pH (unitless)	21	8.0	8.0	8.1	8.1	8.2	8.3	8.3	8.2	0.1	1.1E-02
Specific Conductivity µS/cm	21	1150	1200	1230	1250	1270	1300	1320	1249	37	2.9E-02
Total Dissolved Solids	21	853	854	891	916	943	974	984	917	37	4.0E-02
Total Suspended Solids	19	2	2	2	2	4	139	1280	71	293	4.1E+00
Turbidity NTU	19	1	1	1	1	2	16	128	8	29	3.6E+00
Dissolved Anions											
Bromide	21	0.03	0.03	0.25	0.25	0.25	0.25	1.15	0.27	0.21	7.8E-01
Chloride	21	7	7	8	9	10	11	11	9	1	1.1E-01
Fluoride	21	0.10	0.10	0.10	0.20	0.22	0.35	0.38	0.19	0.09	4.7E-01
Sulphate	21	414	415	448	460	465	471	496	454	20	4.5E-02
Nutrients											
Ammonia (Total)	20	0.003	0.003	0.007	0.011	0.017	0.048	0.070	0.016	0.016	9.9E-01
Nitrate (as N)	21	0	0	0	0	0	0	0	0	0	6.3E-01
Nitrite (as N)	21	0.001	0.001	0.005	0.005	0.005	0.005	0.012	0.005	0.002	4.3E-01
Nitrogen (Dissolved)	7	0.05	0.06	0.08	0.13	0.16	0.23	0.26	0.13	0.07	5.4E-01
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	20	0.08	0.09	0.13	0.14	0.16	0.19	0.30	0.14	0.05	3.2E-01
Orthophosphate (Dissolved)	12	0.015	0.015	0.016	0.016	0.017	0.018	0.019	0.017	0.001	7.3E-02
Phosphorus - Dissolved	15	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.02	0.00	2.2E-01
Phosphorus - Total	21	0.019	0.019	0.021	0.024	0.030	0.042	0.701	0.058	0.147	2.5E+00
Cyanide										-	
Cyanide (Free)	21	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	19	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (WAD)	21	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	19	0.0011	0.0011	0.0015	0.0022	0.0038	0.0050	0.0050	0.0026	0.0015	5.9E-01
Antimony	20	0.00005	0.00005	0.00005	0.00015	0.00050	0.00050	0.00050	0.00022	0.00020	8.9E-01
Arsenic	20	0.0053	0.0054	0.0055	0.0057	0.0059	0.0064	0.0066	0.0058	0.0004	6.2E-02
Barium	20	0.025	0.027	0.028	0.028	0.030	0.034	0.037	0.029	0.003	8.9E-02
Beryllium	20	0.0001	0.0001	0.0001	0.0001	0.0010	0.0010	0.0010	0.0004	0.0004	1.2E+00
Bismuth	15	0.00025	0.00025	0.00025	0.00025	0.00025	0.10000	0.10000	0.02020	0.04130	2.0E+00
Boron	20	0.026	0.029	0.032	0.034	0.050	0.050	0.050	0.039	0.009	2.4E-01
Cadmium	19	0.000005	0.000005	0.000010	0.000015	0.000027	0.000105	0.000150	0.000031	0.000038	1.2E+00
Calcium	20	70	72	74	75	78	79	79	75	2	3.2E-02
Chromium	20	0.0001	0.0001	0.0001	0.0002	0.0010	0.0010	0.0010	0.0004	0.0004	9.8E-01
Cobalt	20	0.00011	0.00012	0.00013	0.00015	0.00030	0.00044	0.00066	0.00023	0.00014	6.1E-01
Copper	20	0.0001	0.0001	0.0001	0.0003	0.0010	0.0010	0.0010	0.0005	0.0004	8.8E-01
Iron	20	0.074	0.079	0.089	0.111	0.126	0.141	0.156	0.110	0.023	2.1E-01
Lead	20	0.00003	0.00003	0.00003	0.00003	0.00050	0.00050	0.00050	0.00019	0.00022	1.1E+00
Lithium	20	0.0025	0.0037	0.0046	0.0050	0.0050	0.0052	0.0052	0.0047	0.0006	1.3E-01
Magnesium	20	93	98	100	103	104	106	109	102	4	3.5E-02
Manganese	20	0.249	0.267	0.284	0.292	0.309	0.325	0.327	0.293	0.021	7.1E-02
Mercury	20	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000100	0.0000100	0.0000055	0.0000015	2.8E-01
Molybdenum	20	0.039	0.043	0.045	0.047	0.049	0.053	0.055	0.047	0.004	7.7E-02
Nickel	20	0.0005	0.0005	0.0007	0.0010	0.0011	0.0018	0.0063	0.0012	0.0012	1.0E+00
Phosphorus	15	0.03	0.03	0.03	0.03	0.15	0.15	0.15	0.08	0.06	8.5E-01
Potassium	20	17	17	18	18	19	20	21	18	1	5.3E-02
Selenium	20	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.000	0.000	1.2E+00
Silicon	15	9.3	9.3	9.5	9.6	9.8	9.9	10.1	9.6	0.2	2.2E-02
Silver	20	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00009	0.00001	0.00002	1.4E+00
Sodium	20	56	57	61	63	67	69	70	63	4	6.3E-02
Strontium	15	0.71	0.75	0.79	0.83	0.86	0.90	0.92	0.82	0.06	6.8E-02
Sulphur	9	131	135	145	149	150	154	156	147	7	4.9E-02
Thallium	20	0.00001	0.00001	0.00001	0.00001	0.00020	0.00020	0.00020	0.00007	0.00009	1.2E+00
Tin	20	0.0001	0.0001	0.0001	0.0001	0.0005	0.0005	0.0005	0.0002	0.0002	1.0E+00
Titanium	20	0.0050	0.0050	0.0050	0.0050	0.0050	0.0053	0.0100	0.0053	0.0011	2.1E-01
Uranium	20	0.0024	0.0025	0.0026	0.0027	0.0028	0.0029	0.0030	0.0027	0.0001	5.4E-02
Vanadium	20	0.0005	0.0005	0.0005	0.0005	0.0010	0.0010	0.0010	0.0007	0.0002	3.6E-01
Zinc	20	0.0005	0.0005	0.0016	0.0018	0.0025	0.0027	0.0064	0.0021	0.0012	6.0E-01
Total Metals											
Aluminum	21	0.0	0.0	0.0	0.0	0.1	0.2	14.3	0.7	3.1	4.3E+00
Antimony	21	0.0001	0.0001	0.0001	0.0003	0.0005	0.0005	0.0005	0.0003	0.0002	6.3E-01
Arsenic	21	0.0046	0.0053	0.0054	0.0056	0.0058	0.0067	0.0269	0.0066	0.0047	7.0E-01
Barium	21	0.025	0.026	0.028	0.029	0.031	0.033	0.216	0.038	0.041	1.1E+00
Beryllium	21	0.0001	0.0001	0.0001	0.0001	0.0010	0.0010	0.0010	0.0004	0.0004	1.1E+00
Bismuth	16	0.00025	0.00025	0.00025	0.00025	0.02519	0.10000	0.10000	0.02519	0.04461	1.8E+00
Boron	21	0.029	0.034	0.036	0.042	0.050	0.050	0.054	0.043	0.008	1.8E-01
Cadmium	21	0.00002	0.00002	0.00002	0.00005	0.00010	0.00063	0.00064	0.00012	0.00018	1.5E+00
Calcium	21	68	71	74	76	77	78	128	77	12	1.5E-01
Chromium	21	0.000	0.000	0.000	0.001	0.001	0.007	0.038	0.003	0.008	3.0E+00
Cobalt	21	0.0001	0.0002	0.0002	0.0003	0.0003	0.0007	0.0166	0.0010	0.0036	3.4E+00
Copper	21	0.000	0.000	0.001	0.001	0.001	0.003	0.085	0.005	0.018	3.6E+00
Iron	21	0.07	0.10	0.14	0.16	0.18	0.42	24.50	1.33	5.31	4.0E+00
Lead	21	0.00003	0.00003	0.00003	0.00006	0.00050	0.00050	0.00490	0.00041	0.00105	2.6E+00
Lithium	21	0.0025	0.0025	0.0047	0.0050	0.0052	0.0056	0.0120	0.0050	0.0018	3.6E-01
Magnesium	21	91	97	99	102	104	109	114	102	5	4.5E-02
Manganese	21	0.25	0.27	0.29	0.30	0.31	0.35	1.08	0.34	0.17	5.1E-01
Mercury	21	0.000005	0.000005	0.000005	0.000005	0.000005	0.000010	0.000354	0.000022	0.000076	3.5E+00
Molybdenum	21	0.04	0.04	0.05	0.05	0.05	0.06	0.06	0.05	0.00	8.7E-02
Nickel	21	0.001	0.001	0.001	0.001	0.002	0.014	0.079	0.006	0.017	2.9E+00
Phosphorus	16	0.03	0.03	0.03	0.03	0.15	0.15	0.15	0.08	0.06	8.0E-01
Potassium	21	17	17	18	18	19	20	20	18	1	4.9E-02
Selenium	21	0.000	0.000	0.000	0.000	0.001	0.001	0.005	0.001	0.001	1.8E+00
Silicon	16	9.3	9.3	9.6	9.8	9.9	10.1	10.2	9.8	0.3	2.8E-02
Silver	21	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00023	0.00002	0.00005	2.4E+00
Sodium	21	57	57	62	64	66	69	71	64	4	6.0E-02
Strontium	16	0.72	0.76	0.80	0.84	0.85	0.89	0.90	0.83	0.05	5.6E-02
Sulphur	9	130	137	149	151	155	157	157	150	8	5.5E-02
Thallium	21	0.0000	0.0000	0.0000	0.0000	0.0002	0.0002	0.0002	0.0001	0.0001	1.2E+00
Tin	21	0.0001	0.0001	0.0001	0.0001	0.0005	0.0005	0.0005	0.0002	0.0002	9.8E-01
Titanium	21	0.005	0.005	0.005	0.005	0.005	0.014	0.832	0.045	0.180	4.0E+00
Uranium	21	0.0024	0.0025	0.0027	0.0028	0.0028	0.0030	0.0037	0.0028	0.0003	9.4E-02
Vanadium	21	0.001	0.001	0.001	0.001	0.001	0.001	0.061	0.003	0.013	3.8E+00
Zinc	21	0.0015	0.0015	0.0015	0.0025	0.0025	0.0087	0.0447	0.0046	0.0093	2.0E+00
Organics											
Carbon Organic (Dissolved)	17	1.9	2.3	2.4	2.5	2.7	3.2	4.4	2.6	0.5	1.9E-01
Carbon Organic (Total)	15	2.0	2.1	2.2	2.4	2.5	3.0	3.7	2.5	0.4	1.6E-01
Nitrogen Organic (Dissolved)	7	0.03	0.03	0.05	0.08	0.13	0.18	0.19	0.09	0.06	6.6E-01
Nitrogen Organic (Total)	7	0.07	0.09	0.12	0.13	0.15	0.21	0.23	0.14	0.05	3.3E-01

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.2 - AJGW05-S

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	3	1217	1265	1459	1701	1854	1976	2007	1642	398	2.4E-01
Oxygen Dissolved %	3	16	18	23	30	37	43	44	30	14	4.6E-01
Oxygen Dissolved	3	1.9	2.1	2.6	3.4	4.2	4.9	5.1	3.4	1.6	4.6E-01
pH (unitless)	3	7.9	7.9	8.0	8.0	8.0	8.1	8.1	8.0	0.1	1.2E-02
Redox Potential mV	3	-80	-79	-78	-76	-73	-72	-71	-75	4	-5.6E-02
Salinity ppt	0	-	-	-	-	-	-	-	-	-	-
Specific Conductivity µS/cm	3	1807	1861	2079	2351	2603	2804	2854	2337	524	2.2E-01
Temperature °C	3	8.0	8.1	8.7	9.5	10.1	10.6	10.7	9.4	1.4	1.4E-01
Total Dissolved Solids	0	-	-	-	-	-	-	-	-	-	-
Turbidity NTU	0	-	-	-	-	-	-	-	-	-	-
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	4	4.4	4.5	4.9	6.2	7.4	7.5	7.5	6.1	1.6	2.6E-01
Alkalinity (Total as CaCO3)	4	82	91	126	148	160	171	174	138	40	2.9E-01
Bicarbonate Alkalinity	4	82	91	126	148	160	171	174	138	40	2.9E-01
Carbonate Alkalinity	4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	-	-
Color TCU	4	6.0	6.1	6.4	6.7	10.5	19.0	21.1	10.1	7.3	7.2E-01
Hardness as CaCO3 (Dissolved)	4	963	965	973	983	1013	1067	1080	1002	53	5.3E-02
Hydroxide Alkalinity	4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	-	-
pH (unitless)	4	7.6	7.6	7.7	7.8	7.9	8.0	8.1	7.8	0.2	2.5E-02
Specific Conductivity µS/cm	4	2390	2393	2405	2530	2723	2897	2940	2598	257	9.9E-02
Total Dissolved Solids	4	2020	2026	2050	2140	2250	2322	2340	2160	148	6.8E-02
Total Suspended Solids	4	27	39	86	162	371	737	828	295	364	1.2E+00
Turbidity NTU	3	27	33	59	91	101	108	110	76	44	5.7E-01
Dissolved Anions											
Bromide	4	0.25	0.29	0.44	0.88	1.56	2.31	2.50	1.13	1.01	9.0E-01
Chloride	4	20	21	24	28	30	31	31	27	5	1.9E-01
Fluoride	4	0.20	0.23	0.33	0.44	0.63	0.93	1.00	0.52	0.34	6.7E-01
Sulphate	4	1260	1265	1283	1370	1480	1552	1570	1393	145	1.0E-01
Nutrients											
Ammonia (Total)	4	0.003	0.004	0.008	0.020	0.061	0.137	0.156	0.049	0.072	1.5E+00
Nitrate (as N)	4	0	0	0	0	0	1	1	0	0	1.0E+00
Nitrite (as N)	4	0.010	0.025	0.086	0.126	0.345	0.836	0.959	0.305	0.440	1.4E+00
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	3	0.24	0.26	0.31	0.38	0.86	1.24	1.34	0.65	0.60	9.1E-01
Orthophosphate (Dissolved)	4	0.001	0.001	0.001	0.003	0.013	0.030	0.034	0.010	0.016	1.6E+00
Phosphorus - Dissolved	2	0.01	0.03	0.10	0.19	0.28	0.35	0.37	0.19	0.26	1.3E+00
Phosphorus - Total	3	0.055	0.059	0.077	0.099	0.590	0.982	1.080	0.411	0.579	1.4E+00
Cyanide										-	
Cyanide (Free)	3	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	3	0.0025	0.0025	0.0025	0.0025	0.0050	0.0069	0.0074	0.0041	0.0028	6.8E-01
Cyanide (WAD)	3	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	4	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	-	-
Antimony	4	0.00125	0.00125	0.00125	0.00125	0.00125	0.00125	0.00125	0.00125	-	-
Arsenic	4	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	-	-
Barium	4	0.077	0.077	0.078	0.083	0.101	0.131	0.138	0.095	0.029	3.0E-01
Beryllium	4	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Bismuth	0	-	-	-	-	-	-	-	-	-	-
Boron	4	0.050	0.059	0.095	0.110	0.115	0.127	0.130	0.100	0.035	3.5E-01
Cadmium	4	0.000043	0.000043	0.000043	0.000043	0.000043	0.000043	0.000043	0.000043	-	-
Calcium	4	186	188	194	201	217	244	251	210	29	1.4E-01
Chromium	4	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cobalt	4	0.00075	0.00113	0.00266	0.00380	0.00530	0.00770	0.00830	0.00416	0.00314	7.5E-01
Copper	4	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Iron	4	0.015	0.015	0.015	0.039	0.095	0.172	0.191	0.071	0.083	1.2E+00
Lead	4	0.00125	0.00125	0.00125	0.00125	0.00125	0.00125	0.00125	0.00125	-	-
Lithium	4	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	-	-
Magnesium	4	109	110	114	117	119	121	121	116	5	4.4E-02
Manganese	4	0.242	0.431	1.186	1.845	2.610	3.618	3.870	1.951	1.513	7.8E-01
Mercury	4	0.0000050	0.0000058	0.0000088	0.0000100	0.0000100	0.0000100	0.0000100	0.0000088	0.0000025	2.9E-01
Molybdenum	4	0.070	0.071	0.072	0.079	0.090	0.100	0.102	0.083	0.015	1.8E-01
Nickel	4	0.0160	0.0164	0.0182	0.0312	0.0468	0.0546	0.0565	0.0337	0.0196	5.8E-01
Phosphorus	0	-	-	-	-	-	-	-	-	-	-
Potassium	4	26	27	29	31	33	36	37	31	4	1.4E-01
Selenium	4	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	-	-
Silicon	0	-	-	-	-	-	-	-	-	-	-
Silver	4	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	-	-
Sodium	4	208	209	215	218	250	325	344	247	65	2.6E-01
Strontium	0	-	-	-	-	-	-	-	-	-	-
Sulphur	0	-	-	-	-	-	-	-	-	-	-
Thallium	4	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	-	-
Tin	4	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	-	-
Titanium	4	0.0050	0.0050	0.0050	0.0050	0.0065	0.0101	0.0110	0.0065	0.0030	4.6E-01
Uranium	4	0.0017	0.0020	0.0032	0.0042	0.0049	0.0055	0.0057	0.0039	0.0017	4.3E-01
Vanadium	4	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Zinc	4	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Total Metals											
Aluminum	4	1.7	1.9	3.0	5.4	9.8	15.8	17.3	7.4	7.0	9.4E-01
Antimony	4	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	-	-
Arsenic	4	0.0029	0.0030	0.0034	0.0048	0.0070	0.0091	0.0096	0.0055	0.0031	5.5E-01
Barium	4	0.112	0.127	0.186	0.217	0.277	0.407	0.439	0.246	0.138	5.6E-01
Beryllium	4	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Bismuth	0	-	-	-	-	-	-	-	-	-	-
Boron	4	0.050	0.061	0.103	0.120	0.120	0.120	0.120	0.103	0.035	3.4E-01
Cadmium	4	0.00014	0.00014	0.00015	0.00035	0.00072	0.00113	0.00123	0.00052	0.00051	9.8E-01
Calcium	4	194	195	197	211	235	261	267	221	34	1.5E-01
Chromium	4	0.005	0.007	0.014	0.021	0.035	0.059	0.065	0.028	0.026	9.2E-01
Cobalt	4	0.0056	0.0063	0.0092	0.0133	0.0194	0.0274	0.0294	0.0154	0.0103	6.7E-01
Copper	4	0.022	0.025	0.036	0.066	0.122	0.195	0.213	0.092	0.086	9.4E-01
Iron	4	2.97	3.49	5.55	8.76	15.25	25.21	27.70	12.05	10.96	9.1E-01
Lead	4	0.00125	0.00125	0.00125	0.00203	0.00370	0.00586	0.00640	0.00293	0.00243	8.3E-01
Lithium	4	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	-	-
Magnesium	4	107	108	113	122	130	133	134	121	12	1.0E-01
Manganese	4	0.36	0.59	1.54	2.37	3.06	3.68	3.84	2.23	1.47	6.6E-01
Mercury	4	0.000005	0.000006	0.000009	0.000010	0.000021	0.000046	0.000052	0.000019	0.000022	1.1E+00
Molybdenum	4	0.06	0.06	0.07	0.08	0.10	0.10	0.10	0.08	0.02	2.4E-01
Nickel	4	0.051	0.052	0.056	0.068	0.082	0.090	0.092	0.070	0.019	2.7E-01
Phosphorus	0	-	-	-	-	-	-	-	-	-	-
Potassium	4	26	26	29	32	34	34	34	31	4	1.3E-01
Selenium	4	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	-	-
Silicon	0	-	-	-	-	-	-	-	-	-	-
Silver	4	0.00005	0.00005	0.00005	0.00005	0.00008	0.00014	0.00015	0.00008	0.00005	6.7E-01
Sodium	4	204	206	213	219	248	310	325	242	56	2.3E-01
Strontium	0	-	-	-	-	-	-	-	-	-	-
Sulphur	0	-	-	-	-	-	-	-	-	-	-
Thallium	4	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	-	-
Tin	4	0.0013	0.0013	0.0013	0.0013	0.0018	0.0032	0.0035	0.0018	0.0011	6.2E-01
Titanium	4	0.134	0.150	0.212	0.392	0.714	1.119	1.220	0.534	0.489	9.2E-01
Uranium	4	0.0021	0.0024	0.0036	0.0048	0.0055	0.0057	0.0058	0.0044	0.0017	3.8E-01
Vanadium	4	0.009	0.010	0.014	0.028	0.052	0.083	0.091	0.039	0.037	9.5E-01
Zinc	4	0.0025	0.0043	0.0113	0.0193	0.0335	0.0557	0.0612	0.0256	0.0254	9.9E-01
Organics											
Carbon Organic (Dissolved)	4	8.9	8.9	9.1	9.8	14.3	24.0	26.4	13.7	8.5	6.2E-01
Carbon Organic (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.3 - AJGW06-D

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	18	447	448	517	533	606	750	996	577	128	2.2E-01
Oxygen Dissolved %	16	1	1	3	6	11	15	17	7	5	6.9E-01
Oxygen Dissolved	16	0.1	0.1	0.4	0.7	1.2	1.8	1.9	0.8	0.6	6.8E-01
pH (unitless)	18	7.1	7.1	8.0	8.1	8.2	8.6	8.7	8.0	0.4	5.0E-02
Redox Potential mV	15	-178	-152	-119	-91	-25	159	177	-53	105	-2.0E+00
Salinity ppt	10	0.33	0.33	0.34	0.36	0.37	0.40	0.40	0.36	0.03	7.0E-02
Specific Conductivity µS/cm	17	438	472	688	736	790	950	1476	751	213	2.8E-01
Temperature °C	18	6.2	6.6	8.5	9.4	10.8	11.7	11.9	9.4	1.7	1.8E-01
Total Dissolved Solids	11	440	443	456	483	489	531	532	480	31	6.4E-02
Turbidity NTU	11	-1.8	-0.9	0.5	1.5	4.1	66.9	113.0	13.2	33.7	2.5E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	12	0.5	0.5	1.4	2.1	2.8	4.3	4.8	2.2	1.3	5.9E-01
Alkalinity (Total as CaCO3)	19	80	84	107	112	120	129	159	111	17	1.6E-01
Bicarbonate Alkalinity	19	72	84	107	112	120	129	159	111	18	1.6E-01
Carbonate Alkalinity	19	0.5	0.5	0.8	1.0	1.0	1.7	7.7	1.2	1.6	1.3E+00
Color TCU	14	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	-	-
Hardness as CaCO3 (Dissolved)	19	129	147	163	176	180	191	194	171	16	9.5E-02
Hydroxide Alkalinity	19	0.5	0.5	0.5	1.0	1.0	1.0	1.0	0.8	0.2	2.8E-01
pH (unitless)	19	7.9	7.9	8.1	8.2	8.2	8.5	8.6	8.2	0.2	1.9E-02
Specific Conductivity µS/cm	19	665	675	693	728	740	763	785	722	32	4.5E-02
Total Dissolved Solids	19	434	446	466	486	504	518	521	484	26	5.4E-02
Total Suspended Solids	17	2	2	2	2	14	86	114	16	31	1.9E+00
Turbidity NTU	16	0	0	0	1	3	22	42	5	10	2.0E+00
Dissolved Anions											
Bromide	19	0.03	0.03	0.03	0.13	0.25	0.28	0.60	0.14	0.15	1.1E+00
Chloride	19	1	1	2	3	3	4	4	2	1	3.2E-01
Fluoride	19	0.04	0.09	0.26	0.30	0.33	0.41	0.45	0.29	0.09	3.3E-01
Sulphate	19	234	235	244	258	268	278	278	257	15	5.9E-02
Nutrients											
Ammonia (Total)	18	0.003	0.003	0.003	0.003	0.010	0.023	0.031	0.007	0.008	1.2E+00
Nitrate (as N)	19	0	0	0	0	0	0	0	0	0	8.1E-01
Nitrite (as N)	19	0.001	0.001	0.001	0.003	0.005	0.007	0.012	0.003	0.003	1.1E+00
Nitrogen (Dissolved)	4	0.06	0.07	0.11	0.13	0.13	0.14	0.14	0.11	0.04	3.2E-01
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	17	0.08	0.08	0.08	0.09	0.13	0.23	0.46	0.13	0.09	7.2E-01
Orthophosphate (Dissolved)	13	0.001	0.003	0.008	0.009	0.011	0.018	0.024	0.009	0.005	5.9E-01
Phosphorus - Dissolved	13	0.00	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.00	3.2E-01
Phosphorus - Total	18	0.009	0.010	0.012	0.014	0.024	0.091	0.095	0.026	0.026	1.0E+00
Cyanide										-	
Cyanide (Free)	18	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	18	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (WAD)	18	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	19	0.0013	0.0015	0.0021	0.0025	0.0050	0.0152	0.0399	0.0053	0.0088	1.6E+00
Antimony	19	0.00005	0.00005	0.00005	0.00025	0.00025	0.00076	0.00131	0.00026	0.00032	1.2E+00
Arsenic	19	0.0141	0.0142	0.0152	0.0176	0.0219	0.0277	0.0334	0.0194	0.0053	2.7E-01
Barium	19	0.010	0.010	0.018	0.020	0.023	0.032	0.033	0.020	0.006	3.0E-01
Beryllium	19	0.0001	0.0001	0.0001	0.0005	0.0005	0.0010	0.0010	0.0003	0.0003	9.4E-01
Bismuth	12	0.00025	0.00025	0.00025	0.00025	0.02519	0.10000	0.10000	0.02519	0.04511	1.8E+00
Boron	19	0.184	0.186	0.210	0.220	0.235	0.250	0.250	0.221	0.020	8.9E-02
Cadmium	19	0.000005	0.000005	0.000009	0.000013	0.000083	0.000111	0.000205	0.000046	0.000054	1.2E+00
Calcium	19	30	34	37	41	41	44	44	39	4	9.2E-02
Chromium	19	0.0001	0.0001	0.0001	0.0005	0.0008	0.0013	0.0017	0.0005	0.0005	1.1E+00
Cobalt	19	0.00005	0.00005	0.00005	0.00015	0.00015	0.00030	0.00030	0.00012	0.00008	6.8E-01
Copper	19	0.0001	0.0001	0.0001	0.0005	0.0005	0.0011	0.0015	0.0004	0.0004	9.4E-01
Iron	19	0.015	0.015	0.038	0.059	0.066	0.081	0.083	0.051	0.022	4.3E-01
Lead	19	0.00003	0.00003	0.00003	0.00025	0.00025	0.00050	0.00050	0.00017	0.00016	9.4E-01
Lithium	19	0.0025	0.0025	0.0025	0.0029	0.0031	0.0050	0.0050	0.0030	0.0008	2.5E-01
Magnesium	19	13	15	17	18	19	20	20	18	2	1.0E-01
Manganese	19	0.012	0.030	0.073	0.082	0.097	0.103	0.107	0.079	0.024	3.1E-01
Mercury	19	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000100	0.0000100	0.0000061	0.0000021	3.5E-01
Molybdenum	19	0.039	0.039	0.040	0.041	0.043	0.050	0.051	0.043	0.004	8.4E-02
Nickel	19	0.0003	0.0003	0.0003	0.0005	0.0006	0.0011	0.0013	0.0005	0.0003	6.3E-01
Phosphorus	12	0.03	0.03	0.03	0.03	0.06	0.15	0.15	0.06	0.06	1.0E+00
Potassium	19	1	1	1	1	1	2	2	1	0	2.5E-01
Selenium	19	0.000	0.000	0.000	0.001	0.001	0.004	0.006	0.001	0.001	1.9E+00
Silicon	12	4.7	4.8	5.0	5.1	5.1	5.1	5.2	5.0	0.1	2.5E-02
Silver	19	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00001	0.00000	5.4E-01
Sodium	19	84	85	88	90	95	100	102	92	5	5.6E-02
Strontium	12	0.92	0.93	0.95	0.97	1.03	1.08	1.11	0.99	0.06	5.9E-02
Sulphur	9	83	84	87	90	92	94	94	89	4	4.2E-02
Thallium	19	0.00001	0.00001	0.00001	0.00010	0.00010	0.00020	0.00020	0.00007	0.00007	1.0E+00
Tin	19	0.0001	0.0001	0.0001	0.0003	0.0003	0.0005	0.0005	0.0002	0.0001	8.2E-01
Titanium	19	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	-	-
Uranium	19	0.0004	0.0004	0.0005	0.0009	0.0011	0.0027	0.0041	0.0011	0.0009	8.5E-01
Vanadium	19	0.0005	0.0005	0.0005	0.0005	0.0005	0.0013	0.0020	0.0007	0.0004	5.8E-01
Zinc	19	0.0005	0.0005	0.0005	0.0025	0.0025	0.0031	0.0083	0.0021	0.0018	8.6E-01
Total Metals											
Aluminum	19	0.0	0.0	0.0	0.0	0.2	1.1	1.8	0.2	0.4	2.2E+00
Antimony	19	0.0001	0.0001	0.0001	0.0003	0.0004	0.0011	0.0012	0.0003	0.0003	1.1E+00
Arsenic	19	0.0147	0.0148	0.0154	0.0175	0.0212	0.0297	0.0360	0.0194	0.0056	2.9E-01
Barium	19	0.010	0.017	0.019	0.021	0.026	0.068	0.098	0.028	0.020	7.4E-01
Beryllium	19	0.0001	0.0001	0.0001	0.0005	0.0005	0.0010	0.0010	0.0003	0.0003	9.4E-01
Bismuth	12	0.00025	0.00025	0.00025	0.00025	0.02519	0.10000	0.10000	0.02519	0.04511	1.8E+00
Boron	19	0.199	0.200	0.217	0.225	0.236	0.260	0.260	0.226	0.018	7.9E-02
Cadmium	19	0.00001	0.00001	0.00002	0.00004	0.00010	0.00016	0.00021	0.00006	0.00006	9.2E-01
Calcium	19	32	35	39	41	42	44	45	40	3	7.9E-02
Chromium	19	0.000	0.000	0.000	0.001	0.002	0.015	0.092	0.006	0.021	3.4E+00
Cobalt	19	0.0001	0.0001	0.0001	0.0002	0.0004	0.0021	0.0040	0.0005	0.0010	1.9E+00
Copper	19	0.000	0.000	0.000	0.001	0.001	0.012	0.017	0.003	0.005	1.9E+00
Iron	19	0.07	0.07	0.09	0.09	0.20	1.74	2.58	0.34	0.65	1.9E+00
Lead	19	0.00003	0.00003	0.00003	0.00025	0.00025	0.00050	0.00050	0.00017	0.00016	9.4E-01
Lithium	19	0.0025	0.0025	0.0025	0.0028	0.0032	0.0050	0.0050	0.0030	0.0008	2.6E-01
Magnesium	19	14	15	17	18	19	20	21	18	2	9.6E-02
Manganese	19	0.05	0.06	0.08	0.09	0.10	0.12	0.16	0.09	0.02	2.6E-01
Mercury	19	0.000005	0.000005	0.000005	0.000005	0.000005	0.000010	0.000010	0.000006	0.000002	3.5E-01
Molybdenum	19	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.04	0.00	6.8E-02
Nickel	19	0.000	0.000	0.000	0.001	0.002	0.008	0.047	0.004	0.011	2.9E+00
Phosphorus	12	0.03	0.03	0.03	0.03	0.06	0.15	0.15	0.06	0.06	1.0E+00
Potassium	19	1	1	1	1	1	2	2	1	0	2.8E-01
Selenium	19	0.000	0.000	0.000	0.001	0.001	0.005	0.005	0.001	0.001	1.7E+00
Silicon	12	5.0	5.0	5.1	5.1	5.1	5.7	6.1	5.2	0.3	6.0E-02
Silver	19	0.00001	0.00001	0.00001	0.00001	0.00001	0.00003	0.00009	0.00001	0.00002	1.5E+00
Sodium	19	82	86	90	91	95	99	103	92	5	5.3E-02
Strontium	12	0.96	0.96	0.96	1.00	1.04	1.09	1.13	1.01	0.05	5.3E-02
Sulphur	9	87	87	89	90	94	97	98	91	4	4.3E-02
Thallium	19	0.0000	0.0000	0.0000	0.0001	0.0001	0.0002	0.0002	0.0001	0.0001	1.0E+00
Tin	19	0.0001	0.0001	0.0001	0.0003	0.0004	0.0009	0.0010	0.0003	0.0003	1.1E+00
Titanium	19	0.005	0.005	0.005	0.005	0.005	0.059	0.116	0.014	0.027	1.9E+00
Uranium	19	0.0005	0.0005	0.0005	0.0009	0.0012	0.0029	0.0041	0.0012	0.0010	8.2E-01
Vanadium	19	0.001	0.001	0.001	0.001	0.001	0.005	0.010	0.001	0.002	1.6E+00
Zinc	19	0.0015	0.0015	0.0015	0.0025	0.0025	0.0073	0.0099	0.0027	0.0022	8.1E-01
Organics											
Carbon Organic (Dissolved)	15	2.5	2.6	2.8	2.9	3.9	4.3	4.6	3.2	0.7	2.1E-01
Carbon Organic (Total)	11	2.2	2.3	2.5	2.5	2.8	3.1	3.4	2.7	0.3	1.3E-01
Nitrogen Organic (Dissolved)	4	0.06	0.06	0.10	0.12	0.12	0.13	0.13	0.11	0.03	3.2E-01
Nitrogen Organic (Total)	4	0.08	0.08	0.08	0.10	0.12	0.14	0.15	0.11	0.03	3.1E-01

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.4 - AJGW07-D

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	19	541	579	621	659	876	983	1052	728	152	2.1E-01
Oxygen Dissolved %	17	0	1	2	3	18	37	56	11	15	1.4E+00
Oxygen Dissolved	18	0.0	0.1	0.2	0.4	2.0	3.9	5.9	1.2	1.6	1.3E+00
pH (unitless)	20	6.9	7.2	7.7	7.9	8.2	8.3	8.3	7.9	0.4	4.7E-02
Redox Potential mV	17	-294	-251	-213	-113	-79	163	239	-112	134	-1.2E+00
Salinity ppt	10	0.38	0.38	0.40	0.42	0.45	0.45	0.45	0.42	0.03	6.2E-02
Specific Conductivity µS/cm	19	604	628	816	875	907	1019	1493	875	179	2.0E-01
Temperature °C	20	8.9	9.2	9.8	10.4	11.3	12.6	14.8	10.7	1.4	1.3E-01
Total Dissolved Solids	13	501	509	544	568	585	658	757	572	62	1.1E-01
Turbidity NTU	12	-3.6	-2.6	-1.1	0.0	2.2	5.9	6.3	0.9	2.9	3.3E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	14	0.5	1.2	1.9	3.3	4.1	4.7	5.7	3.0	1.4	4.7E-01
Alkalinity (Total as CaCO3)	21	182	207	211	218	225	231	232	218	11	5.1E-02
Bicarbonate Alkalinity	20	178	206	211	219	226	231	232	217	12	5.6E-02
Carbonate Alkalinity	20	0.5	0.5	1.0	1.0	1.0	1.2	4.7	1.1	0.9	8.1E-01
Color TCU	17	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	-	-
Hardness as CaCO3 (Dissolved)	21	363	374	403	412	420	443	449	410	21	5.2E-02
Hydroxide Alkalinity	20	0.5	0.5	0.9	1.0	1.0	1.0	1.0	0.9	0.2	2.5E-01
pH (unitless)	21	7.9	8.0	8.1	8.2	8.3	8.3	8.4	8.2	0.1	1.4E-02
Specific Conductivity µS/cm	21	812	830	859	881	910	919	935	880	33	3.8E-02
Total Dissolved Solids	21	583	587	609	621	641	653	661	622	23	3.7E-02
Total Suspended Solids	19	2	2	2	3	6	72	80	11	23	2.1E+00
Turbidity NTU	18	3	4	6	8	15	32	84	14	18	1.3E+00
Dissolved Anions											
Bromide	20	0.03	0.03	0.13	0.25	0.25	0.27	0.65	0.21	0.14	6.8E-01
Chloride	20	3	3	4	6	6	8	14	5	3	4.7E-01
Fluoride	20	0.10	0.10	0.10	0.15	0.18	0.49	2.67	0.28	0.57	2.0E+00
Sulphate	20	251	258	264	274	289	298	314	277	16	5.9E-02
Nutrients											
Ammonia (Total)	20	0.003	0.003	0.005	0.008	0.012	0.020	0.030	0.009	0.007	7.3E-01
Nitrate (as N)	20	0	0	0	0	0	0	0	0	0	5.4E-01
Nitrite (as N)	20	0.001	0.001	0.003	0.005	0.005	0.014	0.015	0.005	0.004	7.7E-01
Nitrogen (Dissolved)	7	0.03	0.03	0.06	0.11	0.13	1.30	1.80	0.33	0.65	2.0E+00
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	19	0.03	0.03	0.06	0.08	0.09	0.15	0.16	0.08	0.04	5.1E-01
Orthophosphate (Dissolved)	16	0.001	0.001	0.001	0.001	0.002	0.006	0.008	0.002	0.002	1.0E+00
Phosphorus - Dissolved	14	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	1.1E+00
Phosphorus - Total	21	0.009	0.010	0.013	0.027	0.035	0.091	0.110	0.031	0.026	8.3E-01
Cyanide										-	
Cyanide (Free)	20	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	20	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (WAD)	20	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	20	0.0005	0.0005	0.0014	0.0021	0.0038	0.0050	0.0050	0.0025	0.0016	6.5E-01
Antimony	20	0.00005	0.00005	0.00005	0.00023	0.00031	0.00050	0.00050	0.00024	0.00018	7.5E-01
Arsenic	20	0.0005	0.0005	0.0006	0.0012	0.0013	0.0019	0.0021	0.0010	0.0005	4.8E-01
Barium	20	0.033	0.034	0.037	0.040	0.043	0.051	0.051	0.041	0.005	1.3E-01
Beryllium	20	0.0001	0.0001	0.0001	0.0001	0.0006	0.0010	0.0010	0.0004	0.0004	1.1E+00
Bismuth	13	0.00025	0.00025	0.00025	0.00025	0.00025	0.10000	0.10000	0.01560	0.03746	2.4E+00
Boron	20	0.050	0.050	0.050	0.087	0.096	0.103	0.108	0.077	0.023	3.0E-01
Cadmium	20	0.000008	0.000008	0.000015	0.000017	0.000025	0.000157	0.000200	0.000038	0.000054	1.4E+00
Calcium	19	67	71	84	87	91	98	100	87	8	9.1E-02
Chromium	20	0.0001	0.0001	0.0001	0.0002	0.0006	0.0010	0.0010	0.0004	0.0004	1.0E+00
Cobalt	20	0.00005	0.00005	0.00005	0.00014	0.00021	0.00032	0.00076	0.00017	0.00017	1.0E+00
Copper	20	0.0001	0.0001	0.0001	0.0003	0.0006	0.0010	0.0010	0.0004	0.0004	8.4E-01
Iron	20	0.094	0.213	0.400	0.700	1.360	2.054	2.130	0.929	0.674	7.3E-01
Lead	20	0.00003	0.00003	0.00003	0.00003	0.00031	0.00050	0.00050	0.00019	0.00020	1.1E+00
Lithium	20	0.0025	0.0025	0.0045	0.0050	0.0055	0.0060	0.0061	0.0049	0.0010	2.0E-01
Magnesium	19	45	46	46	48	48	50	50	47	1	2.6E-02
Manganese	20	0.079	0.084	0.097	0.140	0.195	0.234	0.237	0.147	0.055	3.7E-01
Mercury	20	0.0000050	0.0000050	0.0000050	0.0000050	0.0000063	0.0000100	0.0000100	0.0000063	0.0000022	3.6E-01
Molybdenum	20	0.054	0.061	0.069	0.073	0.078	0.096	0.110	0.075	0.012	1.6E-01
Nickel	20	0.0003	0.0003	0.0004	0.0010	0.0023	0.0048	0.0049	0.0016	0.0016	9.8E-01
Phosphorus	12	0.03	0.03	0.03	0.03	0.15	0.15	0.15	0.08	0.06	8.4E-01
Potassium	20	8	8	8	8	9	9	9	8	0	5.2E-02
Selenium	20	0.000	0.000	0.003	0.013	0.023	0.030	0.031	0.013	0.011	8.6E-01
Silicon	12	4.5	4.5	5.6	6.3	6.9	7.0	7.0	6.1	0.9	1.5E-01
Silver	20	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00001	0.00001	6.5E-01
Sodium	20	38	39	41	42	43	47	47	42	2	5.1E-02
Strontium	13	0.58	0.58	0.59	0.61	0.65	0.67	0.68	0.62	0.03	5.6E-02
Sulphur	7	84	85	88	89	93	98	98	90	5	5.6E-02
Thallium	20	0.00001	0.00001	0.00001	0.00001	0.00013	0.00020	0.00020	0.00007	0.00008	1.2E+00
Tin	20	0.0001	0.0001	0.0001	0.0001	0.0003	0.0005	0.0005	0.0002	0.0002	9.5E-01
Titanium	19	0.0050	0.0050	0.0050	0.0050	0.0050	0.0057	0.0120	0.0054	0.0016	3.0E-01
Uranium	20	0.0001	0.0001	0.0004	0.0009	0.0011	0.0015	0.0021	0.0008	0.0005	6.3E-01
Vanadium	20	0.0005	0.0005	0.0005	0.0005	0.0011	0.0027	0.0030	0.0010	0.0008	7.7E-01
Zinc	20	0.0005	0.0005	0.0005	0.0017	0.0025	0.0029	0.0102	0.0020	0.0021	1.1E+00
Total Metals											
Aluminum	21	0.0	0.0	0.0	0.0	0.0	0.2	1.7	0.1	0.4	3.6E+00
Antimony	21	0.0001	0.0001	0.0001	0.0003	0.0003	0.0005	0.0005	0.0003	0.0002	5.7E-01
Arsenic	21	0.0006	0.0006	0.0008	0.0013	0.0014	0.0029	0.0033	0.0013	0.0007	5.6E-01
Barium	21	0.034	0.035	0.037	0.041	0.045	0.056	0.072	0.043	0.009	2.1E-01
Beryllium	21	0.0001	0.0001	0.0001	0.0001	0.0005	0.0010	0.0010	0.0004	0.0004	1.0E+00
Bismuth	14	0.00025	0.00025	0.00025	0.00025	0.00025	0.10000	0.10000	0.02163	0.04248	2.0E+00
Boron	21	0.050	0.050	0.050	0.094	0.100	0.113	0.116	0.079	0.027	3.4E-01
Cadmium	21	0.00002	0.00002	0.00002	0.00003	0.00003	0.00020	0.00021	0.00005	0.00006	1.2E+00
Calcium	20	70	70	85	86	92	95	97	87	7	8.1E-02
Chromium	21	0.000	0.000	0.000	0.001	0.001	0.006	0.010	0.002	0.002	1.6E+00
Cobalt	21	0.0001	0.0001	0.0001	0.0002	0.0003	0.0009	0.0022	0.0003	0.0005	1.5E+00
Copper	21	0.001	0.001	0.002	0.003	0.005	0.023	0.030	0.006	0.007	1.3E+00
Iron	21	0.38	0.50	0.70	1.03	2.08	3.15	8.88	1.64	1.82	1.1E+00
Lead	21	0.00003	0.00003	0.00003	0.00007	0.00025	0.00050	0.00050	0.00020	0.00020	1.0E+00
Lithium	21	0.0025	0.0025	0.0045	0.0050	0.0056	0.0059	0.0061	0.0048	0.0011	2.3E-01
Magnesium	20	44	45	46	47	48	49	50	47	1	3.0E-02
Manganese	21	0.06	0.08	0.11	0.15	0.21	0.25	0.25	0.16	0.06	3.7E-01
Mercury	21	0.000005	0.000005	0.000005	0.000005	0.000005	0.000010	0.000010	0.000006	0.000002	3.4E-01
Molybdenum	21	0.06	0.06	0.07	0.08	0.08	0.10	0.10	0.08	0.01	1.3E-01
Nickel	21	0.000	0.001	0.001	0.001	0.002	0.010	0.013	0.003	0.003	1.2E+00
Phosphorus	13	0.03	0.03	0.03	0.03	0.15	0.15	0.15	0.08	0.06	7.8E-01
Potassium	21	8	8	8	8	9	9	10	8	1	6.1E-02
Selenium	21	0.000	0.000	0.003	0.011	0.019	0.024	0.024	0.011	0.009	8.1E-01
Silicon	13	4.5	4.6	5.8	6.6	7.2	7.3	7.3	6.3	1.0	1.6E-01
Silver	21	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00003	0.00001	0.00001	6.9E-01
Sodium	21	39	39	41	42	44	47	49	43	3	5.9E-02
Strontium	14	0.59	0.59	0.61	0.62	0.66	0.71	0.74	0.64	0.04	6.6E-02
Sulphur	7	88	88	89	91	95	99	99	92	4	4.8E-02
Thallium	21	0.0000	0.0000	0.0000	0.0000	0.0001	0.0002	0.0002	0.0001	0.0001	1.1E+00
Tin	21	0.0001	0.0001	0.0001	0.0001	0.0003	0.0005	0.0005	0.0002	0.0002	9.2E-01
Titanium	20	0.005	0.005	0.005	0.005	0.005	0.024	0.119	0.012	0.025	2.2E+00
Uranium	21	0.0001	0.0002	0.0005	0.0010	0.0011	0.0015	0.0022	0.0009	0.0005	6.0E-01
Vanadium	21	0.001	0.001	0.001	0.001	0.002	0.009	0.011	0.002	0.003	1.5E+00
Zinc	21	0.0015	0.0015	0.0015	0.0025	0.0025	0.0098	0.0159	0.0033	0.0035	1.1E+00
Organics											
Carbon Organic (Dissolved)	18	1.0	1.2	1.5	1.6	1.9	5.7	16.3	2.6	3.5	1.3E+00
Carbon Organic (Total)	13	0.9	1.0	1.5	1.6	1.8	2.3	2.4	1.6	0.4	2.5E-01
Nitrogen Organic (Dissolved)	7	0.03	0.03	0.03	0.11	0.11	1.29	1.79	0.31	0.65	2.1E+00
Nitrogen Organic (Total)	6	0.03	0.04	0.08	0.10	0.11	0.12	0.12	0.09	0.04	3.9E-01

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.5 - AJGW07-S

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	19	605	614	652	674	807	1026	1255	751	171	2.3E-01
Oxygen Dissolved %	18	0	2	6	10	21	38	56	15	14	9.4E-01
Oxygen Dissolved	19	0.0	0.3	0.6	1.4	2.7	10.0	41.6	3.8	9.3	2.4E+00
pH (unitless)	18	7.4	7.4	7.6	7.8	7.9	8.7	8.7	7.8	0.4	4.8E-02
Redox Potential mV	15	-132	-112	-62	-13	54	249	609	26	175	6.8E+00
Salinity ppt	9	0.42	0.43	0.45	0.46	0.47	0.50	0.50	0.46	0.02	5.0E-02
Specific Conductivity µS/cm	18	637	654	894	927	939	1106	1763	929	232	2.5E-01
Temperature °C	19	8.2	9.0	9.5	10.3	10.9	12.6	13.9	10.4	1.4	1.3E-01
Total Dissolved Solids	11	13	279	589	600	606	21555	42500	4351	12654	2.9E+00
Turbidity NTU	11	1.0	1.3	5.1	6.4	10.3	42.0	48.0	12.5	15.1	1.2E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	14	0.5	0.5	2.7	3.2	4.5	5.4	5.9	3.3	1.6	5.0E-01
Alkalinity (Total as CaCO3)	20	230	240	256	265	270	286	293	263	14	5.3E-02
Bicarbonate Alkalinity	19	230	239	256	265	269	287	293	263	15	5.6E-02
Carbonate Alkalinity	19	0.5	0.5	1.0	1.0	1.0	8.0	8.7	1.7	2.3	1.4E+00
Color TCU	16	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	-	-
Hardness as CaCO3 (Dissolved)	20	409	424	430	438	442	455	463	437	12	2.8E-02
Hydroxide Alkalinity	19	0.5	0.5	0.8	1.0	1.0	1.0	1.0	0.9	0.2	2.6E-01
pH (unitless)	20	7.9	8.0	8.1	8.2	8.3	8.3	8.3	8.2	0.1	1.5E-02
Specific Conductivity µS/cm	20	879	881	897	907	916	933	934	906	16	1.7E-02
Total Dissolved Solids	20	590	607	632	639	645	650	650	635	16	2.5E-02
Total Suspended Solids	18	2	3	3	6	13	115	247	28	59	2.1E+00
Turbidity NTU	17	0	1	1	6	10	46	54	12	17	1.4E+00
Dissolved Anions											
Bromide	20	0.03	0.03	0.13	0.25	0.25	0.27	0.65	0.21	0.14	6.5E-01
Chloride	20	3	3	3	5	6	10	15	5	3	5.5E-01
Fluoride	20	0.10	0.10	0.18	0.20	0.22	0.54	3.82	0.38	0.81	2.1E+00
Sulphate	20	246	247	252	256	261	265	281	257	8	3.1E-02
Nutrients											
Ammonia (Total)	19	0.003	0.003	0.003	0.003	0.007	0.010	0.010	0.005	0.003	7.1E-01
Nitrate (as N)	20	0	0	0	0	0	0	0	0	0	6.3E-01
Nitrite (as N)	20	0.001	0.001	0.003	0.005	0.005	0.010	0.012	0.005	0.003	6.1E-01
Nitrogen (Dissolved)	6	0.05	0.05	0.05	0.07	0.09	0.15	0.17	0.08	0.05	5.6E-01
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	18	0.03	0.05	0.06	0.07	0.08	0.10	0.10	0.07	0.02	2.7E-01
Orthophosphate (Dissolved)	16	0.017	0.017	0.025	0.029	0.030	0.036	0.037	0.028	0.006	2.2E-01
Phosphorus - Dissolved	13	0.02	0.02	0.03	0.03	0.03	0.04	0.04	0.03	0.00	1.5E-01
Phosphorus - Total	20	0.029	0.032	0.034	0.038	0.048	0.107	0.282	0.057	0.056	9.9E-01
Cyanide										-	
Cyanide (Free)	19	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	19	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (WAD)	19	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	20	0.0012	0.0013	0.0015	0.0025	0.0050	0.0086	0.0778	0.0067	0.0168	2.5E+00
Antimony	20	0.00022	0.00022	0.00024	0.00025	0.00050	0.00050	0.00050	0.00032	0.00012	3.8E-01
Arsenic	20	0.0024	0.0028	0.0039	0.0043	0.0047	0.0048	0.0048	0.0042	0.0007	1.6E-01
Barium	20	0.033	0.035	0.036	0.039	0.043	0.054	0.085	0.042	0.011	2.6E-01
Beryllium	20	0.0001	0.0001	0.0001	0.0003	0.0010	0.0010	0.0010	0.0004	0.0004	1.0E+00
Bismuth	13	0.00025	0.00025	0.00025	0.00025	0.00025	0.10000	0.10000	0.02327	0.04374	1.9E+00
Boron	20	0.050	0.050	0.050	0.055	0.066	0.071	0.076	0.058	0.009	1.6E-01
Cadmium	20	0.000009	0.000017	0.000017	0.000025	0.000026	0.000203	0.000255	0.000044	0.000064	1.5E+00
Calcium	19	89	90	92	93	94	100	105	94	4	3.9E-02
Chromium	20	0.0001	0.0001	0.0002	0.0004	0.0010	0.0012	0.0020	0.0006	0.0005	8.4E-01
Cobalt	20	0.00005	0.00005	0.00005	0.00010	0.00030	0.00118	0.00133	0.00029	0.00041	1.4E+00
Copper	19	0.0003	0.0009	0.0013	0.0018	0.0022	0.0027	0.0027	0.0018	0.0006	3.6E-01
Iron	20	0.005	0.005	0.005	0.015	0.015	0.062	0.227	0.024	0.049	2.0E+00
Lead	20	0.00003	0.00003	0.00003	0.00014	0.00050	0.00050	0.00050	0.00021	0.00021	1.0E+00
Lithium	20	0.0025	0.0025	0.0036	0.0041	0.0050	0.0050	0.0050	0.0040	0.0009	2.3E-01
Magnesium	19	48	48	49	50	50	52	52	50	1	2.6E-02
Manganese	20	0.009	0.010	0.022	0.046	0.062	0.263	0.368	0.077	0.096	1.3E+00
Mercury	20	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000100	0.0000100	0.0000060	0.0000021	3.4E-01
Molybdenum	20	0.098	0.106	0.121	0.128	0.135	0.141	0.145	0.125	0.012	9.9E-02
Nickel	20	0.0003	0.0003	0.0003	0.0006	0.0010	0.0024	0.0040	0.0008	0.0009	1.1E+00
Phosphorus	12	0.03	0.03	0.03	0.09	0.15	0.15	0.15	0.09	0.07	7.5E-01
Potassium	20	7	7	8	8	8	8	9	8	0	5.1E-02
Selenium	20	0.018	0.018	0.023	0.025	0.028	0.033	0.040	0.026	0.005	2.0E-01
Silicon	12	7.2	7.2	7.3	7.4	7.5	7.6	7.7	7.4	0.1	2.0E-02
Silver	20	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00002	0.00001	0.00001	6.4E-01
Sodium	20	35	40	41	43	44	46	47	43	3	6.0E-02
Strontium	13	0.67	0.67	0.69	0.70	0.72	0.73	0.73	0.70	0.02	2.7E-02
Sulphur	6	77	77	78	80	81	85	86	80	3	4.0E-02
Thallium	20	0.00001	0.00001	0.00001	0.00005	0.00020	0.00020	0.00020	0.00008	0.00009	1.1E+00
Tin	20	0.0001	0.0001	0.0001	0.0002	0.0005	0.0005	0.0005	0.0002	0.0002	8.9E-01
Titanium	19	0.0050	0.0050	0.0050	0.0050	0.0050	0.0130	0.0130	0.0058	0.0025	4.3E-01
Uranium	20	0.0024	0.0029	0.0034	0.0039	0.0040	0.0042	0.0044	0.0037	0.0005	1.3E-01
Vanadium	20	0.0023	0.0025	0.0029	0.0030	0.0031	0.0033	0.0033	0.0029	0.0003	8.9E-02
Zinc	20	0.0005	0.0005	0.0011	0.0025	0.0025	0.0044	0.0106	0.0024	0.0022	9.1E-01
Total Metals											
Aluminum	20	0.0	0.0	0.0	0.2	0.6	2.2	2.6	0.5	0.8	1.5E+00
Antimony	20	0.0002	0.0002	0.0003	0.0003	0.0005	0.0005	0.0005	0.0003	0.0001	3.5E-01
Arsenic	20	0.0030	0.0032	0.0039	0.0044	0.0047	0.0049	0.0056	0.0043	0.0006	1.5E-01
Barium	20	0.033	0.035	0.038	0.042	0.050	0.071	0.093	0.047	0.015	3.1E-01
Beryllium	20	0.0001	0.0001	0.0001	0.0003	0.0010	0.0010	0.0010	0.0004	0.0004	1.0E+00
Bismuth	13	0.00025	0.00025	0.00025	0.00025	0.00025	0.10000	0.10000	0.02327	0.04374	1.9E+00
Boron	20	0.050	0.050	0.050	0.057	0.073	0.080	0.083	0.062	0.013	2.1E-01
Cadmium	20	0.00001	0.00002	0.00003	0.00003	0.00004	0.00020	0.00026	0.00005	0.00006	1.2E+00
Calcium	19	89	89	91	92	96	103	103	94	4	4.6E-02
Chromium	20	0.000	0.000	0.000	0.001	0.002	0.007	0.012	0.002	0.003	1.4E+00
Cobalt	20	0.0001	0.0001	0.0001	0.0003	0.0009	0.0025	0.0041	0.0008	0.0011	1.4E+00
Copper	20	0.002	0.002	0.003	0.005	0.010	0.031	0.040	0.010	0.011	1.1E+00
Iron	20	0.01	0.01	0.06	0.24	0.68	3.32	4.02	0.70	1.13	1.6E+00
Lead	20	0.00003	0.00003	0.00003	0.00018	0.00050	0.00051	0.00060	0.00024	0.00022	9.5E-01
Lithium	20	0.0025	0.0025	0.0038	0.0044	0.0050	0.0050	0.0057	0.0042	0.0009	2.2E-01
Magnesium	19	47	47	49	49	51	52	52	49	1	2.8E-02
Manganese	20	0.02	0.02	0.05	0.09	0.13	0.30	0.30	0.11	0.09	7.7E-01
Mercury	20	0.000005	0.000005	0.000005	0.000005	0.000005	0.000010	0.000010	0.000006	0.000002	3.4E-01
Molybdenum	20	0.10	0.11	0.12	0.13	0.14	0.15	0.16	0.13	0.01	1.1E-01
Nickel	20	0.000	0.000	0.001	0.001	0.003	0.008	0.012	0.003	0.003	1.3E+00
Phosphorus	12	0.03	0.03	0.03	0.10	0.15	0.15	0.15	0.09	0.06	7.1E-01
Potassium	20	7	7	7	8	8	9	9	8	0	5.7E-02
Selenium	20	0.017	0.017	0.022	0.022	0.025	0.029	0.029	0.023	0.003	1.4E-01
Silicon	12	7.2	7.3	7.5	7.8	8.3	9.7	11.2	8.1	1.1	1.3E-01
Silver	20	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00005	0.00001	0.00001	8.4E-01
Sodium	20	35	40	42	43	45	46	47	43	3	6.1E-02
Strontium	13	0.67	0.68	0.70	0.72	0.73	0.75	0.75	0.71	0.02	3.4E-02
Sulphur	6	80	80	81	81	83	87	89	83	3	3.8E-02
Thallium	20	0.0000	0.0000	0.0000	0.0001	0.0002	0.0002	0.0002	0.0001	0.0001	1.0E+00
Tin	20	0.0001	0.0001	0.0001	0.0002	0.0005	0.0005	0.0005	0.0002	0.0002	8.9E-01
Titanium	19	0.005	0.005	0.005	0.024	0.047	0.189	0.228	0.044	0.064	1.5E+00
Uranium	20	0.0025	0.0029	0.0035	0.0040	0.0041	0.0044	0.0045	0.0038	0.0005	1.4E-01
Vanadium	20	0.003	0.003	0.003	0.004	0.005	0.013	0.015	0.005	0.003	6.3E-01
Zinc	20	0.0015	0.0015	0.0015	0.0025	0.0039	0.0091	0.0122	0.0036	0.0031	8.6E-01
Organics											
Carbon Organic (Dissolved)	17	1.0	1.3	1.7	1.8	2.0	2.2	2.3	1.8	0.3	1.7E-01
Carbon Organic (Total)	12	1.1	1.2	1.3	1.5	1.6	1.8	1.9	1.5	0.2	1.6E-01
Nitrogen Organic (Dissolved)	6	0.03	0.03	0.03	0.06	0.08	0.09	0.09	0.06	0.03	4.9E-01
Nitrogen Organic (Total)	6	0.03	0.04	0.06	0.08	0.09	0.10	0.11	0.07	0.03	3.7E-01

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.6 - BGC13-001D

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	5	677	681	699	719	719	992	1060	775	160	2.1E-01
Oxygen Dissolved %	5	4	4	4	4	16	62	73	20	30	1.5E+00
Oxygen Dissolved	5	0.5	0.5	0.5	0.5	1.9	7.3	8.7	2.4	3.5	1.5E+00
pH (unitless)	5	6.6	6.6	7.0	7.4	7.5	7.6	7.7	7.2	0.5	6.4E-02
Redox Potential mV	5	-39	-38	-31	11	23	65	76	8	47	5.9E+00
Salinity ppt	5	0.48	0.48	0.49	0.52	0.52	0.53	0.53	0.51	0.02	4.3E-02
Specific Conductivity µS/cm	5	716	765	960	994	1047	1051	1052	954	138	1.5E-01
Temperature °C	5	8.0	8.1	8.4	8.6	9.5	9.5	9.5	8.8	0.7	7.4E-02
Total Dissolved Solids	5	624	628	646	681	684	688	689	665	28	4.3E-02
Turbidity NTU	5	-3.4	-2.7	0.0	0.0	4.8	6.2	6.5	1.6	4.0	2.5E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	0	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	5	424	427	437	449	451	456	457	444	13	3.0E-02
Bicarbonate Alkalinity	5	424	427	437	449	451	456	457	444	13	3.0E-02
Carbonate Alkalinity	5	0.5	0.5	0.5	0.5	1.0	1.0	1.0	0.7	0.3	3.9E-01
Color TCU	0	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	5	404	408	422	429	439	444	445	428	16	3.7E-02
Hydroxide Alkalinity	5	0.5	0.5	0.5	0.5	1.0	1.0	1.0	0.7	0.3	3.9E-01
pH (unitless)	5	8.0	8.0	8.2	8.2	8.2	8.3	8.3	8.2	0.1	1.3E-02
Specific Conductivity µS/cm	5	1010	1010	1010	1020	1030	1046	1050	1024	17	1.6E-02
Total Dissolved Solids	5	604	606	614	618	635	649	653	625	19	3.1E-02
Total Suspended Solids	4	2	2	2	2	2	2	2	2	-	-
Turbidity NTU	4	0	0	1	1	1	1	1	1	0	2.3E-01
Dissolved Anions											
Bromide	5	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	-	-
Chloride	5	3	3	3	3	3	3	3	3	-	-
Fluoride	5	0.22	0.22	0.22	0.23	0.26	0.32	0.34	0.25	0.05	2.0E-01
Sulphate	5	142	143	147	150	154	179	185	156	17	1.1E-01
Nutrients											
Ammonia (Total)	5	0.052	0.053	0.054	0.055	0.063	0.073	0.076	0.060	0.010	1.6E-01
Nitrate (as N)	5	0	0	0	0	0	0	0	0	0	5.8E-02
Nitrite (as N)	5	0.005	0.005	0.005	0.014	0.015	0.020	0.021	0.012	0.007	5.8E-01
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	5	0.14	0.15	0.18	0.19	0.19	0.24	0.25	0.19	0.04	2.1E-01
Orthophosphate (Dissolved)	5	0.006	0.008	0.015	0.015	0.017	0.017	0.018	0.014	0.005	3.4E-01
Phosphorus - Dissolved	5	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.00	1.5E-01
Phosphorus - Total	5	0.007	0.009	0.018	0.020	0.022	0.024	0.025	0.018	0.007	3.7E-01
Cyanide										-	
Cyanide (Free)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (WAD)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	5	0.0030	0.0030	0.0030	0.0030	0.0038	0.0049	0.0052	0.0036	0.0010	2.7E-01
Antimony	5	0.00014	0.00014	0.00015	0.00020	0.00022	0.00024	0.00025	0.00019	0.00005	2.4E-01
Arsenic	5	0.0004	0.0004	0.0005	0.0006	0.0007	0.0007	0.0007	0.0006	0.0001	1.9E-01
Barium	5	0.029	0.030	0.030	0.030	0.031	0.032	0.033	0.031	0.001	4.5E-02
Beryllium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	5	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	5	0.106	0.108	0.114	0.116	0.122	0.122	0.122	0.116	0.007	5.7E-02
Cadmium	5	0.000017	0.000018	0.000023	0.000023	0.000025	0.000063	0.000072	0.000032	0.000023	7.1E-01
Calcium	5	57	57	58	59	60	61	61	59	2	2.6E-02
Chromium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0004	0.0005	0.0001	0.0002	1.4E+00
Cobalt	5	0.00105	0.00107	0.00117	0.00121	0.00125	0.00131	0.00132	0.00120	0.00010	8.4E-02
Copper	5	0.0004	0.0004	0.0004	0.0005	0.0006	0.0019	0.0022	0.0008	0.0008	9.4E-01
Iron	5	0.005	0.006	0.012	0.038	0.051	0.056	0.057	0.033	0.023	7.1E-01
Lead	5	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	-	-
Lithium	5	0.0141	0.0142	0.0147	0.0148	0.0150	0.0156	0.0158	0.0149	0.0006	4.1E-02
Magnesium	5	64	64	67	69	70	71	71	68	3	4.5E-02
Manganese	5	0.208	0.226	0.296	0.313	0.334	0.343	0.345	0.299	0.054	1.8E-01
Mercury	5	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	-	-
Molybdenum	5	0.008	0.008	0.009	0.010	0.010	0.010	0.010	0.009	0.001	8.2E-02
Nickel	5	0.0018	0.0019	0.0023	0.0026	0.0028	0.0038	0.0041	0.0027	0.0008	3.0E-01
Phosphorus	5	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	-	-
Potassium	5	7	7	7	7	8	8	8	7	0	6.5E-02
Selenium	5	0.003	0.003	0.003	0.003	0.003	0.004	0.004	0.003	0.000	1.3E-01
Silicon	5	4.7	4.7	4.7	4.7	4.7	4.8	4.8	4.7	0.1	1.3E-02
Silver	5	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	5	77	78	81	81	85	97	100	85	9	1.0E-01
Strontium	5	1.13	1.13	1.13	1.18	1.26	1.29	1.30	1.20	0.08	6.4E-02
Sulphur	5	48	48	48	49	51	56	57	51	4	7.8E-02
Thallium	5	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00000	1.0E-01
Tin	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0001	0.0001	7.3E-01
Titanium	5	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	-	-
Uranium	5	0.0025	0.0026	0.0030	0.0031	0.0033	0.0033	0.0034	0.0030	0.0003	1.1E-01
Vanadium	5	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	-	-
Zinc	5	0.0016	0.0023	0.0050	0.0055	0.0061	0.0068	0.0070	0.0050	0.0021	4.1E-01
Total Metals											
Aluminum	5	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	1.1E+00
Antimony	5	0.0002	0.0002	0.0002	0.0002	0.0002	0.0003	0.0003	0.0002	0.0000	2.1E-01
Arsenic	5	0.0003	0.0003	0.0005	0.0006	0.0007	0.0008	0.0008	0.0006	0.0002	3.9E-01
Barium	5	0.029	0.030	0.030	0.031	0.031	0.034	0.035	0.031	0.002	7.1E-02
Beryllium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	5	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	5	0.119	0.120	0.126	0.127	0.129	0.131	0.131	0.126	0.005	3.6E-02
Cadmium	5	0.00002	0.00002	0.00003	0.00003	0.00003	0.00006	0.00007	0.00003	0.00002	6.4E-01
Calcium	5	57	57	57	58	59	61	62	58	2	3.5E-02
Chromium	5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	8.2E-01
Cobalt	5	0.0011	0.0011	0.0013	0.0013	0.0013	0.0013	0.0014	0.0012	0.0001	9.4E-02
Copper	5	0.001	0.001	0.001	0.001	0.001	0.003	0.003	0.001	0.001	7.7E-01
Iron	5	0.03	0.03	0.06	0.07	0.09	0.13	0.15	0.08	0.04	5.6E-01
Lead	5	0.00003	0.00003	0.00003	0.00003	0.00003	0.00005	0.00005	0.00003	0.00001	3.7E-01
Lithium	5	0.0145	0.0145	0.0147	0.0148	0.0160	0.0160	0.0160	0.0152	0.0007	4.9E-02
Magnesium	5	65	65	67	68	69	70	70	68	2	2.8E-02
Manganese	5	0.20	0.22	0.30	0.33	0.35	0.36	0.36	0.31	0.06	2.1E-01
Mercury	5	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	-	-
Molybdenum	5	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	4.3E-02
Nickel	5	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.003	0.001	2.7E-01
Phosphorus	5	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	-	-
Potassium	5	7	7	7	7	7	8	8	7	0	5.4E-02
Selenium	5	0.002	0.002	0.003	0.003	0.003	0.003	0.003	0.003	0.000	1.1E-01
Silicon	5	4.7	4.7	4.8	4.8	4.9	5.1	5.1	4.9	0.2	3.5E-02
Silver	5	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00000	4.3E-01
Sodium	5	77	78	83	83	86	98	101	86	9	1.1E-01
Strontium	5	1.15	1.17	1.23	1.24	1.28	1.30	1.30	1.24	0.06	4.7E-02
Sulphur	5	49	49	50	51	52	59	61	53	5	9.3E-02
Thallium	5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	6.5E-02
Tin	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003	0.0004	0.0001	0.0001	1.1E+00
Titanium	5	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	-	-
Uranium	5	0.0030	0.0030	0.0031	0.0032	0.0035	0.0036	0.0036	0.0033	0.0003	8.0E-02
Vanadium	5	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	-	-
Zinc	5	0.0015	0.0020	0.0038	0.0067	0.0083	0.0086	0.0087	0.0058	0.0031	5.3E-01
Organics											
Carbon Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Carbon Organic (Total)	5	1.1	1.1	1.3	1.5	1.5	2.1	2.2	1.5	0.4	2.7E-01
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.7 - BGC14-002D

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	5	822	824	832	842	862	1210	1297	931	205	2.2E-01
Oxygen Dissolved %	5	0	0	1	1	2	26	33	7	14	1.9E+00
Oxygen Dissolved	5	0.0	0.0	0.1	0.1	0.3	3.1	3.8	0.9	1.6	1.9E+00
pH (unitless)	5	7.1	7.1	7.3	7.4	7.7	9.0	9.3	7.8	0.9	1.2E-01
Redox Potential mV	5	-158	-140	-69	-45	-45	34	54	-53	75	-1.4E+00
Salinity ppt	5	0.59	0.59	0.59	0.60	0.61	0.64	0.65	0.61	0.02	4.1E-02
Specific Conductivity µS/cm	5	889	945	1169	1189	1193	1208	1212	1130	136	1.2E-01
Temperature °C	5	8.5	8.5	8.8	9.1	9.8	10.4	10.6	9.4	0.9	9.2E-02
Total Dissolved Solids	5	761	763	772	773	788	832	843	787	33	4.1E-02
Turbidity NTU	5	-3.2	-3.0	-2.4	0.0	0.0	2.3	2.9	-0.5	2.4	-4.4E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	1	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	-	-
Alkalinity (Total as CaCO3)	5	287	287	287	288	290	291	291	289	2	6.3E-03
Bicarbonate Alkalinity	5	287	287	287	288	290	291	291	289	2	6.3E-03
Carbonate Alkalinity	5	0.5	0.5	0.5	1.0	1.0	1.0	1.0	0.8	0.3	3.4E-01
Color TCU	2	2.5	2.7	3.3	4.2	5.0	5.6	5.8	4.2	2.3	5.6E-01
Hardness as CaCO3 (Dissolved)	5	385	387	393	399	399	407	409	397	9	2.2E-02
Hydroxide Alkalinity	5	0.5	0.5	0.5	1.0	1.0	1.0	1.0	0.8	0.3	3.4E-01
pH (unitless)	5	8.0	8.0	8.1	8.1	8.2	8.3	8.3	8.1	0.1	1.2E-02
Specific Conductivity µS/cm	5	1230	1230	1230	1240	1260	1268	1270	1246	18	1.5E-02
Total Dissolved Solids	5	795	805	843	854	856	861	862	842	27	3.2E-02
Total Suspended Solids	5	2	2	2	3	3	4	4	3	1	4.2E-01
Turbidity NTU	5	1	1	1	1	1	2	2	1	1	6.2E-01
Dissolved Anions											
Bromide	5	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	-	-
Chloride	5	5	5	6	6	6	7	7	6	1	1.1E-01
Fluoride	5	0.31	0.31	0.31	0.34	0.36	0.42	0.43	0.35	0.05	1.4E-01
Sulphate	5	399	400	405	416	418	419	419	411	9	2.2E-02
Nutrients											
Ammonia (Total)	5	0.199	0.199	0.199	0.199	0.205	0.210	0.211	0.203	0.005	2.6E-02
Nitrate (as N)	5	0	0	0	0	0	0	0	0	-	-
Nitrite (as N)	5	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	-	-
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	5	0.35	0.35	0.35	0.36	0.37	0.38	0.38	0.36	0.02	4.2E-02
Orthophosphate (Dissolved)	5	0.013	0.014	0.021	0.021	0.022	0.025	0.026	0.021	0.005	2.3E-01
Phosphorus - Dissolved	5	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.02	0.00	1.1E-01
Phosphorus - Total	5	0.014	0.016	0.026	0.035	0.041	0.044	0.045	0.032	0.012	3.8E-01
Cyanide										-	
Cyanide (Free)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (WAD)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	5	0.0029	0.0030	0.0034	0.0042	0.0043	0.0045	0.0045	0.0039	0.0007	1.8E-01
Antimony	5	0.00005	0.00007	0.00017	0.00022	0.00024	0.00030	0.00031	0.00020	0.00010	4.9E-01
Arsenic	5	0.0008	0.0009	0.0014	0.0023	0.0024	0.0025	0.0025	0.0019	0.0008	4.1E-01
Barium	5	0.022	0.023	0.024	0.024	0.025	0.027	0.027	0.024	0.002	7.0E-02
Beryllium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	5	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	5	0.482	0.484	0.492	0.504	0.528	0.570	0.580	0.517	0.039	7.6E-02
Cadmium	5	0.000005	0.000005	0.000005	0.000010	0.000021	0.000032	0.000035	0.000015	0.000013	8.5E-01
Calcium	5	59	60	60	63	63	64	64	62	2	3.5E-02
Chromium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Cobalt	5	0.00170	0.00175	0.00194	0.00217	0.00244	0.00276	0.00284	0.00222	0.00044	2.0E-01
Copper	5	0.0001	0.0001	0.0001	0.0001	0.0003	0.0006	0.0006	0.0003	0.0002	9.4E-01
Iron	5	0.005	0.009	0.023	0.125	0.142	0.197	0.211	0.101	0.086	8.5E-01
Lead	5	0.00003	0.00003	0.00003	0.00003	0.00003	0.00007	0.00008	0.00004	0.00002	6.5E-01
Lithium	5	0.0066	0.0067	0.0073	0.0073	0.0083	0.0092	0.0095	0.0078	0.0011	1.4E-01
Magnesium	5	55	56	59	59	60	61	61	59	2	3.7E-02
Manganese	5	0.408	0.461	0.672	0.823	0.940	1.060	1.090	0.787	0.261	3.3E-01
Mercury	5	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	-	-
Molybdenum	5	0.012	0.012	0.012	0.012	0.012	0.012	0.013	0.012	0.000	3.3E-02
Nickel	5	0.0033	0.0034	0.0041	0.0051	0.0051	0.0052	0.0052	0.0046	0.0008	1.8E-01
Phosphorus	5	0.03	0.03	0.03	0.03	0.03	0.06	0.07	0.03	0.02	6.1E-01
Potassium	5	8	8	9	9	9	9	10	9	0	5.2E-02
Selenium	5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.1E-01
Silicon	5	6.1	6.1	6.2	6.2	6.3	6.3	6.3	6.2	0.1	1.6E-02
Silver	5	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	5	131	131	132	136	148	148	148	139	8	6.1E-02
Strontium	5	1.33	1.33	1.34	1.36	1.41	1.50	1.52	1.39	0.08	5.6E-02
Sulphur	5	129	130	132	135	135	136	136	133	3	2.2E-02
Thallium	5	0.00002	0.00002	0.00003	0.00003	0.00003	0.00004	0.00004	0.00003	0.00001	3.1E-01
Tin	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0001	0.0001	6.3E-01
Titanium	5	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	-	-
Uranium	5	0.0026	0.0026	0.0027	0.0027	0.0027	0.0031	0.0032	0.0028	0.0002	8.4E-02
Vanadium	5	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	-	-
Zinc	5	0.0030	0.0030	0.0032	0.0042	0.0050	0.0146	0.0170	0.0065	0.0059	9.2E-01
Total Metals											
Aluminum	5	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	7.0E-01
Antimony	5	0.0001	0.0001	0.0002	0.0003	0.0003	0.0003	0.0004	0.0002	0.0001	3.6E-01
Arsenic	5	0.0008	0.0010	0.0015	0.0024	0.0024	0.0025	0.0025	0.0019	0.0007	3.8E-01
Barium	5	0.023	0.024	0.024	0.025	0.027	0.028	0.029	0.026	0.002	8.4E-02
Beryllium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	5	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	5	0.464	0.467	0.478	0.534	0.586	0.608	0.614	0.535	0.065	1.2E-01
Cadmium	5	0.00002	0.00002	0.00002	0.00003	0.00003	0.00004	0.00004	0.00003	0.00001	4.2E-01
Calcium	5	60	60	60	62	63	64	64	62	2	3.1E-02
Chromium	5	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	5.9E-01
Cobalt	5	0.0019	0.0020	0.0021	0.0023	0.0026	0.0029	0.0030	0.0024	0.0004	1.7E-01
Copper	5	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.000	3.8E-01
Iron	5	0.06	0.07	0.13	0.15	0.18	0.23	0.25	0.15	0.07	4.6E-01
Lead	5	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	-	-
Lithium	5	0.0055	0.0059	0.0073	0.0077	0.0084	0.0095	0.0097	0.0077	0.0015	2.0E-01
Magnesium	5	53	54	58	59	61	63	63	59	4	6.1E-02
Manganese	5	0.43	0.49	0.72	0.85	0.95	1.08	1.11	0.81	0.26	3.2E-01
Mercury	5	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	-	-
Molybdenum	5	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	5.2E-02
Nickel	5	0.004	0.004	0.004	0.006	0.006	0.006	0.006	0.005	0.001	2.0E-01
Phosphorus	5	0.03	0.03	0.03	0.03	0.05	0.06	0.06	0.04	0.02	4.4E-01
Potassium	5	8	8	9	9	9	10	10	9	1	6.6E-02
Selenium	5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.8E-01
Silicon	5	6.0	6.1	6.3	6.4	6.4	6.4	6.4	6.3	0.2	2.6E-02
Silver	5	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	5	132	132	134	141	151	155	156	143	10	7.3E-02
Strontium	5	1.32	1.32	1.33	1.42	1.48	1.54	1.55	1.42	0.10	6.9E-02
Sulphur	5	128	130	136	139	141	142	142	137	6	4.1E-02
Thallium	5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.8E-01
Tin	5	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0000	1.8E-01
Titanium	5	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	-	-
Uranium	5	0.0028	0.0028	0.0029	0.0029	0.0030	0.0032	0.0033	0.0029	0.0002	6.8E-02
Vanadium	5	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	-	-
Zinc	5	0.0015	0.0015	0.0015	0.0078	0.0104	0.0171	0.0188	0.0080	0.0072	9.0E-01
Organics											
Carbon Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Carbon Organic (Total)	5	2.4	2.4	2.6	2.8	2.8	3.0	3.0	2.7	0.2	8.9E-02
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.8 - BGC14-002S

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	5	873	874	876	920	943	1324	1419	1006	233	2.3E-01
Oxygen Dissolved %	5	0	0	3	3	10	38	45	12	19	1.6E+00
Oxygen Dissolved	5	0.0	0.0	0.2	0.3	1.0	4.4	5.3	1.4	2.2	1.6E+00
pH (unitless)	5	7.3	7.3	7.4	7.5	7.6	8.8	9.1	7.8	0.7	9.6E-02
Redox Potential mV	5	-155	-144	-98	-84	-83	-47	-38	-92	42	-4.6E-01
Salinity ppt	5	0.60	0.60	0.60	0.62	0.62	0.70	0.72	0.63	0.05	7.9E-02
Specific Conductivity µS/cm	5	965	1012	1200	1209	1240	1240	1240	1171	116	9.9E-02
Temperature °C	5	8.4	8.6	9.5	9.5	12.7	13.7	13.9	10.8	2.4	2.2E-01
Total Dissolved Solids	5	780	780	781	805	806	900	923	819	59	7.3E-02
Turbidity NTU	5	-3.1	-3.0	-2.6	0.0	0.0	1.4	1.8	-0.8	2.0	-2.6E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	1	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	-	-
Alkalinity (Total as CaCO3)	5	260	260	262	263	266	276	279	266	8	2.9E-02
Bicarbonate Alkalinity	5	259	260	262	263	266	276	279	266	8	2.9E-02
Carbonate Alkalinity	5	0.5	0.6	1.0	1.0	1.0	1.0	1.0	0.9	0.2	2.5E-01
Color TCU	2	6.2	6.3	6.8	7.4	8.0	8.5	8.6	7.4	1.7	2.3E-01
Hardness as CaCO3 (Dissolved)	5	437	438	443	445	459	501	512	459	31	6.7E-02
Hydroxide Alkalinity	5	0.5	0.6	1.0	1.0	1.0	1.0	1.0	0.9	0.2	2.5E-01
pH (unitless)	5	8.0	8.0	8.1	8.1	8.1	8.2	8.3	8.1	0.1	1.2E-02
Specific Conductivity µS/cm	5	1240	1244	1260	1270	1270	1318	1330	1274	34	2.6E-02
Total Dissolved Solids	5	852	859	887	921	929	956	963	910	42	4.7E-02
Total Suspended Solids	5	2	2	2	2	2	3	4	2	1	4.9E-01
Turbidity NTU	5	1	1	1	2	2	2	2	2	0	3.3E-01
Dissolved Anions											
Bromide	5	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	-	-
Chloride	5	7	7	7	8	9	9	9	8	1	1.4E-01
Fluoride	5	0.33	0.33	0.33	0.34	0.36	0.42	0.44	0.36	0.05	1.3E-01
Sulphate	5	448	450	457	468	484	492	494	470	19	4.0E-02
Nutrients											
Ammonia (Total)	5	0.125	0.126	0.128	0.139	0.145	0.146	0.146	0.137	0.010	7.1E-02
Nitrate (as N)	5	0	0	0	0	0	0	0	0	-	-
Nitrite (as N)	5	0.005	0.005	0.005	0.005	0.005	0.026	0.031	0.010	0.012	1.1E+00
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	5	0.14	0.18	0.33	0.35	0.36	0.38	0.39	0.31	0.10	3.2E-01
Orthophosphate (Dissolved)	5	0.016	0.016	0.017	0.023	0.023	0.028	0.030	0.022	0.006	2.6E-01
Phosphorus - Dissolved	5	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.02	0.00	2.0E-01
Phosphorus - Total	5	0.019	0.023	0.036	0.066	0.068	0.070	0.070	0.052	0.023	4.4E-01
Cyanide										-	
Cyanide (Free)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (WAD)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	5	0.0054	0.0054	0.0054	0.0054	0.0059	0.0061	0.0062	0.0057	0.0004	6.6E-02
Antimony	5	0.00012	0.00013	0.00015	0.00016	0.00022	0.00024	0.00024	0.00018	0.00005	2.8E-01
Arsenic	5	0.0007	0.0008	0.0013	0.0025	0.0026	0.0028	0.0029	0.0020	0.0009	4.7E-01
Barium	5	0.019	0.019	0.020	0.021	0.022	0.024	0.024	0.021	0.002	8.8E-02
Beryllium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	5	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	5	0.367	0.373	0.395	0.396	0.398	0.430	0.438	0.399	0.025	6.4E-02
Cadmium	5	0.000010	0.000011	0.000013	0.000013	0.000018	0.000019	0.000019	0.000015	0.000004	2.6E-01
Calcium	5	68	68	68	73	74	84	87	74	8	1.0E-01
Chromium	5	0.0001	0.0001	0.0001	0.0001	0.0002	0.0003	0.0003	0.0001	0.0001	6.9E-01
Cobalt	5	0.00182	0.00188	0.00214	0.00226	0.00247	0.00270	0.00276	0.00229	0.00035	1.5E-01
Copper	5	0.0002	0.0002	0.0002	0.0003	0.0006	0.0006	0.0006	0.0004	0.0002	5.2E-01
Iron	5	0.065	0.074	0.111	0.335	0.363	0.432	0.449	0.265	0.167	6.3E-01
Lead	5	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	-	-
Lithium	5	0.0058	0.0058	0.0059	0.0059	0.0061	0.0062	0.0062	0.0060	0.0002	2.9E-02
Magnesium	5	63	63	65	67	67	71	72	67	3	4.9E-02
Manganese	5	0.731	0.781	0.981	1.030	1.140	1.276	1.310	1.038	0.213	2.1E-01
Mercury	5	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	-	-
Molybdenum	5	0.015	0.015	0.016	0.016	0.016	0.017	0.017	0.016	0.001	5.8E-02
Nickel	5	0.0034	0.0034	0.0035	0.0045	0.0047	0.0059	0.0062	0.0044	0.0011	2.5E-01
Phosphorus	5	0.03	0.03	0.05	0.07	0.08	0.12	0.13	0.07	0.04	5.7E-01
Potassium	5	13	13	13	13	14	14	14	14	1	4.9E-02
Selenium	5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.0E-01
Silicon	5	6.3	6.4	6.4	6.5	6.6	6.7	6.7	6.5	0.1	2.1E-02
Silver	5	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	5	116	117	121	122	126	128	128	123	5	3.8E-02
Strontium	5	1.19	1.20	1.25	1.28	1.32	1.38	1.39	1.29	0.08	5.8E-02
Sulphur	5	144	144	146	147	149	160	163	150	8	5.1E-02
Thallium	5	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00001	0.00000	1.6E-01
Tin	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0001	0.0001	8.7E-01
Titanium	5	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	-	-
Uranium	5	0.0026	0.0026	0.0026	0.0027	0.0031	0.0032	0.0032	0.0028	0.0003	1.0E-01
Vanadium	5	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	-	-
Zinc	5	0.0015	0.0016	0.0021	0.0074	0.0132	0.0483	0.0571	0.0163	0.0233	1.4E+00
Total Metals											
Aluminum	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5E-01
Antimony	5	0.0001	0.0001	0.0002	0.0002	0.0003	0.0003	0.0003	0.0002	0.0001	3.6E-01
Arsenic	5	0.0007	0.0009	0.0014	0.0025	0.0027	0.0029	0.0030	0.0021	0.0010	4.7E-01
Barium	5	0.020	0.020	0.020	0.020	0.022	0.025	0.025	0.021	0.002	1.1E-01
Beryllium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	5	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	5	0.372	0.377	0.398	0.423	0.430	0.444	0.448	0.414	0.030	7.2E-02
Cadmium	5	0.00001	0.00001	0.00001	0.00002	0.00003	0.00003	0.00003	0.00002	0.00001	4.0E-01
Calcium	5	67	67	68	70	74	84	86	73	8	1.1E-01
Chromium	5	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	6.1E-01
Cobalt	5	0.0019	0.0020	0.0023	0.0025	0.0027	0.0028	0.0029	0.0024	0.0004	1.5E-01
Copper	5	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.000	4.7E-01
Iron	5	0.13	0.13	0.15	0.39	0.42	0.45	0.46	0.31	0.16	5.1E-01
Lead	5	0.00003	0.00003	0.00003	0.00003	0.00003	0.00008	0.00010	0.00004	0.00003	8.2E-01
Lithium	5	0.0056	0.0057	0.0059	0.0060	0.0064	0.0064	0.0064	0.0061	0.0003	5.6E-02
Magnesium	5	62	63	64	65	67	70	71	66	3	5.0E-02
Manganese	5	0.77	0.83	1.07	1.08	1.18	1.32	1.36	1.09	0.22	2.0E-01
Mercury	5	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	-	-
Molybdenum	5	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.00	5.3E-02
Nickel	5	0.004	0.004	0.004	0.005	0.005	0.006	0.006	0.005	0.001	2.4E-01
Phosphorus	5	0.03	0.03	0.03	0.07	0.09	0.09	0.09	0.06	0.03	5.6E-01
Potassium	5	13	13	13	13	14	14	14	13	0	3.3E-02
Selenium	5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.5E-01
Silicon	5	6.3	6.4	6.5	6.6	6.7	6.7	6.7	6.6	0.2	2.3E-02
Silver	5	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	5	120	121	123	125	130	131	131	126	5	3.7E-02
Strontium	5	1.17	1.20	1.30	1.31	1.35	1.43	1.45	1.32	0.10	7.7E-02
Sulphur	5	144	145	149	149	153	166	169	153	10	6.3E-02
Thallium	5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.7E-01
Tin	5	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0003	0.0001	0.0001	8.5E-01
Titanium	5	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	-	-
Uranium	5	0.0027	0.0027	0.0027	0.0028	0.0032	0.0034	0.0034	0.0030	0.0003	1.1E-01
Vanadium	5	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	-	-
Zinc	5	0.0015	0.0015	0.0015	0.0087	0.0096	0.0481	0.0577	0.0158	0.0237	1.5E+00
Organics											
Carbon Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Carbon Organic (Total)	5	3.5	3.5	3.6	3.7	3.8	4.1	4.2	3.7	0.3	7.2E-02
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.9 - BGC14-003D

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	3	570	576	601	632	880	1078	1128	777	306	3.9E-01
Oxygen Dissolved %	3	1	1	2	2	4	5	6	3	2	8.7E-01
Oxygen Dissolved	3	0.0	0.0	0.0	0.1	0.2	0.2	0.3	0.1	0.1	1.2E+00
pH (unitless)	3	9.1	9.1	9.1	9.1	9.3	9.4	9.4	9.2	0.2	1.7E-02
Redox Potential mV	3	-88	-80	-47	-5	16	32	36	-19	63	-3.3E+00
Salinity ppt	3	0.00	0.04	0.20	0.40	0.41	0.42	0.42	0.27	0.24	8.7E-01
Specific Conductivity µS/cm	3	806	810	828	850	1219	1514	1588	1081	439	4.1E-01
Temperature °C	3	9.7	9.7	9.8	9.8	10.8	11.6	11.8	10.4	1.2	1.1E-01
Total Dissolved Solids	3	0	53	263	525	539	550	553	359	312	8.7E-01
Turbidity NTU	3	0.0	0.1	0.4	0.7	1.6	2.3	2.5	1.1	1.3	1.2E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	0	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	3	135	135	136	136	137	138	138	136	2	1.1E-02
Bicarbonate Alkalinity	3	94	95	96	99	104	109	110	101	8	8.1E-02
Carbonate Alkalinity	3	24.7	26.0	31.3	37.8	40.6	42.8	43.4	35.3	9.6	2.7E-01
Color TCU	0	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	3	20	20	21	22	22	22	22	21	1	4.6E-02
Hydroxide Alkalinity	3	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	-	-
pH (unitless)	3	8.9	8.9	8.9	8.9	8.9	9.0	9.0	8.9	0.1	6.2E-03
Specific Conductivity µS/cm	3	844	844	846	848	852	855	856	849	6	7.2E-03
Total Dissolved Solids	3	569	569	571	573	574	575	575	572	3	5.3E-03
Total Suspended Solids	3	2	2	2	2	3	4	4	2	1	6.2E-01
Turbidity NTU	3	1	1	2	3	3	3	3	2	1	4.2E-01
Dissolved Anions											
Bromide	3	0.12	0.13	0.18	0.25	0.25	0.25	0.25	0.21	0.08	3.7E-01
Chloride	3	8	8	9	9	9	9	9	9	1	5.6E-02
Fluoride	3	0.12	0.12	0.12	0.12	0.13	0.15	0.15	0.13	0.02	1.3E-01
Sulphate	3	254	254	255	255	262	267	268	259	8	3.0E-02
Nutrients											
Ammonia (Total)	3	0.082	0.082	0.082	0.083	0.092	0.099	0.101	0.089	0.011	1.2E-01
Nitrate (as N)	3	0	0	0	0	0	0	0	0	0	7.4E-01
Nitrite (as N)	3	0.001	0.001	0.003	0.005	0.005	0.005	0.005	0.004	0.003	7.4E-01
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	3	0.21	0.21	0.22	0.22	0.23	0.24	0.25	0.23	0.02	8.5E-02
Orthophosphate (Dissolved)	3	0.176	0.185	0.222	0.267	0.269	0.270	0.270	0.238	0.053	2.2E-01
Phosphorus - Dissolved	3	0.19	0.20	0.22	0.26	0.27	0.28	0.28	0.24	0.05	2.0E-01
Phosphorus - Total	3	0.187	0.198	0.241	0.295	0.299	0.301	0.302	0.261	0.064	2.5E-01
Cyanide										-	
Cyanide (Free)	3	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	3	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (WAD)	3	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	3	0.0465	0.0470	0.0488	0.0511	0.0552	0.0584	0.0592	0.0523	0.0064	1.2E-01
Antimony	3	0.00010	0.00011	0.00016	0.00021	0.00022	0.00023	0.00023	0.00018	0.00007	3.9E-01
Arsenic	3	0.0050	0.0050	0.0052	0.0054	0.0054	0.0055	0.0055	0.0053	0.0003	5.1E-02
Barium	3	0.009	0.009	0.009	0.010	0.010	0.010	0.010	0.010	0.000	5.0E-02
Beryllium	3	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	3	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	-	-
Boron	3	8.130	8.207	8.515	8.900	9.500	9.980	10.100	9.043	0.993	1.1E-01
Cadmium	3	0.000010	0.000010	0.000010	0.000010	0.000010	0.000010	0.000010	0.000010	-	-
Calcium	3	5	5	5	5	5	5	5	5	0	4.6E-02
Chromium	3	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Cobalt	3	0.00010	0.00010	0.00010	0.00010	0.00016	0.00021	0.00022	0.00014	0.00007	4.9E-01
Copper	3	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	-	-
Iron	3	0.005	0.006	0.009	0.013	0.014	0.014	0.014	0.011	0.005	4.6E-01
Lead	3	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	-	-
Lithium	3	0.0064	0.0065	0.0070	0.0075	0.0081	0.0085	0.0086	0.0075	0.0011	1.5E-01
Magnesium	3	2	2	2	2	2	2	2	2	0	4.7E-02
Manganese	3	0.028	0.029	0.031	0.034	0.034	0.035	0.035	0.032	0.004	1.1E-01
Mercury	3	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	-	-
Molybdenum	3	0.017	0.017	0.017	0.018	0.018	0.018	0.018	0.018	0.000	1.7E-02
Nickel	3	0.0005	0.0006	0.0009	0.0013	0.0015	0.0017	0.0017	0.0012	0.0006	5.2E-01
Phosphorus	3	0.18	0.19	0.23	0.28	0.29	0.29	0.29	0.25	0.06	2.4E-01
Potassium	3	9	10	10	10	10	10	10	10	0	3.9E-02
Selenium	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.5E-01
Silicon	3	4.0	4.0	4.0	4.1	4.2	4.3	4.3	4.1	0.2	3.9E-02
Silver	3	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	3	161	161	162	163	165	166	166	163	3	1.5E-02
Strontium	3	0.16	0.16	0.16	0.16	0.16	0.17	0.17	0.16	0.01	4.1E-02
Sulphur	3	86	86	86	87	87	88	88	87	1	1.4E-02
Thallium	3	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Tin	3	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Titanium	3	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	-	-
Uranium	3	0.0005	0.0006	0.0007	0.0008	0.0009	0.0010	0.0010	0.0008	0.0002	3.1E-01
Vanadium	3	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	-	-
Zinc	3	0.0010	0.0011	0.0017	0.0023	0.0024	0.0025	0.0025	0.0019	0.0008	4.2E-01
Total Metals											
Aluminum	3	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.2	0.1	4.8E-01
Antimony	3	0.0001	0.0001	0.0002	0.0003	0.0003	0.0003	0.0003	0.0002	0.0001	4.9E-01
Arsenic	3	0.0051	0.0051	0.0051	0.0052	0.0053	0.0053	0.0053	0.0052	0.0001	2.4E-02
Barium	3	0.010	0.010	0.010	0.011	0.011	0.012	0.012	0.011	0.001	9.8E-02
Beryllium	3	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	3	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	-	-
Boron	3	8.740	8.906	9.570	10.400	10.450	10.490	10.500	9.880	0.989	1.0E-01
Cadmium	3	0.00001	0.00001	0.00002	0.00002	0.00003	0.00003	0.00003	0.00002	0.00001	4.6E-01
Calcium	3	5	5	5	5	5	5	5	5	0	5.7E-02
Chromium	3	0.000	0.000	0.001	0.001	0.002	0.002	0.002	0.001	0.001	7.9E-01
Cobalt	3	0.0002	0.0002	0.0003	0.0003	0.0004	0.0005	0.0005	0.0004	0.0002	4.3E-01
Copper	3	0.001	0.001	0.001	0.001	0.001	0.002	0.002	0.001	0.001	7.7E-01
Iron	3	0.10	0.11	0.17	0.25	0.33	0.40	0.42	0.25	0.16	6.4E-01
Lead	3	0.00005	0.00005	0.00005	0.00005	0.00008	0.00010	0.00011	0.00007	0.00003	4.9E-01
Lithium	3	0.0075	0.0076	0.0079	0.0082	0.0086	0.0088	0.0089	0.0082	0.0007	8.5E-02
Magnesium	3	2	2	2	3	3	3	3	2	0	1.3E-01
Manganese	3	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.01	1.6E-01
Mercury	3	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	-	-
Molybdenum	3	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.00	8.4E-02
Nickel	3	0.002	0.002	0.002	0.003	0.004	0.005	0.005	0.003	0.002	5.1E-01
Phosphorus	3	0.19	0.20	0.24	0.29	0.30	0.30	0.31	0.26	0.07	2.5E-01
Potassium	3	9	9	10	10	10	10	10	10	0	3.6E-02
Selenium	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.8E-01
Silicon	3	4.2	4.3	4.5	4.7	4.8	4.8	4.8	4.6	0.3	7.1E-02
Silver	3	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	3	161	161	161	161	166	170	171	164	6	3.5E-02
Strontium	3	0.16	0.16	0.17	0.17	0.18	0.18	0.18	0.17	0.01	6.2E-02
Sulphur	3	85	85	86	87	89	90	90	88	3	3.0E-02
Thallium	3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-	-
Tin	3	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Titanium	3	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	-	-
Uranium	3	0.0006	0.0006	0.0007	0.0009	0.0010	0.0011	0.0011	0.0009	0.0003	3.2E-01
Vanadium	3	0.001	0.001	0.002	0.002	0.002	0.002	0.003	0.002	0.001	4.2E-01
Zinc	3	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	-	-
Organics											
Carbon Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Carbon Organic (Total)	3	3.0	3.1	3.2	3.4	3.5	3.6	3.7	3.4	0.3	9.7E-02
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.10 - BGC14-003I

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	5	447	447	449	481	491	657	699	513	106	2.1E-01
Oxygen Dissolved %	5	1	3	8	8	12	37	43	15	17	1.1E+00
Oxygen Dissolved	5	0.2	0.2	0.6	0.9	1.4	4.5	5.3	1.7	2.1	1.2E+00
pH (unitless)	5	7.6	7.7	8.2	8.2	8.3	8.3	8.4	8.1	0.3	3.7E-02
Redox Potential mV	5	-20	-13	13	38	38	78	88	32	39	1.2E+00
Salinity ppt	5	0.33	0.33	0.34	0.34	0.35	0.35	0.35	0.34	0.01	2.4E-02
Specific Conductivity µS/cm	5	458	501	674	699	703	718	722	651	109	1.7E-01
Temperature °C	5	6.8	6.9	7.5	8.3	8.3	8.6	8.7	7.9	0.8	9.5E-02
Total Dissolved Solids	5	438	441	454	455	456	466	469	454	11	2.4E-02
Turbidity NTU	5	2.0	2.2	2.8	3.2	10.5	12.0	12.4	6.2	4.9	7.9E-01
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	-	-
Alkalinity (Total as CaCO3)	5	196	197	199	200	202	202	202	200	2	1.2E-02
Bicarbonate Alkalinity	5	189	190	196	197	198	199	199	196	4	2.0E-02
Carbonate Alkalinity	5	0.5	0.9	2.4	3.5	4.4	8.9	10.0	4.2	3.6	8.6E-01
Color TCU	1	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	-	-
Hardness as CaCO3 (Dissolved)	5	115	115	117	117	118	124	125	118	4	3.2E-02
Hydroxide Alkalinity	5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	-	-
pH (unitless)	5	8.3	8.3	8.3	8.4	8.4	8.4	8.4	8.4	0.0	5.9E-03
Specific Conductivity µS/cm	5	694	696	703	715	719	721	721	710	12	1.6E-02
Total Dissolved Solids	5	455	456	459	463	472	490	495	469	16	3.4E-02
Total Suspended Solids	5	2	2	2	5	6	7	8	4	3	6.5E-01
Turbidity NTU	5	1	1	3	4	4	6	7	4	2	5.9E-01
Dissolved Anions											
Bromide	5	0.05	0.05	0.06	0.13	0.13	0.23	0.25	0.12	0.08	6.4E-01
Chloride	5	3	3	3	3	3	3	3	3	0	7.8E-02
Fluoride	5	0.31	0.31	0.32	0.35	0.42	0.54	0.57	0.39	0.11	2.7E-01
Sulphate	5	158	159	164	165	169	171	172	166	5	3.2E-02
Nutrients											
Ammonia (Total)	5	0.022	0.026	0.043	0.045	0.046	0.059	0.063	0.044	0.015	3.4E-01
Nitrate (as N)	5	0	0	0	0	0	0	0	0	0	8.4E-01
Nitrite (as N)	5	0.001	0.001	0.003	0.003	0.004	0.005	0.005	0.003	0.002	5.9E-01
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	5	0.16	0.16	0.17	0.18	0.18	0.18	0.18	0.17	0.01	5.6E-02
Orthophosphate (Dissolved)	5	0.029	0.035	0.059	0.065	0.066	0.067	0.068	0.057	0.016	2.9E-01
Phosphorus - Dissolved	5	0.05	0.05	0.06	0.07	0.07	0.07	0.08	0.06	0.01	1.5E-01
Phosphorus - Total	4	0.067	0.069	0.076	0.079	0.080	0.082	0.082	0.077	0.007	8.5E-02
Cyanide										-	
Cyanide (Free)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (WAD)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	5	0.0053	0.0054	0.0059	0.0062	0.0066	0.0068	0.0068	0.0062	0.0006	9.6E-02
Antimony	5	0.00011	0.00011	0.00013	0.00013	0.00017	0.00026	0.00028	0.00016	0.00007	4.2E-01
Arsenic	5	0.0044	0.0044	0.0048	0.0049	0.0051	0.0053	0.0053	0.0049	0.0004	7.3E-02
Barium	5	0.025	0.025	0.025	0.025	0.027	0.029	0.030	0.026	0.002	8.6E-02
Beryllium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	5	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	5	1.660	1.666	1.690	1.730	1.830	1.878	1.890	1.760	0.097	5.5E-02
Cadmium	5	0.000005	0.000006	0.000010	0.000011	0.000015	0.000018	0.000019	0.000012	0.000005	4.4E-01
Calcium	5	19	19	19	19	20	21	21	20	1	4.8E-02
Chromium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0001	0.0001	8.7E-01
Cobalt	5	0.00011	0.00011	0.00012	0.00012	0.00016	0.00026	0.00029	0.00016	0.00008	4.7E-01
Copper	5	0.0004	0.0004	0.0004	0.0004	0.0005	0.0009	0.0010	0.0005	0.0003	5.1E-01
Iron	5	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	-	-
Lead	5	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	-	-
Lithium	5	0.0092	0.0093	0.0098	0.0103	0.0103	0.0113	0.0115	0.0102	0.0009	8.5E-02
Magnesium	5	16	16	17	17	17	17	18	17	0	2.4E-02
Manganese	5	0.074	0.078	0.092	0.100	0.107	0.107	0.107	0.096	0.014	1.4E-01
Mercury	5	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	-	-
Molybdenum	5	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.000	2.1E-02
Nickel	5	0.0005	0.0006	0.0007	0.0007	0.0013	0.0015	0.0016	0.0009	0.0004	4.7E-01
Phosphorus	5	0.03	0.03	0.07	0.07	0.07	0.08	0.08	0.06	0.02	3.5E-01
Potassium	5	10	10	10	10	10	10	10	10	0	1.7E-02
Selenium	5	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.000	3.7E-01
Silicon	5	5.6	5.7	6.0	6.2	6.3	6.5	6.5	6.1	0.4	5.9E-02
Silver	5	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	5	105	105	105	110	110	110	110	108	3	2.5E-02
Strontium	5	0.64	0.64	0.65	0.66	0.66	0.67	0.68	0.66	0.02	2.3E-02
Sulphur	5	55	56	57	57	57	58	58	57	1	1.6E-02
Thallium	5	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00001	0.00001	6.5E-01
Tin	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000	5.9E-01
Titanium	5	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	-	-
Uranium	5	0.0011	0.0011	0.0011	0.0011	0.0013	0.0014	0.0014	0.0012	0.0002	1.3E-01
Vanadium	5	0.0014	0.0014	0.0014	0.0014	0.0015	0.0019	0.0020	0.0015	0.0003	1.7E-01
Zinc	5	0.0005	0.0007	0.0017	0.0019	0.0021	0.0066	0.0077	0.0028	0.0028	1.0E+00
Total Metals											
Aluminum	5	0.0	0.0	0.1	0.1	0.1	0.3	0.3	0.1	0.1	7.5E-01
Antimony	5	0.0001	0.0001	0.0002	0.0002	0.0002	0.0003	0.0004	0.0002	0.0001	4.0E-01
Arsenic	5	0.0045	0.0045	0.0046	0.0049	0.0053	0.0055	0.0056	0.0050	0.0005	9.6E-02
Barium	5	0.025	0.026	0.027	0.027	0.029	0.033	0.034	0.028	0.003	1.1E-01
Beryllium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	5	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	5	1.770	1.770	1.770	1.770	1.970	2.010	2.020	1.860	0.124	6.7E-02
Cadmium	5	0.00001	0.00001	0.00002	0.00003	0.00003	0.00003	0.00003	0.00002	0.00001	3.5E-01
Calcium	5	19	19	19	20	20	21	21	20	1	4.0E-02
Chromium	5	0.000	0.000	0.000	0.001	0.001	0.001	0.001	0.000	0.000	4.5E-01
Cobalt	5	0.0002	0.0002	0.0003	0.0004	0.0004	0.0006	0.0006	0.0004	0.0002	4.3E-01
Copper	5	0.001	0.001	0.001	0.002	0.003	0.003	0.003	0.002	0.001	4.1E-01
Iron	5	0.05	0.06	0.14	0.22	0.23	0.39	0.43	0.21	0.14	6.7E-01
Lead	5	0.00003	0.00003	0.00003	0.00006	0.00007	0.00012	0.00013	0.00006	0.00004	7.0E-01
Lithium	5	0.0093	0.0095	0.0102	0.0102	0.0110	0.0116	0.0118	0.0105	0.0009	9.0E-02
Magnesium	5	16	16	17	17	17	17	17	17	0	1.8E-02
Manganese	5	0.12	0.12	0.13	0.13	0.14	0.15	0.15	0.13	0.01	9.7E-02
Mercury	5	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	-	-
Molybdenum	5	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.00	3.2E-02
Nickel	5	0.001	0.001	0.001	0.002	0.002	0.003	0.003	0.002	0.001	5.4E-01
Phosphorus	5	0.05	0.06	0.07	0.08	0.08	0.08	0.08	0.07	0.01	1.6E-01
Potassium	5	9	9	10	10	10	10	10	10	0	2.7E-02
Selenium	5	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.000	3.4E-01
Silicon	5	6.2	6.2	6.3	6.4	6.5	6.6	6.7	6.4	0.2	2.7E-02
Silver	5	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	5	103	103	105	107	109	111	112	107	3	3.3E-02
Strontium	5	0.66	0.66	0.66	0.68	0.69	0.71	0.72	0.68	0.02	3.3E-02
Sulphur	5	55	55	56	58	58	59	59	57	1	2.5E-02
Thallium	5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.9E-01
Tin	5	0.0001	0.0001	0.0001	0.0001	0.0002	0.0003	0.0004	0.0001	0.0001	8.7E-01
Titanium	5	0.005	0.005	0.005	0.005	0.005	0.011	0.012	0.006	0.003	4.9E-01
Uranium	5	0.0011	0.0011	0.0011	0.0012	0.0013	0.0015	0.0016	0.0013	0.0002	1.5E-01
Vanadium	5	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.002	0.001	3.0E-01
Zinc	5	0.0015	0.0015	0.0015	0.0015	0.0031	0.0080	0.0092	0.0034	0.0033	9.9E-01
Organics											
Carbon Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Carbon Organic (Total)	5	1.6	1.6	1.7	1.8	1.8	2.5	2.6	1.9	0.4	2.2E-01
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.11 - BGC14-003S

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	5	464	464	464	479	533	692	732	534	114	2.1E-01
Oxygen Dissolved %	5	1	1	1	3	53	91	101	32	45	1.4E+00
Oxygen Dissolved	5	0.2	0.2	0.2	0.4	7.3	10.7	11.6	3.9	5.3	1.3E+00
pH (unitless)	5	7.9	7.9	8.0	8.0	8.0	8.0	8.0	8.0	0.1	6.3E-03
Redox Potential mV	5	-31	-31	-31	68	83	93	95	37	63	1.7E+00
Salinity ppt	5	0.33	0.33	0.34	0.34	0.36	0.38	0.39	0.35	0.02	6.8E-02
Specific Conductivity µS/cm	5	470	513	683	689	689	766	785	663	116	1.8E-01
Temperature °C	5	6.3	6.6	7.9	7.9	8.2	9.1	9.4	7.9	1.1	1.4E-01
Total Dissolved Solids	5	443	443	444	448	476	503	510	464	29	6.2E-02
Turbidity NTU	5	-3.6	-2.9	0.0	4.0	4.2	6.8	7.4	2.4	4.3	1.8E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	-	-
Alkalinity (Total as CaCO3)	5	173	173	174	182	182	183	183	179	5	2.7E-02
Bicarbonate Alkalinity	5	173	173	174	182	182	183	183	179	5	2.7E-02
Carbonate Alkalinity	5	0.5	0.5	0.5	1.0	1.0	1.0	1.0	0.8	0.3	3.4E-01
Color TCU	1	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	-	-
Hardness as CaCO3 (Dissolved)	5	188	188	189	191	199	203	204	194	7	3.6E-02
Hydroxide Alkalinity	5	0.5	0.5	0.5	1.0	1.0	1.0	1.0	0.8	0.3	3.4E-01
pH (unitless)	5	8.2	8.2	8.2	8.2	8.3	8.3	8.4	8.2	0.1	1.0E-02
Specific Conductivity µS/cm	5	686	687	692	697	712	729	733	704	19	2.7E-02
Total Dissolved Solids	5	451	452	454	454	464	486	492	463	17	3.7E-02
Total Suspended Solids	5	2	2	2	2	2	2	2	2	-	-
Turbidity NTU	5	0	0	0	0	1	2	2	1	1	6.8E-01
Dissolved Anions											
Bromide	5	0.07	0.08	0.13	0.13	0.13	0.23	0.25	0.14	0.07	4.8E-01
Chloride	5	3	3	3	4	4	5	5	4	1	2.6E-01
Fluoride	5	0.26	0.26	0.27	0.29	0.29	0.35	0.36	0.29	0.04	1.4E-01
Sulphate	5	180	181	186	196	200	210	212	195	12	6.4E-02
Nutrients											
Ammonia (Total)	5	0.051	0.052	0.059	0.062	0.068	0.068	0.069	0.062	0.007	1.2E-01
Nitrate (as N)	5	0	0	0	0	0	0	0	0	0	6.1E-01
Nitrite (as N)	5	0.001	0.001	0.003	0.003	0.003	0.005	0.005	0.003	0.002	6.1E-01
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	5	0.18	0.18	0.19	0.19	0.19	0.19	0.20	0.19	0.01	3.9E-02
Orthophosphate (Dissolved)	5	0.037	0.040	0.050	0.051	0.052	0.053	0.053	0.049	0.006	1.3E-01
Phosphorus - Dissolved	5	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.05	0.00	8.6E-02
Phosphorus - Total	5	0.043	0.044	0.051	0.053	0.056	0.057	0.058	0.052	0.006	1.1E-01
Cyanide										-	
Cyanide (Free)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (WAD)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	5	0.0052	0.0053	0.0058	0.0060	0.0063	0.0081	0.0086	0.0064	0.0013	2.0E-01
Antimony	5	0.00027	0.00027	0.00028	0.00029	0.00029	0.00033	0.00034	0.00029	0.00003	9.2E-02
Arsenic	5	0.0014	0.0014	0.0015	0.0015	0.0015	0.0016	0.0016	0.0015	0.0001	4.5E-02
Barium	5	0.027	0.027	0.028	0.028	0.029	0.033	0.034	0.029	0.003	9.3E-02
Beryllium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	5	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	5	0.838	0.850	0.896	0.997	1.010	1.034	1.040	0.956	0.085	8.9E-02
Cadmium	5	0.000005	0.000007	0.000015	0.000025	0.000025	0.000029	0.000030	0.000020	0.000010	5.0E-01
Calcium	5	34	34	35	35	38	38	38	36	2	5.4E-02
Chromium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Cobalt	5	0.00044	0.00045	0.00048	0.00049	0.00051	0.00057	0.00058	0.00050	0.00005	1.0E-01
Copper	5	0.0005	0.0005	0.0006	0.0006	0.0009	0.0014	0.0015	0.0008	0.0004	4.7E-01
Iron	5	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	-	-
Lead	5	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	-	-
Lithium	5	0.0009	0.0009	0.0009	0.0010	0.0011	0.0011	0.0012	0.0010	0.0001	1.1E-01
Magnesium	5	25	25	25	25	25	26	26	25	1	2.5E-02
Manganese	5	0.111	0.120	0.158	0.166	0.184	0.196	0.199	0.164	0.033	2.0E-01
Mercury	5	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	-	-
Molybdenum	5	0.028	0.028	0.029	0.030	0.031	0.033	0.033	0.030	0.002	6.6E-02
Nickel	5	0.0014	0.0014	0.0014	0.0017	0.0022	0.0024	0.0024	0.0018	0.0005	2.5E-01
Phosphorus	5	0.03	0.03	0.03	0.03	0.06	0.06	0.06	0.04	0.02	5.0E-01
Potassium	5	8	8	9	9	9	9	9	9	0	3.3E-02
Selenium	5	0.000	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.000	3.2E-01
Silicon	5	5.8	5.9	6.2	6.2	6.3	6.3	6.3	6.2	0.2	3.5E-02
Silver	5	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	5	74	74	75	76	82	82	83	78	4	5.3E-02
Strontium	5	0.53	0.54	0.55	0.57	0.57	0.60	0.60	0.56	0.03	4.7E-02
Sulphur	5	61	61	61	62	67	69	69	64	4	5.8E-02
Thallium	5	0.00002	0.00002	0.00002	0.00002	0.00003	0.00003	0.00003	0.00002	0.00000	1.5E-01
Tin	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Titanium	5	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	-	-
Uranium	5	0.0030	0.0030	0.0031	0.0031	0.0032	0.0033	0.0033	0.0031	0.0001	3.7E-02
Vanadium	5	0.0010	0.0010	0.0012	0.0013	0.0013	0.0015	0.0016	0.0013	0.0002	1.7E-01
Zinc	5	0.0005	0.0007	0.0015	0.0037	0.0044	0.0062	0.0067	0.0034	0.0024	7.3E-01
Total Metals											
Aluminum	5	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	6.0E-01
Antimony	5	0.0003	0.0003	0.0003	0.0003	0.0003	0.0004	0.0004	0.0003	0.0001	1.7E-01
Arsenic	5	0.0014	0.0014	0.0015	0.0015	0.0016	0.0016	0.0016	0.0015	0.0001	4.1E-02
Barium	5	0.027	0.027	0.028	0.029	0.031	0.034	0.034	0.030	0.003	1.0E-01
Beryllium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	5	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	5	0.840	0.867	0.974	1.020	1.030	1.054	1.060	0.985	0.087	8.8E-02
Cadmium	5	0.00002	0.00002	0.00002	0.00003	0.00004	0.00005	0.00005	0.00003	0.00001	4.9E-01
Calcium	5	33	33	34	36	37	38	38	35	2	5.9E-02
Chromium	5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.9E-01
Cobalt	5	0.0005	0.0005	0.0005	0.0005	0.0005	0.0006	0.0006	0.0005	0.0001	9.4E-02
Copper	5	0.001	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.000	2.8E-01
Iron	5	0.02	0.02	0.04	0.04	0.07	0.10	0.11	0.05	0.04	6.4E-01
Lead	5	0.00003	0.00003	0.00003	0.00003	0.00003	0.00005	0.00005	0.00003	0.00001	4.1E-01
Lithium	5	0.0010	0.0010	0.0011	0.0011	0.0013	0.0014	0.0014	0.0012	0.0002	1.6E-01
Magnesium	5	24	24	25	25	25	26	26	25	1	2.1E-02
Manganese	5	0.11	0.12	0.16	0.18	0.19	0.19	0.19	0.17	0.03	1.9E-01
Mercury	5	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	-	-
Molybdenum	5	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.00	4.2E-02
Nickel	5	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.002	0.001	2.6E-01
Phosphorus	5	0.03	0.03	0.06	0.06	0.06	0.06	0.06	0.05	0.02	3.0E-01
Potassium	5	8	9	9	9	9	9	9	9	0	3.0E-02
Selenium	5	0.000	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.000	3.1E-01
Silicon	5	5.9	6.0	6.1	6.3	6.3	6.4	6.4	6.2	0.2	2.9E-02
Silver	5	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	5	71	72	78	79	80	83	84	79	5	6.2E-02
Strontium	5	0.55	0.56	0.57	0.57	0.58	0.60	0.61	0.57	0.02	3.3E-02
Sulphur	5	59	60	62	65	66	70	71	65	4	6.9E-02
Thallium	5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.7E-01
Tin	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000	4.4E-01
Titanium	5	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	-	-
Uranium	5	0.0032	0.0032	0.0032	0.0032	0.0034	0.0035	0.0036	0.0033	0.0002	5.1E-02
Vanadium	5	0.001	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.000	1.8E-01
Zinc	5	0.0015	0.0015	0.0015	0.0044	0.0067	0.0068	0.0068	0.0042	0.0026	6.3E-01
Organics											
Carbon Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Carbon Organic (Total)	5	2.1	2.1	2.2	2.5	2.9	2.9	2.9	2.5	0.4	1.6E-01
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.12 - BGC14-005

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	5	2010	2027	2095	2100	2155	2458	2534	2179	205	9.4E-02
Oxygen Dissolved %	5	0	1	2	3	4	5	5	3	2	6.5E-01
Oxygen Dissolved	5	0.0	0.1	0.2	0.3	0.4	0.5	0.5	0.3	0.2	6.5E-01
pH (unitless)	5	8.2	8.2	8.5	8.9	9.8	10.1	10.2	9.1	0.9	9.7E-02
Redox Potential mV	5	-301	-296	-274	-216	-182	-172	-170	-229	57	-2.5E-01
Salinity ppt	5	1.46	1.47	1.53	1.54	1.60	1.82	1.88	1.60	0.16	1.0E-01
Specific Conductivity µS/cm	5	2807	2830	2923	2946	3058	3458	3558	3058	293	9.6E-02
Temperature °C	5	9.5	9.6	9.9	9.9	10.1	10.7	10.9	10.1	0.5	5.2E-02
Total Dissolved Solids	5	1824	1839	1899	1915	1988	2247	2312	1988	190	9.6E-02
Turbidity NTU	5	-3.1	-2.8	-1.7	0.0	7.3	10.7	11.6	2.8	6.3	2.2E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	2	2.7	2.8	3.1	3.6	4.0	4.3	4.4	3.6	1.2	3.4E-01
Alkalinity (Total as CaCO3)	5	159	160	163	171	172	176	177	168	7	4.3E-02
Bicarbonate Alkalinity	5	159	160	163	171	172	176	177	168	7	4.3E-02
Carbonate Alkalinity	5	0.5	0.6	1.0	1.0	1.0	1.0	1.0	0.9	0.2	2.5E-01
Color TCU	0	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	5	1530	1532	1540	1560	1580	1588	1590	1560	25	1.6E-02
Hydroxide Alkalinity	5	0.5	0.6	1.0	1.0	1.0	1.0	1.0	0.9	0.2	2.5E-01
pH (unitless)	5	8.1	8.1	8.2	8.2	8.2	8.2	8.2	8.2	0.1	7.8E-03
Specific Conductivity µS/cm	5	2860	2864	2880	2890	2970	2986	2990	2918	58	2.0E-02
Total Dissolved Solids	5	2810	2812	2820	2830	2880	2912	2920	2852	47	1.6E-02
Total Suspended Solids	5	4	5	6	8	8	9	9	7	2	2.9E-01
Turbidity NTU	5	2	2	2	3	3	4	4	3	1	3.0E-01
Dissolved Anions											
Bromide	5	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	-	-
Chloride	5	5	5	5	5	10	12	13	8	4	4.9E-01
Fluoride	5	0.18	0.18	0.18	0.20	0.20	0.20	0.20	0.19	0.01	5.6E-02
Sulphate	5	1840	1842	1850	1870	1880	1888	1890	1866	21	1.1E-02
Nutrients											
Ammonia (Total)	5	0.066	0.066	0.066	0.068	0.068	0.078	0.080	0.070	0.006	8.3E-02
Nitrate (as N)	5	0	0	0	0	0	0	0	0	-	-
Nitrite (as N)	5	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	-	-
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	5	0.14	0.15	0.15	0.16	0.16	0.17	0.17	0.16	0.01	6.6E-02
Orthophosphate (Dissolved)	5	0.001	0.001	0.001	0.004	0.008	0.013	0.015	0.006	0.006	1.0E+00
Phosphorus - Dissolved	5	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	1.0E+00
Phosphorus - Total	5	0.022	0.022	0.022	0.027	0.028	0.028	0.028	0.025	0.003	1.2E-01
Cyanide										-	
Cyanide (Free)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (WAD)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	5	0.0013	0.0015	0.0021	0.0024	0.0025	0.0035	0.0037	0.0024	0.0009	3.6E-01
Antimony	5	0.00005	0.00005	0.00005	0.00005	0.00010	0.00016	0.00017	0.00008	0.00005	6.3E-01
Arsenic	5	0.0011	0.0011	0.0011	0.0012	0.0012	0.0013	0.0014	0.0012	0.0001	7.4E-02
Barium	5	0.023	0.023	0.023	0.030	0.032	0.034	0.034	0.028	0.005	1.8E-01
Beryllium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000	3.7E-01
Bismuth	5	0.00025	0.00025	0.00025	0.00025	0.00025	0.00045	0.00050	0.00030	0.00011	3.7E-01
Boron	5	0.070	0.071	0.074	0.075	0.076	0.079	0.080	0.075	0.004	4.8E-02
Cadmium	5	0.000005	0.000005	0.000005	0.000010	0.000010	0.000011	0.000011	0.000008	0.000003	3.6E-01
Calcium	5	283	285	293	294	297	300	301	294	7	2.3E-02
Chromium	5	0.0001	0.0001	0.0001	0.0002	0.0003	0.0003	0.0003	0.0002	0.0001	5.3E-01
Cobalt	5	0.00078	0.00079	0.00081	0.00083	0.00091	0.00092	0.00092	0.00085	0.00006	7.3E-02
Copper	5	0.0001	0.0001	0.0001	0.0002	0.0005	0.0007	0.0007	0.0003	0.0003	8.6E-01
Iron	5	0.485	0.502	0.572	0.575	0.578	0.593	0.597	0.561	0.044	7.8E-02
Lead	5	0.00003	0.00003	0.00003	0.00003	0.00003	0.00005	0.00005	0.00003	0.00001	3.7E-01
Lithium	5	0.0122	0.0125	0.0138	0.0145	0.0147	0.0149	0.0149	0.0140	0.0011	7.8E-02
Magnesium	5	197	198	200	201	202	204	204	201	3	1.3E-02
Manganese	5	0.457	0.458	0.461	0.465	0.493	0.495	0.496	0.474	0.019	3.9E-02
Mercury	5	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	-	-
Molybdenum	5	0.030	0.030	0.030	0.031	0.031	0.034	0.035	0.032	0.002	6.9E-02
Nickel	5	0.0009	0.0009	0.0010	0.0011	0.0017	0.0021	0.0022	0.0014	0.0005	3.9E-01
Phosphorus	5	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	-	-
Potassium	5	11	11	12	12	14	14	14	13	1	9.1E-02
Selenium	5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.5E-01
Silicon	5	9.2	9.3	9.4	9.8	9.8	9.9	9.9	9.6	0.3	2.9E-02
Silver	5	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00000	3.7E-01
Sodium	5	169	169	171	181	187	191	192	180	10	5.5E-02
Strontium	5	2.17	2.18	2.21	2.32	2.37	2.50	2.53	2.32	0.14	6.1E-02
Sulphur	5	564	565	567	570	592	595	596	578	15	2.6E-02
Thallium	5	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00000	3.7E-01
Tin	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000	3.7E-01
Titanium	5	0.0050	0.0050	0.0050	0.0050	0.0050	0.0090	0.0100	0.0060	0.0022	3.7E-01
Uranium	5	0.0015	0.0015	0.0016	0.0016	0.0016	0.0017	0.0017	0.0016	0.0001	3.6E-02
Vanadium	5	0.0005	0.0005	0.0005	0.0005	0.0005	0.0009	0.0010	0.0006	0.0002	3.7E-01
Zinc	5	0.0005	0.0005	0.0005	0.0010	0.0010	0.0025	0.0029	0.0012	0.0010	8.4E-01
Total Metals											
Aluminum	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2E-01
Antimony	5	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0001	0.0001	5.0E-01
Arsenic	5	0.0012	0.0012	0.0012	0.0012	0.0012	0.0013	0.0013	0.0012	0.0001	4.8E-02
Barium	5	0.024	0.024	0.024	0.031	0.033	0.034	0.034	0.029	0.005	1.7E-01
Beryllium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000	3.7E-01
Bismuth	5	0.00025	0.00025	0.00025	0.00025	0.00025	0.00045	0.00050	0.00030	0.00011	3.7E-01
Boron	5	0.066	0.069	0.080	0.081	0.083	0.083	0.083	0.079	0.007	9.1E-02
Cadmium	5	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00000	3.3E-01
Calcium	5	289	289	289	291	293	303	306	294	7	2.4E-02
Chromium	5	0.001	0.001	0.001	0.001	0.002	0.003	0.003	0.001	0.001	7.5E-01
Cobalt	5	0.0009	0.0009	0.0009	0.0009	0.0009	0.0010	0.0010	0.0009	0.0001	5.6E-02
Copper	5	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.000	0.000	7.6E-01
Iron	5	0.52	0.54	0.61	0.65	0.67	0.69	0.70	0.63	0.07	1.1E-01
Lead	5	0.00003	0.00003	0.00003	0.00003	0.00003	0.00005	0.00005	0.00003	0.00001	3.7E-01
Lithium	5	0.0120	0.0122	0.0131	0.0137	0.0150	0.0155	0.0156	0.0139	0.0014	1.0E-01
Magnesium	5	196	196	198	200	204	214	217	203	8	4.1E-02
Manganese	5	0.47	0.47	0.48	0.48	0.48	0.50	0.50	0.48	0.01	2.5E-02
Mercury	5	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	-	-
Molybdenum	5	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.03	0.00	7.6E-02
Nickel	5	0.001	0.001	0.001	0.001	0.002	0.003	0.003	0.002	0.001	4.0E-01
Phosphorus	5	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	-	-
Potassium	5	11	11	12	12	14	14	14	12	1	1.1E-01
Selenium	5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.7E-01
Silicon	5	9.1	9.2	9.4	9.9	10.0	10.1	10.1	9.7	0.4	4.3E-02
Silver	5	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00000	3.7E-01
Sodium	5	170	172	178	186	187	187	187	182	8	4.1E-02
Strontium	5	1.97	2.05	2.38	2.38	2.39	2.45	2.46	2.32	0.20	8.5E-02
Sulphur	5	561	564	577	590	611	613	613	590	22	3.8E-02
Thallium	5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	7.2E-01
Tin	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000	3.7E-01
Titanium	5	0.005	0.005	0.005	0.005	0.005	0.009	0.010	0.006	0.002	3.7E-01
Uranium	5	0.0015	0.0015	0.0015	0.0017	0.0017	0.0017	0.0018	0.0016	0.0001	7.4E-02
Vanadium	5	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.000	3.7E-01
Zinc	5	0.0015	0.0015	0.0015	0.0015	0.0030	0.0042	0.0045	0.0024	0.0013	5.6E-01
Organics											
Carbon Organic (Dissolved)	1	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	-	-
Carbon Organic (Total)	5	1.9	1.9	1.9	2.0	2.1	2.3	2.3	2.0	0.2	9.1E-02
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.13 - BGC14-006D

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	3	2592	2595	2608	2623	2699	2759	2774	2663	97	3.7E-02
Oxygen Dissolved %	3	6	7	11	15	18	20	20	14	7	5.1E-01
Oxygen Dissolved	3	0.7	0.8	1.2	1.7	1.9	2.1	2.1	1.5	0.7	4.9E-01
pH (unitless)	3	7.0	7.0	7.0	7.0	7.2	7.3	7.3	7.1	0.2	2.7E-02
Redox Potential mV	3	-88	-84	-67	-47	-39	-33	-32	-56	29	-5.2E-01
Salinity ppt	3	1.89	1.90	1.96	2.02	2.03	2.03	2.03	1.98	0.08	3.9E-02
Specific Conductivity µS/cm	3	3576	3600	3697	3817	3825	3831	3833	3742	144	3.8E-02
Temperature °C	3	8.5	8.7	9.5	10.6	10.7	10.7	10.7	9.9	1.3	1.3E-01
Total Dissolved Solids	3	2322	2338	2400	2477	2710	2896	2942	2580	323	1.3E-01
Turbidity NTU	3	0.0	0.0	0.0	0.0	2.6	4.7	5.2	1.7	3.0	1.7E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	0	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	4	108	111	125	133	136	137	137	128	13	1.0E-01
Bicarbonate Alkalinity	4	108	111	125	133	136	137	137	128	13	1.0E-01
Carbonate Alkalinity	4	0.5	0.6	0.9	1.0	1.0	1.0	1.0	0.9	0.3	2.9E-01
Color TCU	0	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	4	2360	2360	2360	2405	2453	2459	2460	2408	55	2.3E-02
Hydroxide Alkalinity	4	0.5	0.6	0.9	1.0	1.0	1.0	1.0	0.9	0.3	2.9E-01
pH (unitless)	4	7.7	7.7	7.7	7.7	7.8	7.9	7.9	7.8	0.1	1.5E-02
Specific Conductivity µS/cm	4	3700	3700	3700	3700	3735	3819	3840	3735	70	1.9E-02
Total Dissolved Solids	4	3910	3925	3985	4015	4020	4020	4020	3990	54	1.3E-02
Total Suspended Solids	4	5	5	6	8	15	30	33	14	13	9.9E-01
Turbidity NTU	4	10	10	11	14	20	27	29	17	9	5.1E-01
Dissolved Anions											
Bromide	4	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	-	-
Chloride	4	5	6	9	11	11	12	12	10	3	3.3E-01
Fluoride	4	0.20	0.20	0.22	0.23	0.23	0.24	0.24	0.22	0.02	7.7E-02
Sulphate	4	2710	2712	2718	2725	2733	2739	2740	2725	13	4.7E-03
Nutrients											
Ammonia (Total)	4	0.238	0.239	0.245	0.248	0.253	0.264	0.267	0.250	0.012	4.9E-02
Nitrate (as N)	4	0	0	0	0	0	0	0	0	-	-
Nitrite (as N)	4	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	-	-
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	4	0.26	0.26	0.28	0.31	0.34	0.38	0.39	0.32	0.06	1.8E-01
Orthophosphate (Dissolved)	4	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	-	-
Phosphorus - Dissolved	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	-
Phosphorus - Total	4	0.001	0.001	0.003	0.004	0.006	0.012	0.014	0.006	0.006	1.0E+00
Cyanide										-	
Cyanide (Free)	4	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	4	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (WAD)	4	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	4	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	-	-
Antimony	4	0.00010	0.00010	0.00010	0.00010	0.00010	0.00010	0.00010	0.00010	-	-
Arsenic	4	0.0001	0.0010	0.0045	0.0062	0.0065	0.0066	0.0066	0.0048	0.0031	6.6E-01
Barium	4	0.007	0.007	0.008	0.008	0.008	0.008	0.008	0.008	0.000	5.9E-02
Beryllium	4	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	4	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	-	-
Boron	4	0.123	0.125	0.134	0.141	0.146	0.150	0.151	0.139	0.012	8.6E-02
Cadmium	4	0.000010	0.000010	0.000010	0.000015	0.000021	0.000023	0.000024	0.000016	0.000007	4.4E-01
Calcium	4	446	447	451	457	465	475	477	459	13	2.9E-02
Chromium	4	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Cobalt	4	0.00071	0.00072	0.00075	0.00079	0.00086	0.00094	0.00096	0.00081	0.00011	1.3E-01
Copper	4	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	-	-
Iron	4	1.190	1.235	1.415	1.545	1.670	1.838	1.880	1.540	0.285	1.9E-01
Lead	4	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	-	-
Lithium	4	0.0235	0.0238	0.0251	0.0266	0.0277	0.0282	0.0283	0.0262	0.0021	8.2E-02
Magnesium	4	294	296	302	305	310	320	322	307	12	3.8E-02
Manganese	4	0.323	0.328	0.347	0.359	0.368	0.381	0.384	0.356	0.025	7.1E-02
Mercury	4	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	-	-
Molybdenum	4	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.000	2.3E-02
Nickel	4	0.0005	0.0005	0.0005	0.0008	0.0012	0.0013	0.0013	0.0009	0.0004	4.9E-01
Phosphorus	4	0.03	0.03	0.03	0.03	0.06	0.13	0.15	0.06	0.06	1.1E+00
Potassium	4	6	6	6	6	6	6	6	6	0	3.0E-02
Selenium	4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	-
Silicon	4	8.3	8.3	8.3	8.3	8.5	8.7	8.7	8.4	0.2	2.7E-02
Silver	4	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	4	131	133	142	150	154	155	155	146	11	7.6E-02
Strontium	4	8.31	8.34	8.48	8.56	8.59	8.64	8.65	8.52	0.15	1.7E-02
Sulphur	3	773	781	814	854	867	877	879	835	55	6.6E-02
Thallium	4	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Tin	4	0.0001	0.0001	0.0001	0.0001	0.0003	0.0007	0.0009	0.0003	0.0004	1.3E+00
Titanium	4	0.0100	0.0100	0.0100	0.0100	0.0115	0.0151	0.0160	0.0115	0.0030	2.6E-01
Uranium	4	0.0006	0.0007	0.0009	0.0010	0.0011	0.0012	0.0013	0.0010	0.0003	2.8E-01
Vanadium	4	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	-	-
Zinc	4	0.0010	0.0012	0.0021	0.0029	0.0038	0.0049	0.0052	0.0030	0.0017	5.8E-01
Total Metals											
Aluminum	4	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.1	0.1	1.6E+00
Antimony	4	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0001	0.0001	5.2E-01
Arsenic	4	0.0036	0.0040	0.0057	0.0067	0.0071	0.0075	0.0077	0.0061	0.0018	2.9E-01
Barium	4	0.008	0.008	0.008	0.009	0.010	0.010	0.011	0.009	0.001	1.5E-01
Beryllium	4	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	4	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	-	-
Boron	4	0.133	0.135	0.143	0.151	0.155	0.155	0.155	0.147	0.010	7.1E-02
Cadmium	4	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00000	7.6E-02
Calcium	4	437	440	454	468	477	482	483	464	20	4.4E-02
Chromium	4	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	1.3E+00
Cobalt	4	0.0008	0.0008	0.0009	0.0009	0.0009	0.0010	0.0011	0.0009	0.0001	1.4E-01
Copper	4	0.001	0.001	0.001	0.001	0.001	0.002	0.002	0.001	0.001	7.5E-01
Iron	4	1.68	1.69	1.75	1.92	2.10	2.20	2.23	1.94	0.25	1.3E-01
Lead	4	0.00005	0.00005	0.00005	0.00005	0.00008	0.00014	0.00016	0.00008	0.00006	7.1E-01
Lithium	4	0.0258	0.0258	0.0260	0.0271	0.0281	0.0282	0.0282	0.0271	0.0013	4.7E-02
Magnesium	4	312	312	313	315	317	319	319	315	3	1.0E-02
Manganese	4	0.34	0.34	0.35	0.37	0.39	0.40	0.40	0.37	0.03	6.8E-02
Mercury	4	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	-	-
Molybdenum	4	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	4.3E-02
Nickel	4	0.001	0.001	0.001	0.001	0.002	0.002	0.002	0.001	0.000	4.0E-01
Phosphorus	4	0.03	0.03	0.03	0.03	0.06	0.13	0.15	0.06	0.06	1.1E+00
Potassium	4	6	6	6	6	6	6	6	6	0	1.5E-02
Selenium	4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	-
Silicon	4	8.6	8.6	8.6	8.7	8.8	9.1	9.2	8.8	0.3	2.9E-02
Silver	4	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	4	132	135	148	154	157	163	164	151	13	8.9E-02
Strontium	4	8.35	8.41	8.67	8.79	8.83	8.92	8.94	8.72	0.25	2.9E-02
Sulphur	3	825	828	838	851	860	867	869	848	22	2.6E-02
Thallium	4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-	-
Tin	4	0.0001	0.0001	0.0001	0.0002	0.0013	0.0039	0.0046	0.0013	0.0022	1.8E+00
Titanium	4	0.010	0.010	0.010	0.010	0.012	0.016	0.017	0.012	0.004	3.0E-01
Uranium	4	0.0006	0.0007	0.0009	0.0010	0.0012	0.0013	0.0014	0.0010	0.0003	3.0E-01
Vanadium	4	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	-	-
Zinc	4	0.0030	0.0030	0.0030	0.0030	0.0041	0.0067	0.0073	0.0041	0.0022	5.3E-01
Organics											
Carbon Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Carbon Organic (Total)	4	1.1	1.1	1.2	1.3	2.1	3.8	4.2	2.0	1.5	7.4E-01
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.14 - BGC14-009

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	5	641	654	706	728	788	1189	1289	830	262	3.2E-01
Oxygen Dissolved %	5	1	1	2	4	7	8	8	4	3	7.1E-01
Oxygen Dissolved	5	0.1	0.1	0.3	0.4	0.8	0.9	0.9	0.5	0.3	7.1E-01
pH (unitless)	5	7.5	7.5	7.6	7.6	7.8	9.1	9.4	8.0	0.8	1.0E-01
Redox Potential mV	5	-189	-172	-103	-101	-67	-56	-53	-103	53	-5.2E-01
Salinity ppt	5	0.36	0.38	0.45	0.51	0.54	0.81	0.88	0.55	0.20	3.6E-01
Specific Conductivity µS/cm	5	489	573	909	1016	1074	1594	1724	1042	445	4.3E-01
Temperature °C	5	7.9	8.1	9.0	9.6	11.1	11.7	11.8	9.9	1.6	1.6E-01
Total Dissolved Solids	5	473	497	591	661	698	1036	1121	709	246	3.5E-01
Turbidity NTU	5	-4.4	-4.0	-2.3	-2.0	2.2	5.6	6.5	0.0	4.4	-
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	-	-
Alkalinity (Total as CaCO3)	5	121	122	125	136	146	149	150	136	13	9.3E-02
Bicarbonate Alkalinity	5	121	122	125	136	146	149	150	136	13	9.3E-02
Carbonate Alkalinity	5	0.5	0.6	1.0	1.0	1.0	1.0	1.0	0.9	0.2	2.5E-01
Color TCU	0	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	5	175	186	232	233	236	246	248	225	29	1.3E-01
Hydroxide Alkalinity	5	0.5	0.6	1.0	1.0	1.0	1.0	1.0	0.9	0.2	2.5E-01
pH (unitless)	5	8.0	8.0	8.0	8.0	8.1	8.1	8.1	8.0	0.1	8.2E-03
Specific Conductivity µS/cm	5	715	753	907	917	954	971	975	894	104	1.2E-01
Total Dissolved Solids	5	524	543	619	625	642	680	689	620	60	9.7E-02
Total Suspended Solids	5	2	2	2	2	2	15	18	5	7	1.5E+00
Turbidity NTU	5	1	1	1	1	2	6	8	3	3	1.1E+00
Dissolved Anions											
Bromide	5	0.13	0.15	0.25	0.25	0.25	0.25	0.25	0.23	0.06	2.5E-01
Chloride	5	6	6	7	8	8	11	11	8	2	2.5E-01
Fluoride	5	0.17	0.17	0.17	0.19	0.21	0.27	0.28	0.20	0.05	2.3E-01
Sulphate	5	250	265	324	329	368	373	374	329	50	1.5E-01
Nutrients											
Ammonia (Total)	5	0.131	0.134	0.146	0.156	0.162	0.180	0.185	0.156	0.020	1.3E-01
Nitrate (as N)	5	0	0	0	0	0	0	0	0	0	2.5E-01
Nitrite (as N)	5	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.000	3.5E-02
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	5	0.30	0.31	0.35	0.37	0.41	0.41	0.42	0.37	0.05	1.3E-01
Orthophosphate (Dissolved)	5	0.003	0.004	0.008	0.038	0.039	0.056	0.060	0.030	0.024	8.1E-01
Phosphorus - Dissolved	5	0.02	0.02	0.03	0.04	0.04	0.05	0.05	0.04	0.01	3.6E-01
Phosphorus - Total	5	0.004	0.015	0.057	0.067	0.069	0.074	0.075	0.054	0.029	5.3E-01
Cyanide										-	
Cyanide (Free)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (WAD)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	5	0.0048	0.0049	0.0051	0.0056	0.0058	0.0076	0.0080	0.0059	0.0013	2.2E-01
Antimony	5	0.00029	0.00031	0.00038	0.00044	0.00077	0.00269	0.00317	0.00101	0.00122	1.2E+00
Arsenic	5	0.0043	0.0044	0.0050	0.0050	0.0051	0.0053	0.0053	0.0049	0.0004	7.6E-02
Barium	5	0.021	0.021	0.022	0.023	0.024	0.026	0.026	0.023	0.002	8.8E-02
Beryllium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	5	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	5	0.122	0.122	0.122	0.125	0.131	0.145	0.149	0.130	0.011	8.7E-02
Cadmium	5	0.000005	0.000005	0.000005	0.000010	0.000010	0.000012	0.000012	0.000008	0.000003	3.8E-01
Calcium	5	53	56	70	70	70	74	75	67	8	1.2E-01
Chromium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Cobalt	5	0.00125	0.00131	0.00154	0.00167	0.00182	0.00242	0.00257	0.00177	0.00049	2.8E-01
Copper	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0001	0.0000	3.7E-01
Iron	5	0.005	0.048	0.221	0.238	0.251	0.298	0.310	0.205	0.117	5.7E-01
Lead	5	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	-	-
Lithium	5	0.0047	0.0047	0.0048	0.0050	0.0051	0.0057	0.0058	0.0051	0.0004	8.8E-02
Magnesium	5	11	11	14	14	15	15	15	14	2	1.3E-01
Manganese	5	0.471	0.522	0.727	0.920	1.110	1.238	1.270	0.900	0.314	3.5E-01
Mercury	5	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000098	0.0000110	0.0000062	0.0000027	4.3E-01
Molybdenum	5	0.021	0.021	0.021	0.023	0.024	0.024	0.025	0.023	0.001	6.5E-02
Nickel	5	0.0026	0.0027	0.0031	0.0037	0.0040	0.0044	0.0045	0.0036	0.0007	2.1E-01
Phosphorus	5	0.03	0.03	0.07	0.07	0.08	0.10	0.10	0.07	0.03	4.0E-01
Potassium	5	1	1	1	1	1	1	1	1	0	8.7E-02
Selenium	5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.7E-01
Silicon	5	8.0	8.0	8.1	8.5	8.5	8.6	8.6	8.3	0.3	3.6E-02
Silver	5	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	5	97	98	103	108	111	114	115	107	7	6.5E-02
Strontium	5	0.09	0.09	0.12	0.13	0.13	0.14	0.14	0.12	0.02	1.7E-01
Sulphur	5	80	85	106	107	117	127	129	108	18	1.7E-01
Thallium	5	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00002	0.00001	0.00001	4.1E-01
Tin	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Titanium	5	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	-	-
Uranium	5	0.0023	0.0023	0.0025	0.0025	0.0026	0.0027	0.0027	0.0025	0.0001	5.8E-02
Vanadium	5	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	-	-
Zinc	5	0.0005	0.0008	0.0018	0.0026	0.0033	0.0070	0.0079	0.0032	0.0028	8.7E-01
Total Metals											
Aluminum	5	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.1	1.1E+00
Antimony	5	0.0005	0.0005	0.0005	0.0006	0.0008	0.0027	0.0032	0.0011	0.0012	1.0E+00
Arsenic	5	0.0043	0.0044	0.0052	0.0052	0.0053	0.0053	0.0053	0.0050	0.0004	8.9E-02
Barium	5	0.022	0.022	0.022	0.022	0.026	0.026	0.026	0.024	0.002	9.6E-02
Beryllium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	5	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	5	0.123	0.124	0.127	0.128	0.147	0.157	0.159	0.137	0.015	1.1E-01
Cadmium	5	0.00001	0.00001	0.00001	0.00002	0.00002	0.00003	0.00003	0.00002	0.00001	4.9E-01
Calcium	5	52	55	66	67	73	74	74	67	9	1.3E-01
Chromium	5	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	6.8E-01
Cobalt	5	0.0014	0.0015	0.0016	0.0017	0.0020	0.0026	0.0028	0.0019	0.0005	2.7E-01
Copper	5	0.000	0.000	0.001	0.001	0.001	0.002	0.002	0.001	0.001	8.8E-01
Iron	5	0.04	0.08	0.27	0.30	0.34	0.39	0.41	0.27	0.14	5.2E-01
Lead	5	0.00003	0.00003	0.00003	0.00003	0.00003	0.00008	0.00010	0.00004	0.00003	8.3E-01
Lithium	5	0.0045	0.0045	0.0046	0.0047	0.0052	0.0059	0.0061	0.0050	0.0006	1.3E-01
Magnesium	5	11	11	14	14	15	15	16	14	2	1.3E-01
Manganese	5	0.46	0.52	0.74	0.93	1.12	1.30	1.34	0.92	0.34	3.7E-01
Mercury	5	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	-	-
Molybdenum	5	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.02	0.00	8.7E-02
Nickel	5	0.003	0.003	0.003	0.004	0.004	0.005	0.005	0.004	0.001	1.6E-01
Phosphorus	5	0.03	0.03	0.07	0.08	0.08	0.10	0.11	0.07	0.03	4.0E-01
Potassium	5	1	1	1	1	1	1	1	1	0	8.4E-02
Selenium	5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.3E-01
Silicon	5	7.7	7.9	8.4	8.6	8.7	8.7	8.7	8.4	0.4	5.0E-02
Silver	5	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	5	92	95	104	110	114	121	123	109	11	1.1E-01
Strontium	5	0.09	0.09	0.12	0.13	0.13	0.15	0.15	0.12	0.02	1.8E-01
Sulphur	5	81	85	104	106	126	129	130	109	20	1.8E-01
Thallium	5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.5E-01
Tin	5	0.0001	0.0001	0.0002	0.0002	0.0002	0.0004	0.0004	0.0002	0.0001	5.8E-01
Titanium	5	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	-	-
Uranium	5	0.0023	0.0023	0.0025	0.0027	0.0027	0.0027	0.0028	0.0026	0.0002	7.6E-02
Vanadium	5	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	-	-
Zinc	5	0.0015	0.0015	0.0015	0.0035	0.0081	0.0095	0.0099	0.0049	0.0039	7.9E-01
Organics											
Carbon Organic (Dissolved)	1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	-	-
Carbon Organic (Total)	5	4.9	5.1	6.0	6.5	6.8	6.9	7.0	6.2	0.8	1.3E-01
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.15 - BGC14-010

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	5	1026	1037	1079	1108	1176	1504	1586	1195	225	1.9E-01
Oxygen Dissolved %	5	3	3	6	6	14	17	18	9	6	6.8E-01
Oxygen Dissolved	5	0.3	0.4	0.6	0.8	1.7	1.9	2.0	1.1	0.7	6.8E-01
pH (unitless)	5	6.9	6.9	7.0	7.0	7.1	8.4	8.8	7.4	0.8	1.1E-01
Redox Potential mV	5	-128	-112	-48	-36	-21	-12	-10	-48	47	-9.7E-01
Salinity ppt	5	0.75	0.75	0.76	0.79	0.80	0.85	0.86	0.79	0.04	5.5E-02
Specific Conductivity µS/cm	5	1044	1132	1482	1504	1561	1655	1678	1454	241	1.7E-01
Temperature °C	5	7.1	7.4	8.8	9.0	9.5	10.8	11.1	9.1	1.4	1.6E-01
Total Dissolved Solids	5	964	967	980	1013	1031	1083	1096	1017	52	5.1E-02
Turbidity NTU	5	-1.3	-1.0	0.0	0.0	6.7	7.0	7.1	2.5	4.1	1.6E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	1	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	-	-
Alkalinity (Total as CaCO3)	5	371	372	377	383	386	391	392	382	8	2.1E-02
Bicarbonate Alkalinity	5	371	372	377	383	386	391	392	382	8	2.1E-02
Carbonate Alkalinity	5	0.5	0.5	0.5	1.0	1.0	1.0	1.0	0.8	0.3	3.4E-01
Color TCU	0	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	5	856	862	885	892	896	905	907	887	19	2.2E-02
Hydroxide Alkalinity	5	0.5	0.5	0.5	1.0	1.0	1.0	1.0	0.8	0.3	3.4E-01
pH (unitless)	5	7.8	7.8	7.9	8.0	8.0	8.1	8.1	7.9	0.1	1.7E-02
Specific Conductivity µS/cm	5	1510	1512	1520	1570	1580	1588	1590	1554	36	2.3E-02
Total Dissolved Solids	5	1240	1240	1240	1270	1290	1322	1330	1274	38	3.0E-02
Total Suspended Solids	4	2	2	3	4	5	6	6	4	2	5.0E-01
Turbidity NTU	4	2	3	4	5	6	6	6	5	2	3.8E-01
Dissolved Anions											
Bromide	5	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	-	-
Chloride	5	8	8	8	8	9	9	10	8	1	8.7E-02
Fluoride	5	0.27	0.27	0.28	0.28	0.29	0.30	0.31	0.28	0.01	4.8E-02
Sulphate	5	573	574	579	593	607	617	619	594	19	3.2E-02
Nutrients											
Ammonia (Total)	5	0.054	0.054	0.055	0.071	0.073	0.084	0.087	0.068	0.014	2.0E-01
Nitrate (as N)	5	0	0	0	0	0	0	0	0	-	-
Nitrite (as N)	5	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	-	-
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	5	0.20	0.20	0.22	0.22	0.26	0.68	0.79	0.34	0.25	7.5E-01
Orthophosphate (Dissolved)	5	0.001	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.001	4.3E-01
Phosphorus - Dissolved	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.8E-01
Phosphorus - Total	5	0.016	0.016	0.018	0.018	0.022	0.044	0.049	0.025	0.014	5.6E-01
Cyanide										-	
Cyanide (Free)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (WAD)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	5	0.0024	0.0024	0.0024	0.0029	0.0030	0.0032	0.0033	0.0028	0.0004	1.4E-01
Antimony	5	0.00005	0.00005	0.00005	0.00010	0.00023	0.00029	0.00031	0.00015	0.00012	7.9E-01
Arsenic	5	0.0007	0.0007	0.0007	0.0008	0.0009	0.0009	0.0010	0.0008	0.0001	1.2E-01
Barium	5	0.024	0.024	0.025	0.027	0.028	0.028	0.028	0.026	0.002	6.1E-02
Beryllium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	5	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	5	0.018	0.018	0.019	0.020	0.022	0.022	0.022	0.020	0.002	8.9E-02
Cadmium	5	0.000026	0.000026	0.000027	0.000028	0.000040	0.000050	0.000052	0.000035	0.000011	3.3E-01
Calcium	5	160	161	163	164	166	168	168	164	3	1.8E-02
Chromium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Cobalt	5	0.00154	0.00155	0.00159	0.00226	0.00232	0.00251	0.00256	0.00205	0.00046	2.2E-01
Copper	5	0.0001	0.0001	0.0001	0.0002	0.0003	0.0003	0.0003	0.0002	0.0001	5.1E-01
Iron	5	0.507	0.531	0.626	0.719	0.745	0.791	0.803	0.680	0.116	1.7E-01
Lead	5	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	-	-
Lithium	5	0.0387	0.0389	0.0396	0.0424	0.0427	0.0432	0.0433	0.0413	0.0021	5.0E-02
Magnesium	5	111	112	116	117	117	118	118	116	3	2.4E-02
Manganese	5	0.287	0.295	0.327	0.557	0.670	0.693	0.699	0.508	0.192	3.8E-01
Mercury	5	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	-	-
Molybdenum	5	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.000	4.7E-02
Nickel	5	0.0022	0.0023	0.0027	0.0036	0.0037	0.0042	0.0043	0.0033	0.0008	2.5E-01
Phosphorus	5	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	-	-
Potassium	5	11	11	12	12	12	12	12	12	0	3.4E-02
Selenium	5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	-
Silicon	5	22.1	22.3	23.0	23.5	24.2	24.6	24.7	23.5	1.0	4.3E-02
Silver	5	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	5	40	41	41	43	44	47	48	43	3	6.9E-02
Strontium	5	1.76	1.79	1.93	2.02	2.02	2.04	2.05	1.96	0.12	6.1E-02
Sulphur	5	174	174	174	192	198	199	199	187	13	6.7E-02
Thallium	5	0.00002	0.00002	0.00002	0.00003	0.00003	0.00003	0.00003	0.00003	0.00000	1.1E-01
Tin	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0001	0.0001	6.2E-01
Titanium	5	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	-	-
Uranium	5	0.0023	0.0023	0.0024	0.0027	0.0027	0.0029	0.0030	0.0026	0.0003	1.0E-01
Vanadium	5	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	-	-
Zinc	5	0.0023	0.0024	0.0030	0.0057	0.0105	0.0141	0.0150	0.0073	0.0054	7.4E-01
Total Metals											
Aluminum	5	0.0	0.0	0.0	0.0	0.1	0.4	0.4	0.1	0.2	1.3E+00
Antimony	5	0.0001	0.0001	0.0001	0.0002	0.0003	0.0005	0.0006	0.0003	0.0002	7.0E-01
Arsenic	5	0.0007	0.0007	0.0008	0.0008	0.0009	0.0010	0.0011	0.0009	0.0001	1.5E-01
Barium	5	0.024	0.025	0.027	0.028	0.029	0.030	0.030	0.028	0.002	7.5E-02
Beryllium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	5	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	5	0.020	0.020	0.022	0.022	0.027	0.029	0.030	0.024	0.004	1.7E-01
Cadmium	5	0.00003	0.00003	0.00003	0.00004	0.00004	0.00006	0.00006	0.00004	0.00001	2.9E-01
Calcium	5	156	157	162	164	165	166	166	163	4	2.4E-02
Chromium	5	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	7.7E-01
Cobalt	5	0.0016	0.0017	0.0017	0.0024	0.0025	0.0027	0.0027	0.0022	0.0005	2.1E-01
Copper	5	0.000	0.000	0.000	0.000	0.001	0.002	0.002	0.001	0.001	1.1E+00
Iron	5	0.68	0.70	0.80	0.84	0.85	1.03	1.08	0.85	0.15	1.7E-01
Lead	5	0.00003	0.00003	0.00003	0.00003	0.00013	0.00018	0.00020	0.00008	0.00008	9.9E-01
Lithium	5	0.0388	0.0392	0.0406	0.0416	0.0437	0.0441	0.0442	0.0418	0.0022	5.3E-02
Magnesium	5	110	111	115	118	119	120	120	116	4	3.5E-02
Manganese	5	0.30	0.31	0.33	0.58	0.71	0.71	0.71	0.53	0.20	3.8E-01
Mercury	5	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	-	-
Molybdenum	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.4E-02
Nickel	5	0.002	0.003	0.003	0.004	0.005	0.005	0.005	0.004	0.001	2.6E-01
Phosphorus	5	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	-	-
Potassium	5	11	11	12	12	12	13	13	12	1	5.8E-02
Selenium	5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	-
Silicon	5	22.7	22.9	23.6	23.9	24.2	26.1	26.6	24.2	1.5	6.0E-02
Silver	5	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	5	41	41	43	43	45	50	51	44	4	8.7E-02
Strontium	5	1.80	1.84	2.00	2.00	2.06	2.08	2.09	1.99	0.11	5.7E-02
Sulphur	5	174	176	186	200	203	204	204	193	13	6.7E-02
Thallium	5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.4E-01
Tin	5	0.0001	0.0001	0.0002	0.0002	0.0003	0.0005	0.0005	0.0003	0.0002	6.0E-01
Titanium	5	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	-	-
Uranium	5	0.0023	0.0024	0.0026	0.0027	0.0027	0.0029	0.0030	0.0027	0.0002	9.1E-02
Vanadium	5	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	-	-
Zinc	5	0.0015	0.0015	0.0015	0.0066	0.0117	0.0188	0.0206	0.0084	0.0080	9.6E-01
Organics											
Carbon Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Carbon Organic (Total)	5	3.2	3.2	3.2	3.4	3.5	3.9	4.0	3.5	0.3	9.8E-02
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.16 - BGC14-011D

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	5	653	654	660	754	966	993	1000	807	166	2.1E-01
Oxygen Dissolved %	5	0	0	1	2	4	12	13	4	5	1.3E+00
Oxygen Dissolved	5	0.0	0.0	0.1	0.3	0.5	1.4	1.6	0.5	0.7	1.3E+00
pH (unitless)	5	7.7	7.7	8.0	8.1	8.1	8.5	8.6	8.1	0.3	4.1E-02
Redox Potential mV	5	-134	-129	-108	-100	-78	-41	-32	-90	38	-4.2E-01
Salinity ppt	5	0.48	0.48	0.48	0.48	0.50	0.51	0.51	0.49	0.01	2.9E-02
Specific Conductivity µS/cm	4	629	679	881	966	983	1021	1030	898	182	2.0E-01
Temperature °C	5	6.7	7.0	8.1	8.4	10.5	10.6	10.6	8.8	1.7	1.9E-01
Total Dissolved Solids	5	627	627	628	628	640	664	670	639	18	2.9E-02
Turbidity NTU	4	-2.6	-2.2	-0.7	0.8	2.8	5.9	6.7	1.4	3.9	2.8E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	-	-
Alkalinity (Total as CaCO3)	5	318	319	321	323	328	330	331	324	5	1.6E-02
Bicarbonate Alkalinity	5	307	308	310	311	312	318	319	312	4	1.4E-02
Carbonate Alkalinity	5	8.1	8.2	8.8	9.4	16.4	19.0	19.6	12.5	5.2	4.2E-01
Color TCU	0	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	5	58	60	65	67	70	71	72	66	5	7.8E-02
Hydroxide Alkalinity	5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	-	-
pH (unitless)	5	8.4	8.4	8.4	8.5	8.5	8.6	8.6	8.5	0.1	8.9E-03
Specific Conductivity µS/cm	5	968	969	974	1000	1010	1018	1020	994	23	2.3E-02
Total Dissolved Solids	5	621	624	636	648	656	658	658	644	15	2.4E-02
Total Suspended Solids	4	2	2	2	2	3	5	6	3	2	8.0E-01
Turbidity NTU	4	1	1	1	1	1	2	3	1	1	7.8E-01
Dissolved Anions											
Bromide	5	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	-	-
Chloride	5	19	19	19	20	20	20	20	19	1	3.0E-02
Fluoride	5	0.62	0.62	0.63	0.66	0.66	0.67	0.67	0.65	0.02	3.4E-02
Sulphate	5	172	172	173	182	185	188	189	180	7	4.1E-02
Nutrients											
Ammonia (Total)	5	0.010	0.012	0.022	0.024	0.025	0.030	0.031	0.022	0.008	3.5E-01
Nitrate (as N)	5	0	0	0	0	0	0	0	0	-	-
Nitrite (as N)	5	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	-	-
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	5	0.10	0.11	0.15	0.18	0.20	0.22	0.22	0.17	0.05	2.9E-01
Orthophosphate (Dissolved)	5	0.009	0.013	0.028	0.031	0.038	0.039	0.039	0.029	0.012	4.2E-01
Phosphorus - Dissolved	5	0.01	0.01	0.03	0.03	0.04	0.04	0.04	0.03	0.01	4.0E-01
Phosphorus - Total	5	0.021	0.024	0.038	0.041	0.045	0.049	0.050	0.039	0.011	2.9E-01
Cyanide										-	
Cyanide (Free)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (WAD)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	5	0.0082	0.0082	0.0083	0.0092	0.0097	0.0103	0.0105	0.0092	0.0010	1.1E-01
Antimony	5	0.00005	0.00006	0.00012	0.00016	0.00019	0.00025	0.00026	0.00016	0.00008	5.0E-01
Arsenic	5	0.0004	0.0004	0.0006	0.0006	0.0007	0.0007	0.0007	0.0006	0.0001	2.2E-01
Barium	5	0.021	0.021	0.022	0.023	0.024	0.025	0.025	0.023	0.002	7.7E-02
Beryllium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	5	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	5	0.028	0.028	0.029	0.030	0.030	0.032	0.033	0.030	0.002	6.2E-02
Cadmium	5	0.000005	0.000005	0.000005	0.000005	0.000005	0.000010	0.000011	0.000006	0.000003	4.3E-01
Calcium	5	7	8	9	10	11	11	11	10	1	1.4E-01
Chromium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Cobalt	5	0.00014	0.00019	0.00041	0.00052	0.00057	0.00060	0.00061	0.00045	0.00019	4.2E-01
Copper	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Iron	5	0.005	0.009	0.023	0.023	0.025	0.031	0.032	0.022	0.010	4.6E-01
Lead	5	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	-	-
Lithium	5	0.0125	0.0131	0.0155	0.0158	0.0158	0.0188	0.0196	0.0158	0.0025	1.6E-01
Magnesium	5	10	10	10	10	11	11	11	10	0	4.5E-02
Manganese	5	0.029	0.047	0.119	0.123	0.155	0.167	0.170	0.119	0.055	4.6E-01
Mercury	5	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	-	-
Molybdenum	5	0.005	0.005	0.006	0.006	0.006	0.006	0.006	0.006	0.001	1.0E-01
Nickel	5	0.0003	0.0005	0.0014	0.0017	0.0020	0.0025	0.0026	0.0016	0.0009	5.4E-01
Phosphorus	5	0.03	0.03	0.03	0.03	0.03	0.07	0.08	0.04	0.03	7.2E-01
Potassium	5	5	5	6	6	6	6	6	6	0	7.0E-02
Selenium	5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.1E-01
Silicon	5	4.1	4.2	4.3	4.3	4.4	4.4	4.4	4.3	0.1	3.1E-02
Silver	5	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	5	191	191	191	197	200	202	203	196	5	2.7E-02
Strontium	5	0.25	0.26	0.29	0.29	0.30	0.30	0.30	0.29	0.02	6.3E-02
Sulphur	5	54	54	55	59	60	62	62	58	3	5.8E-02
Thallium	5	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Tin	5	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0000	2.8E-01
Titanium	5	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	-	-
Uranium	5	0.0004	0.0005	0.0013	0.0014	0.0015	0.0016	0.0016	0.0012	0.0005	4.0E-01
Vanadium	5	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	-	-
Zinc	5	0.0005	0.0005	0.0005	0.0013	0.0025	0.0062	0.0071	0.0024	0.0028	1.2E+00
Total Metals											
Aluminum	5	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.1	0.1	6.8E-01
Antimony	5	0.0002	0.0002	0.0002	0.0003	0.0004	0.0004	0.0004	0.0003	0.0001	3.5E-01
Arsenic	5	0.0004	0.0004	0.0006	0.0007	0.0007	0.0007	0.0007	0.0006	0.0001	2.1E-01
Barium	5	0.024	0.024	0.024	0.026	0.026	0.028	0.029	0.026	0.002	8.2E-02
Beryllium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	5	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	5	0.029	0.029	0.031	0.032	0.035	0.045	0.047	0.035	0.007	2.1E-01
Cadmium	5	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00000	3.3E-01
Calcium	5	8	8	10	10	11	11	11	10	1	1.3E-01
Chromium	5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.2E-01
Cobalt	5	0.0003	0.0003	0.0005	0.0006	0.0006	0.0007	0.0007	0.0005	0.0002	3.2E-01
Copper	5	0.000	0.000	0.000	0.001	0.001	0.001	0.001	0.000	0.000	4.3E-01
Iron	5	0.06	0.07	0.09	0.10	0.17	0.24	0.25	0.14	0.08	5.7E-01
Lead	5	0.00003	0.00003	0.00003	0.00003	0.00007	0.00010	0.00011	0.00005	0.00004	7.3E-01
Lithium	5	0.0139	0.0140	0.0143	0.0150	0.0162	0.0184	0.0190	0.0157	0.0021	1.3E-01
Magnesium	5	10	10	10	11	11	11	11	10	0	3.9E-02
Manganese	5	0.04	0.05	0.12	0.14	0.17	0.17	0.17	0.13	0.05	4.3E-01
Mercury	5	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	-	-
Molybdenum	5	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	1.3E-01
Nickel	5	0.001	0.001	0.002	0.002	0.002	0.003	0.003	0.002	0.001	4.2E-01
Phosphorus	5	0.03	0.03	0.03	0.03	0.03	0.07	0.08	0.04	0.02	6.4E-01
Potassium	5	5	5	6	6	6	6	6	6	0	6.5E-02
Selenium	5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.2E-01
Silicon	5	4.5	4.5	4.6	4.6	4.6	4.7	4.7	4.6	0.1	2.0E-02
Silver	5	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	5	189	189	190	191	206	209	210	197	10	5.1E-02
Strontium	5	0.29	0.30	0.30	0.31	0.31	0.31	0.32	0.31	0.01	2.7E-02
Sulphur	5	57	57	57	62	62	62	63	60	3	4.8E-02
Thallium	5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-	-
Tin	5	0.0002	0.0002	0.0003	0.0003	0.0004	0.0004	0.0004	0.0003	0.0001	3.6E-01
Titanium	5	0.005	0.005	0.005	0.005	0.005	0.011	0.012	0.006	0.003	4.9E-01
Uranium	5	0.0004	0.0006	0.0015	0.0016	0.0018	0.0019	0.0019	0.0014	0.0006	4.2E-01
Vanadium	5	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	-	-
Zinc	5	0.0015	0.0015	0.0015	0.0015	0.0032	0.0073	0.0083	0.0032	0.0029	9.2E-01
Organics											
Carbon Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Carbon Organic (Total)	5	2.1	2.3	3.1	3.4	3.8	4.4	4.6	3.4	0.9	2.7E-01
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.17 - BGC14-011S

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	5	453	468	528	532	714	810	834	612	157	2.6E-01
Oxygen Dissolved %	5	0	0	1	3	14	18	19	7	9	1.2E+00
Oxygen Dissolved	5	0.0	0.0	0.1	0.3	1.8	2.1	2.1	0.9	1.0	1.2E+00
pH (unitless)	5	7.8	7.9	8.3	8.4	8.9	9.3	9.4	8.6	0.6	6.9E-02
Redox Potential mV	5	-218	-217	-215	-199	-144	-31	-2	-156	91	-5.8E-01
Salinity ppt	5	0.33	0.33	0.35	0.36	0.37	0.39	0.40	0.36	0.03	7.2E-02
Specific Conductivity µS/cm	4	459	491	618	705	744	756	759	657	137	2.1E-01
Temperature °C	5	6.3	6.6	8.0	9.4	9.9	10.5	10.7	8.9	1.7	2.0E-01
Total Dissolved Solids	5	431	432	436	464	493	530	539	473	45	9.4E-02
Turbidity NTU	4	-2.9	-2.5	-0.7	1.2	2.6	3.0	3.1	0.7	2.7	4.2E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	-	-
Alkalinity (Total as CaCO3)	5	157	160	174	178	179	191	194	176	13	7.5E-02
Bicarbonate Alkalinity	5	150	153	164	168	174	177	178	167	11	6.5E-02
Carbonate Alkalinity	5	0.5	1.4	5.0	5.7	6.9	25.1	29.6	9.5	11.5	1.2E+00
Color TCU	0	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	5	69	70	73	78	80	82	83	77	5	7.0E-02
Hydroxide Alkalinity	5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	-	-
pH (unitless)	5	8.3	8.3	8.4	8.5	8.5	8.9	9.0	8.5	0.3	3.1E-02
Specific Conductivity µS/cm	5	659	668	703	746	752	758	760	724	43	5.9E-02
Total Dissolved Solids	5	438	442	456	489	502	504	505	478	30	6.2E-02
Total Suspended Solids	4	2	2	2	3	5	7	7	4	3	7.4E-01
Turbidity NTU	4	1	1	1	1	1	2	2	1	1	5.0E-01
Dissolved Anions											
Bromide	5	0.13	0.13	0.13	0.15	0.15	0.23	0.25	0.16	0.05	3.2E-01
Chloride	5	12	12	12	12	13	13	14	12	1	5.8E-02
Fluoride	5	0.49	0.50	0.52	0.54	0.58	0.58	0.58	0.54	0.04	7.5E-02
Sulphate	5	158	162	178	181	185	192	194	179	13	7.4E-02
Nutrients											
Ammonia (Total)	5	0.006	0.006	0.009	0.011	0.018	0.022	0.023	0.013	0.007	5.4E-01
Nitrate (as N)	5	0	0	0	0	0	0	0	0	0	8.4E-01
Nitrite (as N)	5	0.001	0.001	0.001	0.003	0.003	0.005	0.005	0.002	0.002	8.4E-01
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	5	0.18	0.19	0.21	0.30	0.34	0.35	0.35	0.28	0.07	2.7E-01
Orthophosphate (Dissolved)	5	0.059	0.060	0.064	0.083	0.130	0.139	0.141	0.095	0.038	4.0E-01
Phosphorus - Dissolved	5	0.07	0.07	0.07	0.09	0.14	0.16	0.17	0.11	0.04	4.2E-01
Phosphorus - Total	5	0.071	0.072	0.075	0.099	0.169	0.175	0.177	0.118	0.051	4.3E-01
Cyanide										-	
Cyanide (Free)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (WAD)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	5	0.0286	0.0295	0.0330	0.0340	0.0449	0.0491	0.0501	0.0381	0.0090	2.4E-01
Antimony	5	0.00018	0.00019	0.00024	0.00024	0.00026	0.00027	0.00027	0.00024	0.00003	1.5E-01
Arsenic	5	0.0009	0.0009	0.0011	0.0012	0.0018	0.0019	0.0020	0.0014	0.0005	3.5E-01
Barium	5	0.015	0.015	0.016	0.017	0.024	0.026	0.026	0.020	0.005	2.6E-01
Beryllium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	5	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	5	0.014	0.014	0.016	0.017	0.017	0.017	0.017	0.016	0.001	8.0E-02
Cadmium	5	0.000005	0.000005	0.000005	0.000005	0.000005	0.000023	0.000027	0.000009	0.000010	1.0E+00
Calcium	5	9	9	10	10	11	11	11	10	1	7.4E-02
Chromium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Cobalt	5	0.00017	0.00019	0.00025	0.00034	0.00034	0.00048	0.00052	0.00032	0.00013	4.0E-01
Copper	5	0.0001	0.0001	0.0001	0.0002	0.0005	0.0006	0.0007	0.0003	0.0003	8.0E-01
Iron	5	0.005	0.005	0.005	0.035	0.105	0.110	0.111	0.052	0.052	1.0E+00
Lead	5	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	-	-
Lithium	5	0.0130	0.0131	0.0133	0.0136	0.0147	0.0150	0.0151	0.0139	0.0009	6.5E-02
Magnesium	5	11	11	12	13	13	13	13	12	1	7.0E-02
Manganese	5	0.018	0.036	0.108	0.163	0.324	0.374	0.386	0.200	0.153	7.6E-01
Mercury	5	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	-	-
Molybdenum	5	0.018	0.019	0.022	0.023	0.023	0.024	0.024	0.022	0.002	9.7E-02
Nickel	5	0.0009	0.0009	0.0009	0.0011	0.0015	0.0016	0.0016	0.0012	0.0003	2.9E-01
Phosphorus	5	0.06	0.07	0.08	0.10	0.16	0.20	0.21	0.12	0.06	4.9E-01
Potassium	5	6	6	6	6	6	6	6	6	0	3.9E-02
Selenium	5	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.000	0.000	4.1E-01
Silicon	5	3.1	3.1	3.1	3.2	3.2	3.3	3.4	3.2	0.1	3.8E-02
Silver	5	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	5	112	114	124	125	127	129	130	124	7	5.6E-02
Strontium	5	0.25	0.26	0.28	0.32	0.32	0.33	0.34	0.30	0.04	1.2E-01
Sulphur	5	51	53	59	61	65	69	71	61	7	1.2E-01
Thallium	5	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00000	4.3E-01
Tin	5	0.0002	0.0002	0.0002	0.0003	0.0003	0.0003	0.0003	0.0002	0.0001	2.9E-01
Titanium	5	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	-	-
Uranium	5	0.0012	0.0012	0.0013	0.0015	0.0016	0.0020	0.0021	0.0015	0.0003	2.2E-01
Vanadium	5	0.0005	0.0005	0.0005	0.0005	0.0005	0.0011	0.0013	0.0007	0.0004	5.4E-01
Zinc	5	0.0005	0.0007	0.0014	0.0017	0.0022	0.0052	0.0059	0.0023	0.0021	8.9E-01
Total Metals											
Aluminum	5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	3.1E-01
Antimony	5	0.0002	0.0002	0.0003	0.0004	0.0004	0.0004	0.0004	0.0003	0.0001	2.4E-01
Arsenic	5	0.0009	0.0009	0.0011	0.0013	0.0019	0.0021	0.0021	0.0014	0.0005	3.7E-01
Barium	5	0.015	0.015	0.017	0.018	0.024	0.027	0.028	0.020	0.005	2.7E-01
Beryllium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	5	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	5	0.016	0.016	0.017	0.018	0.022	0.024	0.024	0.019	0.003	1.8E-01
Cadmium	5	0.00001	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00000	1.9E-01
Calcium	5	9	9	10	10	10	11	11	10	1	7.8E-02
Chromium	5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.7E-01
Cobalt	5	0.0002	0.0003	0.0005	0.0006	0.0006	0.0007	0.0007	0.0005	0.0002	3.6E-01
Copper	5	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.000	3.3E-01
Iron	5	0.03	0.03	0.05	0.07	0.24	0.25	0.25	0.13	0.11	8.6E-01
Lead	5	0.00003	0.00003	0.00003	0.00003	0.00005	0.00016	0.00019	0.00006	0.00007	1.1E+00
Lithium	5	0.0134	0.0134	0.0136	0.0140	0.0141	0.0148	0.0150	0.0140	0.0006	4.4E-02
Magnesium	5	11	11	12	12	13	13	14	12	1	6.7E-02
Manganese	5	0.02	0.04	0.11	0.17	0.32	0.38	0.40	0.20	0.15	7.6E-01
Mercury	5	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	-	-
Molybdenum	5	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.02	0.00	1.3E-01
Nickel	5	0.001	0.001	0.001	0.001	0.002	0.002	0.002	0.002	0.001	3.6E-01
Phosphorus	5	0.08	0.08	0.09	0.11	0.19	0.19	0.19	0.13	0.05	4.0E-01
Potassium	5	5	6	6	6	6	6	6	6	0	4.9E-02
Selenium	5	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.000	0.000	4.1E-01
Silicon	5	3.1	3.1	3.1	3.2	3.3	3.5	3.6	3.3	0.2	5.6E-02
Silver	5	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	5	112	113	115	126	128	128	128	122	8	6.3E-02
Strontium	5	0.29	0.29	0.30	0.31	0.33	0.35	0.35	0.32	0.03	8.3E-02
Sulphur	5	54	55	59	62	62	65	66	61	5	7.5E-02
Thallium	5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	4.9E-01
Tin	5	0.0002	0.0002	0.0003	0.0005	0.0006	0.0007	0.0007	0.0004	0.0002	4.8E-01
Titanium	5	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	-	-
Uranium	5	0.0013	0.0013	0.0015	0.0015	0.0017	0.0020	0.0021	0.0016	0.0003	1.9E-01
Vanadium	5	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.001	0.000	6.8E-01
Zinc	5	0.0015	0.0015	0.0015	0.0015	0.0045	0.0051	0.0053	0.0029	0.0019	6.6E-01
Organics											
Carbon Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Carbon Organic (Total)	5	14.5	16.1	22.6	23.1	24.4	29.4	30.7	23.1	5.8	2.5E-01
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.18 - BGC14-012D

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	5	1314	1333	1408	1446	1581	1939	2029	1556	281	1.8E-01
Oxygen Dissolved %	5	4	4	6	7	25	65	76	23	30	1.3E+00
Oxygen Dissolved	5	0.4	0.5	0.7	0.9	2.6	8.1	9.5	2.8	3.8	1.4E+00
pH (unitless)	5	7.3	7.4	7.6	7.7	7.7	7.8	7.8	7.6	0.2	2.5E-02
Redox Potential mV	5	-97	-95	-86	-84	-82	-66	-62	-82	13	-1.5E-01
Salinity ppt	5	0.97	0.98	1.03	1.06	1.06	1.08	1.08	1.04	0.04	4.1E-02
Specific Conductivity µS/cm	5	1267	1396	1910	2072	2092	10062	12055	3879	4583	1.2E+00
Temperature °C	5	5.4	5.9	8.3	8.7	8.8	12.2	13.1	8.9	2.8	3.1E-01
Total Dissolved Solids	5	1241	1257	1320	1340	1345	1359	1362	1322	47	3.6E-02
Turbidity NTU	5	-3.6	-2.9	0.0	0.9	2.3	5.5	6.3	1.2	3.6	3.0E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	0	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	5	212	212	213	219	220	221	221	217	4	1.9E-02
Bicarbonate Alkalinity	5	212	212	213	219	220	221	221	217	4	1.9E-02
Carbonate Alkalinity	5	0.5	0.5	0.5	1.0	1.0	1.0	1.0	0.8	0.3	3.4E-01
Color TCU	0	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	5	666	673	699	718	718	731	734	707	26	3.7E-02
Hydroxide Alkalinity	5	0.5	0.5	0.5	1.0	1.0	1.0	1.0	0.8	0.3	3.4E-01
pH (unitless)	5	8.0	8.0	8.0	8.2	8.2	8.3	8.3	8.1	0.1	1.3E-02
Specific Conductivity µS/cm	5	1970	1978	2010	2010	2020	2028	2030	2008	23	1.1E-02
Total Dissolved Solids	5	1540	1542	1550	1580	1600	1672	1690	1592	60	3.8E-02
Total Suspended Solids	5	2	2	2	2	3	6	7	3	2	8.2E-01
Turbidity NTU	5	1	1	1	1	1	2	2	1	0	3.5E-01
Dissolved Anions											
Bromide	5	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	-	-
Chloride	5	5	5	5	5	5	11	12	6	3	4.9E-01
Fluoride	5	0.20	0.21	0.26	0.28	0.30	0.64	0.72	0.35	0.21	5.9E-01
Sulphate	5	974	976	985	993	995	995	995	988	9	9.2E-03
Nutrients											
Ammonia (Total)	5	0.084	0.085	0.090	0.093	0.094	0.098	0.099	0.092	0.006	6.0E-02
Nitrate (as N)	5	0	0	0	0	0	0	0	0	-	-
Nitrite (as N)	5	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	-	-
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	5	0.23	0.23	0.24	0.25	0.25	0.26	0.26	0.24	0.01	4.6E-02
Orthophosphate (Dissolved)	5	0.005	0.005	0.009	0.009	0.009	0.012	0.013	0.009	0.003	3.2E-01
Phosphorus - Dissolved	5	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	2.8E-01
Phosphorus - Total	5	0.013	0.014	0.016	0.021	0.024	0.025	0.026	0.020	0.005	2.6E-01
Cyanide										-	
Cyanide (Free)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (WAD)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	5	0.0038	0.0039	0.0043	0.0050	0.0055	0.0055	0.0055	0.0048	0.0008	1.6E-01
Antimony	5	0.00005	0.00006	0.00010	0.00011	0.00012	0.00014	0.00015	0.00011	0.00004	3.4E-01
Arsenic	5	0.0360	0.0362	0.0371	0.0379	0.0387	0.0398	0.0401	0.0380	0.0016	4.1E-02
Barium	5	0.015	0.015	0.016	0.017	0.018	0.019	0.019	0.017	0.001	8.7E-02
Beryllium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000	3.7E-01
Bismuth	5	0.00025	0.00025	0.00025	0.00025	0.00025	0.00045	0.00050	0.00030	0.00011	3.7E-01
Boron	5	0.571	0.574	0.586	0.592	0.602	0.621	0.626	0.595	0.020	3.4E-02
Cadmium	5	0.000011	0.000011	0.000013	0.000017	0.000017	0.000030	0.000033	0.000018	0.000009	4.8E-01
Calcium	5	67	67	70	71	71	72	72	70	2	2.9E-02
Chromium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000	3.7E-01
Cobalt	5	0.00093	0.00099	0.00122	0.00146	0.00152	0.00190	0.00200	0.00143	0.00040	2.8E-01
Copper	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0001	0.0000	3.7E-01
Iron	5	0.134	0.144	0.184	0.191	0.227	0.250	0.256	0.198	0.046	2.3E-01
Lead	5	0.00003	0.00003	0.00003	0.00003	0.00003	0.00005	0.00005	0.00003	0.00001	3.7E-01
Lithium	5	0.0448	0.0449	0.0452	0.0465	0.0493	0.0495	0.0495	0.0471	0.0022	4.7E-02
Magnesium	5	121	122	127	131	132	134	135	129	5	4.2E-02
Manganese	5	0.173	0.188	0.248	0.365	0.381	0.430	0.442	0.322	0.109	3.4E-01
Mercury	5	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	-	-
Molybdenum	5	0.016	0.016	0.016	0.016	0.017	0.017	0.017	0.016	0.000	1.6E-02
Nickel	5	0.0012	0.0013	0.0019	0.0020	0.0020	0.0024	0.0024	0.0019	0.0005	2.5E-01
Phosphorus	5	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	-	-
Potassium	5	6	6	7	7	7	7	7	7	0	5.1E-02
Selenium	5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.7E-01
Silicon	5	7.1	7.1	7.2	7.3	7.4	7.4	7.4	7.3	0.1	1.6E-02
Silver	5	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00000	3.7E-01
Sodium	5	207	207	208	217	218	224	226	215	8	3.7E-02
Strontium	5	9.62	9.68	9.92	10.00	10.10	10.42	10.50	10.03	0.32	3.2E-02
Sulphur	5	308	309	311	313	316	320	321	314	5	1.6E-02
Thallium	5	0.00001	0.00001	0.00001	0.00002	0.00002	0.00002	0.00002	0.00001	0.00000	2.0E-01
Tin	5	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	0.0001	4.2E-01
Titanium	5	0.0050	0.0050	0.0050	0.0050	0.0050	0.0090	0.0100	0.0060	0.0022	3.7E-01
Uranium	5	0.0007	0.0008	0.0008	0.0008	0.0010	0.0011	0.0011	0.0009	0.0001	1.7E-01
Vanadium	5	0.0005	0.0005	0.0005	0.0005	0.0005	0.0009	0.0010	0.0006	0.0002	3.7E-01
Zinc	5	0.0010	0.0011	0.0017	0.0019	0.0024	0.0031	0.0033	0.0021	0.0009	4.2E-01
Total Metals											
Aluminum	5	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	7.0E-01
Antimony	5	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0003	0.0002	0.0001	3.5E-01
Arsenic	5	0.0367	0.0369	0.0379	0.0386	0.0411	0.0427	0.0431	0.0395	0.0026	6.5E-02
Barium	5	0.016	0.017	0.017	0.018	0.019	0.020	0.020	0.018	0.002	8.5E-02
Beryllium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000	3.7E-01
Bismuth	5	0.00025	0.00025	0.00025	0.00025	0.00025	0.00045	0.00050	0.00030	0.00011	3.7E-01
Boron	5	0.608	0.609	0.612	0.614	0.629	0.639	0.642	0.621	0.014	2.3E-02
Cadmium	5	0.00002	0.00002	0.00002	0.00002	0.00003	0.00003	0.00003	0.00002	0.00000	2.1E-01
Calcium	5	67	67	70	70	70	71	71	69	2	2.4E-02
Chromium	5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.7E-01
Cobalt	5	0.0011	0.0011	0.0012	0.0015	0.0016	0.0019	0.0020	0.0015	0.0004	2.4E-01
Copper	5	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.000	5.7E-01
Iron	5	0.19	0.20	0.23	0.24	0.25	0.35	0.37	0.26	0.07	2.6E-01
Lead	5	0.00003	0.00003	0.00005	0.00006	0.00010	0.00020	0.00023	0.00009	0.00008	8.6E-01
Lithium	5	0.0451	0.0455	0.0469	0.0471	0.0502	0.0504	0.0505	0.0480	0.0023	4.8E-02
Magnesium	5	125	126	128	134	134	135	135	131	4	3.4E-02
Manganese	5	0.17	0.19	0.26	0.38	0.40	0.43	0.43	0.33	0.11	3.3E-01
Mercury	5	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	-	-
Molybdenum	5	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.00	2.1E-02
Nickel	5	0.001	0.002	0.002	0.002	0.002	0.003	0.003	0.002	0.000	2.2E-01
Phosphorus	5	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	-	-
Potassium	5	6	6	7	7	7	7	7	7	0	2.5E-02
Selenium	5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.7E-01
Silicon	5	7.3	7.3	7.3	7.4	7.5	7.6	7.7	7.4	0.2	2.1E-02
Silver	5	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00001	0.00000	5.6E-01
Sodium	5	210	211	215	218	221	222	222	217	5	2.2E-02
Strontium	5	9.84	9.91	10.20	10.40	10.50	10.74	10.80	10.35	0.36	3.5E-02
Sulphur	5	319	319	321	321	327	329	329	323	4	1.3E-02
Thallium	5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0E-01
Tin	5	0.0003	0.0003	0.0003	0.0003	0.0004	0.0004	0.0004	0.0003	0.0001	1.6E-01
Titanium	5	0.005	0.005	0.005	0.005	0.005	0.009	0.010	0.006	0.002	3.7E-01
Uranium	5	0.0007	0.0008	0.0009	0.0009	0.0010	0.0012	0.0012	0.0009	0.0002	1.8E-01
Vanadium	5	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.000	3.7E-01
Zinc	5	0.0015	0.0018	0.0030	0.0038	0.0042	0.0045	0.0046	0.0034	0.0012	3.6E-01
Organics											
Carbon Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Carbon Organic (Total)	5	2.4	2.4	2.5	2.6	2.7	2.7	2.7	2.6	0.1	5.4E-02
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.19 - BGC14-012S

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	5	796	846	1047	1368	1507	1519	1522	1248	317	2.5E-01
Oxygen Dissolved %	5	2	3	5	18	35	48	51	22	21	9.3E-01
Oxygen Dissolved	5	0.3	0.4	0.6	4.0	5.8	107.6	133.0	28.7	58.3	2.0E+00
pH (unitless)	5	6.9	7.0	7.4	7.4	7.6	7.9	8.0	7.5	0.4	5.3E-02
Redox Potential mV	5	-35	-34	-28	1	33	54	59	6	40	6.8E+00
Salinity ppt	5	0.39	0.48	0.85	1.09	1.11	1.12	1.12	0.91	0.31	3.4E-01
Specific Conductivity µS/cm	5	461	705	1683	2121	2164	2168	2169	1720	732	4.3E-01
Temperature °C	5	3.0	3.4	5.2	6.4	9.1	9.3	9.4	6.6	2.7	4.1E-01
Total Dissolved Solids	5	517	632	1093	1140	1380	1404	1410	1108	359	3.2E-01
Turbidity NTU	5	-3.6	-2.9	0.0	1.1	1.9	2.2	2.3	0.3	2.4	7.0E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	0	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	5	190	209	286	406	411	446	455	350	109	3.1E-01
Bicarbonate Alkalinity	5	190	209	286	406	411	446	455	350	109	3.1E-01
Carbonate Alkalinity	5	0.5	0.5	0.5	1.0	1.0	1.0	1.0	0.8	0.3	3.4E-01
Color TCU	0	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	5	289	371	698	927	985	1069	1090	798	319	4.0E-01
Hydroxide Alkalinity	5	0.5	0.5	0.5	1.0	1.0	1.0	1.0	0.8	0.3	3.4E-01
pH (unitless)	5	8.0	8.0	8.1	8.2	8.2	8.2	8.2	8.1	0.1	9.9E-03
Specific Conductivity µS/cm	5	771	943	1630	2070	2140	2212	2230	1768	603	3.4E-01
Total Dissolved Solids	5	512	662	1260	1730	1810	1834	1840	1430	564	3.9E-01
Total Suspended Solids	5	2	2	2	2	2	2	2	2	-	-
Turbidity NTU	5	0	0	0	0	0	1	1	0	0	3.7E-01
Dissolved Anions											
Bromide	5	0.25	0.25	0.25	0.50	0.50	0.50	0.50	0.40	0.14	3.4E-01
Chloride	5	3	4	11	13	14	16	16	11	5	4.6E-01
Fluoride	5	0.20	0.21	0.23	0.23	0.23	0.41	0.45	0.27	0.10	3.8E-01
Sulphate	5	237	324	671	860	939	1012	1030	747	314	4.2E-01
Nutrients											
Ammonia (Total)	5	0.003	0.005	0.013	0.018	0.021	0.022	0.022	0.015	0.008	5.2E-01
Nitrate (as N)	5	0	0	0	0	0	0	0	0	0	3.4E-01
Nitrite (as N)	5	0.005	0.005	0.005	0.010	0.010	0.010	0.010	0.008	0.003	3.4E-01
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	5	0.39	0.41	0.50	0.64	0.72	0.84	0.87	0.62	0.19	3.0E-01
Orthophosphate (Dissolved)	5	0.035	0.036	0.038	0.039	0.040	0.042	0.043	0.039	0.003	7.1E-02
Phosphorus - Dissolved	5	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.04	0.01	1.2E-01
Phosphorus - Total	5	0.042	0.042	0.046	0.047	0.049	0.059	0.061	0.049	0.007	1.5E-01
Cyanide										-	
Cyanide (Free)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (WAD)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	5	0.0035	0.0036	0.0038	0.0042	0.0052	0.0060	0.0062	0.0046	0.0011	2.4E-01
Antimony	5	0.00012	0.00012	0.00013	0.00017	0.00024	0.00077	0.00090	0.00031	0.00033	1.1E+00
Arsenic	5	0.0027	0.0027	0.0027	0.0028	0.0030	0.0036	0.0038	0.0030	0.0005	1.6E-01
Barium	5	0.023	0.024	0.029	0.037	0.037	0.038	0.039	0.033	0.007	2.1E-01
Beryllium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	5	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	5	0.068	0.084	0.149	0.176	0.179	0.183	0.184	0.151	0.048	3.2E-01
Cadmium	5	0.000012	0.000012	0.000013	0.000021	0.000024	0.000025	0.000025	0.000019	0.000006	3.2E-01
Calcium	5	39	51	98	128	140	150	152	111	45	4.1E-01
Chromium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000	4.3E-01
Cobalt	5	0.00044	0.00047	0.00061	0.00066	0.00067	0.00093	0.00099	0.00067	0.00020	3.0E-01
Copper	5	0.0028	0.0029	0.0035	0.0039	0.0049	0.0077	0.0085	0.0047	0.0022	4.7E-01
Iron	5	0.005	0.007	0.013	0.032	0.044	0.055	0.058	0.030	0.022	7.2E-01
Lead	5	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	-	-
Lithium	5	0.0076	0.0086	0.0127	0.0167	0.0172	0.0178	0.0179	0.0144	0.0043	3.0E-01
Magnesium	5	47	59	110	148	155	170	174	127	51	4.0E-01
Manganese	5	0.049	0.053	0.070	0.074	0.078	0.083	0.085	0.071	0.014	1.9E-01
Mercury	5	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	-	-
Molybdenum	5	0.008	0.008	0.010	0.010	0.010	0.010	0.011	0.010	0.001	9.1E-02
Nickel	5	0.0017	0.0018	0.0022	0.0026	0.0027	0.0027	0.0028	0.0024	0.0004	1.9E-01
Phosphorus	5	0.03	0.03	0.03	0.03	0.06	0.06	0.06	0.04	0.02	4.9E-01
Potassium	5	12	13	17	25	25	25	25	21	6	2.9E-01
Selenium	5	0.000	0.000	0.000	0.000	0.000	0.002	0.002	0.001	0.001	1.4E+00
Silicon	5	5.3	5.5	6.5	7.7	8.0	8.9	9.1	7.3	1.5	2.0E-01
Silver	5	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	5	64	74	115	155	155	161	162	130	42	3.2E-01
Strontium	5	0.60	0.77	1.46	2.05	2.13	2.22	2.24	1.70	0.68	4.0E-01
Sulphur	5	78	106	220	279	296	311	315	238	96	4.0E-01
Thallium	5	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Tin	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Titanium	5	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	-	-
Uranium	5	0.0012	0.0014	0.0021	0.0029	0.0031	0.0034	0.0034	0.0025	0.0009	3.6E-01
Vanadium	5	0.0061	0.0063	0.0072	0.0089	0.0096	0.0289	0.0337	0.0131	0.0116	8.9E-01
Zinc	5	0.0011	0.0013	0.0020	0.0021	0.0052	0.0086	0.0095	0.0040	0.0035	8.7E-01
Total Metals											
Aluminum	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5E-01
Antimony	5	0.0001	0.0001	0.0002	0.0002	0.0003	0.0008	0.0010	0.0003	0.0003	9.9E-01
Arsenic	5	0.0026	0.0027	0.0029	0.0029	0.0030	0.0037	0.0039	0.0031	0.0005	1.6E-01
Barium	5	0.023	0.024	0.029	0.037	0.037	0.039	0.040	0.033	0.007	2.2E-01
Beryllium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	5	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	5	0.071	0.087	0.152	0.196	0.197	0.209	0.212	0.166	0.057	3.5E-01
Cadmium	5	0.00002	0.00002	0.00002	0.00002	0.00002	0.00003	0.00003	0.00002	0.00001	2.6E-01
Calcium	5	39	50	97	128	138	150	153	111	45	4.1E-01
Chromium	5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.0E-01
Cobalt	5	0.0005	0.0005	0.0006	0.0007	0.0007	0.0010	0.0010	0.0007	0.0002	3.0E-01
Copper	5	0.003	0.004	0.005	0.005	0.006	0.009	0.010	0.006	0.002	4.1E-01
Iron	5	0.02	0.02	0.02	0.04	0.05	0.05	0.05	0.04	0.02	4.1E-01
Lead	5	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	-	-
Lithium	5	0.0076	0.0085	0.0122	0.0178	0.0183	0.0187	0.0188	0.0149	0.0049	3.3E-01
Magnesium	5	44	57	110	147	157	174	178	127	53	4.1E-01
Manganese	5	0.05	0.05	0.07	0.08	0.08	0.09	0.09	0.07	0.01	1.9E-01
Mercury	5	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	-	-
Molybdenum	5	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	9.9E-02
Nickel	5	0.002	0.002	0.002	0.003	0.003	0.003	0.003	0.002	0.000	1.8E-01
Phosphorus	5	0.03	0.03	0.03	0.05	0.06	0.07	0.07	0.05	0.02	4.5E-01
Potassium	5	12	13	17	24	24	25	25	20	6	2.9E-01
Selenium	5	0.000	0.000	0.000	0.000	0.000	0.002	0.002	0.001	0.001	1.4E+00
Silicon	5	5.3	5.5	6.4	7.9	8.2	8.9	9.1	7.4	1.5	2.1E-01
Silver	5	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00000	5.2E-01
Sodium	5	65	73	104	157	167	168	168	132	46	3.5E-01
Strontium	5	0.59	0.77	1.51	2.02	2.28	2.35	2.37	1.75	0.73	4.2E-01
Sulphur	5	79	106	215	284	310	329	334	244	103	4.2E-01
Thallium	5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-	-
Tin	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Titanium	5	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	-	-
Uranium	5	0.0013	0.0014	0.0020	0.0030	0.0034	0.0037	0.0038	0.0027	0.0010	3.8E-01
Vanadium	5	0.006	0.007	0.008	0.010	0.010	0.030	0.035	0.014	0.012	8.5E-01
Zinc	5	0.0015	0.0015	0.0015	0.0033	0.0069	0.0087	0.0092	0.0045	0.0034	7.7E-01
Organics											
Carbon Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Carbon Organic (Total)	5	6.9	7.4	9.2	9.4	11.5	12.8	13.1	10.0	2.4	2.4E-01
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.20 - BGC14-013

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	5	280	281	285	289	327	361	370	310	38	1.2E-01
Oxygen Dissolved %	5	1	1	2	5	6	50	61	15	26	1.7E+00
Oxygen Dissolved	5	0.1	0.1	0.2	0.6	0.8	6.0	7.3	1.8	3.1	1.7E+00
pH (unitless)	5	8.0	8.1	8.2	8.5	9.5	9.6	9.6	8.8	0.8	8.6E-02
Redox Potential mV	5	-81	-81	-81	-33	4	40	49	-28	56	-2.0E+00
Salinity ppt	5	0.20	0.20	0.21	0.21	0.24	0.26	0.26	0.22	0.03	1.1E-01
Specific Conductivity µS/cm	5	419	422	434	444	490	526	535	464	48	1.0E-01
Temperature °C	5	5.7	6.0	7.5	7.5	8.3	8.8	8.9	7.6	1.2	1.6E-01
Total Dissolved Solids	5	272	274	282	289	320	342	347	302	31	1.0E-01
Turbidity NTU	5	-2.4	-1.9	0.0	2.4	8.1	42.6	51.2	11.9	22.3	1.9E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	0	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	5	130	130	131	132	141	142	142	135	6	4.3E-02
Bicarbonate Alkalinity	5	130	130	131	131	141	142	142	135	6	4.4E-02
Carbonate Alkalinity	5	0.5	0.5	0.5	1.0	1.0	1.0	1.0	0.8	0.3	3.4E-01
Color TCU	0	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	5	42	42	43	46	56	56	56	49	7	1.4E-01
Hydroxide Alkalinity	5	0.5	0.5	0.5	1.0	1.0	1.0	1.0	0.8	0.3	3.4E-01
pH (unitless)	5	8.2	8.2	8.3	8.3	8.3	8.3	8.3	8.3	0.1	6.6E-03
Specific Conductivity µS/cm	5	430	431	434	438	440	450	453	439	9	2.0E-02
Total Dissolved Solids	5	283	283	284	293	294	298	299	291	7	2.4E-02
Total Suspended Solids	5	2	2	2	2	2	3	3	2	1	3.9E-01
Turbidity NTU	5	0	0	0	1	1	2	2	1	1	7.4E-01
Dissolved Anions											
Bromide	5	0.06	0.06	0.06	0.07	0.08	0.08	0.08	0.07	0.01	1.2E-01
Chloride	5	5	5	5	5	5	5	5	5	0	5.0E-02
Fluoride	5	0.25	0.25	0.27	0.27	0.28	0.28	0.28	0.27	0.01	4.2E-02
Sulphate	5	83	83	83	84	86	88	88	85	2	2.9E-02
Nutrients											
Ammonia (Total)	5	0.054	0.056	0.065	0.071	0.071	0.080	0.082	0.069	0.010	1.5E-01
Nitrate (as N)	5	0	0	0	0	0	0	0	0	-	-
Nitrite (as N)	5	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.000	4.5E-01
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	5	0.13	0.13	0.14	0.15	0.16	0.16	0.16	0.15	0.01	9.0E-02
Orthophosphate (Dissolved)	5	0.019	0.019	0.019	0.026	0.029	0.031	0.031	0.025	0.006	2.3E-01
Phosphorus - Dissolved	5	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.01	2.0E-01
Phosphorus - Total	5	0.026	0.026	0.027	0.031	0.032	0.032	0.033	0.030	0.003	9.8E-02
Cyanide										-	
Cyanide (Free)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (WAD)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	5	0.0113	0.0114	0.0116	0.0119	0.0123	0.0126	0.0127	0.0120	0.0006	4.6E-02
Antimony	5	0.00005	0.00005	0.00005	0.00005	0.00005	0.00011	0.00012	0.00006	0.00003	4.9E-01
Arsenic	5	0.0031	0.0031	0.0032	0.0034	0.0036	0.0037	0.0037	0.0034	0.0002	7.3E-02
Barium	5	0.014	0.014	0.015	0.015	0.017	0.019	0.019	0.016	0.002	1.4E-01
Beryllium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	5	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	5	0.239	0.239	0.241	0.257	0.278	0.280	0.281	0.259	0.020	7.7E-02
Cadmium	5	0.000005	0.000005	0.000005	0.000014	0.000014	0.000016	0.000017	0.000011	0.000006	5.1E-01
Calcium	5	10	10	10	11	13	13	13	11	2	1.5E-01
Chromium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Cobalt	5	0.00020	0.00021	0.00026	0.00030	0.00030	0.00038	0.00040	0.00029	0.00007	2.5E-01
Copper	5	0.0003	0.0003	0.0004	0.0006	0.0006	0.0008	0.0009	0.0005	0.0002	4.1E-01
Iron	5	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	-	-
Lead	5	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	-	-
Lithium	5	0.0140	0.0140	0.0142	0.0145	0.0146	0.0148	0.0148	0.0144	0.0003	2.2E-02
Magnesium	5	4	4	4	5	6	6	6	5	1	1.4E-01
Manganese	5	0.045	0.052	0.083	0.101	0.119	0.121	0.122	0.094	0.032	3.4E-01
Mercury	5	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	-	-
Molybdenum	5	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.000	5.1E-02
Nickel	5	0.0005	0.0006	0.0007	0.0008	0.0010	0.0011	0.0011	0.0008	0.0002	2.7E-01
Phosphorus	5	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	-	-
Potassium	5	2	2	2	3	3	3	3	3	0	8.8E-02
Selenium	5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.0E-01
Silicon	5	5.6	5.7	6.3	6.3	6.5	6.5	6.5	6.2	0.4	6.1E-02
Silver	5	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	5	73	73	73	75	76	77	78	75	2	2.6E-02
Strontium	5	0.27	0.27	0.28	0.30	0.31	0.31	0.31	0.30	0.02	6.0E-02
Sulphur	5	27	27	28	29	30	30	30	28	1	4.6E-02
Thallium	5	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00001	0.00001	6.3E-01
Tin	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003	0.0003	0.0001	0.0001	9.3E-01
Titanium	5	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	-	-
Uranium	5	0.0004	0.0005	0.0005	0.0005	0.0006	0.0006	0.0006	0.0005	0.0001	1.5E-01
Vanadium	5	0.0005	0.0005	0.0005	0.0005	0.0005	0.0011	0.0012	0.0006	0.0003	4.9E-01
Zinc	5	0.0022	0.0024	0.0032	0.0045	0.0079	0.0091	0.0094	0.0054	0.0031	5.7E-01
Total Metals											
Aluminum	5	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	5.2E-01
Antimony	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0001	0.0000	5.8E-01
Arsenic	5	0.0031	0.0031	0.0032	0.0036	0.0036	0.0036	0.0036	0.0034	0.0002	6.8E-02
Barium	5	0.014	0.014	0.014	0.016	0.018	0.020	0.020	0.016	0.003	1.7E-01
Beryllium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	5	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	5	0.262	0.263	0.268	0.276	0.278	0.294	0.298	0.276	0.014	4.9E-02
Cadmium	5	0.00001	0.00001	0.00001	0.00002	0.00002	0.00003	0.00003	0.00002	0.00001	6.1E-01
Calcium	5	10	10	10	11	12	13	13	11	1	1.3E-01
Chromium	5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.8E-01
Cobalt	5	0.0002	0.0002	0.0002	0.0003	0.0004	0.0004	0.0005	0.0003	0.0001	3.1E-01
Copper	5	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.000	5.4E-01
Iron	5	0.01	0.01	0.02	0.06	0.07	0.07	0.07	0.05	0.03	6.1E-01
Lead	5	0.00003	0.00003	0.00003	0.00003	0.00006	0.00006	0.00006	0.00004	0.00002	4.7E-01
Lithium	5	0.0133	0.0134	0.0139	0.0143	0.0148	0.0157	0.0159	0.0144	0.0010	6.8E-02
Magnesium	5	4	5	5	5	6	6	6	5	1	1.1E-01
Manganese	5	0.04	0.05	0.08	0.10	0.12	0.13	0.13	0.10	0.03	3.6E-01
Mercury	5	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	-	-
Molybdenum	5	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	1.6E-02
Nickel	5	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.000	3.3E-01
Phosphorus	5	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	-	-
Potassium	5	2	3	3	3	3	3	3	3	0	4.3E-02
Selenium	5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.3E-01
Silicon	5	6.3	6.3	6.4	6.4	6.5	6.5	6.6	6.4	0.1	1.4E-02
Silver	5	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00001	0.00001	8.7E-01
Sodium	5	75	75	75	75	75	78	79	76	2	2.3E-02
Strontium	5	0.29	0.29	0.29	0.30	0.31	0.33	0.33	0.30	0.02	5.6E-02
Sulphur	5	26	27	28	29	30	30	30	29	2	5.5E-02
Thallium	5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.4E-01
Tin	5	0.0001	0.0001	0.0001	0.0002	0.0003	0.0004	0.0005	0.0002	0.0002	8.4E-01
Titanium	5	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	-	-
Uranium	5	0.0005	0.0005	0.0005	0.0005	0.0006	0.0007	0.0007	0.0006	0.0001	1.3E-01
Vanadium	5	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.001	0.000	5.6E-01
Zinc	5	0.0015	0.0015	0.0015	0.0034	0.0102	0.0122	0.0127	0.0059	0.0052	8.9E-01
Organics											
Carbon Organic (Dissolved)	1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	-	-
Carbon Organic (Total)	5	0.9	0.9	1.1	1.2	1.4	1.7	1.7	1.3	0.3	2.6E-01
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.21 - BGC14-014D

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	2	2100	2159	2395	2691	2986	3222	3281	2691	835	3.1E-01
Oxygen Dissolved %	2	52	53	57	63	68	73	74	63	15	2.5E-01
Oxygen Dissolved	2	5.5	5.6	6.0	6.6	7.2	7.6	7.8	6.6	1.6	2.4E-01
pH (unitless)	2	7.6	7.7	8.3	9.0	9.6	10.2	10.3	9.0	1.9	2.1E-01
Redox Potential mV	2	-196	-186	-148	-99	-51	-12	-2	-99	137	-1.4E+00
Salinity ppt	2	1.51	1.56	1.76	2.00	2.25	2.44	2.49	2.00	0.69	3.5E-01
Specific Conductivity µS/cm	2	453	574	1060	1667	2274	2760	2881	1667	1717	1.0E+00
Temperature °C	2	10.7	10.7	10.7	10.8	10.8	10.8	10.8	10.8	0.1	6.6E-03
Total Dissolved Solids	2	1876	1933	2160	2445	2729	2956	3013	2445	804	3.3E-01
Turbidity NTU	2	-2.6	-2.3	-1.3	-0.1	1.2	2.2	2.5	-0.1	3.6	-7.2E+01
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	1	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	-	-
Alkalinity (Total as CaCO3)	3	109	110	116	123	127	130	131	121	11	9.2E-02
Bicarbonate Alkalinity	3	109	110	116	123	127	130	131	121	11	9.2E-02
Carbonate Alkalinity	3	0.5	0.6	0.8	1.0	1.0	1.0	1.0	0.8	0.3	3.5E-01
Color TCU	0	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	3	1120	1131	1175	1230	1235	1239	1240	1197	67	5.6E-02
Hydroxide Alkalinity	3	0.5	0.6	0.8	1.0	1.0	1.0	1.0	0.8	0.3	3.5E-01
pH (unitless)	3	7.5	7.5	7.6	7.7	7.8	7.8	7.8	7.7	0.2	2.6E-02
Specific Conductivity µS/cm	3	2200	2213	2265	2330	2355	2375	2380	2303	93	4.0E-02
Total Dissolved Solids	3	1820	1855	1995	2170	2185	2197	2200	2063	211	1.0E-01
Total Suspended Solids	3	5	6	8	10	18	24	25	14	10	7.6E-01
Turbidity NTU	3	4	4	4	4	10	16	17	8	7	9.0E-01
Dissolved Anions											
Bromide	3	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	-	-
Chloride	3	5	5	5	5	12	17	18	9	8	8.0E-01
Fluoride	3	0.20	0.20	0.20	0.20	0.34	0.45	0.48	0.29	0.16	5.4E-01
Sulphate	3	1370	1374	1390	1410	1415	1419	1420	1400	26	1.9E-02
Nutrients											
Ammonia (Total)	3	0.003	0.024	0.112	0.222	0.332	0.419	0.441	0.222	0.219	9.9E-01
Nitrate (as N)	2	0	0	0	0	0	0	0	0	-	-
Nitrite (as N)	2	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	-	-
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	3	0.52	0.52	0.52	0.53	0.54	0.55	0.55	0.53	0.02	3.3E-02
Orthophosphate (Dissolved)	3	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.000	2.1E-01
Phosphorus - Dissolved	2	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	1.1E+00
Phosphorus - Total	3	0.045	0.045	0.045	0.045	0.066	0.082	0.086	0.059	0.024	4.1E-01
Cyanide										-	
Cyanide (Free)	2	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	2	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (WAD)	2	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	3	0.0029	0.0030	0.0032	0.0034	0.0055	0.0071	0.0075	0.0046	0.0025	5.5E-01
Antimony	3	0.00024	0.00026	0.00034	0.00043	0.00044	0.00044	0.00044	0.00037	0.00011	3.0E-01
Arsenic	3	0.0016	0.0016	0.0018	0.0021	0.0022	0.0023	0.0023	0.0020	0.0004	1.8E-01
Barium	3	0.037	0.037	0.038	0.038	0.040	0.041	0.042	0.039	0.002	6.1E-02
Beryllium	3	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	3	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	3	0.072	0.073	0.075	0.077	0.084	0.089	0.090	0.080	0.009	1.2E-01
Cadmium	3	0.000005	0.000005	0.000005	0.000005	0.000009	0.000012	0.000013	0.000008	0.000005	6.0E-01
Calcium	3	208	209	212	216	218	220	220	215	6	2.8E-02
Chromium	3	0.0001	0.0001	0.0001	0.0001	0.0005	0.0008	0.0009	0.0004	0.0005	1.3E+00
Cobalt	3	0.00112	0.00164	0.00373	0.00633	0.00657	0.00675	0.00680	0.00475	0.00315	6.6E-01
Copper	3	0.0001	0.0001	0.0002	0.0002	0.0003	0.0003	0.0003	0.0002	0.0001	4.7E-01
Iron	3	0.318	0.363	0.542	0.765	0.767	0.768	0.768	0.617	0.259	4.2E-01
Lead	3	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	-	-
Lithium	3	0.0037	0.0037	0.0038	0.0038	0.0042	0.0045	0.0046	0.0040	0.0005	1.2E-01
Magnesium	3	145	147	157	168	168	168	168	160	13	8.3E-02
Manganese	3	2.780	2.792	2.840	2.900	3.550	4.070	4.200	3.293	0.787	2.4E-01
Mercury	3	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	-	-
Molybdenum	3	0.020	0.021	0.025	0.031	0.033	0.035	0.035	0.029	0.008	2.8E-01
Nickel	3	0.0058	0.0062	0.0076	0.0094	0.0095	0.0096	0.0096	0.0083	0.0021	2.6E-01
Phosphorus	3	0.03	0.03	0.03	0.03	0.04	0.05	0.05	0.03	0.02	4.8E-01
Potassium	3	17	17	17	18	18	18	18	18	1	5.3E-02
Selenium	1	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	-	-
Silicon	3	5.8	5.8	5.9	5.9	6.1	6.3	6.3	6.0	0.3	4.2E-02
Silver	3	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	3	127	127	129	131	131	131	131	130	2	1.8E-02
Strontium	3	3.92	3.94	4.03	4.13	4.29	4.41	4.44	4.16	0.26	6.3E-02
Sulphur	3	401	406	425	449	461	470	472	441	36	8.2E-02
Thallium	3	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	6.5E-01
Tin	3	0.0001	0.0001	0.0001	0.0001	0.0007	0.0012	0.0013	0.0005	0.0007	1.4E+00
Titanium	3	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	-	-
Uranium	3	0.0026	0.0026	0.0027	0.0028	0.0030	0.0032	0.0033	0.0029	0.0003	1.2E-01
Vanadium	3	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	-	-
Zinc	3	0.0005	0.0014	0.0050	0.0094	0.0100	0.0105	0.0106	0.0068	0.0055	8.1E-01
Total Metals											
Aluminum	3	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.1	0.1	1.4E+00
Antimony	3	0.0004	0.0004	0.0004	0.0005	0.0005	0.0005	0.0005	0.0004	0.0001	1.4E-01
Arsenic	3	0.0017	0.0017	0.0020	0.0023	0.0024	0.0025	0.0025	0.0022	0.0004	1.9E-01
Barium	3	0.037	0.037	0.037	0.038	0.041	0.044	0.045	0.040	0.005	1.1E-01
Beryllium	3	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	3	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	3	0.081	0.081	0.082	0.083	0.092	0.099	0.101	0.088	0.011	1.2E-01
Cadmium	3	0.00004	0.00004	0.00004	0.00005	0.00010	0.00014	0.00015	0.00008	0.00006	7.6E-01
Calcium	3	200	201	206	212	212	212	212	208	7	3.3E-02
Chromium	3	0.000	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.001	7.1E-01
Cobalt	3	0.0061	0.0061	0.0062	0.0063	0.0066	0.0068	0.0068	0.0064	0.0004	6.2E-02
Copper	3	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.000	3.2E-01
Iron	3	0.87	0.87	0.89	0.91	0.94	0.96	0.97	0.91	0.05	5.8E-02
Lead	3	0.00003	0.00003	0.00006	0.00009	0.00016	0.00022	0.00023	0.00012	0.00011	9.2E-01
Lithium	3	0.0036	0.0036	0.0038	0.0040	0.0043	0.0046	0.0046	0.0041	0.0005	1.3E-01
Magnesium	3	144	146	156	168	172	174	175	162	16	1.0E-01
Manganese	3	2.73	2.75	2.84	2.94	3.59	4.11	4.24	3.30	0.82	2.5E-01
Mercury	3	0.000005	0.000005	0.000005	0.000005	0.000013	0.000019	0.000021	0.000010	0.000009	8.9E-01
Molybdenum	3	0.02	0.03	0.03	0.04	0.04	0.04	0.04	0.03	0.01	2.1E-01
Nickel	3	0.009	0.009	0.010	0.010	0.011	0.011	0.011	0.010	0.001	1.1E-01
Phosphorus	3	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.00	4.5E-02
Potassium	3	16	16	17	18	19	19	19	18	2	8.6E-02
Selenium	3	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	5.9E-01
Silicon	3	5.9	5.9	5.9	5.9	6.3	6.6	6.6	6.1	0.4	6.9E-02
Silver	3	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	3	124	124	126	128	130	131	131	128	4	2.8E-02
Strontium	3	3.76	3.82	4.08	4.39	4.48	4.55	4.57	4.24	0.43	1.0E-01
Sulphur	3	391	397	419	447	458	467	469	436	40	9.2E-02
Thallium	3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.8E-02
Tin	3	0.0002	0.0002	0.0002	0.0002	0.0015	0.0025	0.0028	0.0010	0.0015	1.4E+00
Titanium	3	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	-	-
Uranium	3	0.0028	0.0028	0.0028	0.0028	0.0029	0.0030	0.0030	0.0029	0.0001	4.1E-02
Vanadium	3	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	-	-
Zinc	3	0.0041	0.0057	0.0122	0.0202	0.0333	0.0438	0.0464	0.0236	0.0214	9.1E-01
Organics											
Carbon Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Carbon Organic (Total)	3	5.8	5.8	6.1	6.5	7.3	7.9	8.1	6.8	1.2	1.8E-01
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.22 - BGC14-015D

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	4	419	421	427	431	439	453	456	434	16	3.6E-02
Oxygen Dissolved %	4	0	0	1	5	14	27	31	10	14	1.5E+00
Oxygen Dissolved	4	0.0	0.0	0.1	0.5	1.5	3.1	3.5	1.1	1.7	1.5E+00
pH (unitless)	4	8.0	8.0	8.1	8.2	8.4	8.6	8.6	8.3	0.3	3.5E-02
Redox Potential mV	4	-147	-142	-122	-108	-78	-24	-10	-93	59	-6.3E-01
Salinity ppt	4	0.28	0.28	0.29	0.29	0.29	0.30	0.30	0.29	0.01	2.8E-02
Specific Conductivity µS/cm	4	576	580	595	603	605	607	607	597	14	2.4E-02
Temperature °C	4	9.7	9.8	10.1	10.5	11.1	12.1	12.3	10.7	1.1	1.0E-01
Total Dissolved Solids	4	374	377	387	392	393	394	394	388	9	2.4E-02
Turbidity NTU	4	0.3	0.9	3.1	8.2	15.8	24.0	26.0	10.7	11.4	1.1E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	0	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	4	167	168	174	178	179	180	180	176	6	3.4E-02
Bicarbonate Alkalinity	4	167	168	174	177	177	177	177	174	5	2.8E-02
Carbonate Alkalinity	4	0.5	0.5	0.5	1.6	2.8	3.4	3.5	1.8	1.5	8.5E-01
Color TCU	0	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	4	64	65	68	69	69	71	71	68	3	4.3E-02
Hydroxide Alkalinity	4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	-	-
pH (unitless)	4	8.3	8.3	8.4	8.4	8.4	8.4	8.4	8.4	0.0	3.9E-03
Specific Conductivity µS/cm	4	572	575	588	602	612	614	615	598	20	3.3E-02
Total Dissolved Solids	4	380	381	385	393	400	402	403	392	11	2.8E-02
Total Suspended Solids	4	9	10	13	18	27	42	45	23	16	7.1E-01
Turbidity NTU	4	3	4	4	5	9	17	19	8	7	9.0E-01
Dissolved Anions											
Bromide	4	0.03	0.03	0.05	0.06	0.06	0.06	0.07	0.05	0.02	3.6E-01
Chloride	4	3	3	3	3	3	3	3	3	0	3.6E-02
Fluoride	4	0.39	0.39	0.39	0.40	0.41	0.43	0.44	0.41	0.02	5.2E-02
Sulphate	4	127	127	128	129	130	131	131	129	2	1.4E-02
Nutrients											
Ammonia (Total)	4	0.058	0.062	0.076	0.083	0.093	0.116	0.122	0.086	0.026	3.1E-01
Nitrate (as N)	0	-	-	-	-	-	-	-	-	-	-
Nitrite (as N)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	4	0.20	0.21	0.22	0.24	0.25	0.27	0.28	0.24	0.03	1.3E-01
Orthophosphate (Dissolved)	4	0.038	0.041	0.052	0.061	0.065	0.067	0.067	0.057	0.013	2.3E-01
Phosphorus - Dissolved	4	0.04	0.05	0.05	0.06	0.07	0.07	0.07	0.06	0.01	1.8E-01
Phosphorus - Total	4	0.054	0.054	0.057	0.062	0.068	0.076	0.078	0.064	0.010	1.6E-01
Cyanide										-	
Cyanide (Free)	0	-	-	-	-	-	-	-	-	-	-
Cyanide (Total)	0	-	-	-	-	-	-	-	-	-	-
Cyanide (WAD)	0	-	-	-	-	-	-	-	-	-	-
Dissolved Metals											
Aluminum	4	0.0086	0.0087	0.0092	0.0096	0.0100	0.0106	0.0108	0.0096	0.0009	9.5E-02
Antimony	4	0.00011	0.00011	0.00011	0.00014	0.00017	0.00017	0.00017	0.00014	0.00003	2.5E-01
Arsenic	4	0.0034	0.0035	0.0038	0.0040	0.0040	0.0041	0.0041	0.0039	0.0003	8.1E-02
Barium	4	0.016	0.016	0.016	0.017	0.017	0.017	0.017	0.017	0.001	4.2E-02
Beryllium	4	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	4	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	4	0.114	0.114	0.116	0.119	0.124	0.128	0.129	0.120	0.007	5.6E-02
Cadmium	4	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	-	-
Calcium	4	9	9	9	10	10	10	10	10	1	6.0E-02
Chromium	4	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Cobalt	4	0.00049	0.00049	0.00051	0.00052	0.00055	0.00062	0.00064	0.00054	0.00007	1.3E-01
Copper	4	0.0001	0.0001	0.0001	0.0003	0.0006	0.0009	0.0010	0.0004	0.0004	1.0E+00
Iron	4	0.012	0.012	0.013	0.019	0.025	0.028	0.029	0.020	0.008	4.3E-01
Lead	4	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	-	-
Lithium	4	0.0382	0.0389	0.0418	0.0430	0.0436	0.0450	0.0453	0.0424	0.0030	7.0E-02
Magnesium	4	10	10	11	11	11	11	11	11	0	4.0E-02
Manganese	4	0.122	0.124	0.130	0.144	0.165	0.191	0.197	0.152	0.033	2.2E-01
Mercury	4	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	-	-
Molybdenum	4	0.015	0.015	0.016	0.016	0.016	0.016	0.016	0.016	0.000	2.0E-02
Nickel	4	0.0014	0.0014	0.0016	0.0017	0.0018	0.0020	0.0021	0.0017	0.0003	1.7E-01
Phosphorus	4	0.05	0.05	0.06	0.07	0.08	0.08	0.08	0.07	0.02	2.3E-01
Potassium	4	1	1	1	1	1	1	1	1	0	2.9E-02
Selenium	4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.1E-01
Silicon	4	7.4	7.4	7.4	7.6	7.9	8.2	8.3	7.7	0.4	5.6E-02
Silver	4	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	4	99	99	99	103	108	109	109	103	5	5.1E-02
Strontium	4	0.52	0.52	0.55	0.58	0.60	0.60	0.60	0.57	0.04	6.8E-02
Sulphur	4	44	44	44	44	45	45	45	44	0	8.1E-03
Thallium	4	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Tin	4	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0001	0.0001	7.9E-01
Titanium	4	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	-	-
Uranium	4	0.0005	0.0005	0.0005	0.0006	0.0008	0.0009	0.0009	0.0007	0.0002	2.7E-01
Vanadium	4	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	-	-
Zinc	4	0.0025	0.0030	0.0051	0.0071	0.0086	0.0092	0.0093	0.0065	0.0030	4.7E-01
Total Metals											
Aluminum	4	0.4	0.5	0.6	0.8	0.8	0.9	0.9	0.7	0.2	3.1E-01
Antimony	4	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0000	2.2E-01
Arsenic	4	0.0030	0.0031	0.0037	0.0040	0.0042	0.0043	0.0044	0.0039	0.0006	1.6E-01
Barium	4	0.018	0.018	0.018	0.018	0.019	0.019	0.019	0.018	0.001	3.3E-02
Beryllium	4	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	4	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	4	0.113	0.115	0.122	0.126	0.129	0.132	0.133	0.125	0.008	6.7E-02
Cadmium	4	0.00001	0.00001	0.00001	0.00002	0.00002	0.00002	0.00002	0.00002	0.00001	3.1E-01
Calcium	4	9	9	10	10	10	10	10	10	1	5.6E-02
Chromium	4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.3E-01
Cobalt	4	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007	0.0000	3.5E-02
Copper	4	0.001	0.001	0.001	0.001	0.001	0.002	0.002	0.001	0.001	6.7E-01
Iron	4	0.21	0.23	0.28	0.33	0.36	0.36	0.36	0.31	0.07	2.3E-01
Lead	4	0.00014	0.00016	0.00024	0.00033	0.00041	0.00047	0.00048	0.00032	0.00015	4.6E-01
Lithium	4	0.0347	0.0357	0.0397	0.0419	0.0429	0.0439	0.0442	0.0407	0.0041	1.0E-01
Magnesium	4	10	10	10	11	11	11	12	11	1	5.5E-02
Manganese	4	0.13	0.13	0.15	0.16	0.17	0.18	0.18	0.16	0.02	1.3E-01
Mercury	4	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	-	-
Molybdenum	4	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.00	5.4E-02
Nickel	4	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.000	8.7E-02
Phosphorus	4	0.05	0.05	0.06	0.07	0.08	0.08	0.08	0.07	0.01	2.0E-01
Potassium	4	1	1	1	1	1	1	1	1	0	3.8E-02
Selenium	4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.0E-01
Silicon	4	9.4	9.4	9.5	9.7	10.2	10.9	11.1	10.0	0.8	7.8E-02
Silver	4	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	4	95	96	96	102	107	108	108	102	7	6.5E-02
Strontium	4	0.56	0.56	0.56	0.57	0.59	0.60	0.60	0.58	0.02	3.8E-02
Sulphur	4	43	43	43	44	45	47	48	44	2	5.4E-02
Thallium	4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.9E-01
Tin	4	0.0001	0.0001	0.0001	0.0002	0.0002	0.0003	0.0003	0.0002	0.0001	3.8E-01
Titanium	4	0.005	0.006	0.010	0.012	0.014	0.015	0.015	0.011	0.004	3.9E-01
Uranium	4	0.0006	0.0006	0.0007	0.0008	0.0008	0.0009	0.0010	0.0008	0.0002	1.9E-01
Vanadium	4	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	-	-
Zinc	4	0.0015	0.0020	0.0038	0.0125	0.0205	0.0206	0.0206	0.0118	0.0102	8.6E-01
Organics											
Carbon Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Carbon Organic (Total)	4	2.2	2.3	2.6	2.9	3.1	3.1	3.1	2.8	0.4	1.5E-01
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.23 - BGC14-015S

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	4	507	510	521	538	554	564	567	538	26	4.9E-02
Oxygen Dissolved %	4	1	1	2	2	4	9	11	4	4	1.1E+00
Oxygen Dissolved	4	0.1	0.1	0.2	0.2	0.5	1.0	1.2	0.5	0.5	1.1E+00
pH (unitless)	4	7.3	7.3	7.6	7.7	7.8	8.0	8.1	7.7	0.3	4.3E-02
Redox Potential mV	4	-104	-104	-103	-93	-60	-5	9	-70	53	-7.6E-01
Salinity ppt	4	0.34	0.34	0.35	0.36	0.37	0.38	0.38	0.36	0.02	5.1E-02
Specific Conductivity µS/cm	4	693	696	710	736	760	769	771	734	36	4.9E-02
Temperature °C	4	10.7	10.7	10.9	11.1	11.2	11.3	11.3	11.0	0.3	2.3E-02
Total Dissolved Solids	4	450	451	454	473	494	502	504	475	27	5.6E-02
Turbidity NTU	4	-0.3	-0.3	-0.1	1.3	4.2	8.1	9.1	2.9	4.4	1.5E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	0	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	4	296	296	296	297	298	299	299	297	2	5.0E-03
Bicarbonate Alkalinity	4	296	296	296	297	298	299	299	297	1	4.8E-03
Carbonate Alkalinity	4	0.5	0.5	0.5	0.5	0.6	0.9	1.0	0.6	0.3	4.0E-01
Color TCU	0	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	4	343	344	349	352	354	355	355	351	5	1.5E-02
Hydroxide Alkalinity	4	0.5	0.5	0.5	0.5	0.6	0.9	1.0	0.6	0.3	4.0E-01
pH (unitless)	4	8.2	8.2	8.2	8.2	8.2	8.3	8.3	8.2	0.0	6.1E-03
Specific Conductivity µS/cm	4	707	707	709	719	730	733	734	720	13	1.8E-02
Total Dissolved Solids	4	408	413	432	442	445	451	452	436	19	4.4E-02
Total Suspended Solids	4	2	2	2	3	4	6	7	3	2	7.2E-01
Turbidity NTU	4	1	1	1	1	1	1	1	1	0	2.0E-01
Dissolved Anions											
Bromide	4	0.03	0.04	0.10	0.13	0.16	0.23	0.25	0.13	0.09	7.0E-01
Chloride	4	1	1	2	2	3	3	3	2	1	3.0E-01
Fluoride	4	0.23	0.23	0.24	0.24	0.25	0.26	0.26	0.24	0.01	4.7E-02
Sulphate	4	118	118	119	120	120	121	121	120	1	1.1E-02
Nutrients											
Ammonia (Total)	4	0.033	0.034	0.038	0.044	0.051	0.054	0.055	0.044	0.010	2.3E-01
Nitrate (as N)	3	0	0	0	0	0	0	0	0	0	8.5E-01
Nitrite (as N)	3	0.001	0.001	0.002	0.003	0.004	0.005	0.005	0.003	0.002	6.4E-01
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	4	0.16	0.16	0.16	0.17	0.17	0.18	0.18	0.17	0.01	6.1E-02
Orthophosphate (Dissolved)	4	0.053	0.055	0.060	0.062	0.063	0.065	0.065	0.061	0.005	8.4E-02
Phosphorus - Dissolved	4	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.06	0.00	3.3E-02
Phosphorus - Total	3	0.065	0.066	0.068	0.070	0.074	0.077	0.078	0.071	0.006	8.6E-02
Cyanide										-	
Cyanide (Free)	3	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	3	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (WAD)	3	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	4	0.0044	0.0044	0.0046	0.0047	0.0049	0.0055	0.0056	0.0048	0.0005	1.1E-01
Antimony	4	0.00005	0.00006	0.00010	0.00012	0.00013	0.00015	0.00015	0.00011	0.00004	3.9E-01
Arsenic	4	0.0025	0.0025	0.0026	0.0027	0.0028	0.0028	0.0028	0.0027	0.0001	4.7E-02
Barium	4	0.035	0.036	0.036	0.037	0.037	0.037	0.037	0.037	0.001	2.3E-02
Beryllium	4	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	4	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	4	0.062	0.062	0.063	0.063	0.064	0.066	0.067	0.064	0.002	3.5E-02
Cadmium	3	0.000005	0.000005	0.000005	0.000005	0.000009	0.000012	0.000013	0.000008	0.000005	6.0E-01
Calcium	4	42	42	43	43	43	43	43	43	0	1.0E-02
Chromium	4	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Cobalt	4	0.00098	0.00100	0.00109	0.00124	0.00139	0.00145	0.00147	0.00123	0.00022	1.8E-01
Copper	4	0.0001	0.0001	0.0001	0.0002	0.0004	0.0007	0.0008	0.0003	0.0003	1.0E+00
Iron	4	0.005	0.006	0.010	0.025	0.049	0.075	0.081	0.034	0.035	1.0E+00
Lead	4	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	-	-
Lithium	4	0.0040	0.0040	0.0043	0.0044	0.0045	0.0049	0.0049	0.0044	0.0004	9.1E-02
Magnesium	4	58	58	59	59	60	60	60	59	1	2.1E-02
Manganese	4	0.249	0.256	0.283	0.333	0.372	0.374	0.374	0.322	0.061	1.9E-01
Mercury	4	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	-	-
Molybdenum	4	0.016	0.016	0.016	0.016	0.017	0.017	0.017	0.016	0.001	3.8E-02
Nickel	4	0.0023	0.0023	0.0025	0.0025	0.0026	0.0028	0.0028	0.0025	0.0002	7.9E-02
Phosphorus	4	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.07	0.00	3.9E-02
Potassium	4	7	7	8	8	8	8	8	8	0	3.6E-02
Selenium	4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.9E-01
Silicon	4	8.9	8.9	8.9	9.1	9.2	9.2	9.2	9.1	0.2	2.0E-02
Silver	4	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	4	33	34	34	35	36	36	36	35	1	3.3E-02
Strontium	4	0.67	0.67	0.67	0.68	0.68	0.69	0.69	0.68	0.01	1.1E-02
Sulphur	4	39	39	39	40	41	41	41	40	1	2.6E-02
Thallium	4	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00002	0.00001	0.00001	4.7E-01
Tin	4	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Titanium	4	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	-	-
Uranium	4	0.0035	0.0035	0.0036	0.0036	0.0037	0.0037	0.0037	0.0036	0.0001	2.9E-02
Vanadium	4	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	-	-
Zinc	4	0.0015	0.0016	0.0020	0.0030	0.0044	0.0056	0.0059	0.0034	0.0020	5.9E-01
Total Metals											
Aluminum	4	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.1	0.1	1.0E+00
Antimony	4	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0001	0.0000	1.7E-01
Arsenic	4	0.0026	0.0027	0.0027	0.0028	0.0028	0.0029	0.0029	0.0028	0.0001	4.3E-02
Barium	4	0.036	0.036	0.038	0.039	0.040	0.041	0.041	0.039	0.002	5.5E-02
Beryllium	4	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	4	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	4	0.062	0.063	0.066	0.070	0.078	0.092	0.096	0.074	0.015	2.0E-01
Cadmium	4	0.00001	0.00001	0.00001	0.00002	0.00002	0.00003	0.00003	0.00002	0.00001	5.8E-01
Calcium	4	41	41	41	42	43	44	44	42	1	3.1E-02
Chromium	4	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	8.0E-01
Cobalt	4	0.0012	0.0012	0.0013	0.0014	0.0015	0.0015	0.0016	0.0014	0.0002	1.1E-01
Copper	4	0.000	0.000	0.001	0.001	0.002	0.003	0.003	0.001	0.001	9.5E-01
Iron	4	0.07	0.08	0.10	0.11	0.18	0.32	0.36	0.16	0.13	8.0E-01
Lead	4	0.00003	0.00003	0.00003	0.00003	0.00005	0.00011	0.00013	0.00005	0.00005	1.0E+00
Lithium	4	0.0041	0.0041	0.0042	0.0044	0.0046	0.0047	0.0047	0.0044	0.0003	6.4E-02
Magnesium	4	56	56	58	58	59	60	61	58	2	3.8E-02
Manganese	4	0.26	0.27	0.30	0.35	0.38	0.39	0.40	0.34	0.06	1.8E-01
Mercury	4	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	-	-
Molybdenum	4	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.00	1.5E-02
Nickel	4	0.002	0.003	0.003	0.003	0.003	0.004	0.004	0.003	0.001	1.8E-01
Phosphorus	4	0.07	0.07	0.07	0.07	0.08	0.09	0.09	0.08	0.01	1.1E-01
Potassium	4	7	7	7	7	8	8	8	8	0	6.1E-02
Selenium	4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.4E-01
Silicon	4	8.7	8.8	9.1	9.3	9.4	9.5	9.5	9.2	0.3	3.8E-02
Silver	4	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	4	34	34	34	36	38	38	39	36	3	7.1E-02
Strontium	4	0.65	0.66	0.67	0.68	0.70	0.72	0.72	0.69	0.03	4.2E-02
Sulphur	4	39	39	40	41	41	43	43	41	2	4.5E-02
Thallium	4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	4.7E-01
Tin	4	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000	3.0E-01
Titanium	4	0.005	0.005	0.005	0.005	0.007	0.012	0.013	0.007	0.004	5.7E-01
Uranium	4	0.0036	0.0036	0.0037	0.0038	0.0038	0.0039	0.0039	0.0038	0.0001	3.7E-02
Vanadium	4	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.001	0.001	6.7E-01
Zinc	4	0.0015	0.0015	0.0015	0.0033	0.0053	0.0058	0.0059	0.0035	0.0023	6.7E-01
Organics											
Carbon Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Carbon Organic (Total)	4	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	0.1	2.7E-02
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.24 - BGC14-016

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	5	535	542	572	615	621	1067	1179	704	268	3.8E-01
Oxygen Dissolved %	5	-7	-6	1	3	15	24	26	7	13	1.8E+00
Oxygen Dissolved	5	-0.3	-0.2	0.1	0.3	1.7	3.0	3.3	1.0	1.5	1.5E+00
pH (unitless)	5	7.3	7.3	7.3	7.4	7.6	7.6	7.6	7.4	0.1	2.0E-02
Redox Potential mV	5	-135	-123	-74	-64	-32	18	31	-55	61	-1.1E+00
Salinity ppt	5	0.41	0.41	0.42	0.42	0.44	0.76	0.84	0.51	0.19	3.7E-01
Specific Conductivity µS/cm	5	826	832	854	855	892	1498	1649	1015	355	3.5E-01
Temperature °C	5	5.4	6.2	9.1	9.1	10.1	10.3	10.4	8.8	2.0	2.3E-01
Total Dissolved Solids	5	536	540	556	579	585	973	1070	665	227	3.4E-01
Turbidity NTU	5	-3.2	-2.4	0.7	2.3	2.3	5.7	6.6	1.7	3.5	2.0E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	0	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	5	380	381	383	387	388	394	395	387	6	1.5E-02
Bicarbonate Alkalinity	5	380	381	383	387	388	394	395	387	6	1.5E-02
Carbonate Alkalinity	5	0.5	0.6	1.0	1.0	1.0	1.0	1.0	0.9	0.2	2.5E-01
Color TCU	0	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	5	455	458	468	475	477	479	479	471	10	2.1E-02
Hydroxide Alkalinity	5	0.5	0.6	1.0	1.0	1.0	1.0	1.0	0.9	0.2	2.5E-01
pH (unitless)	5	7.8	7.8	8.0	8.0	8.1	8.1	8.1	8.0	0.1	1.6E-02
Specific Conductivity µS/cm	5	833	835	844	854	854	857	858	849	10	1.2E-02
Total Dissolved Solids	5	510	511	517	522	527	560	568	529	23	4.3E-02
Total Suspended Solids	5	2	2	2	2	2	2	2	2	-	-
Turbidity NTU	5	1	1	1	1	1	2	2	1	1	4.6E-01
Dissolved Anions											
Bromide	5	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	-	-
Chloride	5	3	3	3	3	3	3	3	3	-	-
Fluoride	5	0.10	0.10	0.10	0.13	0.13	0.14	0.14	0.12	0.02	1.5E-01
Sulphate	5	123	125	134	134	135	143	145	134	8	5.8E-02
Nutrients											
Ammonia (Total)	5	0.003	0.003	0.003	0.003	0.009	0.010	0.010	0.005	0.004	7.4E-01
Nitrate (as N)	5	0	0	0	0	0	0	0	0	-	-
Nitrite (as N)	5	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	-	-
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	5	0.11	0.12	0.14	0.14	0.15	0.15	0.16	0.14	0.02	1.1E-01
Orthophosphate (Dissolved)	5	0.011	0.011	0.014	0.016	0.017	0.020	0.021	0.016	0.004	2.4E-01
Phosphorus - Dissolved	5	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.00	1.6E-01
Phosphorus - Total	5	0.021	0.023	0.031	0.033	0.034	0.036	0.037	0.031	0.006	2.0E-01
Cyanide										-	
Cyanide (Free)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (WAD)	5	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	5	0.0041	0.0041	0.0042	0.0045	0.0049	0.0054	0.0055	0.0046	0.0006	1.2E-01
Antimony	5	0.00005	0.00006	0.00012	0.00016	0.00035	0.00037	0.00037	0.00021	0.00014	6.8E-01
Arsenic	5	0.0018	0.0018	0.0021	0.0023	0.0025	0.0027	0.0028	0.0023	0.0004	1.7E-01
Barium	5	0.037	0.037	0.038	0.039	0.040	0.040	0.040	0.039	0.001	3.3E-02
Beryllium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	5	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	5	0.027	0.027	0.027	0.031	0.031	0.031	0.031	0.029	0.002	7.5E-02
Cadmium	5	0.000005	0.000005	0.000005	0.000005	0.000005	0.000035	0.000043	0.000013	0.000017	1.3E+00
Calcium	5	60	60	61	61	61	64	64	61	2	2.8E-02
Chromium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003	0.0004	0.0001	0.0001	1.2E+00
Cobalt	5	0.00174	0.00187	0.00241	0.00256	0.00291	0.00313	0.00319	0.00256	0.00055	2.2E-01
Copper	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0006	0.0007	0.0002	0.0003	1.2E+00
Iron	5	0.005	0.037	0.165	0.205	0.231	0.289	0.303	0.182	0.111	6.1E-01
Lead	5	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	-	-
Lithium	5	0.0189	0.0190	0.0196	0.0207	0.0218	0.0222	0.0223	0.0207	0.0014	6.9E-02
Magnesium	5	74	75	77	77	79	79	79	77	2	2.4E-02
Manganese	5	0.300	0.386	0.731	0.886	0.924	0.985	1.000	0.768	0.279	3.6E-01
Mercury	5	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	-	-
Molybdenum	5	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.004	0.000	1.1E-01
Nickel	5	0.0032	0.0032	0.0034	0.0035	0.0037	0.0039	0.0040	0.0036	0.0003	8.8E-02
Phosphorus	5	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	-	-
Potassium	5	2	2	2	2	2	2	2	2	0	3.1E-02
Selenium	5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	6.3E-01
Silicon	5	8.0	8.0	8.1	8.1	8.3	8.3	8.3	8.2	0.1	1.5E-02
Silver	5	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	5	21	21	22	23	24	28	29	24	3	1.3E-01
Strontium	5	2.58	2.60	2.66	2.68	2.73	2.88	2.92	2.71	0.13	4.7E-02
Sulphur	5	42	42	44	44	45	46	46	44	2	3.6E-02
Thallium	5	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00002	0.00001	0.00001	5.4E-01
Tin	5	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0001	0.0001	5.8E-01
Titanium	5	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	-	-
Uranium	5	0.0013	0.0013	0.0013	0.0016	0.0016	0.0018	0.0018	0.0015	0.0002	1.4E-01
Vanadium	5	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	-	-
Zinc	5	0.0005	0.0009	0.0025	0.0029	0.0035	0.0046	0.0049	0.0029	0.0016	5.6E-01
Total Metals											
Aluminum	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6E-01
Antimony	5	0.0001	0.0001	0.0002	0.0002	0.0004	0.0004	0.0004	0.0003	0.0001	4.9E-01
Arsenic	5	0.0018	0.0018	0.0020	0.0022	0.0027	0.0027	0.0027	0.0023	0.0004	1.7E-01
Barium	5	0.037	0.037	0.039	0.040	0.040	0.040	0.041	0.039	0.002	4.1E-02
Beryllium	5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	5	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	5	0.030	0.030	0.031	0.032	0.034	0.035	0.035	0.032	0.002	6.4E-02
Cadmium	5	0.00001	0.00001	0.00001	0.00002	0.00002	0.00005	0.00006	0.00002	0.00002	1.0E+00
Calcium	5	59	59	60	61	63	64	64	62	2	3.5E-02
Chromium	5	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	7.0E-01
Cobalt	5	0.0018	0.0019	0.0025	0.0028	0.0030	0.0032	0.0033	0.0027	0.0006	2.1E-01
Copper	5	0.000	0.000	0.000	0.001	0.001	0.001	0.001	0.000	0.000	4.5E-01
Iron	5	0.06	0.09	0.18	0.22	0.29	0.29	0.30	0.21	0.10	4.6E-01
Lead	5	0.00003	0.00003	0.00003	0.00003	0.00003	0.00005	0.00005	0.00003	0.00001	3.9E-01
Lithium	5	0.0188	0.0189	0.0191	0.0206	0.0211	0.0222	0.0225	0.0204	0.0015	7.4E-02
Magnesium	5	74	74	76	77	78	80	80	77	3	3.3E-02
Manganese	5	0.31	0.41	0.77	0.87	0.91	0.99	1.01	0.77	0.27	3.5E-01
Mercury	5	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	-	-
Molybdenum	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.1E-01
Nickel	5	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.004	0.000	1.2E-01
Phosphorus	5	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	-	-
Potassium	5	2	2	2	2	2	2	2	2	0	3.1E-02
Selenium	5	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	6.5E-01
Silicon	5	8.0	8.0	8.2	8.3	8.3	8.6	8.7	8.3	0.3	3.1E-02
Silver	5	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	5	21	21	22	23	25	28	28	24	3	1.2E-01
Strontium	5	2.59	2.60	2.66	2.67	2.92	2.92	2.92	2.75	0.16	5.7E-02
Sulphur	5	42	42	44	46	47	47	47	45	2	5.1E-02
Thallium	5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	4.3E-01
Tin	5	0.0001	0.0001	0.0002	0.0002	0.0003	0.0003	0.0003	0.0002	0.0001	4.7E-01
Titanium	5	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	-	-
Uranium	5	0.0014	0.0014	0.0015	0.0016	0.0016	0.0019	0.0019	0.0016	0.0002	1.3E-01
Vanadium	5	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	-	-
Zinc	5	0.0015	0.0015	0.0015	0.0031	0.0037	0.0060	0.0066	0.0033	0.0021	6.4E-01
Organics											
Carbon Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Carbon Organic (Total)	5	2.3	2.3	2.3	2.9	3.0	3.4	3.5	2.8	0.5	1.8E-01
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.25 - BGC14-017D

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	3	414	418	436	457	470	480	483	451	35	7.7E-02
Oxygen Dissolved %	3	11	13	19	27	35	41	43	27	16	5.9E-01
Oxygen Dissolved	3	1.3	1.5	2.2	3.0	3.8	4.5	4.6	3.0	1.7	5.6E-01
pH (unitless)	3	8.2	8.3	8.4	8.6	9.4	10.0	10.2	9.0	1.0	1.2E-01
Redox Potential mV	3	-18	-18	-17	-16	12	34	39	2	32	1.9E+01
Salinity ppt	3	0.27	0.28	0.30	0.33	0.34	0.34	0.34	0.31	0.04	1.2E-01
Specific Conductivity µS/cm	3	556	567	613	669	681	690	692	639	73	1.1E-01
Temperature °C	3	8.4	8.5	8.8	9.1	10.4	11.4	11.7	9.7	1.7	1.8E-01
Total Dissolved Solids	3	362	369	399	436	443	449	450	416	47	1.1E-01
Turbidity NTU	3	-3.0	-2.7	-1.4	0.3	30.2	54.1	60.1	19.1	35.5	1.9E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	-	-
Alkalinity (Total as CaCO3)	3	200	201	203	205	208	210	210	205	5	2.4E-02
Bicarbonate Alkalinity	3	195	196	199	203	204	205	205	201	5	2.6E-02
Carbonate Alkalinity	3	1.0	1.3	2.6	4.1	5.5	6.6	6.9	4.0	3.0	7.4E-01
Color TCU	0	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	3	59	59	59	59	60	61	61	60	1	2.2E-02
Hydroxide Alkalinity	3	0.5	0.5	0.5	0.5	0.8	1.0	1.0	0.7	0.3	4.3E-01
pH (unitless)	3	8.3	8.3	8.3	8.4	8.4	8.5	8.5	8.4	0.1	1.4E-02
Specific Conductivity µS/cm	3	579	579	580	580	608	630	635	598	32	5.4E-02
Total Dissolved Solids	3	366	367	369	371	399	421	426	388	33	8.6E-02
Total Suspended Solids	3	2	2	2	2	14	24	27	10	15	1.5E+00
Turbidity NTU	3	1	1	1	2	24	42	47	17	26	1.6E+00
Dissolved Anions											
Bromide	3	0.06	0.06	0.06	0.06	0.09	0.12	0.13	0.08	0.04	4.5E-01
Chloride	3	4	4	4	4	7	8	9	6	3	4.4E-01
Fluoride	3	0.27	0.27	0.28	0.30	0.30	0.30	0.30	0.29	0.02	5.2E-02
Sulphate	3	98	98	99	100	117	131	134	111	20	1.8E-01
Nutrients											
Ammonia (Total)	3	0.003	0.003	0.004	0.005	0.006	0.006	0.006	0.005	0.002	4.1E-01
Nitrate (as N)	3	0	0	0	0	0	0	0	0	0	9.9E-01
Nitrite (as N)	3	0.001	0.001	0.001	0.001	0.002	0.002	0.003	0.001	0.001	9.9E-01
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	3	0.11	0.11	0.11	0.12	0.13	0.13	0.13	0.12	0.01	1.1E-01
Orthophosphate (Dissolved)	3	0.052	0.053	0.055	0.059	0.059	0.059	0.059	0.057	0.004	7.5E-02
Phosphorus - Dissolved	3	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.00	7.2E-03
Phosphorus - Total	3	0.061	0.061	0.062	0.063	0.078	0.090	0.093	0.072	0.018	2.4E-01
Cyanide										-	
Cyanide (Free)	3	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	3	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (WAD)	3	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	2	0.0074	0.0074	0.0075	0.0077	0.0078	0.0079	0.0079	0.0077	0.0004	4.6E-02
Antimony	3	0.00017	0.00017	0.00017	0.00017	0.00019	0.00020	0.00020	0.00018	0.00002	9.6E-02
Arsenic	3	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0000	2.8E-02
Barium	3	0.024	0.024	0.025	0.025	0.025	0.026	0.026	0.025	0.001	2.9E-02
Beryllium	3	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	3	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	3	0.088	0.089	0.092	0.095	0.096	0.096	0.096	0.093	0.004	4.7E-02
Cadmium	3	0.000011	0.000011	0.000013	0.000014	0.000016	0.000018	0.000018	0.000014	0.000004	2.5E-01
Calcium	3	12	12	12	12	13	14	14	13	1	8.5E-02
Chromium	3	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Cobalt	3	0.00036	0.00036	0.00037	0.00037	0.00041	0.00043	0.00044	0.00039	0.00004	1.1E-01
Copper	3	0.0004	0.0004	0.0005	0.0005	0.0012	0.0017	0.0018	0.0009	0.0008	8.6E-01
Iron	3	0.005	0.005	0.005	0.005	0.068	0.118	0.131	0.047	0.073	1.5E+00
Lead	3	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	-	-
Lithium	3	0.0407	0.0410	0.0422	0.0436	0.0439	0.0441	0.0442	0.0428	0.0019	4.4E-02
Magnesium	3	7	7	7	7	7	7	7	7	0	4.9E-02
Manganese	3	0.079	0.079	0.079	0.080	0.083	0.086	0.087	0.082	0.004	5.2E-02
Mercury	3	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	-	-
Molybdenum	3	0.006	0.006	0.006	0.006	0.007	0.007	0.007	0.006	0.001	8.2E-02
Nickel	3	0.0014	0.0014	0.0015	0.0016	0.0017	0.0017	0.0017	0.0016	0.0001	9.2E-02
Phosphorus	3	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.00	1.5E-02
Potassium	3	1	1	1	1	1	1	1	1	0	6.6E-02
Selenium	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.1E-01
Silicon	3	7.0	7.0	7.0	7.0	7.1	7.2	7.2	7.1	0.1	1.5E-02
Silver	3	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	3	102	103	105	108	114	118	119	110	9	7.9E-02
Strontium	3	0.84	0.84	0.84	0.84	0.85	0.87	0.87	0.85	0.02	2.4E-02
Sulphur	3	32	32	33	33	38	42	43	36	6	1.6E-01
Thallium	3	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00000	9.1E-02
Tin	3	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Titanium	3	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	-	-
Uranium	3	0.0024	0.0024	0.0025	0.0025	0.0030	0.0034	0.0035	0.0028	0.0006	2.1E-01
Vanadium	3	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	-	-
Zinc	3	0.0005	0.0008	0.0020	0.0034	0.0049	0.0061	0.0064	0.0034	0.0030	8.6E-01
Total Metals											
Aluminum	3	0.0	0.0	0.0	0.0	1.5	2.6	2.9	1.0	1.7	1.7E+00
Antimony	3	0.0002	0.0002	0.0002	0.0002	0.0002	0.0003	0.0003	0.0002	0.0001	2.7E-01
Arsenic	3	0.0012	0.0012	0.0012	0.0013	0.0015	0.0017	0.0017	0.0014	0.0003	2.0E-01
Barium	3	0.021	0.022	0.023	0.025	0.032	0.037	0.038	0.028	0.009	3.2E-01
Beryllium	3	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0001	0.0001	9.4E-01
Bismuth	3	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	3	0.087	0.088	0.093	0.099	0.099	0.099	0.099	0.095	0.007	7.3E-02
Cadmium	3	0.00001	0.00001	0.00002	0.00003	0.00004	0.00005	0.00006	0.00003	0.00003	8.3E-01
Calcium	3	11	11	11	12	13	14	14	12	2	1.4E-01
Chromium	3	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.000	0.001	1.4E+00
Cobalt	3	0.0004	0.0004	0.0004	0.0004	0.0008	0.0012	0.0013	0.0007	0.0005	7.5E-01
Copper	3	0.000	0.000	0.001	0.002	0.002	0.003	0.003	0.002	0.001	7.9E-01
Iron	3	0.01	0.01	0.02	0.03	1.03	1.83	2.03	0.69	1.16	1.7E+00
Lead	3	0.00003	0.00003	0.00003	0.00003	0.00057	0.00100	0.00111	0.00039	0.00063	1.6E+00
Lithium	3	0.0373	0.0378	0.0398	0.0422	0.0435	0.0445	0.0448	0.0414	0.0038	9.2E-02
Magnesium	3	7	7	7	7	7	7	7	7	0	6.3E-02
Manganese	3	0.08	0.08	0.08	0.08	0.09	0.10	0.11	0.09	0.02	1.8E-01
Mercury	3	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	-	-
Molybdenum	3	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	7.6E-02
Nickel	3	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.002	0.001	4.0E-01
Phosphorus	3	0.06	0.07	0.07	0.07	0.09	0.10	0.10	0.08	0.02	2.5E-01
Potassium	3	1	1	1	1	1	2	2	1	0	2.3E-01
Selenium	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.2E-01
Silicon	3	6.4	6.4	6.7	7.0	11.8	15.6	16.5	10.0	5.7	5.7E-01
Silver	3	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00001	0.00001	7.3E-01
Sodium	3	94	95	99	104	111	116	117	105	11	1.1E-01
Strontium	3	0.80	0.81	0.84	0.87	0.89	0.91	0.91	0.86	0.06	6.4E-02
Sulphur	3	30	31	32	34	38	41	41	35	6	1.6E-01
Thallium	3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.1E+00
Tin	3	0.0001	0.0001	0.0001	0.0001	0.0002	0.0003	0.0003	0.0001	0.0002	1.1E+00
Titanium	3	0.005	0.005	0.005	0.005	0.032	0.054	0.059	0.023	0.031	1.4E+00
Uranium	3	0.0022	0.0023	0.0024	0.0025	0.0030	0.0035	0.0036	0.0028	0.0007	2.6E-01
Vanadium	3	0.001	0.001	0.001	0.001	0.003	0.004	0.005	0.002	0.002	1.3E+00
Zinc	3	0.0053	0.0053	0.0053	0.0053	0.0061	0.0067	0.0069	0.0058	0.0009	1.6E-01
Organics											
Carbon Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Carbon Organic (Total)	3	2.6	2.6	2.8	3.0	3.2	3.2	3.3	3.0	0.4	1.2E-01
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.26 - BGC14-017S

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	4	445	449	467	483	492	494	495	476	23	4.8E-02
Oxygen Dissolved %	4	10	12	23	55	84	84	85	51	39	7.5E-01
Oxygen Dissolved	4	1.1	1.4	2.6	6.2	9.4	9.6	9.7	5.8	4.4	7.5E-01
pH (unitless)	4	5.4	5.7	7.0	7.8	8.1	8.2	8.3	7.3	1.3	1.8E-01
Redox Potential mV	4	69	69	70	91	135	193	208	115	65	5.7E-01
Salinity ppt	4	0.31	0.31	0.33	0.34	0.34	0.34	0.34	0.33	0.01	4.3E-02
Specific Conductivity µS/cm	4	644	649	667	680	685	688	689	673	20	3.0E-02
Temperature °C	4	8.9	8.9	9.3	9.8	10.2	10.5	10.6	9.7	0.8	7.9E-02
Total Dissolved Solids	4	419	422	434	442	445	447	448	438	13	2.9E-02
Turbidity NTU	4	0.0	0.0	0.0	2.0	17.1	48.9	56.8	15.2	27.8	1.8E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	-	-
Alkalinity (Total as CaCO3)	4	350	356	381	392	394	400	401	384	23	5.9E-02
Bicarbonate Alkalinity	4	342	349	379	392	394	400	401	382	27	7.0E-02
Carbonate Alkalinity	4	0.5	0.5	0.5	0.8	2.8	7.1	8.2	2.6	3.8	1.5E+00
Color TCU	0	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	4	387	388	394	396	397	400	401	395	6	1.5E-02
Hydroxide Alkalinity	4	0.5	0.5	0.5	0.5	0.6	0.9	1.0	0.6	0.3	4.0E-01
pH (unitless)	4	8.1	8.1	8.1	8.2	8.2	8.3	8.3	8.2	0.1	1.2E-02
Specific Conductivity µS/cm	4	641	644	655	666	675	678	679	663	17	2.5E-02
Total Dissolved Solids	4	356	358	364	366	374	393	398	372	18	4.9E-02
Total Suspended Solids	4	2	2	2	5	22	54	62	18	29	1.6E+00
Turbidity NTU	4	0	0	1	3	10	22	25	8	12	1.5E+00
Dissolved Anions											
Bromide	4	0.03	0.03	0.03	0.08	0.13	0.13	0.13	0.08	0.06	7.7E-01
Chloride	4	1	1	1	1	1	1	1	1	0	2.5E-01
Fluoride	4	0.14	0.14	0.15	0.15	0.15	0.16	0.16	0.15	0.01	4.7E-02
Sulphate	4	13	13	13	13	13	14	14	13	1	3.9E-02
Nutrients											
Ammonia (Total)	4	0.003	0.003	0.003	0.003	0.008	0.021	0.024	0.008	0.011	1.4E+00
Nitrate (as N)	4	0	0	0	0	0	0	0	0	0	5.6E-02
Nitrite (as N)	4	0.001	0.001	0.002	0.004	0.007	0.008	0.009	0.004	0.004	8.1E-01
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	4	0.10	0.11	0.12	0.13	0.13	0.15	0.16	0.13	0.02	1.7E-01
Orthophosphate (Dissolved)	4	0.018	0.019	0.019	0.021	0.023	0.023	0.023	0.021	0.002	1.2E-01
Phosphorus - Dissolved	4	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.02	0.00	1.4E-01
Phosphorus - Total	3	0.025	0.026	0.031	0.037	0.073	0.102	0.109	0.057	0.045	8.0E-01
Cyanide										-	
Cyanide (Free)	4	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	4	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (WAD)	4	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	4	0.0034	0.0034	0.0034	0.0037	0.0041	0.0044	0.0045	0.0038	0.0005	1.4E-01
Antimony	4	0.00005	0.00005	0.00005	0.00008	0.00011	0.00012	0.00012	0.00008	0.00004	4.6E-01
Arsenic	4	0.0009	0.0009	0.0009	0.0009	0.0009	0.0010	0.0010	0.0009	0.0001	5.5E-02
Barium	4	0.126	0.128	0.134	0.137	0.140	0.148	0.150	0.138	0.010	7.1E-02
Beryllium	4	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	4	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	4	0.014	0.014	0.015	0.015	0.015	0.015	0.015	0.015	0.001	3.4E-02
Cadmium	4	0.000020	0.000020	0.000020	0.000023	0.000028	0.000035	0.000037	0.000026	0.000008	3.1E-01
Calcium	4	65	65	65	66	66	67	67	66	1	1.3E-02
Chromium	4	0.0027	0.0027	0.0027	0.0027	0.0028	0.0028	0.0028	0.0027	0.0000	1.8E-02
Cobalt	4	0.00005	0.00005	0.00005	0.00005	0.00008	0.00016	0.00018	0.00008	0.00007	7.9E-01
Copper	4	0.0008	0.0008	0.0009	0.0013	0.0018	0.0022	0.0023	0.0014	0.0007	5.0E-01
Iron	4	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	-	-
Lead	4	0.00003	0.00003	0.00003	0.00003	0.00004	0.00006	0.00007	0.00004	0.00002	6.0E-01
Lithium	4	0.0085	0.0085	0.0085	0.0085	0.0086	0.0086	0.0086	0.0085	0.0001	6.5E-03
Magnesium	4	55	55	56	56	57	57	57	56	1	1.6E-02
Manganese	4	0.006	0.006	0.006	0.008	0.015	0.025	0.027	0.013	0.010	8.0E-01
Mercury	4	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	-	-
Molybdenum	4	0.001	0.001	0.001	0.001	0.002	0.002	0.002	0.001	0.000	2.5E-02
Nickel	4	0.0005	0.0005	0.0006	0.0007	0.0009	0.0011	0.0011	0.0008	0.0003	3.3E-01
Phosphorus	4	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	-	-
Potassium	4	2	2	2	2	2	2	2	2	0	3.6E-02
Selenium	4	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.000	6.3E-02
Silicon	4	7.5	7.5	7.5	7.5	7.6	7.7	7.7	7.6	0.1	1.3E-02
Silver	4	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	4	9	9	9	9	10	10	10	10	0	2.9E-02
Strontium	4	1.48	1.48	1.49	1.50	1.52	1.53	1.53	1.50	0.02	1.5E-02
Sulphur	4	4	4	4	4	5	5	5	4	0	2.3E-02
Thallium	4	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00000	4.0E-01
Tin	4	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Titanium	4	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	-	-
Uranium	4	0.0011	0.0011	0.0011	0.0011	0.0012	0.0012	0.0013	0.0012	0.0001	5.8E-02
Vanadium	4	0.0034	0.0035	0.0038	0.0039	0.0040	0.0041	0.0041	0.0038	0.0003	7.8E-02
Zinc	4	0.0031	0.0037	0.0060	0.0103	0.0144	0.0166	0.0172	0.0102	0.0063	6.2E-01
Total Metals											
Aluminum	4	0.0	0.0	0.0	0.1	0.5	1.4	1.6	0.5	0.8	1.7E+00
Antimony	4	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0003	0.0002	0.0001	4.0E-01
Arsenic	4	0.0009	0.0009	0.0010	0.0010	0.0012	0.0014	0.0015	0.0011	0.0003	2.4E-01
Barium	4	0.137	0.137	0.139	0.142	0.148	0.158	0.160	0.145	0.010	7.1E-02
Beryllium	4	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	4	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	4	0.015	0.015	0.017	0.018	0.019	0.020	0.020	0.018	0.002	1.2E-01
Cadmium	4	0.00002	0.00002	0.00002	0.00003	0.00004	0.00006	0.00007	0.00003	0.00002	5.8E-01
Calcium	4	63	64	64	65	66	66	66	65	1	1.7E-02
Chromium	4	0.003	0.003	0.003	0.003	0.004	0.006	0.007	0.004	0.002	4.7E-01
Cobalt	4	0.0001	0.0001	0.0001	0.0001	0.0005	0.0013	0.0015	0.0005	0.0007	1.5E+00
Copper	4	0.001	0.001	0.001	0.002	0.005	0.010	0.012	0.004	0.005	1.3E+00
Iron	4	0.01	0.01	0.03	0.11	0.66	1.78	2.06	0.57	0.99	1.7E+00
Lead	4	0.00003	0.00003	0.00003	0.00004	0.00016	0.00040	0.00046	0.00014	0.00021	1.5E+00
Lithium	4	0.0081	0.0081	0.0083	0.0084	0.0085	0.0087	0.0087	0.0084	0.0003	3.2E-02
Magnesium	4	53	54	55	56	56	56	57	55	2	2.7E-02
Manganese	4	0.01	0.01	0.01	0.01	0.03	0.06	0.07	0.03	0.03	1.2E+00
Mercury	4	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	-	-
Molybdenum	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.8E-02
Nickel	4	0.001	0.001	0.001	0.001	0.002	0.006	0.006	0.002	0.003	1.3E+00
Phosphorus	4	0.03	0.03	0.03	0.03	0.04	0.08	0.08	0.04	0.03	7.4E-01
Potassium	4	2	2	2	2	2	2	2	2	0	9.5E-03
Selenium	4	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.000	4.6E-02
Silicon	4	7.5	7.6	7.7	7.8	8.6	10.5	11.0	8.5	1.7	1.9E-01
Silver	4	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00000	4.6E-01
Sodium	4	9	9	9	10	10	10	10	10	0	4.2E-02
Strontium	4	1.40	1.42	1.51	1.55	1.56	1.57	1.57	1.52	0.08	5.2E-02
Sulphur	4	5	5	5	5	5	5	5	5	0	1.6E-02
Thallium	4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	9.5E-01
Tin	4	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0001	0.0001	8.2E-01
Titanium	4	0.005	0.005	0.005	0.005	0.022	0.062	0.072	0.022	0.034	1.5E+00
Uranium	4	0.0012	0.0012	0.0012	0.0012	0.0012	0.0012	0.0013	0.0012	0.0000	3.1E-02
Vanadium	4	0.004	0.004	0.004	0.005	0.006	0.008	0.009	0.006	0.002	4.2E-01
Zinc	4	0.0065	0.0070	0.0090	0.0119	0.0152	0.0179	0.0186	0.0122	0.0052	4.3E-01
Organics											
Carbon Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Carbon Organic (Total)	4	1.2	1.2	1.3	1.5	1.9	2.5	2.6	1.7	0.6	3.7E-01
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.27 - KAX-14-107S

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	3	738	741	753	767	768	769	769	758	17	2.3E-02
Oxygen Dissolved %	3	1	2	5	8	11	12	13	7	6	8.3E-01
Oxygen Dissolved	3	0.1	0.2	0.5	0.9	1.2	1.4	1.4	0.8	0.7	8.3E-01
pH (unitless)	3	5.5	5.5	5.7	5.9	6.7	7.3	7.4	6.3	1.0	1.6E-01
Redox Potential mV	3	-267	-257	-215	-163	-149	-137	-134	-188	70	-3.7E-01
Salinity ppt	3	0.51	0.51	0.52	0.53	0.54	0.54	0.54	0.53	0.02	2.9E-02
Specific Conductivity µS/cm	3	1017	1022	1040	1062	1069	1075	1076	1052	31	2.9E-02
Temperature °C	3	10.1	10.1	10.3	10.4	10.5	10.6	10.6	10.4	0.3	2.4E-02
Total Dissolved Solids	3	661	664	675	688	695	700	701	683	20	3.0E-02
Turbidity NTU	3	-0.7	-0.6	-0.4	0.0	0.0	0.0	0.0	-0.2	0.4	-1.7E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	0	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	3	424	425	431	437	439	441	441	434	9	2.0E-02
Bicarbonate Alkalinity	3	405	408	421	437	439	441	441	428	20	4.6E-02
Carbonate Alkalinity	3	0.5	0.6	0.8	1.0	10.1	17.4	19.2	6.9	10.7	1.5E+00
Color TCU	0	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	3	250	251	253	256	257	257	257	254	4	1.5E-02
Hydroxide Alkalinity	3	0.5	0.5	0.5	0.5	0.8	1.0	1.0	0.7	0.3	4.3E-01
pH (unitless)	3	8.2	8.2	8.3	8.3	8.4	8.4	8.5	8.3	0.1	1.4E-02
Specific Conductivity µS/cm	3	1060	1061	1065	1070	1080	1088	1090	1073	15	1.4E-02
Total Dissolved Solids	3	688	688	689	690	725	752	759	712	40	5.7E-02
Total Suspended Solids	3	2	2	3	5	5	5	5	4	2	5.4E-01
Turbidity NTU	3	8	8	8	8	10	11	12	9	2	2.3E-01
Dissolved Anions											
Bromide	3	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	-	-
Chloride	3	8	8	8	8	8	8	8	8	0	7.0E-03
Fluoride	3	0.28	0.28	0.29	0.30	0.30	0.31	0.31	0.30	0.01	4.6E-02
Sulphate	3	162	163	167	172	174	175	175	170	7	4.0E-02
Nutrients											
Ammonia (Total)	3	0.038	0.040	0.048	0.059	0.069	0.077	0.079	0.058	0.021	3.5E-01
Nitrate (as N)	3	0	0	0	0	0	0	0	0	-	-
Nitrite (as N)	3	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	-	-
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	3	0.55	0.55	0.55	0.55	0.59	0.62	0.63	0.58	0.04	7.4E-02
Orthophosphate (Dissolved)	3	0.115	0.115	0.117	0.119	0.127	0.133	0.135	0.123	0.011	8.6E-02
Phosphorus - Dissolved	3	0.11	0.12	0.13	0.15	0.15	0.16	0.16	0.14	0.02	1.8E-01
Phosphorus - Total	3	0.184	0.186	0.193	0.202	0.206	0.209	0.210	0.199	0.013	6.7E-02
Cyanide										-	
Cyanide (Free)	3	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	3	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (WAD)	3	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	3	0.0058	0.0058	0.0059	0.0059	0.0066	0.0071	0.0072	0.0063	0.0008	1.2E-01
Antimony	3	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	-	-
Arsenic	3	0.0053	0.0053	0.0053	0.0053	0.0054	0.0054	0.0054	0.0053	0.0000	2.2E-03
Barium	3	0.032	0.032	0.032	0.032	0.033	0.034	0.034	0.033	0.001	3.5E-02
Beryllium	3	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	3	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	3	0.642	0.645	0.656	0.670	0.686	0.698	0.701	0.671	0.030	4.4E-02
Cadmium	3	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	-	-
Calcium	3	29	29	29	30	30	30	30	30	1	2.9E-02
Chromium	3	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000	4.1E-01
Cobalt	3	0.00027	0.00028	0.00033	0.00039	0.00045	0.00049	0.00050	0.00039	0.00012	3.0E-01
Copper	3	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Iron	3	0.415	0.438	0.530	0.645	0.701	0.745	0.756	0.605	0.174	2.9E-01
Lead	3	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	-	-
Lithium	3	0.0049	0.0049	0.0050	0.0050	0.0052	0.0053	0.0054	0.0051	0.0002	4.3E-02
Magnesium	3	43	43	44	44	44	44	44	44	0	1.0E-02
Manganese	3	0.469	0.487	0.558	0.646	0.657	0.666	0.668	0.594	0.109	1.8E-01
Mercury	3	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	-	-
Molybdenum	3	0.004	0.004	0.004	0.004	0.005	0.005	0.005	0.005	0.000	9.5E-02
Nickel	3	0.0023	0.0023	0.0024	0.0025	0.0026	0.0026	0.0027	0.0025	0.0002	7.1E-02
Phosphorus	3	0.16	0.16	0.17	0.17	0.17	0.17	0.18	0.17	0.01	3.6E-02
Potassium	3	14	14	14	14	14	14	14	14	0	4.1E-03
Selenium	3	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	4.3E-01
Silicon	3	10.3	10.3	10.5	10.6	10.8	10.9	10.9	10.6	0.3	2.8E-02
Silver	3	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	3	146	146	148	150	154	157	158	151	6	4.0E-02
Strontium	3	0.79	0.79	0.80	0.81	0.81	0.81	0.81	0.80	0.01	1.4E-02
Sulphur	3	81	82	88	95	100	103	104	93	12	1.2E-01
Thallium	3	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Tin	3	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Titanium	3	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	-	-
Uranium	3	0.0014	0.0014	0.0014	0.0014	0.0015	0.0015	0.0015	0.0014	0.0001	5.0E-02
Vanadium	3	0.0005	0.0005	0.0005	0.0005	0.0008	0.0010	0.0011	0.0007	0.0003	4.9E-01
Zinc	3	0.0005	0.0006	0.0012	0.0019	0.0059	0.0090	0.0098	0.0041	0.0050	1.2E+00
Total Metals											
Aluminum	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1E-02
Antimony	3	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	-	-
Arsenic	3	0.0056	0.0056	0.0057	0.0058	0.0058	0.0058	0.0058	0.0057	0.0001	1.6E-02
Barium	3	0.032	0.032	0.032	0.032	0.033	0.033	0.034	0.033	0.001	2.2E-02
Beryllium	3	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	3	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	3	0.676	0.677	0.680	0.684	0.715	0.739	0.745	0.702	0.038	5.4E-02
Cadmium	3	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Calcium	3	28	28	29	29	30	30	30	29	1	3.3E-02
Chromium	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.9E-01
Cobalt	3	0.0005	0.0005	0.0005	0.0006	0.0007	0.0007	0.0008	0.0006	0.0002	2.5E-01
Copper	3	0.000	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.001	7.6E-01
Iron	3	0.50	0.52	0.59	0.67	0.73	0.79	0.80	0.66	0.15	2.3E-01
Lead	3	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	-	-
Lithium	3	0.0050	0.0050	0.0051	0.0053	0.0054	0.0055	0.0055	0.0053	0.0003	4.8E-02
Magnesium	3	43	43	43	43	44	44	45	44	1	1.7E-02
Manganese	3	0.51	0.53	0.58	0.66	0.67	0.69	0.69	0.62	0.09	1.5E-01
Mercury	3	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	-	-
Molybdenum	3	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	7.4E-02
Nickel	3	0.002	0.002	0.003	0.003	0.003	0.003	0.003	0.003	0.000	9.6E-02
Phosphorus	3	0.18	0.18	0.18	0.19	0.20	0.21	0.21	0.19	0.02	8.6E-02
Potassium	3	13	13	14	14	14	14	14	14	0	2.6E-02
Selenium	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	9.1E-02
Silicon	3	10.4	10.4	10.5	10.5	10.6	10.6	10.6	10.5	0.1	9.5E-03
Silver	3	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	3	150	150	151	152	156	159	160	154	5	3.4E-02
Strontium	3	0.81	0.81	0.81	0.81	0.82	0.83	0.83	0.82	0.01	1.4E-02
Sulphur	3	55	55	56	57	58	59	59	57	2	3.7E-02
Thallium	3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-	-
Tin	3	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0001	0.0001	7.7E-01
Titanium	3	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	-	-
Uranium	3	0.0014	0.0014	0.0014	0.0014	0.0015	0.0015	0.0015	0.0015	0.0001	5.9E-02
Vanadium	3	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.000	4.3E-01
Zinc	3	0.0015	0.0017	0.0026	0.0036	0.0062	0.0083	0.0088	0.0046	0.0038	8.1E-01
Organics											
Carbon Organic (Dissolved)	3	4.5	5.1	7.7	10.9	12.2	13.2	13.4	9.6	4.6	4.8E-01
Carbon Organic (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.28 - KAX-14-108S

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	3	1314	1317	1331	1347	1386	1417	1425	1362	57	4.2E-02
Oxygen Dissolved %	3	0	1	2	4	25	43	47	17	26	1.5E+00
Oxygen Dissolved	3	0.0	0.1	0.2	0.4	2.9	4.8	5.3	1.9	2.9	1.5E+00
pH (unitless)	3	5.9	5.9	5.9	6.0	6.8	7.5	7.6	6.5	1.0	1.5E-01
Redox Potential mV	3	-125	-117	-83	-41	-11	13	19	-49	72	-1.5E+00
Salinity ppt	3	0.93	0.93	0.94	0.95	0.96	0.96	0.96	0.95	0.02	1.6E-02
Specific Conductivity µS/cm	3	1819	1824	1843	1866	1867	1867	1867	1851	27	1.5E-02
Temperature °C	3	9.5	9.7	10.5	11.4	12.0	12.5	12.6	11.2	1.6	1.4E-01
Total Dissolved Solids	3	1183	1185	1195	1207	1214	1219	1220	1203	19	1.6E-02
Turbidity NTU	3	-0.6	-0.5	-0.3	0.0	0.0	0.0	0.0	-0.2	0.3	-1.7E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	0	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	3	194	194	195	195	198	200	201	197	4	1.9E-02
Bicarbonate Alkalinity	3	194	194	195	195	198	200	201	197	4	1.9E-02
Carbonate Alkalinity	3	0.5	0.5	0.5	0.5	0.8	1.0	1.0	0.7	0.3	4.3E-01
Color TCU	0	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	3	471	472	474	477	481	483	484	477	7	1.4E-02
Hydroxide Alkalinity	3	0.5	0.5	0.5	0.5	0.8	1.0	1.0	0.7	0.3	4.3E-01
pH (unitless)	3	8.1	8.1	8.1	8.2	8.2	8.3	8.3	8.2	0.1	9.7E-03
Specific Conductivity µS/cm	3	1810	1817	1845	1880	1885	1889	1890	1860	44	2.3E-02
Total Dissolved Solids	3	1340	1346	1370	1400	1410	1418	1420	1387	42	3.0E-02
Total Suspended Solids	3	6	6	6	6	10	13	14	8	5	5.5E-01
Turbidity NTU	3	3	3	4	4	5	6	6	4	1	3.1E-01
Dissolved Anions											
Bromide	3	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	-	-
Chloride	3	18	18	20	22	23	24	24	21	3	1.4E-01
Fluoride	3	0.25	0.25	0.25	0.25	0.27	0.28	0.29	0.26	0.02	7.9E-02
Sulphate	3	762	769	799	835	854	869	873	823	56	6.9E-02
Nutrients											
Ammonia (Total)	3	0.128	0.132	0.146	0.163	0.169	0.174	0.175	0.155	0.024	1.6E-01
Nitrate (as N)	3	0	0	0	0	0	0	0	0	-	-
Nitrite (as N)	3	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	-	-
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	3	0.39	0.39	0.40	0.40	0.45	0.48	0.49	0.43	0.06	1.3E-01
Orthophosphate (Dissolved)	3	0.043	0.045	0.054	0.064	0.070	0.074	0.076	0.061	0.017	2.7E-01
Phosphorus - Dissolved	3	0.04	0.04	0.05	0.07	0.07	0.08	0.08	0.06	0.02	2.9E-01
Phosphorus - Total	3	0.165	0.167	0.173	0.181	0.189	0.195	0.196	0.181	0.016	8.6E-02
Cyanide										-	
Cyanide (Free)	3	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	3	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (WAD)	3	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	3	0.0068	0.0068	0.0070	0.0071	0.0076	0.0080	0.0081	0.0073	0.0007	9.3E-02
Antimony	3	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	-	-
Arsenic	3	0.0062	0.0062	0.0062	0.0062	0.0063	0.0064	0.0064	0.0062	0.0001	1.8E-02
Barium	3	0.022	0.022	0.023	0.024	0.025	0.025	0.026	0.024	0.002	6.9E-02
Beryllium	3	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	3	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	3	0.182	0.182	0.183	0.183	0.188	0.192	0.193	0.186	0.006	3.3E-02
Cadmium	3	0.000005	0.000007	0.000013	0.000021	0.000026	0.000029	0.000030	0.000019	0.000013	6.8E-01
Calcium	3	55	55	56	57	57	58	58	56	1	2.2E-02
Chromium	3	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000	5.5E-01
Cobalt	3	0.00125	0.00130	0.00151	0.00177	0.00190	0.00200	0.00202	0.00168	0.00039	2.3E-01
Copper	3	0.0001	0.0001	0.0001	0.0001	0.0003	0.0004	0.0004	0.0002	0.0002	9.1E-01
Iron	3	0.444	0.466	0.554	0.664	0.734	0.790	0.804	0.637	0.181	2.8E-01
Lead	3	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	-	-
Lithium	3	0.0039	0.0039	0.0039	0.0040	0.0043	0.0045	0.0046	0.0042	0.0004	9.2E-02
Magnesium	3	81	81	81	82	82	82	83	82	1	1.0E-02
Manganese	3	0.752	0.790	0.941	1.130	1.145	1.157	1.160	1.014	0.227	2.2E-01
Mercury	3	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	-	-
Molybdenum	3	0.208	0.208	0.210	0.212	0.223	0.231	0.233	0.218	0.013	6.2E-02
Nickel	3	0.0025	0.0025	0.0029	0.0033	0.0035	0.0036	0.0037	0.0031	0.0006	2.0E-01
Phosphorus	3	0.14	0.14	0.14	0.15	0.16	0.16	0.16	0.15	0.01	9.0E-02
Potassium	3	32	32	33	33	33	34	34	33	1	2.1E-02
Selenium	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.3E-01
Silicon	3	11.4	11.4	11.5	11.5	12.0	12.3	12.4	11.8	0.6	4.7E-02
Silver	3	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	3	227	228	231	234	240	245	246	236	10	4.1E-02
Strontium	3	1.18	1.19	1.21	1.23	1.25	1.26	1.26	1.22	0.04	3.3E-02
Sulphur	3	251	251	252	253	255	256	256	253	3	9.9E-03
Thallium	3	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Tin	3	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Titanium	3	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	-	-
Uranium	3	0.0014	0.0014	0.0015	0.0016	0.0017	0.0017	0.0017	0.0016	0.0002	1.1E-01
Vanadium	3	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	-	-
Zinc	3	0.0037	0.0037	0.0038	0.0039	0.0108	0.0162	0.0176	0.0084	0.0080	9.5E-01
Total Metals											
Aluminum	3	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	4.4E-01
Antimony	3	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0001	3.9E-01
Arsenic	3	0.0065	0.0065	0.0065	0.0066	0.0066	0.0066	0.0066	0.0066	0.0001	1.2E-02
Barium	3	0.024	0.024	0.024	0.024	0.026	0.027	0.028	0.025	0.002	8.6E-02
Beryllium	3	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	3	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	3	0.190	0.190	0.192	0.194	0.207	0.217	0.220	0.201	0.016	8.1E-02
Cadmium	3	0.00005	0.00005	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00000	8.1E-02
Calcium	3	55	55	57	58	59	59	59	57	2	3.4E-02
Chromium	3	0.000	0.001	0.001	0.001	0.002	0.002	0.003	0.001	0.001	8.9E-01
Cobalt	3	0.0014	0.0015	0.0017	0.0020	0.0021	0.0021	0.0021	0.0018	0.0004	2.0E-01
Copper	3	0.001	0.001	0.001	0.001	0.002	0.002	0.002	0.001	0.000	2.3E-01
Iron	3	0.59	0.62	0.74	0.89	0.92	0.94	0.95	0.81	0.19	2.4E-01
Lead	3	0.00006	0.00006	0.00007	0.00007	0.00009	0.00010	0.00010	0.00008	0.00002	2.5E-01
Lithium	3	0.0039	0.0039	0.0041	0.0043	0.0045	0.0046	0.0046	0.0043	0.0004	8.4E-02
Magnesium	3	82	82	82	83	84	85	85	83	2	2.1E-02
Manganese	3	0.79	0.83	0.99	1.19	1.20	1.20	1.20	1.06	0.23	2.2E-01
Mercury	3	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	-	-
Molybdenum	3	0.22	0.22	0.22	0.23	0.23	0.24	0.24	0.23	0.01	6.1E-02
Nickel	3	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.004	0.001	1.8E-01
Phosphorus	3	0.16	0.16	0.16	0.16	0.17	0.17	0.17	0.16	0.01	5.0E-02
Potassium	3	33	33	33	33	34	34	34	33	1	1.5E-02
Selenium	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.0E-01
Silicon	3	11.9	11.9	12.0	12.0	12.4	12.6	12.7	12.2	0.4	3.6E-02
Silver	3	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	3	231	232	234	237	246	252	254	241	12	5.0E-02
Strontium	3	1.23	1.24	1.26	1.28	1.30	1.32	1.32	1.28	0.05	3.5E-02
Sulphur	3	258	259	262	266	266	266	266	263	5	1.8E-02
Thallium	3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-	-
Tin	3	0.0001	0.0001	0.0002	0.0002	0.0002	0.0003	0.0003	0.0002	0.0001	4.4E-01
Titanium	3	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	-	-
Uranium	3	0.0014	0.0015	0.0016	0.0017	0.0017	0.0018	0.0018	0.0016	0.0002	1.1E-01
Vanadium	3	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	-	-
Zinc	3	0.0056	0.0058	0.0066	0.0075	0.0095	0.0111	0.0115	0.0082	0.0030	3.7E-01
Organics											
Carbon Organic (Dissolved)	3	3.8	3.8	4.1	4.4	4.4	4.5	4.5	4.2	0.4	9.3E-02
Carbon Organic (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.29 - KAX-14-114S

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	3	350	396	580	809	817	823	824	661	269	4.1E-01
Oxygen Dissolved %	3	7	8	9	10	16	21	22	13	8	6.0E-01
Oxygen Dissolved	3	0.8	0.8	0.9	1.1	1.5	1.9	2.0	1.3	0.6	4.7E-01
pH (unitless)	3	6.1	6.2	6.6	7.1	8.8	10.2	10.5	7.9	2.3	2.9E-01
Redox Potential mV	3	-250	-230	-148	-46	61	146	167	-43	209	-4.9E+00
Salinity ppt	3	0.02	0.07	0.29	0.56	0.57	0.58	0.58	0.39	0.32	8.2E-01
Specific Conductivity µS/cm	3	390	463	754	1118	1142	1161	1166	891	435	4.9E-01
Temperature °C	3	9.6	9.7	10.1	10.5	15.3	19.1	20.1	13.4	5.8	4.3E-01
Total Dissolved Solids	3	25	95	375	725	742	755	758	503	414	8.2E-01
Turbidity NTU	3	0.0	0.1	0.6	1.1	9.5	16.1	17.8	6.3	10.0	1.6E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	0	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	4	287	292	312	324	330	333	334	317	21	6.6E-02
Bicarbonate Alkalinity	4	281	286	307	315	316	317	317	307	17	5.7E-02
Carbonate Alkalinity	4	2.5	3.0	5.0	9.4	14.4	17.8	18.6	10.0	7.2	7.2E-01
Color TCU	0	-	-	-	-	-	-	-	-	-	-
Hardness as CaCO3 (Dissolved)	4	273	273	273	277	282	284	285	278	6	2.2E-02
Hydroxide Alkalinity	4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	-	-
pH (unitless)	4	8.3	8.3	8.4	8.4	8.5	8.5	8.5	8.4	0.1	1.1E-02
Specific Conductivity µS/cm	4	1150	1153	1165	1180	1190	1190	1190	1175	19	1.6E-02
Total Dissolved Solids	4	749	753	771	783	790	795	796	778	21	2.6E-02
Total Suspended Solids	4	3	4	7	8	9	12	13	8	4	5.0E-01
Turbidity NTU	4	3	3	4	4	5	5	5	4	1	2.6E-01
Dissolved Anions											
Bromide	4	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	-	-
Chloride	4	15	15	15	16	18	20	20	17	3	1.5E-01
Fluoride	4	0.27	0.27	0.29	0.30	0.32	0.36	0.37	0.31	0.04	1.4E-01
Sulphate	4	310	310	310	312	320	336	340	318	15	4.6E-02
Nutrients											
Ammonia (Total)	4	1.010	1.012	1.018	1.055	1.095	1.107	1.110	1.058	0.050	4.7E-02
Nitrate (as N)	4	0	0	0	0	0	0	0	0	0	5.6E-01
Nitrite (as N)	4	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	-	-
Nitrogen (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Kjeldahl (Total)	4	2.17	2.18	2.23	2.30	2.48	2.79	2.87	2.41	0.32	1.3E-01
Orthophosphate (Dissolved)	4	0.152	0.156	0.170	0.203	0.233	0.243	0.246	0.201	0.044	2.2E-01
Phosphorus - Dissolved	4	0.17	0.18	0.21	0.24	0.26	0.27	0.27	0.23	0.05	2.0E-01
Phosphorus - Total	4	0.201	0.216	0.276	0.320	0.343	0.353	0.356	0.299	0.069	2.3E-01
Cyanide										-	
Cyanide (Free)	4	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	4	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (WAD)	4	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	4	0.0045	0.0045	0.0047	0.0049	0.0057	0.0075	0.0079	0.0056	0.0016	2.8E-01
Antimony	4	0.00005	0.00007	0.00016	0.00023	0.00027	0.00030	0.00031	0.00020	0.00011	5.6E-01
Arsenic	4	0.0053	0.0053	0.0057	0.0059	0.0062	0.0066	0.0067	0.0059	0.0006	9.7E-02
Barium	4	0.057	0.058	0.066	0.071	0.076	0.082	0.084	0.071	0.011	1.6E-01
Beryllium	4	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	4	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	4	0.346	0.347	0.351	0.360	0.377	0.397	0.402	0.367	0.025	6.8E-02
Cadmium	4	0.000005	0.000005	0.000005	0.000010	0.000015	0.000015	0.000015	0.000010	0.000006	5.8E-01
Calcium	4	31	31	31	32	33	33	33	32	1	2.7E-02
Chromium	4	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Cobalt	4	0.00107	0.00108	0.00111	0.00124	0.00139	0.00145	0.00147	0.00126	0.00019	1.5E-01
Copper	4	0.0006	0.0007	0.0009	0.0011	0.0012	0.0015	0.0016	0.0011	0.0004	3.6E-01
Iron	4	0.159	0.189	0.311	0.412	0.501	0.594	0.617	0.400	0.192	4.8E-01
Lead	4	0.00003	0.00003	0.00003	0.00003	0.00003	0.00005	0.00005	0.00003	0.00001	4.4E-01
Lithium	4	0.0082	0.0083	0.0085	0.0087	0.0091	0.0095	0.0096	0.0088	0.0006	6.4E-02
Magnesium	4	46	46	47	48	49	50	50	48	2	3.5E-02
Manganese	4	0.356	0.404	0.594	0.824	1.006	1.081	1.100	0.776	0.332	4.3E-01
Mercury	4	0.0000050	0.0000050	0.0000050	0.0000050	0.0000065	0.0000101	0.0000110	0.0000065	0.0000030	4.6E-01
Molybdenum	4	0.030	0.031	0.033	0.034	0.035	0.038	0.039	0.034	0.004	1.0E-01
Nickel	4	0.0089	0.0089	0.0091	0.0095	0.0098	0.0098	0.0098	0.0094	0.0004	4.7E-02
Phosphorus	4	0.19	0.20	0.24	0.28	0.30	0.32	0.32	0.27	0.06	2.1E-01
Potassium	4	21	21	21	22	23	25	25	22	2	8.6E-02
Selenium	4	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	4.1E-01
Silicon	4	6.7	6.8	7.1	7.4	7.6	7.6	7.6	7.3	0.4	6.0E-02
Silver	4	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	4	150	150	152	153	155	158	159	154	4	2.5E-02
Strontium	4	0.92	0.94	1.00	1.02	1.05	1.12	1.14	1.03	0.09	8.7E-02
Sulphur	4	99	100	101	101	104	110	112	103	6	5.6E-02
Thallium	4	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Tin	4	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Titanium	4	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	-	-
Uranium	4	0.0023	0.0023	0.0025	0.0028	0.0032	0.0035	0.0036	0.0029	0.0006	2.0E-01
Vanadium	4	0.0005	0.0005	0.0005	0.0008	0.0012	0.0014	0.0014	0.0009	0.0005	5.1E-01
Zinc	4	0.0005	0.0005	0.0005	0.0012	0.0018	0.0019	0.0019	0.0012	0.0008	6.6E-01
Total Metals											
Aluminum	4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	2.3E-01
Antimony	4	0.0002	0.0002	0.0003	0.0003	0.0003	0.0004	0.0004	0.0003	0.0001	2.4E-01
Arsenic	4	0.0054	0.0055	0.0058	0.0062	0.0065	0.0066	0.0067	0.0061	0.0006	9.4E-02
Barium	4	0.065	0.066	0.071	0.077	0.083	0.086	0.087	0.077	0.010	1.3E-01
Beryllium	4	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	4	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	4	0.358	0.362	0.377	0.390	0.397	0.399	0.400	0.384	0.019	4.9E-02
Cadmium	4	0.00003	0.00003	0.00003	0.00003	0.00003	0.00004	0.00004	0.00003	0.00000	1.5E-01
Calcium	4	30	31	31	32	33	33	33	32	1	3.4E-02
Chromium	4	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.000	0.000	1.9E-01
Cobalt	4	0.0012	0.0013	0.0013	0.0014	0.0015	0.0015	0.0015	0.0014	0.0001	9.8E-02
Copper	4	0.011	0.012	0.013	0.015	0.017	0.017	0.017	0.015	0.003	1.8E-01
Iron	4	0.30	0.34	0.50	0.57	0.60	0.66	0.68	0.53	0.16	3.0E-01
Lead	4	0.00022	0.00022	0.00022	0.00027	0.00033	0.00037	0.00039	0.00029	0.00008	2.8E-01
Lithium	4	0.0081	0.0082	0.0083	0.0086	0.0090	0.0092	0.0092	0.0086	0.0005	5.8E-02
Magnesium	4	46	46	46	47	47	49	50	47	2	3.5E-02
Manganese	4	0.36	0.41	0.61	0.82	0.98	1.04	1.05	0.76	0.31	4.1E-01
Mercury	4	0.000028	0.000029	0.000031	0.000040	0.000048	0.000049	0.000049	0.000039	0.000011	2.8E-01
Molybdenum	4	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.03	0.00	9.4E-02
Nickel	4	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.000	1.9E-02
Phosphorus	4	0.21	0.22	0.27	0.30	0.30	0.30	0.31	0.28	0.05	1.7E-01
Potassium	4	20	20	20	22	24	24	24	22	2	9.1E-02
Selenium	4	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.001	0.000	3.3E-01
Silicon	4	6.8	6.8	7.0	7.4	7.8	8.0	8.0	7.4	0.6	7.6E-02
Silver	4	0.00002	0.00002	0.00002	0.00002	0.00003	0.00003	0.00003	0.00002	0.00000	1.2E-01
Sodium	4	143	144	147	151	155	158	159	151	7	4.6E-02
Strontium	4	0.98	0.98	0.99	1.03	1.09	1.17	1.19	1.05	0.10	9.0E-02
Sulphur	4	97	97	99	101	106	115	117	104	9	8.7E-02
Thallium	4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0000	0.0000	3.9E-01
Tin	4	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0001	0.0001	5.3E-01
Titanium	4	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	-	-
Uranium	4	0.0024	0.0024	0.0024	0.0029	0.0034	0.0036	0.0037	0.0029	0.0007	2.3E-01
Vanadium	4	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.002	0.000	2.4E-01
Zinc	4	0.0036	0.0036	0.0037	0.0039	0.0045	0.0054	0.0056	0.0043	0.0009	2.2E-01
Organics											
Carbon Organic (Dissolved)	4	7.9	8.1	8.8	9.8	11.2	12.6	12.9	10.1	2.2	2.1E-01
Carbon Organic (Total)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Dissolved)	0	-	-	-	-	-	-	-	-	-	-
Nitrogen Organic (Total)	0	-	-	-	-	-	-	-	-	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.30 - MW11-01S

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	13	625	625	658	740	808	999	1071	771	141	1.8E-01
Oxygen Dissolved %	12	0	0	1	3	5	14	20	5	6	1.2E+00
Oxygen Dissolved	13	0.0	0.0	0.2	0.4	1.0	1.4	2.0	0.6	0.6	8.9E-01
pH (unitless)	13	6.3	7.5	8.4	8.5	8.6	9.0	9.1	8.4	0.7	8.0E-02
Redox Potential mV	10	4	11	44	110	132	197	212	100	68	6.8E-01
Salinity ppt	10	0.46	0.46	0.46	0.48	0.50	0.57	0.58	0.49	0.04	8.6E-02
Specific Conductivity µS/cm	12	529	598	888	935	969	1139	1156	906	178	2.0E-01
Temperature °C	12	7.8	8.1	8.8	9.7	10.8	13.3	13.5	10.2	1.9	1.9E-01
Total Dissolved Solids	10	8	276	607	622	633	742	752	582	208	3.6E-01
Turbidity NTU	13	1.4	1.9	3.4	3.8	9.1	17.1	21.8	6.8	5.8	8.5E-01
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	2	0.5	0.6	0.8	1.1	1.3	1.5	1.6	1.1	0.8	7.4E-01
Alkalinity (Total as CaCO3)	13	124	127	146	152	159	189	232	155	26	1.7E-01
Bicarbonate Alkalinity	11	110	120	137	143	152	157	158	142	14	9.9E-02
Carbonate Alkalinity	11	0.5	0.8	2.8	5.5	11.5	15.5	15.5	7.0	5.6	7.9E-01
Color TCU	9	2.5	2.5	2.5	2.5	2.5	10.5	13.5	4.1	3.7	9.0E-01
Hardness as CaCO3 (Dissolved)	13	232	271	351	367	374	387	389	351	45	1.3E-01
Hydroxide Alkalinity	11	0.5	0.5	0.5	0.5	0.5	0.8	1.0	0.5	0.2	2.8E-01
pH (unitless)	13	8.2	8.3	8.4	8.4	8.5	8.6	8.7	8.4	0.1	1.6E-02
Specific Conductivity µS/cm	13	443	714	941	974	991	1040	1040	933	153	1.6E-01
Total Dissolved Solids	13	241	456	662	672	697	710	717	642	125	1.9E-01
Total Suspended Solids	11	2	2	2	4	4	9	10	4	3	7.4E-01
Turbidity NTU	11	1	1	1	4	5	6	7	3	2	7.2E-01
Dissolved Anions											
Bromide	13	0.03	0.09	0.25	0.25	0.25	0.35	0.50	0.24	0.10	4.3E-01
Chloride	13	1	2	3	3	3	10	20	4	5	1.3E+00
Fluoride	13	0.10	0.10	0.10	0.20	0.33	0.41	0.42	0.23	0.13	5.6E-01
Sulphate	13	17	213	351	361	367	379	390	335	96	2.9E-01
Nutrients											
Ammonia (Total)	13	0.057	0.072	0.089	0.097	0.103	0.209	0.345	0.113	0.071	6.3E-01
Nitrate (as N)	13	0	0	2	9	9	12	12	6	4	6.9E-01
Nitrite (as N)	13	0.001	0.003	0.059	0.116	0.167	0.375	0.635	0.141	0.163	1.2E+00
Nitrogen (Dissolved)	6	0.16	0.29	3.00	10.39	10.88	14.13	15.20	7.95	6.12	7.7E-01
Nitrogen (Total)	9	0	0	9	9	11	12	12	8	4	5.6E-01
Nitrogen Kjeldahl (Total)	13	0.03	0.03	0.03	0.03	0.21	0.42	0.67	0.15	0.18	1.3E+00
Orthophosphate (Dissolved)	6	0.041	0.042	0.043	0.044	0.061	0.074	0.076	0.053	0.015	2.9E-01
Phosphorus - Dissolved	12	0.02	0.03	0.05	0.05	0.06	0.09	0.12	0.06	0.02	4.0E-01
Phosphorus - Total	12	0.027	0.038	0.050	0.057	0.078	0.103	0.116	0.064	0.024	3.8E-01
Cyanide										-	
Cyanide (Free)	13	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	13	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (WAD)	13	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	13	0.0048	0.0050	0.0055	0.0060	0.0092	0.0122	0.0131	0.0074	0.0028	3.7E-01
Antimony	13	0.00012	0.00013	0.00014	0.00015	0.00021	0.00130	0.00288	0.00038	0.00075	2.0E+00
Arsenic	13	0.0020	0.0020	0.0021	0.0024	0.0029	0.0034	0.0035	0.0026	0.0005	2.0E-01
Barium	13	0.010	0.015	0.020	0.021	0.021	0.049	0.090	0.025	0.020	7.9E-01
Beryllium	13	0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0005	0.0001	0.0002	1.4E+00
Bismuth	13	0.00025	0.00025	0.00025	0.00025	0.00025	0.10000	0.10000	0.01560	0.03746	2.4E+00
Boron	13	0.014	0.036	0.057	0.068	0.073	0.076	0.080	0.062	0.017	2.8E-01
Cadmium	13	0.000005	0.000008	0.000011	0.000015	0.000025	0.000043	0.000044	0.000021	0.000013	6.4E-01
Calcium	13	32	33	37	39	40	45	51	39	5	1.2E-01
Chromium	13	0.0001	0.0001	0.0001	0.0005	0.0011	0.0044	0.0078	0.0012	0.0021	1.8E+00
Cobalt	13	0.00005	0.00005	0.00005	0.00005	0.00010	0.00041	0.00079	0.00013	0.00020	1.6E+00
Copper	13	0.0004	0.0004	0.0005	0.0006	0.0008	0.0014	0.0020	0.0007	0.0004	5.7E-01
Iron	13	0.005	0.005	0.005	0.005	0.015	0.015	0.015	0.008	0.005	5.9E-01
Lead	13	0.00003	0.00003	0.00003	0.00003	0.00003	0.00025	0.00025	0.00006	0.00008	1.4E+00
Lithium	13	0.0025	0.0032	0.0039	0.0043	0.0048	0.0054	0.0056	0.0043	0.0008	1.9E-01
Magnesium	13	26	40	65	65	67	70	72	62	12	2.0E-01
Manganese	13	0.001	0.006	0.017	0.041	0.059	0.084	0.111	0.042	0.029	7.0E-01
Mercury	12	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	-	-
Molybdenum	13	0.012	0.031	0.047	0.050	0.054	0.071	0.084	0.050	0.016	3.1E-01
Nickel	13	0.0003	0.0003	0.0003	0.0005	0.0006	0.0028	0.0051	0.0009	0.0013	1.6E+00
Phosphorus	13	0.03	0.03	0.03	0.06	0.15	0.15	0.15	0.08	0.05	6.8E-01
Potassium	13	1	11	19	20	21	22	23	19	5	2.9E-01
Selenium	13	0.001	0.001	0.001	0.004	0.005	0.005	0.006	0.003	0.002	5.7E-01
Silicon	13	4.4	4.7	6.0	6.6	6.9	7.4	7.6	6.3	1.0	1.5E-01
Silver	13	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00000	3.3E-01
Sodium	13	8	45	72	73	76	77	78	69	18	2.7E-01
Strontium	13	0.69	0.72	0.83	0.89	0.93	0.95	0.98	0.87	0.08	9.4E-02
Sulphur	8	113	114	117	118	118	123	125	118	3	3.0E-02
Thallium	13	0.00001	0.00001	0.00001	0.00001	0.00002	0.00010	0.00010	0.00002	0.00003	1.4E+00
Tin	13	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003	0.0003	0.0001	0.0001	8.8E-01
Titanium	13	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	-	-
Uranium	13	0.0007	0.0007	0.0008	0.0008	0.0010	0.0024	0.0031	0.0011	0.0007	5.9E-01
Vanadium	13	0.0005	0.0019	0.0056	0.0063	0.0074	0.0087	0.0093	0.0060	0.0023	3.8E-01
Zinc	13	0.0005	0.0005	0.0005	0.0011	0.0019	0.0034	0.0047	0.0014	0.0012	8.7E-01
Total Metals											
Aluminum	13	0.0	0.0	0.0	0.1	0.1	0.3	0.3	0.1	0.1	7.9E-01
Antimony	13	0.0002	0.0002	0.0002	0.0002	0.0003	0.0012	0.0025	0.0004	0.0006	1.7E+00
Arsenic	13	0.0020	0.0021	0.0022	0.0025	0.0031	0.0035	0.0036	0.0026	0.0005	2.0E-01
Barium	13	0.020	0.020	0.022	0.022	0.024	0.052	0.094	0.028	0.020	7.2E-01
Beryllium	13	0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0005	0.0001	0.0002	1.4E+00
Bismuth	13	0.00025	0.00025	0.00025	0.00025	0.00025	0.10000	0.10000	0.01560	0.03746	2.4E+00
Boron	13	0.015	0.036	0.063	0.074	0.077	0.090	0.094	0.068	0.020	3.0E-01
Cadmium	13	0.00001	0.00001	0.00002	0.00002	0.00003	0.00005	0.00005	0.00003	0.00001	4.6E-01
Calcium	13	31	34	37	38	39	45	51	39	5	1.2E-01
Chromium	13	0.000	0.000	0.001	0.001	0.003	0.010	0.011	0.003	0.003	1.3E+00
Cobalt	13	0.0001	0.0001	0.0001	0.0002	0.0002	0.0006	0.0008	0.0002	0.0002	9.6E-01
Copper	13	0.001	0.001	0.001	0.001	0.002	0.004	0.004	0.002	0.001	5.8E-01
Iron	13	0.03	0.04	0.05	0.08	0.18	0.35	0.42	0.14	0.13	9.1E-01
Lead	13	0.00003	0.00003	0.00005	0.00009	0.00014	0.00025	0.00026	0.00011	0.00009	7.8E-01
Lithium	13	0.0025	0.0031	0.0040	0.0041	0.0047	0.0055	0.0056	0.0043	0.0009	2.0E-01
Magnesium	13	26	42	63	64	66	69	71	61	11	1.9E-01
Manganese	13	0.01	0.01	0.03	0.05	0.06	0.09	0.12	0.05	0.03	5.8E-01
Mercury	12	0.000005	0.000005	0.000005	0.000005	0.000005	0.000008	0.000012	0.000006	0.000002	3.6E-01
Molybdenum	13	0.01	0.03	0.05	0.05	0.06	0.07	0.09	0.05	0.02	3.2E-01
Nickel	13	0.001	0.001	0.001	0.001	0.001	0.006	0.007	0.002	0.002	1.3E+00
Phosphorus	13	0.03	0.04	0.05	0.06	0.15	0.15	0.15	0.09	0.05	5.5E-01
Potassium	13	1	12	19	20	21	23	24	19	5	2.9E-01
Selenium	13	0.001	0.001	0.001	0.004	0.005	0.005	0.006	0.003	0.002	5.8E-01
Silicon	13	4.6	5.1	6.3	6.8	7.1	7.5	7.7	6.5	0.9	1.3E-01
Silver	13	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00003	0.00001	0.00001	8.1E-01
Sodium	13	9	45	73	75	78	80	83	70	19	2.7E-01
Strontium	13	0.69	0.71	0.82	0.88	0.92	1.00	1.00	0.88	0.10	1.1E-01
Sulphur	8	109	112	119	121	122	123	124	119	5	3.9E-02
Thallium	13	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	0.0000	0.0000	1.3E+00
Tin	13	0.0001	0.0001	0.0001	0.0001	0.0003	0.0003	0.0004	0.0002	0.0001	7.2E-01
Titanium	13	0.005	0.005	0.005	0.005	0.005	0.012	0.015	0.006	0.003	4.9E-01
Uranium	13	0.0008	0.0008	0.0008	0.0009	0.0010	0.0024	0.0029	0.0011	0.0006	5.6E-01
Vanadium	13	0.001	0.003	0.006	0.007	0.008	0.009	0.010	0.007	0.002	3.7E-01
Zinc	13	0.0015	0.0015	0.0015	0.0025	0.0033	0.0053	0.0055	0.0027	0.0015	5.4E-01
Organics											
Carbon Organic (Dissolved)	10	1.4	1.4	1.6	1.8	2.3	3.5	4.3	2.1	0.9	4.2E-01
Carbon Organic (Total)	13	1.3	1.3	1.3	1.4	1.8	2.9	4.1	1.8	0.8	4.3E-01
Nitrogen Organic (Dissolved)	6	0.10	0.16	0.50	1.05	1.10	4.85	6.10	1.62	2.23	1.4E+00
Nitrogen Organic (Total)	5	0.03	0.03	0.03	0.10	0.15	0.29	0.33	0.13	0.12	9.6E-01

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.31 - MW11-02

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	13	1830	1837	1931	2052	2850	3157	3284	2346	528	2.3E-01
Oxygen Dissolved %	12	0	3	6	8	21	53	59	17	19	1.1E+00
Oxygen Dissolved	13	0.0	0.1	0.6	0.9	2.3	6.4	7.0	1.8	2.2	1.2E+00
pH (unitless)	13	7.2	7.3	7.6	7.7	7.7	7.9	8.1	7.7	0.2	2.8E-02
Redox Potential mV	9	-140	-124	-89	-67	-37	143	237	-34	110	-3.2E+00
Salinity ppt	9	1.44	1.47	1.54	1.60	1.70	36.54	59.70	8.05	19.37	2.4E+00
Specific Conductivity µS/cm	12	1900	2117	2744	2939	3019	3329	3437	2838	409	1.4E-01
Temperature °C	13	5.2	6.1	7.3	8.7	9.1	12.4	14.7	8.7	2.4	2.8E-01
Total Dissolved Solids	9	1806	1848	1916	1997	2234	1868400	1880000	416100	821765	2.0E+00
Turbidity NTU	13	0.0	0.0	1.8	3.2	4.7	27.1	32.3	7.1	10.0	1.4E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	2	4.5	4.5	4.7	4.9	5.1	5.3	5.3	4.9	0.6	1.2E-01
Alkalinity (Total as CaCO3)	13	165	170	176	182	195	219	220	188	17	9.1E-02
Bicarbonate Alkalinity	11	165	169	176	180	194	219	220	187	18	9.6E-02
Carbonate Alkalinity	11	0.5	0.5	1.0	1.0	1.0	1.0	1.0	0.9	0.2	2.2E-01
Color TCU	10	2.5	2.5	2.5	3.9	6.9	10.5	10.5	5.1	3.3	6.4E-01
Hardness as CaCO3 (Dissolved)	12	426	427	429	433	445	463	464	438	14	3.1E-02
Hydroxide Alkalinity	11	0.5	0.5	1.0	1.0	1.0	1.0	1.0	0.9	0.2	2.2E-01
pH (unitless)	13	7.9	7.9	8.0	8.1	8.1	8.2	8.2	8.0	0.1	1.1E-02
Specific Conductivity µS/cm	13	2800	2824	2870	2900	2950	2992	3010	2905	60	2.1E-02
Total Dissolved Solids	13	2140	2158	2200	2240	2260	2264	2270	2224	41	1.9E-02
Total Suspended Solids	11	2	3	4	7	12	19	26	9	7	7.6E-01
Turbidity NTU	11	1	2	3	4	7	15	22	6	6	9.8E-01
Dissolved Anions											
Bromide	13	0.50	0.50	0.50	0.50	0.50	1.75	2.50	0.71	0.58	8.1E-01
Chloride	13	15	16	16	16	17	20	25	17	3	1.5E-01
Fluoride	13	0.10	0.11	0.20	0.20	0.20	0.35	0.58	0.21	0.12	5.6E-01
Sulphate	13	1340	1352	1420	1430	1460	1474	1480	1428	40	2.8E-02
Nutrients											
Ammonia (Total)	13	0.025	0.036	0.067	0.070	0.083	0.090	0.093	0.068	0.019	2.9E-01
Nitrate (as N)	13	0	0	0	0	0	0	0	0	0	8.1E-01
Nitrite (as N)	13	0.010	0.010	0.010	0.010	0.010	0.026	0.050	0.013	0.011	8.5E-01
Nitrogen (Dissolved)	6	0.13	0.13	0.14	0.18	0.24	1.38	1.75	0.44	0.64	1.5E+00
Nitrogen (Total)	9	0	0	0	0	0	0	0	0	0	3.5E-01
Nitrogen Kjeldahl (Total)	13	0.13	0.14	0.17	0.19	0.22	0.33	0.33	0.21	0.06	3.1E-01
Orthophosphate (Dissolved)	5	0.052	0.056	0.069	0.072	0.081	0.083	0.083	0.072	0.012	1.7E-01
Phosphorus - Dissolved	12	0.02	0.02	0.05	0.06	0.07	0.08	0.08	0.06	0.02	3.7E-01
Phosphorus - Total	13	0.056	0.064	0.083	0.093	0.098	0.106	0.117	0.090	0.015	1.7E-01
Cyanide										-	
Cyanide (Free)	13	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	13	0.0025	0.0025	0.0025	0.0025	0.0025	0.0039	0.0059	0.0028	0.0009	3.4E-01
Cyanide (WAD)	13	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	13	0.0047	0.0051	0.0060	0.0070	0.0075	0.0165	0.0250	0.0084	0.0053	6.4E-01
Antimony	13	0.00010	0.00010	0.00010	0.00025	0.00028	0.00316	0.00550	0.00072	0.00149	2.1E+00
Arsenic	13	0.0025	0.0025	0.0026	0.0029	0.0032	0.0035	0.0035	0.0029	0.0004	1.2E-01
Barium	13	0.027	0.027	0.029	0.031	0.036	0.041	0.042	0.032	0.005	1.5E-01
Beryllium	13	0.0001	0.0001	0.0001	0.0001	0.0003	0.0021	0.0050	0.0005	0.0013	2.6E+00
Bismuth	13	0.00050	0.00050	0.00050	0.00050	0.00125	0.04075	0.10000	0.00838	0.02753	3.3E+00
Boron	13	1.220	1.220	1.300	1.310	1.340	1.404	1.470	1.312	0.066	5.0E-02
Cadmium	13	0.000010	0.000010	0.000010	0.000010	0.000025	0.000093	0.000105	0.000027	0.000031	1.1E+00
Calcium	13	82	83	84	85	86	92	93	86	3	3.8E-02
Chromium	13	0.0001	0.0001	0.0001	0.0001	0.0003	0.0027	0.0050	0.0007	0.0014	2.1E+00
Cobalt	13	0.00093	0.00093	0.00102	0.00125	0.00156	0.00269	0.00283	0.00144	0.00061	4.3E-01
Copper	13	0.0002	0.0002	0.0002	0.0002	0.0005	0.0027	0.0050	0.0007	0.0013	1.8E+00
Iron	13	0.012	0.014	0.038	0.075	0.102	0.257	0.332	0.091	0.091	9.9E-01
Lead	13	0.00005	0.00005	0.00005	0.00005	0.00013	0.00108	0.00250	0.00026	0.00067	2.6E+00
Lithium	13	0.0250	0.0258	0.0435	0.0538	0.0616	0.0661	0.0681	0.0509	0.0143	2.8E-01
Magnesium	13	52	52	53	55	56	57	57	54	2	3.1E-02
Manganese	13	0.967	0.967	1.040	1.080	1.240	1.418	1.430	1.145	0.155	1.4E-01
Mercury	12	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	-	-
Molybdenum	13	0.001	0.001	0.002	0.003	0.005	0.012	0.014	0.004	0.004	9.3E-01
Nickel	13	0.0013	0.0014	0.0017	0.0019	0.0051	0.0153	0.0170	0.0050	0.0052	1.1E+00
Phosphorus	13	0.07	0.07	0.09	0.10	0.15	0.15	0.15	0.11	0.03	2.9E-01
Potassium	13	1	1	1	1	2	3	3	1	1	4.4E-01
Selenium	13	0.000	0.000	0.000	0.000	0.000	0.002	0.005	0.001	0.001	2.5E+00
Silicon	13	5.5	5.7	6.2	6.4	6.6	6.7	6.7	6.3	0.3	5.5E-02
Silver	13	0.00001	0.00001	0.00001	0.00001	0.00003	0.00005	0.00010	0.00002	0.00002	1.1E+00
Sodium	13	510	514	528	538	547	589	627	543	29	5.4E-02
Strontium	13	3.07	3.30	3.55	3.75	3.96	4.02	4.03	3.70	0.28	7.5E-02
Sulphur	8	435	437	444	455	458	462	464	452	10	2.2E-02
Thallium	13	0.00001	0.00001	0.00001	0.00001	0.00003	0.00041	0.00100	0.00009	0.00027	3.0E+00
Tin	13	0.0001	0.0001	0.0001	0.0001	0.0003	0.0012	0.0025	0.0003	0.0007	2.0E+00
Titanium	13	0.0050	0.0050	0.0100	0.0100	0.0100	0.0250	0.0250	0.0113	0.0065	5.7E-01
Uranium	13	0.0007	0.0007	0.0009	0.0013	0.0017	0.0048	0.0069	0.0019	0.0018	9.3E-01
Vanadium	13	0.0010	0.0010	0.0010	0.0010	0.0025	0.0035	0.0050	0.0018	0.0012	6.8E-01
Zinc	13	0.0010	0.0019	0.0025	0.0040	0.0061	0.0750	0.1350	0.0163	0.0367	2.3E+00
Total Metals											
Aluminum	13	0.0	0.0	0.1	0.1	0.2	0.5	0.6	0.2	0.2	9.7E-01
Antimony	13	0.0002	0.0002	0.0003	0.0003	0.0004	0.0040	0.0055	0.0009	0.0016	1.7E+00
Arsenic	13	0.0025	0.0026	0.0029	0.0030	0.0035	0.0038	0.0039	0.0031	0.0004	1.3E-01
Barium	13	0.027	0.027	0.029	0.032	0.036	0.047	0.052	0.034	0.007	2.1E-01
Beryllium	13	0.0001	0.0001	0.0001	0.0001	0.0003	0.0021	0.0050	0.0005	0.0013	2.6E+00
Bismuth	13	0.00050	0.00050	0.00050	0.00050	0.00125	0.04075	0.10000	0.00838	0.02753	3.3E+00
Boron	13	1.230	1.236	1.260	1.320	1.350	1.402	1.420	1.312	0.063	4.8E-02
Cadmium	13	0.00001	0.00001	0.00002	0.00003	0.00007	0.00017	0.00031	0.00006	0.00008	1.4E+00
Calcium	13	80	81	82	84	86	93	98	85	5	5.5E-02
Chromium	13	0.000	0.000	0.001	0.001	0.002	0.008	0.008	0.002	0.003	1.3E+00
Cobalt	13	0.0009	0.0010	0.0011	0.0014	0.0016	0.0029	0.0030	0.0016	0.0007	4.2E-01
Copper	13	0.001	0.001	0.001	0.001	0.002	0.005	0.005	0.002	0.001	7.5E-01
Iron	13	0.16	0.16	0.17	0.29	0.41	0.80	0.85	0.36	0.24	6.6E-01
Lead	13	0.00005	0.00005	0.00005	0.00005	0.00013	0.00126	0.00250	0.00029	0.00067	2.3E+00
Lithium	13	0.0241	0.0246	0.0442	0.0522	0.0602	0.0675	0.0701	0.0505	0.0146	2.9E-01
Magnesium	13	52	52	53	54	56	57	58	55	2	3.5E-02
Manganese	13	0.91	0.95	1.00	1.11	1.24	1.41	1.44	1.14	0.16	1.4E-01
Mercury	12	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	-	-
Molybdenum	13	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	8.7E-01
Nickel	13	0.002	0.002	0.002	0.003	0.007	0.017	0.018	0.006	0.006	9.9E-01
Phosphorus	13	0.09	0.09	0.10	0.11	0.15	0.15	0.15	0.12	0.02	2.0E-01
Potassium	13	1	1	1	1	1	3	3	1	1	4.3E-01
Selenium	13	0.000	0.000	0.000	0.000	0.000	0.002	0.005	0.001	0.001	2.5E+00
Silicon	13	6.1	6.2	6.4	6.6	6.8	7.5	7.5	6.7	0.4	6.4E-02
Silver	13	0.00001	0.00001	0.00001	0.00001	0.00003	0.00007	0.00010	0.00003	0.00003	1.0E+00
Sodium	13	497	502	525	535	542	585	630	538	32	6.0E-02
Strontium	13	3.06	3.35	3.59	3.72	3.88	3.92	3.95	3.70	0.24	6.4E-02
Sulphur	8	450	451	458	461	468	475	476	462	9	2.0E-02
Thallium	13	0.0000	0.0000	0.0000	0.0000	0.0000	0.0004	0.0010	0.0001	0.0003	2.8E+00
Tin	13	0.0001	0.0001	0.0001	0.0001	0.0003	0.0017	0.0025	0.0004	0.0007	1.6E+00
Titanium	13	0.010	0.010	0.010	0.013	0.025	0.038	0.040	0.018	0.011	5.9E-01
Uranium	13	0.0007	0.0007	0.0009	0.0013	0.0018	0.0048	0.0067	0.0019	0.0017	9.0E-01
Vanadium	13	0.001	0.001	0.001	0.001	0.003	0.004	0.005	0.002	0.001	6.3E-01
Zinc	13	0.0025	0.0028	0.0030	0.0075	0.0141	0.0812	0.1490	0.0203	0.0400	2.0E+00
Organics											
Carbon Organic (Dissolved)	10	3.4	3.4	3.6	3.9	7.8	13.6	17.2	6.2	4.5	7.2E-01
Carbon Organic (Total)	13	2.2	2.2	3.2	3.5	4.0	10.2	11.3	4.4	2.8	6.3E-01
Nitrogen Organic (Dissolved)	6	0.03	0.03	0.06	0.11	0.19	1.31	1.68	0.36	0.65	1.8E+00
Nitrogen Organic (Total)	5	0.03	0.05	0.15	0.17	0.23	0.31	0.33	0.18	0.11	6.0E-01

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.32 - MW11-04D

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	4	611	669	903	1041	1233	1597	1688	1095	445	4.1E-01
Oxygen Dissolved %	3	3	3	5	7	18	26	28	13	14	1.1E+00
Oxygen Dissolved	4	0.4	0.4	0.7	1.3	2.1	2.5	2.6	1.4	1.0	7.4E-01
pH (unitless)	4	7.8	8.0	8.7	9.3	9.7	9.9	9.9	9.1	0.9	1.0E-01
Redox Potential mV	2	30	36	59	89	118	141	147	89	83	9.3E-01
Salinity ppt	2	0.50	0.54	0.68	0.86	1.04	1.18	1.22	0.86	0.51	5.9E-01
Specific Conductivity µS/cm	3	795	806	851	906	1633	2215	2360	1354	873	6.5E-01
Temperature °C	4	7.9	8.3	9.6	10.6	11.6	13.0	13.4	10.6	2.3	2.1E-01
Total Dissolved Solids	2	638	683	862	1086	1309	1488	1533	1086	633	5.8E-01
Turbidity NTU	4	-0.4	-0.1	1.0	1.6	2.5	4.7	5.2	2.0	2.3	1.2E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	-	-
Alkalinity (Total as CaCO3)	4	37	39	46	50	56	68	71	52	14	2.7E-01
Bicarbonate Alkalinity	3	33	34	35	36	53	68	71	47	21	4.5E-01
Carbonate Alkalinity	3	1.0	2.4	7.9	14.8	15.2	15.5	15.6	10.5	8.2	7.8E-01
Color TCU	4	7.3	7.9	10.5	13.1	15.2	16.6	17.0	12.6	4.2	3.3E-01
Hardness as CaCO3 (Dissolved)	4	34	34	37	41	92	208	237	88	99	1.1E+00
Hydroxide Alkalinity	3	0.5	0.5	0.5	0.5	0.8	1.0	1.0	0.7	0.3	4.3E-01
pH (unitless)	4	7.9	8.1	8.6	8.9	9.1	9.2	9.2	8.8	0.6	6.5E-02
Specific Conductivity µS/cm	4	905	907	914	927	1210	1866	2030	1197	555	4.6E-01
Total Dissolved Solids	4	592	595	606	627	851	1346	1470	829	428	5.2E-01
Total Suspended Solids	4	2	2	2	2	2	4	5	2	2	7.0E-01
Turbidity NTU	4	1	1	1	1	2	2	2	1	1	5.3E-01
Dissolved Anions											
Bromide	4	0.25	0.25	0.25	0.25	0.31	0.46	0.50	0.31	0.13	4.0E-01
Chloride	4	21	22	25	26	26	26	26	25	2	1.0E-01
Fluoride	4	0.83	0.85	0.95	1.01	1.04	1.10	1.11	0.99	0.12	1.2E-01
Sulphate	4	341	342	347	353	502	853	941	497	296	6.0E-01
Nutrients											
Ammonia (Total)	4	0.065	0.069	0.085	0.100	0.112	0.122	0.124	0.097	0.025	2.6E-01
Nitrate (as N)	4	0	0	0	0	0	0	0	0	0	4.0E-01
Nitrite (as N)	4	0.005	0.005	0.005	0.017	0.030	0.036	0.037	0.019	0.016	8.7E-01
Nitrogen (Dissolved)	2	0.27	0.27	0.27	0.28	0.29	0.30	0.30	0.28	0.02	8.8E-02
Nitrogen (Total)	4	0	0	0	0	0	0	0	0	0	2.2E-01
Nitrogen Kjeldahl (Total)	4	0.19	0.20	0.26	0.29	0.31	0.33	0.34	0.28	0.06	2.3E-01
Orthophosphate (Dissolved)	1	0.169	0.169	0.169	0.169	0.169	0.169	0.169	0.169	-	-
Phosphorus - Dissolved	3	0.08	0.10	0.17	0.25	0.26	0.26	0.26	0.20	0.10	5.0E-01
Phosphorus - Total	4	0.096	0.109	0.158	0.215	0.261	0.282	0.287	0.203	0.085	4.2E-01
Cyanide										-	
Cyanide (Free)	4	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	4	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (WAD)	4	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	4	0.0114	0.0222	0.0653	0.1152	0.1540	0.1708	0.1750	0.1042	0.0728	7.0E-01
Antimony	4	0.00010	0.00012	0.00020	0.00024	0.00030	0.00040	0.00043	0.00025	0.00014	5.4E-01
Arsenic	4	0.0020	0.0031	0.0074	0.0106	0.0121	0.0123	0.0123	0.0089	0.0048	5.4E-01
Barium	4	0.009	0.009	0.010	0.010	0.019	0.038	0.043	0.018	0.017	9.2E-01
Beryllium	4	0.0001	0.0001	0.0001	0.0001	0.0002	0.0004	0.0005	0.0002	0.0002	1.2E+00
Bismuth	4	0.00025	0.00025	0.00025	0.00038	0.02538	0.08508	0.10000	0.02525	0.04983	2.0E+00
Boron	4	1.350	1.403	1.613	1.725	1.875	2.175	2.250	1.763	0.371	2.1E-01
Cadmium	4	0.000030	0.000031	0.000034	0.000048	0.000066	0.000081	0.000085	0.000053	0.000025	4.8E-01
Calcium	3	14	15	15	16	49	76	82	38	39	1.0E+00
Chromium	4	0.0001	0.0001	0.0001	0.0002	0.0003	0.0005	0.0005	0.0002	0.0002	8.7E-01
Cobalt	4	0.00005	0.00005	0.00005	0.00010	0.00024	0.00046	0.00051	0.00019	0.00022	1.1E+00
Copper	4	0.0001	0.0002	0.0004	0.0006	0.0006	0.0007	0.0007	0.0005	0.0003	5.5E-01
Iron	4	0.005	0.005	0.005	0.010	0.017	0.022	0.023	0.012	0.009	7.3E-01
Lead	4	0.00003	0.00003	0.00003	0.00004	0.00010	0.00022	0.00025	0.00009	0.00011	1.2E+00
Lithium	4	0.0025	0.0025	0.0026	0.0028	0.0032	0.0036	0.0037	0.0030	0.0005	1.8E-01
Magnesium	3	1	1	1	1	4	7	8	3	4	1.4E+00
Manganese	4	0.016	0.016	0.016	0.017	0.154	0.482	0.564	0.153	0.274	1.8E+00
Mercury	4	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	-	-
Molybdenum	4	0.204	0.206	0.213	0.217	0.219	0.221	0.222	0.215	0.008	3.6E-02
Nickel	4	0.0009	0.0010	0.0013	0.0015	0.0016	0.0018	0.0019	0.0014	0.0004	2.8E-01
Phosphorus	3	0.10	0.10	0.12	0.15	0.20	0.24	0.25	0.16	0.08	4.7E-01
Potassium	4	6	6	7	8	10	10	10	8	2	2.3E-01
Selenium	4	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	5.5E-01
Silicon	3	2.7	2.7	2.7	2.7	3.0	3.1	3.2	2.9	0.3	1.0E-01
Silver	4	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00000	3.8E-01
Sodium	4	169	169	170	173	221	330	357	218	93	4.3E-01
Strontium	4	0.21	0.21	0.22	0.23	0.63	1.57	1.80	0.62	0.79	1.3E+00
Sulphur	2	114	123	158	202	245	280	289	202	124	6.1E-01
Thallium	4	0.00001	0.00001	0.00001	0.00002	0.00005	0.00009	0.00010	0.00004	0.00004	1.1E+00
Tin	4	0.0001	0.0001	0.0001	0.0002	0.0003	0.0003	0.0003	0.0002	0.0001	6.8E-01
Titanium	3	0.0050	0.0050	0.0050	0.0050	0.0075	0.0095	0.0100	0.0067	0.0029	4.3E-01
Uranium	4	0.0001	0.0002	0.0002	0.0003	0.0004	0.0007	0.0008	0.0004	0.0003	8.0E-01
Vanadium	4	0.0010	0.0011	0.0016	0.0024	0.0031	0.0033	0.0033	0.0023	0.0011	4.7E-01
Zinc	4	0.0005	0.0005	0.0005	0.0014	0.0024	0.0025	0.0025	0.0015	0.0011	7.6E-01
Total Metals											
Aluminum	4	0.0	0.0	0.1	0.2	0.2	0.3	0.3	0.2	0.1	7.4E-01
Antimony	4	0.0001	0.0001	0.0002	0.0003	0.0003	0.0005	0.0005	0.0003	0.0002	6.1E-01
Arsenic	4	0.0020	0.0030	0.0071	0.0106	0.0125	0.0126	0.0126	0.0089	0.0050	5.5E-01
Barium	4	0.008	0.009	0.010	0.011	0.018	0.035	0.039	0.017	0.015	8.4E-01
Beryllium	4	0.0001	0.0001	0.0001	0.0001	0.0002	0.0004	0.0005	0.0002	0.0002	1.2E+00
Bismuth	4	0.00025	0.00025	0.00025	0.00038	0.02538	0.08508	0.10000	0.02525	0.04983	2.0E+00
Boron	4	1.300	1.368	1.638	1.785	1.948	2.254	2.330	1.800	0.422	2.3E-01
Cadmium	4	0.00005	0.00005	0.00005	0.00005	0.00007	0.00012	0.00013	0.00007	0.00004	5.7E-01
Calcium	3	16	16	16	17	47	72	78	37	35	9.6E-01
Chromium	4	0.000	0.001	0.001	0.002	0.002	0.003	0.004	0.002	0.001	7.7E-01
Cobalt	4	0.0001	0.0001	0.0001	0.0001	0.0002	0.0005	0.0005	0.0002	0.0002	8.3E-01
Copper	4	0.001	0.001	0.001	0.002	0.003	0.004	0.004	0.002	0.001	5.9E-01
Iron	4	0.03	0.04	0.06	0.08	0.08	0.09	0.09	0.07	0.03	3.8E-01
Lead	4	0.00005	0.00005	0.00005	0.00009	0.00015	0.00023	0.00025	0.00012	0.00009	8.0E-01
Lithium	4	0.0025	0.0025	0.0025	0.0029	0.0034	0.0037	0.0038	0.0030	0.0006	2.0E-01
Magnesium	3	1	1	1	1	4	7	8	3	4	1.4E+00
Manganese	4	0.02	0.02	0.02	0.03	0.15	0.45	0.53	0.15	0.25	1.7E+00
Mercury	4	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	-	-
Molybdenum	4	0.20	0.20	0.21	0.22	0.23	0.23	0.23	0.22	0.01	6.0E-02
Nickel	4	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.002	0.001	3.1E-01
Phosphorus	3	0.10	0.10	0.12	0.15	0.20	0.24	0.26	0.17	0.08	4.8E-01
Potassium	4	6	6	7	8	10	12	12	9	3	3.1E-01
Selenium	4	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	5.2E-01
Silicon	3	2.9	2.9	3.0	3.0	3.1	3.1	3.1	3.0	0.1	4.0E-02
Silver	4	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00000	3.0E-01
Sodium	4	163	165	171	184	230	315	336	217	81	3.7E-01
Strontium	4	0.21	0.21	0.22	0.25	0.64	1.54	1.76	0.62	0.76	1.2E+00
Sulphur	2	113	122	156	199	241	275	284	199	121	6.1E-01
Thallium	4	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	0.0001	0.0000	0.0000	9.2E-01
Tin	4	0.0001	0.0001	0.0001	0.0002	0.0003	0.0004	0.0004	0.0002	0.0001	6.2E-01
Titanium	3	0.005	0.005	0.005	0.005	0.008	0.010	0.010	0.007	0.003	4.3E-01
Uranium	4	0.0001	0.0002	0.0003	0.0003	0.0004	0.0007	0.0008	0.0004	0.0003	7.1E-01
Vanadium	4	0.001	0.001	0.002	0.003	0.004	0.004	0.004	0.003	0.001	5.5E-01
Zinc	4	0.0015	0.0017	0.0023	0.0028	0.0032	0.0037	0.0038	0.0027	0.0010	3.6E-01
Organics											
Carbon Organic (Dissolved)	4	4.5	4.6	4.7	5.6	6.4	6.5	6.6	5.6	1.1	1.9E-01
Carbon Organic (Total)	4	4.5	4.6	4.8	5.3	6.0	6.4	6.5	5.4	0.9	1.7E-01
Nitrogen Organic (Dissolved)	2	0.12	0.12	0.13	0.15	0.16	0.17	0.18	0.15	0.04	2.7E-01
Nitrogen Organic (Total)	1	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.33 - MW11-04S

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	12	1274	1311	1398	1516	1830	2126	2317	1624	321	2.0E-01
Oxygen Dissolved %	11	2	4	9	15	28	48	56	20	17	8.4E-01
Oxygen Dissolved	12	0.3	0.5	1.1	1.5	2.9	5.0	5.5	2.2	1.7	7.7E-01
pH (unitless)	12	7.4	7.4	7.7	7.8	7.9	8.9	9.8	8.0	0.6	7.7E-02
Redox Potential mV	9	-298	-208	-25	61	97	112	122	14	133	9.8E+00
Salinity ppt	9	0.91	0.93	1.00	1.04	1.11	1.22	1.28	1.06	0.11	1.0E-01
Specific Conductivity µS/cm	11	1219	1265	1781	1937	2058	2193	2220	1856	327	1.8E-01
Temperature °C	12	6.8	7.5	8.3	9.4	9.7	14.3	16.3	9.7	2.5	2.6E-01
Total Dissolved Solids	9	1159	1184	1260	1283	1355	1430	1443	1304	89	6.9E-02
Turbidity NTU	12	-2.1	-1.4	0.3	1.8	3.1	5.5	6.7	1.9	2.5	1.3E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	3	3.2	3.3	3.6	4.0	4.3	4.5	4.6	3.9	0.7	1.8E-01
Alkalinity (Total as CaCO3)	12	54	62	75	81	86	102	106	81	14	1.7E-01
Bicarbonate Alkalinity	11	54	61	74	80	88	103	106	81	14	1.8E-01
Carbonate Alkalinity	11	0.5	0.5	1.0	1.0	1.0	1.0	1.0	0.9	0.2	2.2E-01
Color TCU	10	6.7	7.0	7.9	9.0	11.4	14.6	15.7	10.0	2.8	2.9E-01
Hardness as CaCO3 (Dissolved)	11	221	226	237	246	253	275	291	247	18	7.4E-02
Hydroxide Alkalinity	11	0.5	0.5	1.0	1.0	1.0	1.0	1.0	0.9	0.2	2.2E-01
pH (unitless)	12	7.8	7.8	7.9	8.0	8.0	8.2	8.2	8.0	0.1	1.6E-02
Specific Conductivity µS/cm	12	1920	1942	2008	2045	2080	2128	2150	2043	65	3.2E-02
Total Dissolved Solids	12	1340	1384	1453	1480	1513	1540	1540	1475	57	3.8E-02
Total Suspended Solids	11	2	2	2	2	4	10	10	4	3	9.2E-01
Turbidity NTU	11	0	0	1	1	1	5	6	2	2	1.1E+00
Dissolved Anions											
Bromide	12	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	-	-
Chloride	12	21	21	22	23	24	26	28	23	2	8.4E-02
Fluoride	12	0.42	0.43	0.50	0.55	0.61	0.88	0.90	0.59	0.15	2.6E-01
Sulphate	12	921	923	948	966	976	999	1010	963	27	2.8E-02
Nutrients											
Ammonia (Total)	12	0.064	0.066	0.070	0.075	0.095	0.122	0.127	0.085	0.021	2.4E-01
Nitrate (as N)	12	0	0	0	0	0	0	0	0	0	4.9E-01
Nitrite (as N)	12	0.010	0.010	0.010	0.010	0.024	0.035	0.044	0.018	0.011	6.2E-01
Nitrogen (Dissolved)	6	0.22	0.23	0.28	0.38	0.48	0.60	0.63	0.40	0.15	3.9E-01
Nitrogen (Total)	8	0	0	0	0	0	1	1	0	0	3.6E-01
Nitrogen Kjeldahl (Total)	12	0.25	0.26	0.28	0.30	0.37	0.54	0.67	0.35	0.12	3.4E-01
Orthophosphate (Dissolved)	6	0.031	0.039	0.069	0.087	0.095	0.099	0.099	0.078	0.026	3.4E-01
Phosphorus - Dissolved	10	0.03	0.04	0.06	0.07	0.09	0.10	0.10	0.07	0.02	3.0E-01
Phosphorus - Total	12	0.055	0.058	0.074	0.083	0.103	0.130	0.132	0.090	0.026	2.9E-01
Cyanide										-	
Cyanide (Free)	12	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	12	0.0025	0.0025	0.0025	0.0025	0.0025	0.0037	0.0051	0.0027	0.0008	2.8E-01
Cyanide (WAD)	12	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	12	0.0089	0.0101	0.0117	0.0127	0.0147	0.0281	0.0430	0.0152	0.0090	5.9E-01
Antimony	12	0.00010	0.00010	0.00010	0.00018	0.00080	0.00125	0.00125	0.00045	0.00047	1.0E+00
Arsenic	12	0.0013	0.0013	0.0015	0.0019	0.0019	0.0020	0.0020	0.0017	0.0003	1.6E-01
Barium	12	0.038	0.038	0.041	0.042	0.048	0.055	0.057	0.044	0.006	1.4E-01
Beryllium	12	0.0001	0.0001	0.0001	0.0001	0.0001	0.0025	0.0025	0.0005	0.0009	1.9E+00
Bismuth	12	0.00050	0.00050	0.00050	0.00050	0.00050	0.10000	0.10000	0.01708	0.03873	2.3E+00
Boron	12	1.320	1.386	1.518	1.585	1.680	1.720	1.720	1.577	0.125	7.9E-02
Cadmium	12	0.000022	0.000029	0.000043	0.000050	0.000107	0.000312	0.000425	0.000105	0.000115	1.1E+00
Calcium	12	76	78	82	85	86	94	100	85	6	7.0E-02
Chromium	12	0.0001	0.0001	0.0001	0.0001	0.0006	0.0025	0.0025	0.0006	0.0009	1.6E+00
Cobalt	12	0.00034	0.00036	0.00044	0.00053	0.00064	0.00075	0.00075	0.00054	0.00015	2.7E-01
Copper	12	0.0002	0.0003	0.0007	0.0009	0.0017	0.0118	0.0224	0.0029	0.0062	2.1E+00
Iron	12	0.005	0.005	0.005	0.009	0.015	0.045	0.082	0.015	0.022	1.4E+00
Lead	12	0.00005	0.00005	0.00005	0.00005	0.00005	0.00125	0.00125	0.00025	0.00047	1.9E+00
Lithium	12	0.0005	0.0018	0.0030	0.0038	0.0056	0.0125	0.0125	0.0052	0.0038	7.3E-01
Magnesium	12	7	8	8	8	9	10	10	8	1	9.2E-02
Manganese	12	0.118	0.140	0.357	0.477	0.524	0.545	0.547	0.414	0.149	3.6E-01
Mercury	11	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	-	-
Molybdenum	12	0.145	0.152	0.165	0.200	0.207	0.216	0.220	0.190	0.025	1.3E-01
Nickel	12	0.0015	0.0016	0.0018	0.0023	0.0030	0.0062	0.0082	0.0030	0.0019	6.6E-01
Phosphorus	12	0.08	0.08	0.09	0.11	0.15	0.15	0.15	0.11	0.03	2.4E-01
Potassium	12	7	7	7	7	8	10	11	8	1	1.6E-01
Selenium	12	0.000	0.000	0.000	0.000	0.000	0.003	0.003	0.001	0.001	1.6E+00
Silicon	12	3.2	3.2	3.3	3.4	3.5	3.7	3.9	3.4	0.2	5.5E-02
Silver	12	0.00001	0.00001	0.00001	0.00001	0.00001	0.00005	0.00005	0.00002	0.00002	9.3E-01
Sodium	12	340	341	343	354	376	386	391	360	19	5.2E-02
Strontium	12	1.49	1.53	1.68	1.73	1.82	1.88	1.95	1.73	0.13	7.6E-02
Sulphur	7	298	298	301	308	312	313	314	307	7	2.1E-02
Thallium	12	0.00001	0.00002	0.00003	0.00005	0.00006	0.00050	0.00050	0.00012	0.00018	1.6E+00
Tin	12	0.0001	0.0001	0.0001	0.0001	0.0004	0.0015	0.0018	0.0004	0.0006	1.4E+00
Titanium	12	0.0050	0.0050	0.0050	0.0100	0.0100	0.0100	0.0100	0.0083	0.0025	3.0E-01
Uranium	12	0.0006	0.0006	0.0007	0.0010	0.0018	0.0021	0.0021	0.0012	0.0006	4.9E-01
Vanadium	12	0.0010	0.0010	0.0010	0.0010	0.0010	0.0025	0.0025	0.0013	0.0006	4.7E-01
Zinc	12	0.0010	0.0022	0.0034	0.0057	0.0063	0.0131	0.0202	0.0060	0.0048	8.1E-01
Total Metals											
Aluminum	12	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.1	0.1	1.1E+00
Antimony	12	0.0001	0.0001	0.0002	0.0003	0.0009	0.0013	0.0013	0.0005	0.0005	9.2E-01
Arsenic	12	0.0013	0.0013	0.0016	0.0019	0.0020	0.0021	0.0021	0.0018	0.0003	1.7E-01
Barium	12	0.039	0.039	0.041	0.042	0.051	0.056	0.056	0.045	0.007	1.5E-01
Beryllium	12	0.0001	0.0001	0.0001	0.0001	0.0001	0.0025	0.0025	0.0005	0.0009	1.9E+00
Bismuth	12	0.00050	0.00050	0.00050	0.00050	0.00050	0.10000	0.10000	0.01708	0.03873	2.3E+00
Boron	12	1.420	1.475	1.550	1.620	1.680	1.783	1.810	1.618	0.108	6.7E-02
Cadmium	12	0.00001	0.00003	0.00005	0.00006	0.00013	0.00033	0.00043	0.00011	0.00012	1.0E+00
Calcium	12	75	75	82	84	87	92	93	84	6	6.6E-02
Chromium	12	0.000	0.000	0.000	0.001	0.002	0.004	0.005	0.001	0.001	1.2E+00
Cobalt	12	0.0004	0.0004	0.0004	0.0006	0.0007	0.0008	0.0010	0.0006	0.0002	3.0E-01
Copper	12	0.001	0.001	0.002	0.002	0.003	0.016	0.024	0.004	0.007	1.5E+00
Iron	12	0.02	0.02	0.06	0.07	0.10	0.22	0.35	0.09	0.09	9.0E-01
Lead	12	0.00005	0.00005	0.00005	0.00005	0.00024	0.00125	0.00125	0.00030	0.00047	1.6E+00
Lithium	12	0.0012	0.0020	0.0033	0.0040	0.0051	0.0125	0.0125	0.0053	0.0037	6.9E-01
Magnesium	12	8	8	8	8	9	9	9	8	1	8.8E-02
Manganese	12	0.12	0.14	0.38	0.46	0.54	0.58	0.58	0.43	0.15	3.6E-01
Mercury	11	0.000005	0.000005	0.000005	0.000005	0.000005	0.000015	0.000025	0.000007	0.000006	8.8E-01
Molybdenum	12	0.15	0.15	0.17	0.20	0.21	0.22	0.22	0.19	0.02	1.3E-01
Nickel	12	0.002	0.002	0.002	0.003	0.003	0.009	0.010	0.003	0.003	8.1E-01
Phosphorus	12	0.08	0.09	0.10	0.12	0.15	0.15	0.15	0.12	0.02	2.0E-01
Potassium	12	7	7	7	7	8	10	12	8	1	1.7E-01
Selenium	12	0.000	0.000	0.000	0.000	0.000	0.003	0.003	0.001	0.001	1.5E+00
Silicon	12	3.1	3.2	3.3	3.4	3.6	4.3	4.4	3.5	0.4	1.1E-01
Silver	12	0.00001	0.00001	0.00001	0.00001	0.00001	0.00005	0.00005	0.00002	0.00002	8.8E-01
Sodium	12	336	338	348	358	371	391	403	361	20	5.5E-02
Strontium	12	1.45	1.47	1.72	1.76	1.83	1.92	1.95	1.74	0.15	8.7E-02
Sulphur	7	297	297	300	311	317	321	322	309	10	3.3E-02
Thallium	12	0.0000	0.0000	0.0000	0.0000	0.0001	0.0005	0.0005	0.0001	0.0002	1.5E+00
Tin	12	0.0001	0.0001	0.0001	0.0001	0.0013	0.0019	0.0026	0.0006	0.0008	1.4E+00
Titanium	12	0.005	0.005	0.009	0.010	0.010	0.016	0.023	0.010	0.005	4.8E-01
Uranium	12	0.0006	0.0006	0.0007	0.0010	0.0018	0.0020	0.0020	0.0012	0.0006	4.7E-01
Vanadium	12	0.001	0.001	0.001	0.001	0.001	0.003	0.003	0.001	0.001	4.7E-01
Zinc	12	0.0025	0.0028	0.0030	0.0049	0.0087	0.0172	0.0254	0.0072	0.0065	9.0E-01
Organics											
Carbon Organic (Dissolved)	9	6.2	6.3	6.7	6.9	7.7	9.4	10.1	7.4	1.2	1.7E-01
Carbon Organic (Total)	12	4.6	5.1	6.3	6.8	7.6	10.1	11.4	7.1	1.8	2.5E-01
Nitrogen Organic (Dissolved)	6	0.10	0.10	0.12	0.25	0.36	0.51	0.56	0.27	0.18	6.8E-01
Nitrogen Organic (Total)	5	0.15	0.18	0.29	0.32	0.36	0.44	0.46	0.32	0.11	3.6E-01

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.34 - MW11-05D

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	12	792	814	928	1039	1246	1697	1827	1131	311	2.8E-01
Oxygen Dissolved %	11	0	2	6	21	49	69	80	29	27	9.4E-01
Oxygen Dissolved	12	0.0	0.2	0.8	2.8	5.4	7.8	9.6	3.3	3.0	9.1E-01
pH (unitless)	12	6.9	7.1	7.3	7.4	7.6	8.3	9.0	7.5	0.5	7.0E-02
Redox Potential mV	9	-292	-249	-167	-143	-127	-113	-104	-159	55	-3.5E-01
Salinity ppt	9	0.58	0.59	0.65	0.75	0.80	0.81	0.81	0.72	0.09	1.2E-01
Specific Conductivity µS/cm	11	823	847	1176	1391	1459	1568	1610	1295	257	2.0E-01
Temperature °C	12	7.0	7.1	7.6	8.3	9.3	12.2	13.8	8.8	1.9	2.2E-01
Total Dissolved Solids	9	620	673	775	912	991	1032	1047	879	142	1.6E-01
Turbidity NTU	12	-2.7	-1.2	3.0	6.6	9.6	29.7	40.1	9.2	11.5	1.3E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	2	0.5	1.2	4.1	7.7	11.3	14.2	14.9	7.7	10.2	1.3E+00
Alkalinity (Total as CaCO3)	12	275	296	352	400	422	440	441	382	55	1.4E-01
Bicarbonate Alkalinity	11	272	293	340	398	418	440	441	378	56	1.5E-01
Carbonate Alkalinity	11	0.5	0.5	1.0	1.0	1.0	2.1	3.2	1.1	0.7	6.5E-01
Color TCU	9	7.2	7.3	8.8	11.9	14.1	17.9	18.7	11.9	4.0	3.4E-01
Hardness as CaCO3 (Dissolved)	11	547	558	574	590	623	664	675	602	39	6.5E-02
Hydroxide Alkalinity	11	0.5	0.5	0.8	1.0	1.0	1.0	1.0	0.9	0.2	2.7E-01
pH (unitless)	12	7.8	7.9	8.0	8.0	8.1	8.3	8.3	8.0	0.1	1.8E-02
Specific Conductivity µS/cm	12	1170	1187	1248	1390	1480	1551	1600	1368	144	1.1E-01
Total Dissolved Solids	12	814	832	870	976	1140	1168	1190	996	138	1.4E-01
Total Suspended Solids	10	12	12	14	19	29	36	37	22	10	4.4E-01
Turbidity NTU	10	22	23	36	44	54	61	61	44	14	3.3E-01
Dissolved Anions											
Bromide	12	0.25	0.25	0.25	0.25	0.25	0.36	0.50	0.27	0.07	2.7E-01
Chloride	12	3	3	7	9	15	23	27	11	7	6.6E-01
Fluoride	12	0.20	0.25	0.32	0.35	0.42	0.58	0.63	0.38	0.12	3.1E-01
Sulphate	12	327	334	351	390	511	577	597	428	95	2.2E-01
Nutrients											
Ammonia (Total)	12	0.100	0.104	0.116	0.127	0.139	0.238	0.314	0.143	0.057	4.0E-01
Nitrate (as N)	12	0	0	0	0	0	0	0	0	0	6.6E-01
Nitrite (as N)	12	0.005	0.005	0.005	0.005	0.011	0.021	0.026	0.009	0.007	7.6E-01
Nitrogen (Dissolved)	5	0.18	0.20	0.28	0.31	0.41	0.79	0.89	0.41	0.28	6.7E-01
Nitrogen (Total)	8	0	0	0	0	0	1	1	0	0	5.3E-01
Nitrogen Kjeldahl (Total)	12	0.20	0.23	0.25	0.29	0.37	0.57	0.66	0.33	0.13	3.9E-01
Orthophosphate (Dissolved)	6	0.001	0.001	0.002	0.002	0.004	0.031	0.039	0.008	0.015	1.8E+00
Phosphorus - Dissolved	10	0.00	0.00	0.00	0.00	0.00	0.02	0.04	0.01	0.01	2.2E+00
Phosphorus - Total	12	0.101	0.130	0.210	0.266	0.304	0.320	0.336	0.247	0.071	2.9E-01
Cyanide										-	
Cyanide (Free)	12	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	11	0.0025	0.0025	0.0025	0.0025	0.0025	0.0073	0.0075	0.0034	0.0019	5.7E-01
Cyanide (WAD)	12	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	12	0.0015	0.0021	0.0044	0.0050	0.0058	0.0064	0.0068	0.0047	0.0015	3.2E-01
Antimony	12	0.00025	0.00025	0.00032	0.00034	0.00047	0.00057	0.00060	0.00039	0.00011	2.9E-01
Arsenic	12	0.0050	0.0050	0.0059	0.0066	0.0068	0.0073	0.0073	0.0064	0.0008	1.3E-01
Barium	12	0.041	0.042	0.047	0.052	0.055	0.069	0.072	0.053	0.009	1.8E-01
Beryllium	12	0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0005	0.0001	0.0002	1.4E+00
Bismuth	12	0.00025	0.00025	0.00025	0.00025	0.00025	0.10000	0.10000	0.01688	0.03883	2.3E+00
Boron	12	0.045	0.047	0.050	0.055	0.057	0.066	0.068	0.055	0.007	1.2E-01
Cadmium	12	0.000005	0.000005	0.000005	0.000005	0.000012	0.000026	0.000027	0.000010	0.000008	8.0E-01
Calcium	12	71	72	75	79	84	90	93	80	7	8.3E-02
Chromium	11	0.0001	0.0001	0.0001	0.0002	0.0002	0.0005	0.0005	0.0002	0.0002	8.8E-01
Cobalt	12	0.00254	0.00266	0.00296	0.00393	0.00468	0.00545	0.00555	0.00392	0.00108	2.7E-01
Copper	12	0.0001	0.0001	0.0001	0.0001	0.0003	0.0005	0.0005	0.0002	0.0002	8.1E-01
Iron	12	0.519	1.174	3.043	3.585	4.215	4.533	4.720	3.357	1.228	3.7E-01
Lead	12	0.00003	0.00003	0.00003	0.00003	0.00004	0.00025	0.00025	0.00007	0.00009	1.3E+00
Lithium	12	0.0094	0.0095	0.0099	0.0104	0.0108	0.0127	0.0140	0.0106	0.0012	1.2E-01
Magnesium	12	89	89	94	97	101	108	108	98	6	6.4E-02
Manganese	12	1.760	1.854	2.270	3.050	3.613	3.950	4.120	2.946	0.786	2.7E-01
Mercury	12	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	-	-
Molybdenum	12	0.030	0.030	0.030	0.031	0.034	0.044	0.047	0.034	0.005	1.6E-01
Nickel	12	0.0041	0.0041	0.0047	0.0055	0.0083	0.0102	0.0110	0.0064	0.0023	3.6E-01
Phosphorus	12	0.15	0.15	0.15	0.18	0.22	0.28	0.29	0.19	0.05	2.6E-01
Potassium	12	5	5	6	8	11	38	53	13	14	1.1E+00
Selenium	12	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	1.0E+00
Silicon	12	9.7	11.1	14.4	15.3	15.9	16.8	16.9	14.8	2.0	1.4E-01
Silver	12	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00000	3.3E-01
Sodium	12	68	71	81	105	117	142	151	103	26	2.5E-01
Strontium	12	0.59	0.59	0.60	0.64	0.67	0.69	0.71	0.64	0.04	6.5E-02
Sulphur	8	107	107	108	111	124	139	142	118	13	1.1E-01
Thallium	12	0.00001	0.00001	0.00001	0.00001	0.00001	0.00010	0.00010	0.00002	0.00004	1.8E+00
Tin	12	0.0001	0.0001	0.0001	0.0001	0.0002	0.0003	0.0003	0.0001	0.0001	8.0E-01
Titanium	12	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	-	-
Uranium	12	0.0019	0.0020	0.0027	0.0032	0.0047	0.0066	0.0074	0.0038	0.0017	4.6E-01
Vanadium	12	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	-	-
Zinc	12	0.0012	0.0014	0.0016	0.0026	0.0030	0.0078	0.0083	0.0031	0.0023	7.4E-01
Total Metals											
Aluminum	12	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.1	8.9E-01
Antimony	12	0.0004	0.0004	0.0004	0.0005	0.0007	0.0011	0.0011	0.0006	0.0003	4.1E-01
Arsenic	12	0.0044	0.0050	0.0066	0.0069	0.0071	0.0075	0.0075	0.0066	0.0009	1.3E-01
Barium	12	0.042	0.044	0.047	0.052	0.061	0.073	0.075	0.055	0.011	1.9E-01
Beryllium	12	0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0005	0.0001	0.0002	1.4E+00
Bismuth	12	0.00025	0.00025	0.00025	0.00025	0.00025	0.10000	0.10000	0.01688	0.03883	2.3E+00
Boron	12	0.050	0.050	0.052	0.057	0.063	0.070	0.073	0.058	0.007	1.3E-01
Cadmium	12	0.00001	0.00001	0.00002	0.00003	0.00009	0.00014	0.00017	0.00005	0.00005	9.3E-01
Calcium	12	68	70	72	77	85	94	94	79	9	1.2E-01
Chromium	12	0.000	0.000	0.000	0.001	0.002	0.010	0.015	0.003	0.004	1.7E+00
Cobalt	12	0.0023	0.0025	0.0032	0.0041	0.0052	0.0061	0.0064	0.0042	0.0014	3.2E-01
Copper	12	0.001	0.001	0.001	0.002	0.004	0.007	0.008	0.003	0.002	7.7E-01
Iron	12	1.00	1.74	3.74	4.10	4.69	5.12	5.22	3.91	1.22	3.1E-01
Lead	12	0.00003	0.00003	0.00003	0.00008	0.00019	0.00026	0.00027	0.00011	0.00010	8.6E-01
Lithium	12	0.0092	0.0096	0.0100	0.0105	0.0112	0.0125	0.0126	0.0107	0.0010	9.6E-02
Magnesium	12	80	83	91	96	99	108	111	95	8	8.7E-02
Manganese	12	1.72	1.91	2.43	2.75	3.59	4.15	4.23	2.96	0.84	2.8E-01
Mercury	12	0.000005	0.000005	0.000005	0.000005	0.000005	0.000014	0.000025	0.000007	0.000006	8.7E-01
Molybdenum	12	0.03	0.03	0.03	0.03	0.04	0.05	0.05	0.04	0.01	2.0E-01
Nickel	12	0.004	0.004	0.005	0.006	0.009	0.014	0.015	0.008	0.003	4.6E-01
Phosphorus	12	0.15	0.15	0.15	0.28	0.29	0.31	0.32	0.24	0.07	2.9E-01
Potassium	12	4	5	6	8	11	45	68	14	18	1.3E+00
Selenium	12	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	1.1E+00
Silicon	12	10.0	11.4	14.4	15.2	16.2	16.6	16.7	14.8	1.9	1.3E-01
Silver	12	0.00001	0.00001	0.00001	0.00001	0.00001	0.00006	0.00010	0.00002	0.00003	1.7E+00
Sodium	12	66	71	83	108	119	133	143	102	24	2.3E-01
Strontium	12	0.57	0.58	0.59	0.64	0.68	0.74	0.77	0.65	0.06	9.4E-02
Sulphur	8	105	106	109	114	125	141	143	119	14	1.2E-01
Thallium	12	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	0.0000	0.0000	1.8E+00
Tin	12	0.0001	0.0001	0.0001	0.0001	0.0003	0.0010	0.0010	0.0003	0.0003	1.3E+00
Titanium	12	0.005	0.005	0.005	0.005	0.007	0.016	0.018	0.007	0.005	6.2E-01
Uranium	12	0.0019	0.0020	0.0025	0.0032	0.0049	0.0069	0.0079	0.0039	0.0019	4.9E-01
Vanadium	12	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.001	0.000	5.6E-01
Zinc	12	0.0032	0.0032	0.0034	0.0048	0.0118	0.0184	0.0186	0.0079	0.0063	8.0E-01
Organics											
Carbon Organic (Dissolved)	9	11.1	11.4	13.5	17.8	21.0	28.9	33.0	18.8	6.7	3.6E-01
Carbon Organic (Total)	12	8.8	9.3	11.3	15.8	20.7	27.5	31.8	16.8	6.9	4.1E-01
Nitrogen Organic (Dissolved)	5	0.03	0.05	0.16	0.17	0.24	0.51	0.58	0.23	0.21	8.9E-01
Nitrogen Organic (Total)	4	0.03	0.06	0.19	0.29	0.34	0.36	0.37	0.24	0.15	6.3E-01

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.35 - MW11-05S

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	12	854	855	887	972	1156	1496	1732	1068	262	2.5E-01
Oxygen Dissolved %	11	0	1	5	16	29	37	38	17	14	8.3E-01
Oxygen Dissolved	12	0.0	0.1	0.7	1.9	3.5	4.5	4.8	2.1	1.7	7.9E-01
pH (unitless)	12	7.0	7.1	7.3	7.4	7.5	7.6	7.7	7.4	0.2	2.5E-02
Redox Potential mV	10	-293	-247	-182	-145	-113	-4	1	-136	86	-6.4E-01
Salinity ppt	10	0.50	0.55	0.62	0.66	0.73	0.77	0.78	0.67	0.08	1.2E-01
Specific Conductivity µS/cm	11	851	859	1207	1273	1424	1509	1531	1258	228	1.8E-01
Temperature °C	12	5.0	6.4	7.5	8.3	8.8	13.4	16.9	8.8	2.9	3.3E-01
Total Dissolved Solids	10	661	724	816	879	965	72498	131000	13880	41152	3.0E+00
Turbidity NTU	12	-3.3	-1.5	3.9	5.9	10.4	17.8	22.1	7.4	6.8	9.2E-01
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	1	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3	-	-
Alkalinity (Total as CaCO3)	12	268	277	291	324	337	343	347	314	27	8.5E-02
Bicarbonate Alkalinity	10	284	285	294	330	338	343	347	318	25	7.8E-02
Carbonate Alkalinity	10	0.5	0.5	1.0	1.0	1.0	1.0	1.0	0.9	0.2	2.3E-01
Color TCU	9	5.9	6.3	7.8	8.5	10.4	13.7	14.7	9.3	2.8	3.0E-01
Hardness as CaCO3 (Dissolved)	11	543	549	561	568	597	608	609	575	23	4.0E-02
Hydroxide Alkalinity	10	0.5	0.5	1.0	1.0	1.0	1.0	1.0	0.9	0.2	2.3E-01
pH (unitless)	12	7.8	7.8	7.9	8.0	8.0	8.1	8.1	8.0	0.1	1.2E-02
Specific Conductivity µS/cm	12	1210	1216	1255	1315	1393	1510	1510	1337	103	7.7E-02
Total Dissolved Solids	12	678	793	922	956	1083	1210	1210	987	151	1.5E-01
Total Suspended Solids	10	4	5	9	14	16	21	24	13	6	4.4E-01
Turbidity NTU	10	8	8	12	30	37	53	55	28	17	5.9E-01
Dissolved Anions											
Bromide	12	0.25	0.25	0.25	0.25	0.25	0.82	1.20	0.35	0.28	7.9E-01
Chloride	12	8	8	10	13	16	26	26	14	6	4.2E-01
Fluoride	12	0.24	0.25	0.28	0.31	0.37	0.55	0.63	0.35	0.12	3.3E-01
Sulphate	12	399	402	415	435	495	573	573	460	63	1.4E-01
Nutrients											
Ammonia (Total)	12	0.003	0.003	0.021	0.031	0.035	0.066	0.078	0.031	0.021	6.9E-01
Nitrate (as N)	12	0	0	0	0	0	0	0	0	0	5.2E-01
Nitrite (as N)	12	0.005	0.005	0.005	0.005	0.007	0.015	0.017	0.007	0.004	6.0E-01
Nitrogen (Dissolved)	5	0.14	0.15	0.20	0.23	0.33	0.70	0.79	0.34	0.26	7.8E-01
Nitrogen (Total)	8	0	0	0	0	0	0	0	0	0	5.3E-01
Nitrogen Kjeldahl (Total)	12	0.10	0.16	0.22	0.27	0.31	0.37	0.41	0.27	0.08	3.0E-01
Orthophosphate (Dissolved)	5	0.001	0.001	0.001	0.002	0.002	0.003	0.003	0.001	0.001	6.6E-01
Phosphorus - Dissolved	11	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	1.3E+00
Phosphorus - Total	12	0.073	0.092	0.136	0.216	0.249	0.286	0.287	0.196	0.075	3.8E-01
Cyanide										-	
Cyanide (Free)	12	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	12	0.0025	0.0025	0.0025	0.0025	0.0025	0.0039	0.0056	0.0028	0.0009	3.2E-01
Cyanide (WAD)	12	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	12	0.0015	0.0019	0.0024	0.0034	0.0060	0.0072	0.0074	0.0042	0.0021	5.1E-01
Antimony	12	0.00005	0.00005	0.00005	0.00010	0.00018	0.00034	0.00037	0.00014	0.00011	8.2E-01
Arsenic	12	0.0014	0.0027	0.0048	0.0056	0.0061	0.0073	0.0076	0.0053	0.0016	3.1E-01
Barium	12	0.064	0.065	0.068	0.071	0.076	0.085	0.089	0.073	0.008	1.0E-01
Beryllium	12	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003	0.0005	0.0001	0.0001	1.5E+00
Bismuth	12	0.00025	0.00025	0.00025	0.00025	0.00025	0.04514	0.10000	0.00856	0.02880	3.4E+00
Boron	12	0.037	0.039	0.042	0.045	0.048	0.050	0.050	0.045	0.004	9.2E-02
Cadmium	12	0.000005	0.000005	0.000005	0.000012	0.000014	0.000038	0.000045	0.000014	0.000012	9.0E-01
Calcium	12	84	86	90	93	98	103	104	94	6	6.7E-02
Chromium	12	0.0001	0.0001	0.0002	0.0002	0.0003	0.0005	0.0006	0.0003	0.0002	5.9E-01
Cobalt	12	0.00050	0.00059	0.00127	0.00201	0.00372	0.00476	0.00533	0.00238	0.00156	6.5E-01
Copper	12	0.0001	0.0001	0.0001	0.0002	0.0003	0.0009	0.0015	0.0003	0.0004	1.3E+00
Iron	12	0.077	0.092	1.111	2.150	3.523	4.257	4.510	2.276	1.523	6.7E-01
Lead	12	0.00003	0.00003	0.00003	0.00003	0.00003	0.00015	0.00025	0.00005	0.00006	1.4E+00
Lithium	12	0.0043	0.0054	0.0081	0.0099	0.0107	0.0152	0.0183	0.0097	0.0035	3.6E-01
Magnesium	12	57	66	79	82	85	87	88	80	8	1.1E-01
Manganese	12	2.340	2.544	3.613	4.275	4.525	4.911	5.070	3.986	0.838	2.1E-01
Mercury	11	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	-	-
Molybdenum	12	0.017	0.019	0.024	0.026	0.027	0.030	0.031	0.025	0.004	1.5E-01
Nickel	12	0.0014	0.0015	0.0017	0.0024	0.0033	0.0103	0.0136	0.0037	0.0036	9.7E-01
Phosphorus	12	0.09	0.09	0.14	0.15	0.16	0.20	0.21	0.15	0.04	2.6E-01
Potassium	12	1	4	6	8	8	9	10	7	2	3.2E-01
Selenium	12	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	8.8E-01
Silicon	12	6.6	7.8	9.7	10.4	10.5	10.8	10.9	9.9	1.2	1.2E-01
Silver	12	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00000	2.7E-01
Sodium	12	76	79	88	96	118	125	133	100	18	1.8E-01
Strontium	12	0.60	0.62	0.64	0.66	0.67	0.69	0.70	0.66	0.03	3.9E-02
Sulphur	8	125	126	131	136	150	335	431	174	104	6.0E-01
Thallium	12	0.00001	0.00001	0.00001	0.00001	0.00001	0.00006	0.00010	0.00001	0.00003	1.9E+00
Tin	12	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003	0.0004	0.0001	0.0001	1.1E+00
Titanium	12	0.0050	0.0050	0.0050	0.0050	0.0050	0.0077	0.0110	0.0055	0.0017	3.1E-01
Uranium	12	0.0082	0.0084	0.0111	0.0139	0.0184	0.0205	0.0214	0.0143	0.0045	3.2E-01
Vanadium	12	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	-	-
Zinc	12	0.0015	0.0019	0.0029	0.0038	0.0061	0.0083	0.0094	0.0045	0.0024	5.4E-01
Total Metals											
Aluminum	12	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.1	0.1	1.2E+00
Antimony	12	0.0001	0.0001	0.0001	0.0002	0.0003	0.0005	0.0007	0.0002	0.0002	6.8E-01
Arsenic	12	0.0016	0.0029	0.0050	0.0061	0.0067	0.0075	0.0081	0.0057	0.0017	3.0E-01
Barium	12	0.067	0.069	0.071	0.073	0.076	0.087	0.088	0.075	0.006	8.5E-02
Beryllium	12	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003	0.0005	0.0001	0.0001	1.5E+00
Bismuth	12	0.00025	0.00025	0.00025	0.00025	0.00025	0.04514	0.10000	0.00856	0.02880	3.4E+00
Boron	12	0.040	0.042	0.045	0.048	0.052	0.068	0.080	0.051	0.011	2.1E-01
Cadmium	12	0.00003	0.00004	0.00004	0.00005	0.00008	0.00016	0.00021	0.00007	0.00005	7.4E-01
Calcium	12	82	83	88	92	101	105	106	93	8	8.7E-02
Chromium	12	0.000	0.000	0.001	0.001	0.001	0.002	0.002	0.001	0.000	4.9E-01
Cobalt	12	0.0007	0.0008	0.0015	0.0025	0.0040	0.0052	0.0058	0.0027	0.0016	5.9E-01
Copper	12	0.001	0.001	0.002	0.002	0.003	0.004	0.004	0.002	0.001	3.9E-01
Iron	12	0.16	0.36	1.41	2.83	4.01	5.10	5.15	2.75	1.70	6.2E-01
Lead	12	0.00006	0.00007	0.00010	0.00014	0.00015	0.00022	0.00025	0.00014	0.00005	3.9E-01
Lithium	12	0.0042	0.0053	0.0079	0.0096	0.0109	0.0156	0.0189	0.0099	0.0037	3.8E-01
Magnesium	12	55	65	77	80	84	87	89	79	9	1.1E-01
Manganese	12	2.51	2.59	3.66	4.39	4.74	5.12	5.24	4.11	0.90	2.2E-01
Mercury	11	0.000005	0.000005	0.000005	0.000005	0.000005	0.000015	0.000025	0.000007	0.000006	8.8E-01
Molybdenum	12	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.00	1.3E-01
Nickel	12	0.002	0.002	0.002	0.003	0.004	0.012	0.017	0.005	0.004	9.5E-01
Phosphorus	12	0.10	0.13	0.15	0.20	0.23	0.24	0.24	0.19	0.05	2.4E-01
Potassium	12	1	3	6	7	8	9	11	7	2	3.4E-01
Selenium	12	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	9.7E-01
Silicon	12	6.8	8.2	9.8	10.3	10.6	10.8	10.8	10.0	1.1	1.1E-01
Silver	12	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00001	0.00000	5.0E-01
Sodium	12	78	79	87	98	116	131	140	101	19	1.9E-01
Strontium	12	0.62	0.63	0.64	0.67	0.69	0.72	0.73	0.67	0.03	5.1E-02
Sulphur	8	126	126	129	136	155	343	444	176	109	6.2E-01
Thallium	12	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	0.0000	0.0000	1.8E+00
Tin	12	0.0001	0.0001	0.0001	0.0002	0.0002	0.0007	0.0011	0.0002	0.0003	1.2E+00
Titanium	12	0.005	0.005	0.005	0.005	0.005	0.017	0.020	0.007	0.005	7.0E-01
Uranium	12	0.0080	0.0084	0.0115	0.0142	0.0196	0.0215	0.0215	0.0148	0.0048	3.3E-01
Vanadium	12	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.000	4.1E-01
Zinc	12	0.0033	0.0035	0.0051	0.0061	0.0105	0.0110	0.0110	0.0070	0.0030	4.2E-01
Organics											
Carbon Organic (Dissolved)	9	12.0	12.2	12.8	13.8	20.2	22.8	23.0	16.2	4.5	2.7E-01
Carbon Organic (Total)	12	9.2	9.5	11.3	12.4	17.9	24.4	27.4	14.8	5.7	3.8E-01
Nitrogen Organic (Dissolved)	5	0.03	0.05	0.17	0.20	0.33	0.67	0.76	0.30	0.28	9.5E-01
Nitrogen Organic (Total)	4	0.10	0.11	0.14	0.20	0.29	0.38	0.41	0.23	0.13	6.0E-01

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.36 - MW11-06D

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	12	650	682	835	1493	1937	2060	2120	1378	567	4.1E-01
Oxygen Dissolved %	11	0	0	1	3	25	36	44	12	15	1.2E+00
Oxygen Dissolved	12	0.0	0.0	0.1	0.4	2.5	3.8	4.2	1.4	1.5	1.1E+00
pH (unitless)	12	8.0	8.1	8.3	8.3	8.4	8.7	8.9	8.3	0.2	2.5E-02
Redox Potential mV	9	-244	-230	-160	-152	-140	-36	1	-145	70	-4.8E-01
Salinity ppt	9	0.49	0.53	0.67	0.98	1.08	1.13	1.13	0.89	0.24	2.7E-01
Specific Conductivity µS/cm	11	999	1002	1097	1327	1731	2182	2195	1459	454	3.1E-01
Temperature °C	12	6.7	7.1	7.8	9.8	11.0	14.6	17.3	10.0	2.9	2.9E-01
Total Dissolved Solids	9	649	692	863	1248	1410	111330	184600	21500	61163	2.8E+00
Turbidity NTU	12	-5.2	-3.7	0.0	0.5	1.5	2.0	2.1	0.2	2.1	1.2E+01
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	3	2.3	2.4	2.8	3.3	3.9	4.3	4.4	3.3	1.1	3.2E-01
Alkalinity (Total as CaCO3)	12	28	34	40	41	42	45	48	40	5	1.2E-01
Bicarbonate Alkalinity	10	28	33	40	40	42	46	48	40	5	1.3E-01
Carbonate Alkalinity	10	0.5	0.5	0.6	1.0	1.0	1.0	1.0	0.9	0.2	2.8E-01
Color TCU	8	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	-	-
Hardness as CaCO3 (Dissolved)	12	140	149	186	484	599	652	653	409	220	5.4E-01
Hydroxide Alkalinity	10	0.5	0.5	0.6	1.0	1.0	1.0	1.0	0.9	0.2	2.8E-01
pH (unitless)	12	7.7	7.7	7.8	7.9	7.9	8.0	8.0	7.9	0.1	1.4E-02
Specific Conductivity µS/cm	12	987	1038	1120	1815	2050	2188	2210	1630	492	3.0E-01
Total Dissolved Solids	12	675	683	778	1435	1653	1745	1750	1251	460	3.7E-01
Total Suspended Solids	11	2	2	2	2	2	4	5	2	1	5.2E-01
Turbidity NTU	11	0	0	0	0	1	1	2	1	0	7.2E-01
Dissolved Anions											
Bromide	12	0.25	0.25	0.25	0.50	0.50	0.50	0.50	0.40	0.13	3.3E-01
Chloride	12	9	9	11	12	12	15	17	12	2	1.9E-01
Fluoride	12	0.20	0.20	0.20	0.30	0.41	0.59	0.63	0.34	0.15	4.5E-01
Sulphate	12	423	452	509	959	1108	1225	1230	844	326	3.9E-01
Nutrients											
Ammonia (Total)	12	0.022	0.036	0.056	0.071	0.083	0.093	0.096	0.068	0.022	3.2E-01
Nitrate (as N)	12	0	0	0	0	0	0	0	0	0	3.3E-01
Nitrite (as N)	12	0.005	0.005	0.005	0.010	0.010	0.016	0.024	0.009	0.005	5.9E-01
Nitrogen (Dissolved)	5	0.07	0.07	0.07	0.10	0.19	0.26	0.28	0.14	0.09	6.3E-01
Nitrogen (Total)	8	0	0	0	0	0	0	0	0	0	3.5E-01
Nitrogen Kjeldahl (Total)	12	0.07	0.09	0.12	0.13	0.17	0.19	0.21	0.14	0.04	2.5E-01
Orthophosphate (Dissolved)	5	0.004	0.004	0.005	0.007	0.007	0.011	0.012	0.007	0.003	4.3E-01
Phosphorus - Dissolved	10	0.01	0.01	0.01	0.02	0.03	0.05	0.05	0.02	0.02	7.3E-01
Phosphorus - Total	12	0.006	0.006	0.009	0.016	0.031	0.052	0.055	0.022	0.017	7.9E-01
Cyanide										-	
Cyanide (Free)	12	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	11	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (WAD)	12	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	12	0.0033	0.0034	0.0044	0.0058	0.0093	0.0204	0.0220	0.0085	0.0064	7.5E-01
Antimony	12	0.00005	0.00005	0.00005	0.00005	0.00016	0.00050	0.00050	0.00016	0.00020	1.3E+00
Arsenic	12	0.0084	0.0093	0.0121	0.0135	0.0137	0.0153	0.0156	0.0128	0.0020	1.6E-01
Barium	12	0.010	0.011	0.015	0.022	0.023	0.024	0.024	0.019	0.005	2.6E-01
Beryllium	12	0.0001	0.0001	0.0001	0.0001	0.0003	0.0010	0.0010	0.0003	0.0004	1.5E+00
Bismuth	12	0.00025	0.00025	0.00025	0.00025	0.02519	0.10000	0.10000	0.02519	0.04511	1.8E+00
Boron	12	0.424	0.455	0.492	0.550	0.596	0.645	0.650	0.546	0.069	1.3E-01
Cadmium	12	0.000005	0.000008	0.000015	0.000017	0.000026	0.000129	0.000200	0.000037	0.000054	1.5E+00
Calcium	12	43	45	54	131	165	170	171	112	56	5.0E-01
Chromium	12	0.0001	0.0001	0.0001	0.0001	0.0003	0.0010	0.0010	0.0003	0.0004	1.5E+00
Cobalt	12	0.00005	0.00005	0.00005	0.00005	0.00020	0.00030	0.00030	0.00012	0.00011	9.2E-01
Copper	12	0.0001	0.0001	0.0001	0.0001	0.0009	0.0037	0.0051	0.0009	0.0015	1.7E+00
Iron	12	0.015	0.030	0.054	0.076	0.096	0.103	0.104	0.072	0.028	4.0E-01
Lead	12	0.00003	0.00003	0.00003	0.00003	0.00014	0.00050	0.00050	0.00014	0.00021	1.5E+00
Lithium	12	0.0050	0.0052	0.0065	0.0107	0.0123	0.0139	0.0142	0.0096	0.0035	3.6E-01
Magnesium	12	8	9	12	37	47	55	56	32	20	6.2E-01
Manganese	12	0.054	0.055	0.056	0.077	0.089	0.114	0.124	0.078	0.022	2.8E-01
Mercury	12	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	-	-
Molybdenum	12	0.077	0.077	0.080	0.083	0.086	0.093	0.095	0.084	0.006	6.6E-02
Nickel	12	0.0003	0.0003	0.0003	0.0005	0.0010	0.0017	0.0020	0.0007	0.0006	8.1E-01
Phosphorus	12	0.03	0.03	0.03	0.03	0.15	0.15	0.15	0.07	0.06	8.8E-01
Potassium	12	1	1	1	1	2	2	2	1	1	3.5E-01
Selenium	12	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	1.4E+00
Silicon	12	3.3	3.4	3.7	3.8	3.9	4.0	4.0	3.8	0.2	5.3E-02
Silver	12	0.00001	0.00001	0.00001	0.00001	0.00002	0.00003	0.00005	0.00001	0.00001	1.1E+00
Sodium	12	148	152	162	237	254	266	269	213	49	2.3E-01
Strontium	12	2.31	2.38	3.05	7.35	7.93	8.20	8.28	5.72	2.62	4.6E-01
Sulphur	8	147	155	170	339	372	385	389	288	106	3.7E-01
Thallium	12	0.00001	0.00001	0.00001	0.00001	0.00005	0.00020	0.00020	0.00005	0.00009	1.6E+00
Tin	12	0.0001	0.0001	0.0001	0.0001	0.0002	0.0010	0.0017	0.0003	0.0005	1.8E+00
Titanium	12	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	-	-
Uranium	12	0.0000	0.0000	0.0000	0.0000	0.0002	0.0002	0.0002	0.0001	0.0001	9.3E-01
Vanadium	12	0.0005	0.0005	0.0005	0.0005	0.0006	0.0010	0.0010	0.0006	0.0002	3.6E-01
Zinc	12	0.0005	0.0005	0.0005	0.0005	0.0025	0.0096	0.0131	0.0026	0.0038	1.5E+00
Total Metals											
Aluminum	12	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	1.0E+00
Antimony	12	0.0001	0.0001	0.0001	0.0001	0.0002	0.0005	0.0005	0.0002	0.0002	1.0E+00
Arsenic	12	0.0080	0.0089	0.0123	0.0137	0.0146	0.0158	0.0161	0.0132	0.0024	1.8E-01
Barium	12	0.010	0.011	0.016	0.022	0.023	0.024	0.024	0.019	0.005	2.6E-01
Beryllium	12	0.0001	0.0001	0.0001	0.0001	0.0003	0.0010	0.0010	0.0003	0.0004	1.5E+00
Bismuth	12	0.00025	0.00025	0.00025	0.00025	0.02519	0.10000	0.10000	0.02519	0.04511	1.8E+00
Boron	12	0.445	0.474	0.512	0.580	0.620	0.670	0.670	0.573	0.071	1.2E-01
Cadmium	12	0.00001	0.00001	0.00002	0.00002	0.00003	0.00013	0.00020	0.00004	0.00005	1.5E+00
Calcium	12	42	44	53	131	160	167	170	110	54	4.9E-01
Chromium	12	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.000	0.000	9.5E-01
Cobalt	12	0.0001	0.0001	0.0001	0.0001	0.0002	0.0003	0.0003	0.0001	0.0001	7.6E-01
Copper	12	0.000	0.000	0.000	0.001	0.003	0.007	0.009	0.002	0.003	1.4E+00
Iron	12	0.02	0.05	0.10	0.11	0.16	0.47	0.61	0.17	0.16	9.4E-01
Lead	12	0.00003	0.00003	0.00003	0.00003	0.00018	0.00050	0.00050	0.00015	0.00021	1.4E+00
Lithium	12	0.0050	0.0050	0.0070	0.0113	0.0132	0.0145	0.0149	0.0101	0.0037	3.7E-01
Magnesium	12	8	9	12	37	46	55	56	32	20	6.2E-01
Manganese	12	0.06	0.06	0.06	0.08	0.10	0.12	0.13	0.08	0.02	2.9E-01
Mercury	12	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	-	-
Molybdenum	12	0.08	0.08	0.08	0.09	0.09	0.10	0.10	0.09	0.01	8.2E-02
Nickel	12	0.000	0.000	0.000	0.001	0.001	0.002	0.002	0.001	0.001	8.4E-01
Phosphorus	12	0.03	0.03	0.03	0.03	0.15	0.15	0.15	0.07	0.06	8.7E-01
Potassium	12	1	1	1	1	2	2	2	1	1	3.4E-01
Selenium	12	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	1.5E+00
Silicon	12	3.4	3.5	3.7	3.8	3.9	4.0	4.1	3.8	0.2	5.4E-02
Silver	12	0.00001	0.00001	0.00001	0.00001	0.00002	0.00003	0.00005	0.00001	0.00001	1.1E+00
Sodium	12	151	156	166	243	254	266	267	216	49	2.3E-01
Strontium	12	2.38	2.42	3.24	7.60	8.01	8.33	8.45	5.85	2.64	4.5E-01
Sulphur	8	154	159	170	339	375	387	393	289	105	3.6E-01
Thallium	12	0.0000	0.0000	0.0000	0.0000	0.0001	0.0002	0.0002	0.0001	0.0001	1.6E+00
Tin	12	0.0001	0.0001	0.0001	0.0001	0.0003	0.0013	0.0022	0.0003	0.0006	1.9E+00
Titanium	12	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	-	-
Uranium	12	0.0000	0.0000	0.0000	0.0000	0.0002	0.0002	0.0002	0.0001	0.0001	8.9E-01
Vanadium	12	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.000	3.6E-01
Zinc	12	0.0015	0.0015	0.0023	0.0073	0.0322	0.0586	0.0711	0.0189	0.0230	1.2E+00
Organics											
Carbon Organic (Dissolved)	10	1.5	1.5	1.8	2.0	2.3	5.5	7.3	2.6	1.7	6.7E-01
Carbon Organic (Total)	12	1.3	1.4	1.5	1.8	2.1	3.7	5.5	2.1	1.1	5.4E-01
Nitrogen Organic (Dissolved)	5	0.03	0.03	0.03	0.03	0.17	0.20	0.21	0.09	0.09	1.0E+00
Nitrogen Organic (Total)	5	0.03	0.03	0.03	0.04	0.04	0.10	0.12	0.05	0.04	7.6E-01

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.37 - MW11-06S

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	12	1545	1561	1626	1729	1935	2466	2633	1862	354	1.9E-01
Oxygen Dissolved %	11	0	1	3	10	22	66	66	20	24	1.2E+00
Oxygen Dissolved	12	0.0	0.1	0.4	1.5	2.2	7.4	7.8	2.2	2.6	1.2E+00
pH (unitless)	12	6.9	7.3	7.8	7.9	8.0	8.2	8.3	7.8	0.3	4.2E-02
Redox Potential mV	9	-144	-129	-96	-77	-55	49	63	-61	66	-1.1E+00
Salinity ppt	9	1.18	1.19	1.21	1.22	1.23	1.32	1.36	1.23	0.05	4.3E-02
Specific Conductivity µS/cm	11	1510	1761	2345	2382	2428	2575	2640	2304	304	1.3E-01
Temperature °C	12	6.7	7.0	7.9	8.3	11.8	12.5	12.6	9.3	2.2	2.4E-01
Total Dissolved Solids	9	1486	1488	1521	1540	1553	1698	1780	1558	88	5.7E-02
Turbidity NTU	12	-0.5	-0.2	2.3	4.8	10.5	20.8	23.6	7.4	7.5	1.0E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	3	2.6	2.8	3.6	4.6	5.4	6.0	6.1	4.4	1.8	4.0E-01
Alkalinity (Total as CaCO3)	12	55	56	69	76	78	93	104	74	13	1.8E-01
Bicarbonate Alkalinity	10	55	55	63	75	77	95	104	74	15	2.0E-01
Carbonate Alkalinity	10	0.5	0.5	0.6	1.0	1.0	1.0	1.0	0.9	0.2	2.8E-01
Color TCU	8	2.5	2.5	2.5	2.5	3.6	8.7	9.8	3.9	2.8	7.1E-01
Hardness as CaCO3 (Dissolved)	12	729	741	789	805	814	828	834	796	30	3.8E-02
Hydroxide Alkalinity	10	0.5	0.5	0.6	1.0	1.0	1.0	1.0	0.9	0.2	2.8E-01
pH (unitless)	12	7.6	7.6	7.8	7.9	7.9	8.0	8.0	7.8	0.1	1.5E-02
Specific Conductivity µS/cm	12	2230	2258	2305	2325	2360	2400	2400	2328	50	2.1E-02
Total Dissolved Solids	12	1750	1794	1910	1960	1973	2004	2020	1933	75	3.9E-02
Total Suspended Solids	11	2	3	4	7	11	29	33	10	10	9.6E-01
Turbidity NTU	11	2	2	4	5	7	15	21	7	5	8.0E-01
Dissolved Anions											
Bromide	12	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	-	-
Chloride	12	28	28	29	30	32	36	38	31	3	9.9E-02
Fluoride	12	0.20	0.20	0.20	0.20	0.23	0.57	0.58	0.27	0.14	5.3E-01
Sulphate	12	1270	1276	1290	1305	1320	1335	1340	1305	21	1.6E-02
Nutrients											
Ammonia (Total)	12	0.057	0.063	0.101	0.120	0.129	0.141	0.143	0.112	0.027	2.4E-01
Nitrate (as N)	12	0	0	0	0	0	0	0	0	0	2.7E-01
Nitrite (as N)	12	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	-	-
Nitrogen (Dissolved)	5	0.18	0.18	0.19	0.24	0.41	0.87	0.99	0.40	0.34	8.6E-01
Nitrogen (Total)	8	0	0	0	0	0	0	0	0	0	3.9E-01
Nitrogen Kjeldahl (Total)	12	0.17	0.17	0.19	0.21	0.28	0.39	0.48	0.25	0.09	3.6E-01
Orthophosphate (Dissolved)	5	0.031	0.033	0.038	0.043	0.050	0.053	0.053	0.043	0.009	2.1E-01
Phosphorus - Dissolved	10	0.01	0.02	0.03	0.05	0.05	0.06	0.06	0.04	0.01	3.5E-01
Phosphorus - Total	12	0.032	0.032	0.040	0.068	0.074	0.090	0.098	0.061	0.022	3.6E-01
Cyanide										-	
Cyanide (Free)	12	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	11	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (WAD)	12	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	12	0.0023	0.0031	0.0039	0.0048	0.0062	0.0127	0.0130	0.0059	0.0034	5.7E-01
Antimony	12	0.00005	0.00005	0.00005	0.00008	0.00025	0.00084	0.00125	0.00024	0.00036	1.5E+00
Arsenic	12	0.0011	0.0012	0.0014	0.0014	0.0015	0.0016	0.0017	0.0014	0.0001	9.1E-02
Barium	12	0.025	0.025	0.026	0.028	0.037	0.057	0.063	0.034	0.012	3.5E-01
Beryllium	12	0.0001	0.0001	0.0001	0.0001	0.0003	0.0017	0.0025	0.0004	0.0007	1.8E+00
Bismuth	12	0.00025	0.00025	0.00025	0.00025	0.02538	0.10000	0.10000	0.02523	0.04509	1.8E+00
Boron	12	0.238	0.242	0.256	0.275	0.288	0.297	0.300	0.272	0.020	7.4E-02
Cadmium	12	0.000010	0.000011	0.000019	0.000028	0.000043	0.000081	0.000124	0.000035	0.000030	8.6E-01
Calcium	12	164	166	169	170	175	175	176	171	4	2.2E-02
Chromium	12	0.0001	0.0001	0.0001	0.0003	0.0012	0.0038	0.0054	0.0010	0.0016	1.5E+00
Cobalt	12	0.00046	0.00051	0.00059	0.00065	0.00111	0.00232	0.00300	0.00102	0.00074	7.3E-01
Copper	12	0.0001	0.0001	0.0001	0.0004	0.0012	0.0037	0.0051	0.0010	0.0015	1.4E+00
Iron	12	0.035	0.038	0.052	0.073	0.109	0.170	0.212	0.088	0.052	5.9E-01
Lead	12	0.00003	0.00003	0.00003	0.00003	0.00016	0.00084	0.00125	0.00021	0.00037	1.8E+00
Lithium	12	0.0050	0.0073	0.0121	0.0132	0.0153	0.0174	0.0192	0.0131	0.0036	2.7E-01
Magnesium	12	74	75	88	93	95	97	97	90	8	8.6E-02
Manganese	12	0.232	0.272	0.338	0.389	0.509	1.284	1.460	0.539	0.373	6.9E-01
Mercury	12	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000140	0.0000250	0.0000067	0.0000058	8.7E-01
Molybdenum	12	0.075	0.087	0.101	0.106	0.110	0.113	0.115	0.103	0.010	1.0E-01
Nickel	12	0.0008	0.0008	0.0010	0.0010	0.0019	0.0040	0.0057	0.0017	0.0014	8.3E-01
Phosphorus	12	0.03	0.03	0.06	0.07	0.15	0.15	0.15	0.09	0.05	5.5E-01
Potassium	12	8	8	8	9	9	9	9	8	0	4.6E-02
Selenium	12	0.000	0.000	0.000	0.000	0.000	0.002	0.003	0.000	0.001	1.8E+00
Silicon	12	4.3	4.3	4.4	4.5	4.5	4.6	4.6	4.4	0.1	2.0E-02
Silver	12	0.00001	0.00001	0.00001	0.00001	0.00002	0.00004	0.00005	0.00001	0.00001	1.0E+00
Sodium	12	253	254	257	263	273	281	288	266	11	4.0E-02
Strontium	12	5.03	5.31	5.72	5.99	6.27	6.53	6.61	5.97	0.45	7.6E-02
Sulphur	8	340	347	384	401	411	430	436	395	31	7.8E-02
Thallium	12	0.00001	0.00001	0.00001	0.00002	0.00008	0.00034	0.00050	0.00009	0.00015	1.7E+00
Tin	12	0.0001	0.0001	0.0001	0.0001	0.0002	0.0008	0.0013	0.0002	0.0004	1.6E+00
Titanium	12	0.0050	0.0050	0.0050	0.0050	0.0050	0.0073	0.0100	0.0054	0.0014	2.7E-01
Uranium	12	0.0002	0.0003	0.0003	0.0004	0.0005	0.0010	0.0012	0.0005	0.0003	5.3E-01
Vanadium	12	0.0005	0.0005	0.0005	0.0005	0.0010	0.0017	0.0025	0.0008	0.0006	6.9E-01
Zinc	12	0.0025	0.0028	0.0231	0.0455	0.1123	0.9246	1.6600	0.2068	0.4662	2.3E+00
Total Metals											
Aluminum	12	0.0	0.0	0.1	0.2	0.3	0.5	0.7	0.2	0.2	8.5E-01
Antimony	12	0.0001	0.0001	0.0001	0.0001	0.0003	0.0008	0.0013	0.0003	0.0003	1.2E+00
Arsenic	12	0.0013	0.0013	0.0015	0.0016	0.0017	0.0024	0.0030	0.0017	0.0005	2.7E-01
Barium	12	0.024	0.025	0.028	0.031	0.040	0.057	0.063	0.036	0.012	3.3E-01
Beryllium	12	0.0001	0.0001	0.0001	0.0001	0.0003	0.0017	0.0025	0.0004	0.0007	1.8E+00
Bismuth	12	0.00025	0.00025	0.00025	0.00025	0.02538	0.10000	0.10000	0.02523	0.04509	1.8E+00
Boron	12	0.251	0.252	0.267	0.274	0.291	0.311	0.313	0.278	0.021	7.4E-02
Cadmium	12	0.00002	0.00002	0.00003	0.00005	0.00006	0.00014	0.00016	0.00006	0.00004	7.6E-01
Calcium	12	157	161	165	168	170	173	176	167	5	2.8E-02
Chromium	12	0.000	0.001	0.001	0.001	0.001	0.005	0.009	0.002	0.002	1.4E+00
Cobalt	12	0.0006	0.0006	0.0007	0.0010	0.0013	0.0034	0.0037	0.0014	0.0010	7.4E-01
Copper	12	0.001	0.001	0.001	0.002	0.003	0.007	0.009	0.003	0.002	8.4E-01
Iron	12	0.14	0.14	0.26	0.34	0.69	1.54	2.24	0.58	0.59	1.0E+00
Lead	12	0.00005	0.00007	0.00010	0.00013	0.00035	0.00127	0.00130	0.00036	0.00045	1.2E+00
Lithium	12	0.0089	0.0095	0.0121	0.0132	0.0149	0.0175	0.0200	0.0134	0.0029	2.2E-01
Magnesium	12	75	76	85	91	93	97	97	89	7	8.3E-02
Manganese	12	0.26	0.28	0.34	0.40	0.51	1.34	1.55	0.55	0.39	7.1E-01
Mercury	12	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	-	-
Molybdenum	12	0.08	0.09	0.10	0.11	0.11	0.12	0.12	0.10	0.01	9.9E-02
Nickel	12	0.001	0.001	0.001	0.002	0.003	0.005	0.007	0.002	0.002	6.8E-01
Phosphorus	12	0.05	0.06	0.07	0.08	0.15	0.15	0.15	0.10	0.04	4.2E-01
Potassium	12	8	8	8	8	9	9	9	8	0	5.1E-02
Selenium	12	0.000	0.000	0.000	0.000	0.000	0.002	0.003	0.000	0.001	1.8E+00
Silicon	12	4.4	4.5	4.6	4.9	5.0	5.7	6.0	4.9	0.5	9.5E-02
Silver	12	0.00001	0.00001	0.00001	0.00001	0.00002	0.00005	0.00005	0.00002	0.00002	9.7E-01
Sodium	12	250	251	258	263	273	281	281	265	11	4.1E-02
Strontium	12	4.85	5.20	5.75	6.00	6.26	6.69	6.89	5.99	0.53	8.8E-02
Sulphur	8	351	351	381	399	416	430	430	395	31	7.7E-02
Thallium	12	0.0000	0.0000	0.0000	0.0000	0.0001	0.0003	0.0005	0.0001	0.0001	1.6E+00
Tin	12	0.0001	0.0001	0.0001	0.0001	0.0004	0.0008	0.0013	0.0003	0.0004	1.4E+00
Titanium	12	0.005	0.005	0.005	0.011	0.016	0.028	0.032	0.012	0.009	7.0E-01
Uranium	12	0.0003	0.0003	0.0004	0.0004	0.0005	0.0010	0.0013	0.0005	0.0003	5.5E-01
Vanadium	12	0.001	0.001	0.001	0.001	0.001	0.003	0.003	0.001	0.001	6.3E-01
Zinc	12	0.0025	0.0028	0.0379	0.0809	0.1548	1.3654	2.2800	0.3023	0.6443	2.1E+00
Organics											
Carbon Organic (Dissolved)	10	1.9	2.0	2.2	2.8	3.8	7.7	9.1	3.6	2.3	6.3E-01
Carbon Organic (Total)	12	1.8	1.9	2.0	2.3	3.2	5.4	5.7	2.9	1.3	4.5E-01
Nitrogen Organic (Dissolved)	5	0.03	0.04	0.09	0.10	0.29	0.75	0.86	0.27	0.34	1.3E+00
Nitrogen Organic (Total)	5	0.04	0.05	0.09	0.09	0.19	0.32	0.36	0.15	0.13	8.2E-01

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.38 - MW11-07D

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	13	945	950	1078	1167	1670	1969	2217	1368	405	3.0E-01
Oxygen Dissolved %	12	0	1	1	3	20	43	69	12	20	1.6E+00
Oxygen Dissolved	13	0.0	0.1	0.2	0.3	2.0	4.8	8.4	1.3	2.3	1.7E+00
pH (unitless)	12	7.7	7.7	7.8	7.9	8.0	8.2	8.4	7.9	0.2	2.1E-02
Redox Potential mV	10	-260	-247	-197	-161	-113	97	254	-128	144	-1.1E+00
Salinity ppt	10	0.73	0.73	0.76	0.80	0.81	1.26	1.60	0.86	0.26	3.0E-01
Specific Conductivity µS/cm	12	980	1019	1391	1488	1581	2284	3050	1546	519	3.4E-01
Temperature °C	13	5.8	6.2	6.7	7.9	10.5	12.6	13.1	8.7	2.3	2.7E-01
Total Dissolved Solids	10	934	940	986	1020	1062	1576	1983	1107	312	2.8E-01
Turbidity NTU	13	-1.3	-0.5	0.0	8.5	9.9	82.5	179.0	19.1	48.4	2.5E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	5	1.6	1.8	2.6	4.6	5.8	6.8	7.1	4.3	2.3	5.2E-01
Alkalinity (Total as CaCO3)	13	112	116	124	128	132	158	195	131	20	1.5E-01
Bicarbonate Alkalinity	12	112	116	123	127	133	161	195	132	21	1.6E-01
Carbonate Alkalinity	12	0.5	0.5	0.9	1.0	1.0	1.0	1.0	0.9	0.2	2.6E-01
Color TCU	10	2.5	2.5	3.6	7.8	10.1	10.9	11.1	7.2	3.5	4.9E-01
Hardness as CaCO3 (Dissolved)	13	255	260	268	273	285	304	310	278	15	5.5E-02
Hydroxide Alkalinity	12	0.5	0.5	0.9	1.0	1.0	1.0	1.0	0.9	0.2	2.6E-01
pH (unitless)	13	8.0	8.0	8.1	8.1	8.2	8.2	8.2	8.1	0.1	9.2E-03
Specific Conductivity µS/cm	13	1420	1486	1540	1580	1610	1640	1640	1570	59	3.7E-02
Total Dissolved Solids	13	872	967	1110	1150	1160	1160	1160	1112	81	7.3E-02
Total Suspended Solids	12	2	2	2	3	7	7	7	4	2	6.4E-01
Turbidity NTU	12	1	1	2	3	5	7	8	4	2	5.3E-01
Dissolved Anions											
Bromide	13	0.25	0.25	0.25	0.25	0.50	0.50	0.50	0.35	0.13	3.7E-01
Chloride	13	15	15	16	17	18	20	21	17	2	1.1E-01
Fluoride	13	0.11	0.31	0.46	0.47	0.50	0.69	0.74	0.49	0.15	3.0E-01
Sulphate	13	670	672	676	688	708	717	722	692	18	2.6E-02
Nutrients											
Ammonia (Total)	13	0.003	0.017	0.037	0.056	0.089	0.129	0.158	0.063	0.041	6.6E-01
Nitrate (as N)	13	0	0	0	0	0	0	0	0	0	3.7E-01
Nitrite (as N)	13	0.005	0.005	0.005	0.005	0.010	0.017	0.028	0.008	0.006	7.7E-01
Nitrogen (Dissolved)	6	0.08	0.10	0.17	0.19	0.21	0.36	0.41	0.21	0.11	5.3E-01
Nitrogen (Total)	9	0	0	0	0	0	0	0	0	0	4.7E-01
Nitrogen Kjeldahl (Total)	13	0.11	0.12	0.14	0.23	0.31	0.39	0.41	0.24	0.10	4.2E-01
Orthophosphate (Dissolved)	6	0.032	0.043	0.075	0.079	0.094	0.102	0.103	0.078	0.025	3.2E-01
Phosphorus - Dissolved	12	0.03	0.04	0.07	0.08	0.10	0.11	0.12	0.08	0.03	3.2E-01
Phosphorus - Total	13	0.056	0.067	0.129	0.138	0.169	0.201	0.206	0.143	0.045	3.1E-01
Cyanide										-	
Cyanide (Free)	13	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	13	0.0025	0.0025	0.0025	0.0025	0.0025	0.0037	0.0054	0.0027	0.0008	3.0E-01
Cyanide (WAD)	13	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	13	0.0040	0.0047	0.0066	0.0087	0.0112	0.0143	0.0171	0.0091	0.0035	3.9E-01
Antimony	13	0.00005	0.00005	0.00010	0.00012	0.00049	0.00093	0.00125	0.00033	0.00035	1.1E+00
Arsenic	13	0.0013	0.0026	0.0040	0.0045	0.0056	0.0061	0.0062	0.0046	0.0014	3.0E-01
Barium	13	0.039	0.039	0.041	0.044	0.047	0.049	0.050	0.044	0.004	8.0E-02
Beryllium	13	0.0001	0.0001	0.0001	0.0001	0.0001	0.0011	0.0025	0.0003	0.0007	2.6E+00
Bismuth	13	0.00025	0.00025	0.00025	0.00025	0.00050	0.04030	0.10000	0.00802	0.02764	3.4E+00
Boron	13	0.279	0.280	0.285	0.293	0.304	0.310	0.314	0.294	0.011	3.8E-02
Cadmium	13	0.000005	0.000005	0.000005	0.000010	0.000010	0.000074	0.000147	0.000020	0.000039	2.0E+00
Calcium	12	59	61	63	65	68	70	71	65	3	5.3E-02
Chromium	13	0.0001	0.0001	0.0001	0.0002	0.0003	0.0014	0.0025	0.0004	0.0007	1.6E+00
Cobalt	13	0.00024	0.00029	0.00037	0.00047	0.00070	0.00111	0.00114	0.00056	0.00028	5.0E-01
Copper	13	0.0001	0.0001	0.0001	0.0002	0.0004	0.0013	0.0025	0.0004	0.0006	1.6E+00
Iron	13	0.054	0.088	0.205	0.250	0.302	0.534	0.579	0.274	0.145	5.3E-01
Lead	13	0.00003	0.00003	0.00003	0.00003	0.00005	0.00053	0.00125	0.00013	0.00034	2.6E+00
Lithium	13	0.0125	0.0162	0.0222	0.0270	0.0280	0.0294	0.0299	0.0247	0.0050	2.0E-01
Magnesium	12	26	26	27	27	28	31	32	28	2	6.7E-02
Manganese	13	0.547	0.609	0.737	0.855	0.970	1.192	1.240	0.877	0.202	2.3E-01
Mercury	13	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	-	-
Molybdenum	13	0.021	0.021	0.021	0.023	0.025	0.032	0.035	0.024	0.004	1.7E-01
Nickel	13	0.0003	0.0004	0.0011	0.0014	0.0021	0.0024	0.0025	0.0015	0.0007	4.8E-01
Phosphorus	12	0.13	0.14	0.15	0.16	0.17	0.18	0.18	0.16	0.01	9.2E-02
Potassium	13	2	2	3	4	7	9	10	5	3	5.5E-01
Selenium	13	0.000	0.000	0.000	0.000	0.000	0.001	0.003	0.000	0.001	2.2E+00
Silicon	12	4.2	4.3	4.4	4.7	4.8	5.0	5.0	4.6	0.3	5.5E-02
Silver	13	0.00001	0.00001	0.00001	0.00001	0.00001	0.00003	0.00005	0.00001	0.00001	1.2E+00
Sodium	13	214	216	223	237	249	260	261	237	16	6.8E-02
Strontium	13	6.98	7.15	7.40	7.53	7.65	7.80	7.80	7.51	0.24	3.2E-02
Sulphur	8	210	210	213	217	221	225	227	217	6	2.7E-02
Thallium	13	0.00001	0.00001	0.00001	0.00001	0.00001	0.00021	0.00050	0.00005	0.00014	3.0E+00
Tin	13	0.0001	0.0001	0.0001	0.0001	0.0002	0.0007	0.0013	0.0002	0.0003	1.5E+00
Titanium	12	0.0050	0.0050	0.0050	0.0050	0.0050	0.0100	0.0100	0.0058	0.0019	3.3E-01
Uranium	13	0.0003	0.0004	0.0007	0.0007	0.0008	0.0015	0.0022	0.0008	0.0005	5.7E-01
Vanadium	13	0.0005	0.0005	0.0005	0.0005	0.0010	0.0016	0.0025	0.0008	0.0006	6.6E-01
Zinc	13	0.0005	0.0005	0.0010	0.0011	0.0021	0.0030	0.0030	0.0014	0.0009	6.3E-01
Total Metals											
Aluminum	13	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.1	1.2E+00
Antimony	13	0.0001	0.0001	0.0001	0.0003	0.0007	0.0014	0.0016	0.0005	0.0005	9.6E-01
Arsenic	13	0.0026	0.0032	0.0042	0.0047	0.0059	0.0061	0.0062	0.0049	0.0011	2.2E-01
Barium	13	0.040	0.041	0.043	0.046	0.048	0.052	0.054	0.046	0.004	8.7E-02
Beryllium	13	0.0001	0.0001	0.0001	0.0001	0.0001	0.0011	0.0025	0.0003	0.0007	2.6E+00
Bismuth	13	0.00025	0.00025	0.00025	0.00025	0.00050	0.04030	0.10000	0.00802	0.02764	3.4E+00
Boron	13	0.288	0.288	0.302	0.316	0.321	0.331	0.331	0.313	0.014	4.6E-02
Cadmium	13	0.00001	0.00001	0.00001	0.00002	0.00004	0.00019	0.00023	0.00005	0.00007	1.4E+00
Calcium	12	62	62	65	67	68	73	73	67	4	5.2E-02
Chromium	13	0.000	0.000	0.001	0.001	0.001	0.004	0.005	0.001	0.001	9.7E-01
Cobalt	13	0.0004	0.0004	0.0005	0.0005	0.0008	0.0015	0.0018	0.0007	0.0004	5.8E-01
Copper	13	0.000	0.000	0.001	0.001	0.001	0.003	0.004	0.001	0.001	1.0E+00
Iron	13	0.18	0.21	0.26	0.30	0.54	0.60	0.66	0.36	0.15	4.2E-01
Lead	13	0.00003	0.00003	0.00005	0.00005	0.00006	0.00067	0.00125	0.00016	0.00033	2.1E+00
Lithium	13	0.0125	0.0163	0.0223	0.0261	0.0285	0.0321	0.0322	0.0250	0.0055	2.2E-01
Magnesium	12	26	26	27	27	28	32	33	28	2	6.9E-02
Manganese	13	0.59	0.65	0.79	0.88	0.96	1.23	1.26	0.91	0.20	2.2E-01
Mercury	13	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	-	-
Molybdenum	13	0.02	0.02	0.02	0.03	0.03	0.03	0.04	0.03	0.00	1.7E-01
Nickel	13	0.000	0.001	0.001	0.002	0.003	0.003	0.003	0.002	0.001	4.4E-01
Phosphorus	12	0.13	0.14	0.15	0.15	0.18	0.21	0.21	0.17	0.02	1.4E-01
Potassium	13	2	2	3	4	8	9	9	5	3	5.5E-01
Selenium	13	0.000	0.000	0.000	0.000	0.000	0.001	0.003	0.000	0.001	2.3E+00
Silicon	12	4.3	4.4	4.7	4.8	4.9	5.2	5.3	4.8	0.3	5.2E-02
Silver	13	0.00001	0.00001	0.00001	0.00001	0.00001	0.00005	0.00005	0.00001	0.00002	1.1E+00
Sodium	13	219	220	229	240	249	260	264	240	14	5.9E-02
Strontium	13	7.36	7.37	7.56	7.71	7.88	8.21	8.34	7.75	0.29	3.7E-02
Sulphur	8	214	215	218	220	224	226	226	220	4	2.0E-02
Thallium	13	0.0000	0.0000	0.0000	0.0000	0.0000	0.0002	0.0005	0.0000	0.0001	3.0E+00
Tin	13	0.0001	0.0001	0.0001	0.0002	0.0004	0.0011	0.0013	0.0004	0.0004	1.0E+00
Titanium	12	0.005	0.005	0.005	0.005	0.006	0.013	0.015	0.007	0.003	5.0E-01
Uranium	13	0.0003	0.0004	0.0007	0.0008	0.0008	0.0016	0.0023	0.0009	0.0005	5.6E-01
Vanadium	13	0.001	0.001	0.001	0.001	0.001	0.002	0.003	0.001	0.001	6.6E-01
Zinc	13	0.0015	0.0015	0.0025	0.0030	0.0036	0.0060	0.0086	0.0032	0.0018	5.6E-01
Organics											
Carbon Organic (Dissolved)	10	5.0	5.3	7.2	8.2	12.1	15.0	16.6	9.4	3.7	3.9E-01
Carbon Organic (Total)	13	4.8	5.0	6.9	8.3	9.5	15.1	17.1	9.0	3.7	4.1E-01
Nitrogen Organic (Dissolved)	6	0.03	0.05	0.11	0.13	0.15	0.26	0.30	0.14	0.09	6.4E-01
Nitrogen Organic (Total)	5	0.11	0.11	0.14	0.15	0.15	0.27	0.30	0.17	0.08	4.5E-01

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.39 - MW11-07S

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	13	786	835	928	958	1480	1765	2008	1180	380	3.2E-01
Oxygen Dissolved %	12	4	8	14	24	46	71	79	32	24	7.6E-01
Oxygen Dissolved	13	0.4	0.8	1.5	2.5	5.4	8.3	9.1	3.5	2.8	8.0E-01
pH (unitless)	13	7.7	7.7	7.8	7.9	7.9	8.0	8.1	7.9	0.1	1.4E-02
Redox Potential mV	10	-292	-220	-43	21	46	107	119	-15	120	-8.1E+00
Salinity ppt	10	0.63	0.63	0.67	0.71	0.74	1.10	1.37	0.76	0.22	2.9E-01
Specific Conductivity µS/cm	12	941	959	1232	1301	1380	2011	2639	1372	433	3.2E-01
Temperature °C	13	2.9	4.1	7.4	8.2	10.2	13.1	14.0	8.5	3.1	3.6E-01
Total Dissolved Solids	10	828	830	860	930	978	68807	123700	13263	38805	2.9E+00
Turbidity NTU	13	0.0	0.0	1.2	1.6	2.6	16.4	16.8	4.0	5.8	1.4E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	4	0.5	0.7	1.4	2.4	3.1	3.2	3.2	2.1	1.3	6.0E-01
Alkalinity (Total as CaCO3)	13	155	159	167	170	183	236	284	183	33	1.8E-01
Bicarbonate Alkalinity	12	155	158	166	174	186	240	284	184	34	1.9E-01
Carbonate Alkalinity	12	0.5	0.5	0.5	1.0	1.0	1.0	1.0	0.8	0.2	3.0E-01
Color TCU	10	2.5	2.5	2.5	5.5	5.9	6.8	7.1	4.6	1.9	4.1E-01
Hardness as CaCO3 (Dissolved)	13	246	250	273	278	288	343	422	286	43	1.5E-01
Hydroxide Alkalinity	12	0.5	0.5	0.5	1.0	1.0	1.0	1.0	0.8	0.2	3.0E-01
pH (unitless)	13	8.0	8.1	8.1	8.2	8.3	8.3	8.3	8.2	0.1	1.0E-02
Specific Conductivity µS/cm	13	897	1115	1350	1370	1410	1438	1450	1339	144	1.1E-01
Total Dissolved Solids	13	610	756	940	962	999	1028	1040	940	112	1.2E-01
Total Suspended Solids	12	2	2	2	4	6	10	12	4	3	7.9E-01
Turbidity NTU	12	0	0	0	1	2	5	5	2	2	1.1E+00
Dissolved Anions											
Bromide	13	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	-	-
Chloride	13	3	6	11	11	11	12	13	10	3	2.4E-01
Fluoride	13	0.29	0.30	0.31	0.32	0.33	0.46	0.47	0.35	0.06	1.8E-01
Sulphate	13	243	385	519	551	587	605	616	531	96	1.8E-01
Nutrients											
Ammonia (Total)	13	0.003	0.003	0.012	0.016	0.025	0.028	0.028	0.017	0.008	4.9E-01
Nitrate (as N)	13	0	0	0	0	0	0	0	0	0	6.3E-01
Nitrite (as N)	13	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	-	-
Nitrogen (Dissolved)	6	0.07	0.10	0.18	0.22	0.26	0.29	0.30	0.21	0.08	3.9E-01
Nitrogen (Total)	9	0	0	0	0	0	0	0	0	0	5.5E-01
Nitrogen Kjeldahl (Total)	13	0.08	0.08	0.10	0.13	0.19	0.26	0.26	0.15	0.07	4.3E-01
Orthophosphate (Dissolved)	6	0.022	0.025	0.036	0.039	0.044	0.048	0.049	0.038	0.010	2.5E-01
Phosphorus - Dissolved	12	0.02	0.03	0.03	0.04	0.04	0.05	0.05	0.04	0.01	2.0E-01
Phosphorus - Total	13	0.034	0.035	0.038	0.043	0.047	0.053	0.054	0.043	0.006	1.5E-01
Cyanide										-	
Cyanide (Free)	13	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	13	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (WAD)	13	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	13	0.0012	0.0034	0.0063	0.0082	0.0125	0.0212	0.0230	0.0106	0.0064	6.0E-01
Antimony	13	0.00005	0.00005	0.00010	0.00010	0.00012	0.00080	0.00125	0.00022	0.00033	1.5E+00
Arsenic	13	0.0037	0.0038	0.0041	0.0049	0.0054	0.0063	0.0065	0.0049	0.0009	1.9E-01
Barium	13	0.029	0.030	0.036	0.037	0.041	0.043	0.043	0.038	0.005	1.3E-01
Beryllium	13	0.0001	0.0001	0.0001	0.0001	0.0001	0.0016	0.0025	0.0003	0.0007	2.1E+00
Bismuth	13	0.00025	0.00025	0.00025	0.00025	0.00050	0.10000	0.10000	0.01567	0.03743	2.4E+00
Boron	13	0.063	0.145	0.241	0.262	0.281	0.301	0.308	0.246	0.064	2.6E-01
Cadmium	13	0.000005	0.000014	0.000026	0.000050	0.000119	0.000323	0.000471	0.000105	0.000129	1.2E+00
Calcium	12	39	40	43	45	49	68	90	49	13	2.7E-01
Chromium	13	0.0001	0.0001	0.0001	0.0001	0.0003	0.0016	0.0025	0.0004	0.0007	1.8E+00
Cobalt	13	0.00005	0.00015	0.00050	0.00062	0.00087	0.00103	0.00108	0.00066	0.00031	4.6E-01
Copper	13	0.0003	0.0004	0.0005	0.0013	0.0024	0.0047	0.0069	0.0018	0.0018	1.0E+00
Iron	13	0.005	0.005	0.005	0.015	0.030	0.095	0.115	0.028	0.033	1.2E+00
Lead	13	0.00003	0.00003	0.00003	0.00003	0.00005	0.00080	0.00125	0.00016	0.00035	2.1E+00
Lithium	13	0.0039	0.0146	0.0229	0.0263	0.0283	0.0317	0.0327	0.0251	0.0072	2.9E-01
Magnesium	12	36	37	39	40	40	44	48	40	3	7.4E-02
Manganese	13	0.017	0.121	0.342	0.552	0.646	0.776	0.792	0.485	0.238	4.9E-01
Mercury	13	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000078	0.0000120	0.0000055	0.0000019	3.5E-01
Molybdenum	13	0.016	0.016	0.016	0.017	0.018	0.062	0.127	0.025	0.031	1.2E+00
Nickel	13	0.0003	0.0006	0.0010	0.0017	0.0025	0.0034	0.0041	0.0019	0.0011	5.6E-01
Phosphorus	12	0.03	0.03	0.03	0.06	0.15	0.15	0.15	0.07	0.06	7.6E-01
Potassium	13	1	1	1	2	2	7	8	3	2	7.6E-01
Selenium	13	0.000	0.000	0.000	0.000	0.000	0.012	0.027	0.002	0.007	3.0E+00
Silicon	12	4.5	4.5	4.7	4.8	4.9	6.0	7.1	5.0	0.7	1.4E-01
Silver	13	0.00001	0.00001	0.00001	0.00001	0.00001	0.00003	0.00005	0.00001	0.00001	1.0E+00
Sodium	13	41	128	197	206	214	219	220	193	47	2.4E-01
Strontium	13	0.68	5.14	8.55	9.11	9.48	9.95	10.30	8.46	2.41	2.9E-01
Sulphur	8	76	99	153	166	186	196	197	160	39	2.4E-01
Thallium	13	0.00001	0.00001	0.00003	0.00003	0.00003	0.00032	0.00050	0.00007	0.00014	1.9E+00
Tin	13	0.0001	0.0001	0.0001	0.0001	0.0001	0.0008	0.0013	0.0002	0.0003	1.8E+00
Titanium	12	0.0050	0.0050	0.0050	0.0050	0.0050	0.0073	0.0100	0.0054	0.0014	2.7E-01
Uranium	13	0.0035	0.0036	0.0040	0.0044	0.0045	0.0048	0.0048	0.0042	0.0004	9.4E-02
Vanadium	13	0.0005	0.0005	0.0005	0.0010	0.0010	0.0028	0.0033	0.0011	0.0009	8.2E-01
Zinc	13	0.0005	0.0015	0.0030	0.0035	0.0062	0.0163	0.0212	0.0058	0.0057	9.8E-01
Total Metals											
Aluminum	13	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.1	9.4E-01
Antimony	13	0.0001	0.0001	0.0001	0.0002	0.0003	0.0008	0.0013	0.0003	0.0003	1.2E+00
Arsenic	13	0.0040	0.0040	0.0045	0.0048	0.0056	0.0064	0.0065	0.0050	0.0008	1.6E-01
Barium	13	0.029	0.030	0.036	0.038	0.042	0.045	0.046	0.038	0.005	1.4E-01
Beryllium	13	0.0001	0.0001	0.0001	0.0001	0.0001	0.0016	0.0025	0.0003	0.0007	2.1E+00
Bismuth	13	0.00025	0.00025	0.00025	0.00025	0.00050	0.10000	0.10000	0.01567	0.03743	2.4E+00
Boron	13	0.071	0.162	0.240	0.263	0.290	0.316	0.332	0.257	0.064	2.5E-01
Cadmium	13	0.00001	0.00002	0.00003	0.00010	0.00015	0.00037	0.00053	0.00013	0.00014	1.1E+00
Calcium	12	39	40	43	46	48	66	88	49	13	2.7E-01
Chromium	13	0.000	0.000	0.000	0.001	0.001	0.003	0.003	0.001	0.001	9.5E-01
Cobalt	13	0.0001	0.0003	0.0006	0.0007	0.0010	0.0012	0.0012	0.0008	0.0003	4.4E-01
Copper	13	0.000	0.000	0.002	0.003	0.004	0.008	0.009	0.003	0.002	7.5E-01
Iron	13	0.02	0.02	0.03	0.06	0.13	0.22	0.27	0.09	0.08	8.5E-01
Lead	13	0.00003	0.00003	0.00003	0.00005	0.00020	0.00080	0.00125	0.00020	0.00034	1.8E+00
Lithium	13	0.0045	0.0155	0.0239	0.0280	0.0290	0.0301	0.0308	0.0253	0.0068	2.7E-01
Magnesium	12	36	36	39	40	40	44	47	40	3	7.2E-02
Manganese	13	0.05	0.13	0.36	0.56	0.69	0.80	0.82	0.52	0.24	4.6E-01
Mercury	13	0.000005	0.000005	0.000005	0.000005	0.000005	0.000008	0.000013	0.000006	0.000002	4.0E-01
Molybdenum	13	0.02	0.02	0.02	0.02	0.02	0.06	0.13	0.03	0.03	1.2E+00
Nickel	13	0.001	0.001	0.001	0.003	0.003	0.005	0.006	0.002	0.002	6.2E-01
Phosphorus	12	0.03	0.03	0.03	0.06	0.15	0.15	0.15	0.08	0.06	7.5E-01
Potassium	13	1	1	2	2	2	7	8	3	2	8.2E-01
Selenium	13	0.000	0.000	0.000	0.000	0.000	0.011	0.023	0.002	0.006	2.9E+00
Silicon	12	4.5	4.6	4.9	4.9	5.1	6.0	7.1	5.1	0.7	1.3E-01
Silver	13	0.00001	0.00001	0.00001	0.00001	0.00001	0.00004	0.00005	0.00001	0.00001	1.0E+00
Sodium	13	42	127	197	212	220	223	226	197	48	2.4E-01
Strontium	13	0.66	5.18	8.48	8.97	10.10	10.18	10.30	8.60	2.49	2.9E-01
Sulphur	8	77	99	157	170	191	198	200	163	40	2.4E-01
Thallium	13	0.0000	0.0000	0.0000	0.0000	0.0000	0.0003	0.0005	0.0001	0.0001	1.8E+00
Tin	13	0.0001	0.0001	0.0001	0.0001	0.0003	0.0008	0.0013	0.0002	0.0003	1.4E+00
Titanium	12	0.005	0.005	0.005	0.005	0.005	0.011	0.013	0.006	0.003	4.3E-01
Uranium	13	0.0036	0.0038	0.0042	0.0044	0.0047	0.0048	0.0049	0.0044	0.0004	8.5E-02
Vanadium	13	0.001	0.001	0.001	0.001	0.001	0.003	0.004	0.001	0.001	8.0E-01
Zinc	13	0.0015	0.0015	0.0030	0.0042	0.0070	0.0221	0.0319	0.0072	0.0083	1.2E+00
Organics											
Carbon Organic (Dissolved)	10	1.6	2.2	3.4	3.7	4.2	4.5	4.5	3.6	0.9	2.4E-01
Carbon Organic (Total)	13	1.4	2.3	3.2	3.3	3.9	4.4	4.7	3.4	0.8	2.3E-01
Nitrogen Organic (Dissolved)	5	0.05	0.06	0.11	0.17	0.18	0.26	0.28	0.16	0.09	5.6E-01
Nitrogen Organic (Total)	5	0.08	0.09	0.15	0.17	0.24	0.25	0.25	0.18	0.07	4.0E-01

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.40 - MW11-08D

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	13	992	992	1019	1104	1448	1628	1776	1209	258	2.1E-01
Oxygen Dissolved %	12	0	1	2	6	9	13	14	6	5	7.5E-01
Oxygen Dissolved	13	0.0	0.1	0.3	0.8	1.0	3.9	7.2	1.2	1.9	1.6E+00
pH (unitless)	13	6.1	7.0	7.8	8.0	8.1	8.3	8.4	7.9	0.6	7.3E-02
Redox Potential mV	10	-298	-263	-178	-162	-116	-20	1	-149	84	-5.7E-01
Salinity ppt	10	0.74	0.74	0.74	0.75	0.79	0.84	0.84	0.77	0.04	5.0E-02
Specific Conductivity µS/cm	12	976	1117	1462	1493	1643	1761	1812	1496	223	1.5E-01
Temperature °C	13	3.5	5.7	7.4	8.9	10.4	14.2	14.5	9.2	2.9	3.2E-01
Total Dissolved Solids	10	-155400	-85043	954	970	979	1078	1093	-14649	49455	-3.4E+00
Turbidity NTU	13	-1.9	-1.6	0.0	1.7	4.0	9.2	9.9	2.4	3.6	1.5E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	2	2.3	2.3	2.4	2.5	2.5	2.6	2.6	2.5	0.2	8.7E-02
Alkalinity (Total as CaCO3)	13	204	209	219	225	233	236	237	225	10	4.5E-02
Bicarbonate Alkalinity	11	204	209	215	223	233	236	237	223	11	4.9E-02
Carbonate Alkalinity	11	0.5	0.5	0.5	0.5	1.0	6.4	11.7	1.7	3.3	2.0E+00
Color TCU	9	2.5	3.8	9.0	11.1	16.4	19.4	20.8	12.0	5.9	4.9E-01
Hardness as CaCO3 (Dissolved)	13	158	158	159	164	177	185	192	168	11	6.6E-02
Hydroxide Alkalinity	11	0.5	0.5	0.5	0.5	1.0	1.0	1.0	0.7	0.3	3.7E-01
pH (unitless)	13	7.9	8.0	8.2	8.2	8.3	8.4	8.4	8.2	0.1	1.5E-02
Specific Conductivity µS/cm	13	1400	1436	1470	1480	1540	1682	1790	1522	99	6.5E-02
Total Dissolved Solids	13	965	969	1010	1030	1110	1186	1240	1056	81	7.7E-02
Total Suspended Solids	12	2	2	2	2	7	13	14	5	5	9.5E-01
Turbidity NTU	12	1	1	1	2	4	7	8	3	3	8.2E-01
Dissolved Anions											
Bromide	13	0.25	0.25	0.25	0.25	0.50	0.50	0.50	0.35	0.13	3.7E-01
Chloride	13	8	8	9	10	14	15	15	11	3	2.5E-01
Fluoride	13	0.20	0.20	0.31	0.35	0.42	0.52	0.53	0.36	0.11	3.2E-01
Sulphate	13	526	527	530	535	578	654	696	564	53	9.4E-02
Nutrients											
Ammonia (Total)	13	0.024	0.024	0.026	0.031	0.037	0.049	0.059	0.034	0.010	2.9E-01
Nitrate (as N)	13	0	0	0	0	0	0	0	0	0	3.7E-01
Nitrite (as N)	13	0.005	0.005	0.005	0.005	0.010	0.012	0.014	0.008	0.003	4.1E-01
Nitrogen (Dissolved)	6	0.14	0.16	0.22	0.28	0.43	0.61	0.66	0.34	0.19	5.7E-01
Nitrogen (Total)	9	0	0	0	0	0	0	0	0	0	5.0E-01
Nitrogen Kjeldahl (Total)	13	0.15	0.16	0.19	0.20	0.25	0.39	0.45	0.23	0.09	3.6E-01
Orthophosphate (Dissolved)	5	0.180	0.188	0.218	0.222	0.226	0.236	0.238	0.217	0.022	1.0E-01
Phosphorus - Dissolved	11	0.07	0.07	0.14	0.19	0.22	0.25	0.25	0.18	0.06	3.7E-01
Phosphorus - Total	12	0.099	0.110	0.194	0.226	0.246	0.287	0.303	0.214	0.061	2.9E-01
Cyanide										-	
Cyanide (Free)	13	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	13	0.0025	0.0025	0.0025	0.0025	0.0025	0.0053	0.0054	0.0029	0.0011	3.6E-01
Cyanide (WAD)	13	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	13	0.0081	0.0085	0.0092	0.0100	0.0103	0.0116	0.0125	0.0099	0.0011	1.1E-01
Antimony	13	0.00010	0.00010	0.00012	0.00018	0.00025	0.00075	0.00125	0.00027	0.00031	1.1E+00
Arsenic	13	0.0027	0.0028	0.0029	0.0029	0.0032	0.0034	0.0035	0.0030	0.0002	7.9E-02
Barium	13	0.042	0.043	0.045	0.050	0.055	0.059	0.059	0.050	0.006	1.2E-01
Beryllium	13	0.0001	0.0001	0.0001	0.0001	0.0001	0.0011	0.0025	0.0003	0.0007	2.6E+00
Bismuth	13	0.00025	0.00025	0.00025	0.00050	0.00050	0.04030	0.10000	0.00804	0.02763	3.4E+00
Boron	13	2.140	2.224	2.330	2.360	2.500	2.606	2.690	2.400	0.139	5.8E-02
Cadmium	13	0.000005	0.000008	0.000010	0.000010	0.000025	0.000046	0.000051	0.000019	0.000014	7.4E-01
Calcium	13	21	21	22	23	29	31	32	25	4	1.6E-01
Chromium	13	0.0001	0.0001	0.0001	0.0002	0.0005	0.0016	0.0025	0.0005	0.0007	1.4E+00
Cobalt	13	0.00037	0.00039	0.00046	0.00067	0.00077	0.00115	0.00128	0.00070	0.00028	4.1E-01
Copper	13	0.0001	0.0001	0.0001	0.0002	0.0002	0.0013	0.0025	0.0004	0.0007	1.7E+00
Iron	13	0.015	0.091	0.165	0.189	0.269	0.282	0.286	0.201	0.076	3.8E-01
Lead	13	0.00003	0.00003	0.00003	0.00005	0.00005	0.00053	0.00125	0.00013	0.00034	2.6E+00
Lithium	13	0.0003	0.0003	0.0003	0.0005	0.0007	0.0057	0.0125	0.0014	0.0033	2.3E+00
Magnesium	13	24	24	25	26	26	27	27	25	1	3.3E-02
Manganese	13	0.391	0.516	0.676	0.778	1.080	1.254	1.290	0.863	0.273	3.2E-01
Mercury	12	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	-	-
Molybdenum	13	0.050	0.052	0.055	0.056	0.060	0.064	0.068	0.057	0.005	8.0E-02
Nickel	13	0.0011	0.0011	0.0016	0.0025	0.0031	0.0064	0.0066	0.0028	0.0018	6.5E-01
Phosphorus	13	0.15	0.15	0.15	0.24	0.26	0.27	0.27	0.22	0.05	2.3E-01
Potassium	13	10	10	10	10	11	18	26	12	4	3.7E-01
Selenium	13	0.000	0.000	0.000	0.000	0.000	0.001	0.003	0.000	0.001	2.3E+00
Silicon	13	3.5	3.7	4.0	4.1	4.3	4.3	4.3	4.1	0.2	5.4E-02
Silver	13	0.00001	0.00001	0.00001	0.00001	0.00001	0.00003	0.00005	0.00001	0.00001	1.1E+00
Sodium	13	243	248	256	274	284	316	341	276	26	9.4E-02
Strontium	13	1.10	1.12	1.17	1.19	1.23	1.27	1.29	1.19	0.05	4.2E-02
Sulphur	8	162	163	168	170	171	175	177	170	4	2.6E-02
Thallium	13	0.00001	0.00001	0.00001	0.00001	0.00001	0.00021	0.00050	0.00005	0.00014	3.0E+00
Tin	13	0.0001	0.0001	0.0001	0.0001	0.0002	0.0009	0.0013	0.0002	0.0004	1.5E+00
Titanium	13	0.0050	0.0050	0.0050	0.0050	0.0050	0.0100	0.0100	0.0062	0.0022	3.6E-01
Uranium	13	0.0024	0.0025	0.0026	0.0027	0.0045	0.0055	0.0057	0.0034	0.0012	3.5E-01
Vanadium	13	0.0005	0.0005	0.0005	0.0010	0.0010	0.0016	0.0025	0.0009	0.0005	6.2E-01
Zinc	13	0.0005	0.0005	0.0010	0.0012	0.0023	0.0030	0.0030	0.0016	0.0009	5.5E-01
Total Metals											
Aluminum	13	0.0	0.0	0.0	0.1	0.2	0.3	0.4	0.1	0.1	9.3E-01
Antimony	13	0.0001	0.0001	0.0002	0.0002	0.0003	0.0007	0.0013	0.0003	0.0003	9.2E-01
Arsenic	13	0.0027	0.0028	0.0029	0.0030	0.0032	0.0036	0.0036	0.0031	0.0003	9.5E-02
Barium	13	0.041	0.041	0.043	0.050	0.055	0.061	0.063	0.050	0.007	1.5E-01
Beryllium	13	0.0001	0.0001	0.0001	0.0001	0.0001	0.0011	0.0025	0.0003	0.0007	2.6E+00
Bismuth	13	0.00025	0.00025	0.00025	0.00050	0.00050	0.04030	0.10000	0.00804	0.02763	3.4E+00
Boron	13	2.260	2.278	2.340	2.380	2.510	2.616	2.640	2.427	0.120	5.0E-02
Cadmium	13	0.00001	0.00001	0.00001	0.00002	0.00007	0.00010	0.00012	0.00004	0.00004	9.6E-01
Calcium	13	21	21	21	23	29	31	32	25	4	1.7E-01
Chromium	13	0.000	0.000	0.000	0.001	0.002	0.004	0.005	0.001	0.001	1.1E+00
Cobalt	13	0.0004	0.0004	0.0005	0.0008	0.0010	0.0013	0.0015	0.0008	0.0004	4.7E-01
Copper	13	0.000	0.000	0.001	0.001	0.001	0.003	0.005	0.001	0.001	1.1E+00
Iron	13	0.19	0.19	0.21	0.27	0.37	0.47	0.51	0.29	0.11	3.7E-01
Lead	13	0.00003	0.00003	0.00005	0.00011	0.00017	0.00066	0.00125	0.00019	0.00033	1.7E+00
Lithium	13	0.0003	0.0003	0.0005	0.0005	0.0008	0.0058	0.0125	0.0015	0.0033	2.2E+00
Magnesium	13	24	24	25	25	26	26	27	25	1	3.3E-02
Manganese	13	0.45	0.55	0.67	0.79	1.13	1.32	1.38	0.88	0.29	3.3E-01
Mercury	12	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	-	-
Molybdenum	13	0.05	0.05	0.05	0.06	0.06	0.07	0.07	0.06	0.01	1.1E-01
Nickel	13	0.001	0.001	0.001	0.004	0.005	0.008	0.009	0.004	0.003	6.9E-01
Phosphorus	13	0.15	0.15	0.15	0.24	0.26	0.27	0.27	0.22	0.05	2.3E-01
Potassium	13	9	9	10	10	11	18	24	12	4	3.3E-01
Selenium	13	0.000	0.000	0.000	0.000	0.000	0.001	0.003	0.000	0.001	2.1E+00
Silicon	13	3.9	3.9	4.1	4.3	4.3	4.8	5.0	4.3	0.3	7.0E-02
Silver	13	0.00001	0.00001	0.00001	0.00001	0.00001	0.00006	0.00007	0.00002	0.00002	1.4E+00
Sodium	13	245	246	251	272	283	323	333	274	27	9.8E-02
Strontium	13	1.06	1.10	1.17	1.23	1.25	1.29	1.29	1.21	0.07	5.4E-02
Sulphur	8	162	163	167	170	173	177	179	170	5	3.1E-02
Thallium	13	0.0000	0.0000	0.0000	0.0000	0.0000	0.0002	0.0005	0.0000	0.0001	3.0E+00
Tin	13	0.0001	0.0001	0.0001	0.0001	0.0005	0.0012	0.0013	0.0004	0.0005	1.3E+00
Titanium	13	0.005	0.005	0.005	0.005	0.010	0.012	0.012	0.007	0.003	4.2E-01
Uranium	13	0.0023	0.0025	0.0026	0.0031	0.0049	0.0055	0.0061	0.0035	0.0013	3.6E-01
Vanadium	13	0.001	0.001	0.001	0.001	0.001	0.002	0.003	0.001	0.001	6.1E-01
Zinc	13	0.0015	0.0015	0.0015	0.0025	0.0030	0.0043	0.0063	0.0025	0.0013	5.3E-01
Organics											
Carbon Organic (Dissolved)	10	5.3	6.2	8.9	14.9	21.3	28.7	29.6	15.9	8.5	5.4E-01
Carbon Organic (Total)	13	5.3	7.5	10.5	13.1	21.2	28.3	30.1	15.7	7.5	4.8E-01
Nitrogen Organic (Dissolved)	6	0.09	0.11	0.19	0.25	0.37	0.58	0.64	0.30	0.19	6.4E-01
Nitrogen Organic (Total)	5	0.10	0.13	0.25	0.28	0.35	0.38	0.39	0.27	0.11	4.1E-01

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.41 - MW11-09D

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	12	999	1011	1028	1231	1420	1794	1882	1293	306	2.4E-01
Oxygen Dissolved %	11	0	4	11	13	24	35	37	17	11	6.5E-01
Oxygen Dissolved	12	0.0	0.5	1.2	1.6	2.5	4.3	4.6	2.0	1.3	6.6E-01
pH (unitless)	12	5.6	6.9	8.1	8.1	8.2	8.3	8.3	7.9	0.8	9.5E-02
Redox Potential mV	9	-293	-275	-206	-157	-126	4	34	-152	100	-6.6E-01
Salinity ppt	9	0.77	0.77	0.79	0.80	0.88	0.95	0.98	0.84	0.07	8.5E-02
Specific Conductivity µS/cm	11	1109	1216	1557	1593	1799	2023	2133	1644	280	1.7E-01
Temperature °C	12	5.3	5.4	6.1	7.2	8.1	9.6	10.1	7.3	1.5	2.1E-01
Total Dissolved Solids	9	991	997	1016	1119	1165	621498	1035000	115970	344636	3.0E+00
Turbidity NTU	11	0.0	0.7	1.6	1.8	5.1	18.1	26.1	5.2	7.5	1.5E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	2	0.5	0.6	1.0	1.6	2.1	2.5	2.6	1.6	1.5	9.6E-01
Alkalinity (Total as CaCO3)	12	116	126	141	144	165	178	185	150	19	1.3E-01
Bicarbonate Alkalinity	10	116	124	138	143	163	180	185	149	21	1.4E-01
Carbonate Alkalinity	10	0.5	0.5	0.6	1.0	1.0	1.5	1.9	0.9	0.4	4.4E-01
Color TCU	9	2.5	5.5	11.4	12.5	14.7	16.3	17.0	12.1	4.2	3.4E-01
Hardness as CaCO3 (Dissolved)	12	55	56	59	62	69	98	112	68	16	2.4E-01
Hydroxide Alkalinity	10	0.5	0.5	0.5	1.0	1.0	1.0	1.0	0.8	0.3	3.2E-01
pH (unitless)	12	8.0	8.0	8.1	8.2	8.3	8.3	8.3	8.2	0.1	1.4E-02
Specific Conductivity µS/cm	12	1550	1550	1608	1640	1690	1892	2040	1673	132	7.9E-02
Total Dissolved Solids	12	980	1013	1090	1120	1143	1333	1470	1138	121	1.1E-01
Total Suspended Solids	11	2	2	2	2	10	23	32	7	9	1.3E+00
Turbidity NTU	11	1	1	1	2	5	22	38	6	11	1.8E+00
Dissolved Anions											
Bromide	12	0.25	0.25	0.50	0.50	0.50	0.50	0.50	0.46	0.10	2.1E-01
Chloride	12	14	14	16	19	23	36	41	21	9	4.0E-01
Fluoride	12	0.20	0.20	0.33	0.41	0.60	0.80	0.87	0.46	0.23	4.9E-01
Sulphate	12	571	586	633	660	681	766	830	666	66	9.8E-02
Nutrients											
Ammonia (Total)	12	0.003	0.003	0.003	0.003	0.022	0.028	0.031	0.011	0.011	1.0E+00
Nitrate (as N)	12	0	0	0	0	0	0	0	0	0	6.7E-01
Nitrite (as N)	12	0.005	0.008	0.010	0.010	0.010	0.031	0.056	0.013	0.013	1.0E+00
Nitrogen (Dissolved)	6	0.11	0.12	0.17	0.24	0.25	0.28	0.29	0.22	0.07	3.2E-01
Nitrogen (Total)	9	0	0	0	0	0	1	1	0	0	9.0E-01
Nitrogen Kjeldahl (Total)	12	0.15	0.15	0.17	0.21	0.27	0.83	1.24	0.31	0.31	9.8E-01
Orthophosphate (Dissolved)	4	0.287	0.293	0.316	0.350	0.381	0.395	0.398	0.346	0.050	1.4E-01
Phosphorus - Dissolved	11	0.12	0.13	0.24	0.37	0.38	0.41	0.42	0.31	0.11	3.5E-01
Phosphorus - Total	12	0.124	0.185	0.337	0.398	0.432	0.455	0.467	0.364	0.102	2.8E-01
Cyanide										-	
Cyanide (Free)	12	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	12	0.0025	0.0025	0.0025	0.0025	0.0025	0.0052	0.0086	0.0030	0.0018	5.9E-01
Cyanide (WAD)	12	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	12	0.0095	0.0096	0.0099	0.0147	0.0186	0.0211	0.0232	0.0149	0.0048	3.2E-01
Antimony	12	0.00010	0.00010	0.00010	0.00010	0.00023	0.00083	0.00125	0.00025	0.00034	1.3E+00
Arsenic	12	0.0042	0.0044	0.0052	0.0056	0.0062	0.0064	0.0064	0.0056	0.0007	1.3E-01
Barium	12	0.036	0.037	0.040	0.042	0.045	0.051	0.053	0.043	0.005	1.1E-01
Beryllium	12	0.0001	0.0001	0.0001	0.0001	0.0001	0.0012	0.0025	0.0003	0.0007	2.3E+00
Bismuth	12	0.00050	0.00050	0.00050	0.00050	0.00050	0.04527	0.10000	0.00879	0.02872	3.3E+00
Boron	12	0.415	0.429	0.446	0.461	0.474	0.503	0.518	0.463	0.027	5.8E-02
Cadmium	12	0.000010	0.000010	0.000010	0.000010	0.000010	0.000096	0.000190	0.000026	0.000052	2.0E+00
Calcium	12	16	16	17	18	20	29	33	20	5	2.6E-01
Chromium	12	0.0001	0.0001	0.0001	0.0001	0.0009	0.0029	0.0034	0.0008	0.0011	1.5E+00
Cobalt	12	0.00010	0.00010	0.00025	0.00037	0.00058	0.00088	0.00104	0.00044	0.00028	6.4E-01
Copper	12	0.0002	0.0002	0.0002	0.0002	0.0005	0.0015	0.0025	0.0005	0.0007	1.2E+00
Iron	12	0.015	0.079	0.162	0.268	0.325	0.407	0.430	0.252	0.122	4.8E-01
Lead	12	0.00005	0.00005	0.00005	0.00005	0.00005	0.00059	0.00125	0.00015	0.00035	2.3E+00
Lithium	12	0.0118	0.0122	0.0146	0.0157	0.0197	0.0213	0.0230	0.0168	0.0034	2.0E-01
Magnesium	12	4	4	4	4	5	6	7	5	1	2.0E-01
Manganese	12	0.063	0.403	0.763	0.809	0.875	0.950	0.955	0.762	0.236	3.1E-01
Mercury	11	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000150	0.0000250	0.0000068	0.0000060	8.8E-01
Molybdenum	12	0.013	0.013	0.016	0.022	0.028	0.046	0.054	0.025	0.012	5.0E-01
Nickel	12	0.0014	0.0016	0.0023	0.0031	0.0055	0.0067	0.0071	0.0037	0.0020	5.3E-01
Phosphorus	12	0.15	0.15	0.33	0.40	0.42	0.44	0.45	0.35	0.12	3.5E-01
Potassium	12	1	1	1	1	2	4	4	2	1	5.4E-01
Selenium	12	0.000	0.000	0.000	0.000	0.000	0.002	0.003	0.000	0.001	1.9E+00
Silicon	12	2.9	3.2	3.4	3.6	3.9	4.0	4.0	3.6	0.3	8.8E-02
Silver	12	0.00001	0.00001	0.00001	0.00001	0.00001	0.00003	0.00005	0.00001	0.00001	8.7E-01
Sodium	12	303	311	320	329	343	404	432	340	35	1.0E-01
Strontium	12	0.68	0.69	0.73	0.76	0.80	0.93	1.02	0.78	0.09	1.2E-01
Sulphur	7	189	193	202	204	210	212	213	204	8	3.9E-02
Thallium	12	0.00001	0.00001	0.00001	0.00001	0.00001	0.00023	0.00050	0.00005	0.00014	2.8E+00
Tin	12	0.0001	0.0001	0.0001	0.0001	0.0001	0.0008	0.0013	0.0002	0.0003	1.5E+00
Titanium	12	0.0050	0.0050	0.0050	0.0100	0.0100	0.0100	0.0100	0.0083	0.0025	3.0E-01
Uranium	12	0.0008	0.0010	0.0013	0.0019	0.0033	0.0059	0.0072	0.0026	0.0019	7.3E-01
Vanadium	12	0.0010	0.0010	0.0010	0.0010	0.0010	0.0017	0.0025	0.0011	0.0004	3.8E-01
Zinc	12	0.0010	0.0010	0.0010	0.0010	0.0025	0.0068	0.0114	0.0023	0.0030	1.3E+00
Total Metals											
Aluminum	12	0.0	0.0	0.0	0.0	0.1	0.4	0.6	0.1	0.2	1.5E+00
Antimony	12	0.0001	0.0001	0.0001	0.0001	0.0004	0.0009	0.0013	0.0003	0.0003	1.1E+00
Arsenic	12	0.0044	0.0046	0.0054	0.0057	0.0062	0.0071	0.0081	0.0058	0.0009	1.6E-01
Barium	12	0.040	0.041	0.043	0.043	0.047	0.056	0.065	0.046	0.007	1.5E-01
Beryllium	12	0.0001	0.0001	0.0001	0.0001	0.0001	0.0012	0.0025	0.0003	0.0007	2.3E+00
Bismuth	12	0.00050	0.00050	0.00050	0.00050	0.00050	0.04527	0.10000	0.00879	0.02872	3.3E+00
Boron	12	0.411	0.432	0.457	0.483	0.506	0.528	0.543	0.481	0.037	7.6E-02
Cadmium	12	0.00001	0.00001	0.00001	0.00002	0.00008	0.00019	0.00024	0.00006	0.00007	1.3E+00
Calcium	12	16	16	17	17	21	32	40	20	7	3.3E-01
Chromium	12	0.000	0.000	0.000	0.001	0.003	0.007	0.011	0.002	0.003	1.3E+00
Cobalt	12	0.0002	0.0002	0.0003	0.0005	0.0008	0.0012	0.0015	0.0006	0.0004	6.4E-01
Copper	12	0.001	0.001	0.001	0.002	0.003	0.006	0.008	0.002	0.002	9.2E-01
Iron	12	0.06	0.21	0.37	0.44	0.54	0.66	0.78	0.44	0.17	3.9E-01
Lead	12	0.00010	0.00012	0.00014	0.00016	0.00028	0.00086	0.00125	0.00030	0.00032	1.1E+00
Lithium	12	0.0118	0.0122	0.0145	0.0167	0.0194	0.0231	0.0256	0.0171	0.0040	2.3E-01
Magnesium	12	4	4	4	4	5	6	7	5	1	2.0E-01
Manganese	12	0.07	0.41	0.77	0.83	0.88	0.95	0.97	0.77	0.24	3.0E-01
Mercury	11	0.000005	0.000005	0.000005	0.000005	0.000005	0.000015	0.000025	0.000007	0.000006	8.8E-01
Molybdenum	12	0.01	0.01	0.02	0.02	0.03	0.05	0.05	0.03	0.01	5.0E-01
Nickel	12	0.001	0.002	0.002	0.004	0.006	0.009	0.011	0.005	0.003	6.4E-01
Phosphorus	12	0.15	0.15	0.37	0.41	0.42	0.44	0.45	0.36	0.10	2.9E-01
Potassium	12	1	1	1	1	2	4	4	2	1	5.2E-01
Selenium	12	0.000	0.000	0.000	0.000	0.000	0.002	0.003	0.000	0.001	2.0E+00
Silicon	12	3.0	3.3	3.6	3.7	4.0	4.5	4.6	3.8	0.4	1.1E-01
Silver	12	0.00001	0.00001	0.00001	0.00001	0.00001	0.00005	0.00005	0.00002	0.00002	9.6E-01
Sodium	12	306	308	322	335	341	401	420	341	33	9.6E-02
Strontium	12	0.66	0.69	0.74	0.78	0.80	0.97	1.07	0.79	0.10	1.3E-01
Sulphur	7	176	180	193	204	211	214	215	200	14	7.1E-02
Thallium	12	0.0000	0.0000	0.0000	0.0000	0.0000	0.0002	0.0005	0.0001	0.0001	2.8E+00
Tin	12	0.0001	0.0001	0.0001	0.0001	0.0004	0.0015	0.0018	0.0004	0.0005	1.3E+00
Titanium	12	0.005	0.005	0.009	0.010	0.010	0.019	0.029	0.010	0.006	6.1E-01
Uranium	12	0.0008	0.0011	0.0014	0.0018	0.0034	0.0062	0.0071	0.0026	0.0019	7.3E-01
Vanadium	12	0.001	0.001	0.001	0.001	0.001	0.003	0.003	0.001	0.001	4.7E-01
Zinc	12	0.0025	0.0028	0.0030	0.0030	0.0067	0.0129	0.0186	0.0053	0.0046	8.7E-01
Organics											
Carbon Organic (Dissolved)	9	11.7	12.0	13.2	14.1	18.7	30.6	33.4	17.9	7.4	4.1E-01
Carbon Organic (Total)	12	10.5	10.8	12.4	13.1	17.9	29.4	33.4	16.2	6.9	4.3E-01
Nitrogen Organic (Dissolved)	6	0.11	0.12	0.15	0.19	0.22	0.24	0.25	0.18	0.05	2.9E-01
Nitrogen Organic (Total)	5	0.14	0.14	0.15	0.15	0.50	1.08	1.22	0.43	0.47	1.1E+00

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.42 - MW11-09S

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	12	1197	1220	1285	1406	1790	2211	2273	1565	391	2.5E-01
Oxygen Dissolved %	11	0	1	5	18	30	57	67	21	21	9.9E-01
Oxygen Dissolved	12	0.0	0.2	0.7	1.7	2.9	7.2	8.4	2.5	2.6	1.0E+00
pH (unitless)	12	7.8	7.9	8.0	8.1	8.1	8.3	8.3	8.1	0.1	1.7E-02
Redox Potential mV	8	-296	-246	-32	76	91	129	135	6	152	2.7E+01
Salinity ppt	8	0.99	0.99	1.01	1.06	1.11	1.21	1.24	1.08	0.08	7.8E-02
Specific Conductivity µS/cm	11	1312	1409	1943	1980	2168	2320	2392	1975	317	1.6E-01
Temperature °C	12	2.4	4.2	6.1	6.8	7.2	9.0	9.9	6.7	1.8	2.6E-01
Total Dissolved Solids	8	1270	1272	1285	1355	1396	1517	1557	1365	97	7.1E-02
Turbidity NTU	12	-1.5	-0.7	0.9	2.2	2.8	6.1	8.6	2.2	2.5	1.2E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	2	2.3	2.3	2.4	2.5	2.5	2.6	2.6	2.5	0.2	8.7E-02
Alkalinity (Total as CaCO3)	12	110	111	120	124	135	152	153	128	14	1.1E-01
Bicarbonate Alkalinity	10	110	110	118	123	128	147	153	125	13	1.0E-01
Carbonate Alkalinity	10	0.5	0.5	0.5	1.0	1.0	1.0	1.0	0.8	0.3	3.2E-01
Color TCU	9	2.5	3.9	6.1	6.6	8.5	10.2	11.1	7.0	2.4	3.4E-01
Hardness as CaCO3 (Dissolved)	12	102	102	104	106	110	131	137	110	11	9.9E-02
Hydroxide Alkalinity	10	0.5	0.5	0.5	1.0	1.0	1.0	1.0	0.8	0.3	3.2E-01
pH (unitless)	12	8.1	8.1	8.2	8.2	8.2	8.3	8.3	8.2	0.1	8.3E-03
Specific Conductivity µS/cm	12	1920	1942	2000	2010	2025	2136	2240	2022	77	3.8E-02
Total Dissolved Solids	12	1220	1242	1328	1375	1415	1463	1490	1365	77	5.7E-02
Total Suspended Solids	11	2	2	2	2	4	7	8	3	2	8.0E-01
Turbidity NTU	11	1	1	1	1	3	6	6	2	2	8.3E-01
Dissolved Anions											
Bromide	12	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	-	-
Chloride	12	19	19	20	21	23	29	36	22	5	2.1E-01
Fluoride	12	0.20	0.20	0.20	0.25	0.50	0.67	0.71	0.35	0.20	5.6E-01
Sulphate	12	841	847	864	873	880	925	979	877	34	3.9E-02
Nutrients											
Ammonia (Total)	12	0.011	0.012	0.018	0.021	0.023	0.031	0.033	0.021	0.006	3.0E-01
Nitrate (as N)	12	0	0	0	0	0	0	0	0	-	-
Nitrite (as N)	12	0.010	0.010	0.010	0.010	0.010	0.025	0.027	0.013	0.006	4.8E-01
Nitrogen (Dissolved)	6	0.15	0.15	0.16	0.17	0.20	0.26	0.28	0.19	0.05	2.5E-01
Nitrogen (Total)	9	0	0	0	0	0	0	0	0	0	3.3E-01
Nitrogen Kjeldahl (Total)	12	0.13	0.14	0.17	0.18	0.24	0.29	0.30	0.21	0.06	2.7E-01
Orthophosphate (Dissolved)	4	0.098	0.099	0.105	0.109	0.111	0.111	0.111	0.107	0.006	5.7E-02
Phosphorus - Dissolved	10	0.05	0.06	0.08	0.10	0.12	0.14	0.15	0.10	0.03	3.1E-01
Phosphorus - Total	12	0.062	0.072	0.096	0.109	0.130	0.149	0.161	0.110	0.028	2.5E-01
Cyanide										-	
Cyanide (Free)	12	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	12	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (WAD)	12	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	12	0.0092	0.0096	0.0105	0.0120	0.0144	0.0276	0.0430	0.0145	0.0092	6.3E-01
Antimony	12	0.00010	0.00010	0.00010	0.00010	0.00015	0.00125	0.00125	0.00031	0.00044	1.4E+00
Arsenic	12	0.0038	0.0039	0.0045	0.0048	0.0049	0.0056	0.0064	0.0047	0.0007	1.4E-01
Barium	12	0.026	0.026	0.027	0.028	0.035	0.043	0.047	0.032	0.007	2.1E-01
Beryllium	12	0.0001	0.0001	0.0001	0.0001	0.0001	0.0025	0.0025	0.0005	0.0009	1.9E+00
Bismuth	12	0.00050	0.00050	0.00050	0.00050	0.00050	0.10000	0.10000	0.01708	0.03873	2.3E+00
Boron	12	0.423	0.433	0.449	0.459	0.473	0.524	0.529	0.467	0.032	6.8E-02
Cadmium	12	0.000010	0.000010	0.000033	0.000047	0.000067	0.000120	0.000157	0.000055	0.000040	7.3E-01
Calcium	11	30	30	30	30	32	39	40	32	4	1.1E-01
Chromium	12	0.0001	0.0001	0.0001	0.0001	0.0002	0.0025	0.0025	0.0005	0.0009	1.8E+00
Cobalt	12	0.00023	0.00024	0.00026	0.00029	0.00057	0.00075	0.00075	0.00040	0.00020	5.1E-01
Copper	12	0.0002	0.0002	0.0004	0.0006	0.0017	0.0131	0.0200	0.0029	0.0057	2.0E+00
Iron	12	0.005	0.005	0.015	0.016	0.032	0.060	0.083	0.025	0.021	8.6E-01
Lead	12	0.00005	0.00005	0.00005	0.00005	0.00005	0.00125	0.00125	0.00025	0.00047	1.9E+00
Lithium	12	0.0158	0.0200	0.0239	0.0256	0.0273	0.0319	0.0330	0.0257	0.0042	1.6E-01
Magnesium	11	7	7	7	7	7	9	9	7	1	8.9E-02
Manganese	12	0.168	0.169	0.196	0.211	0.225	0.290	0.327	0.217	0.043	2.0E-01
Mercury	12	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000140	0.0000250	0.0000067	0.0000058	8.7E-01
Molybdenum	12	0.016	0.017	0.019	0.020	0.021	0.029	0.037	0.021	0.005	2.5E-01
Nickel	12	0.0011	0.0011	0.0012	0.0015	0.0025	0.0033	0.0037	0.0019	0.0009	4.7E-01
Phosphorus	11	0.10	0.10	0.11	0.12	0.15	0.15	0.15	0.13	0.02	1.6E-01
Potassium	12	1	1	1	1	1	1	2	1	0	1.6E-01
Selenium	12	0.000	0.000	0.000	0.000	0.000	0.003	0.003	0.001	0.001	1.8E+00
Silicon	11	3.8	3.8	3.9	4.0	4.1	4.1	4.2	4.0	0.1	2.9E-02
Silver	12	0.00001	0.00001	0.00001	0.00001	0.00001	0.00005	0.00005	0.00002	0.00002	9.3E-01
Sodium	12	374	381	392	398	410	441	456	404	22	5.4E-02
Strontium	12	1.18	1.22	1.30	1.33	1.35	1.47	1.59	1.33	0.10	7.2E-02
Sulphur	7	269	269	271	274	275	281	283	274	5	1.7E-02
Thallium	12	0.00001	0.00001	0.00001	0.00001	0.00002	0.00050	0.00050	0.00009	0.00019	2.0E+00
Tin	12	0.0001	0.0001	0.0001	0.0001	0.0002	0.0013	0.0013	0.0003	0.0004	1.4E+00
Titanium	11	0.0050	0.0050	0.0050	0.0100	0.0100	0.0100	0.0100	0.0082	0.0025	3.1E-01
Uranium	12	0.0005	0.0006	0.0007	0.0008	0.0015	0.0017	0.0019	0.0010	0.0005	4.6E-01
Vanadium	12	0.0010	0.0010	0.0010	0.0010	0.0010	0.0025	0.0025	0.0013	0.0006	4.7E-01
Zinc	12	0.0010	0.0010	0.0018	0.0026	0.0034	0.0110	0.0174	0.0038	0.0045	1.2E+00
Total Metals											
Aluminum	12	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.1	0.1	8.1E-01
Antimony	12	0.0001	0.0001	0.0001	0.0001	0.0003	0.0013	0.0013	0.0003	0.0004	1.3E+00
Arsenic	12	0.0039	0.0039	0.0045	0.0050	0.0052	0.0055	0.0056	0.0048	0.0006	1.2E-01
Barium	12	0.025	0.026	0.028	0.029	0.037	0.046	0.050	0.033	0.008	2.3E-01
Beryllium	12	0.0001	0.0001	0.0001	0.0001	0.0001	0.0025	0.0025	0.0005	0.0009	1.9E+00
Bismuth	12	0.00050	0.00050	0.00050	0.00050	0.00050	0.10000	0.10000	0.01708	0.03873	2.3E+00
Boron	12	0.440	0.441	0.459	0.467	0.498	0.544	0.560	0.480	0.036	7.6E-02
Cadmium	12	0.00001	0.00003	0.00005	0.00005	0.00009	0.00016	0.00018	0.00007	0.00005	6.5E-01
Calcium	11	29	29	30	31	32	39	40	32	4	1.2E-01
Chromium	12	0.000	0.000	0.000	0.000	0.001	0.003	0.003	0.001	0.001	1.1E+00
Cobalt	12	0.0002	0.0003	0.0003	0.0004	0.0006	0.0008	0.0008	0.0005	0.0002	4.1E-01
Copper	12	0.001	0.001	0.001	0.002	0.002	0.018	0.021	0.004	0.007	1.5E+00
Iron	12	0.06	0.06	0.07	0.09	0.13	0.29	0.30	0.12	0.08	6.7E-01
Lead	12	0.00005	0.00005	0.00005	0.00005	0.00015	0.00125	0.00125	0.00027	0.00046	1.7E+00
Lithium	12	0.0156	0.0201	0.0252	0.0262	0.0283	0.0324	0.0340	0.0263	0.0044	1.7E-01
Magnesium	11	7	7	7	7	7	9	9	7	1	9.4E-02
Manganese	12	0.17	0.17	0.22	0.23	0.24	0.31	0.34	0.23	0.04	1.9E-01
Mercury	12	0.000005	0.000005	0.000005	0.000005	0.000005	0.000014	0.000025	0.000007	0.000006	8.7E-01
Molybdenum	12	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.02	0.00	1.9E-01
Nickel	12	0.001	0.001	0.001	0.002	0.003	0.005	0.005	0.002	0.001	5.6E-01
Phosphorus	11	0.10	0.10	0.11	0.13	0.15	0.15	0.15	0.13	0.02	1.6E-01
Potassium	12	1	1	1	1	1	1	2	1	0	1.6E-01
Selenium	12	0.000	0.000	0.000	0.000	0.000	0.003	0.003	0.001	0.001	1.7E+00
Silicon	11	3.9	3.9	4.0	4.1	4.3	4.4	4.5	4.1	0.2	4.9E-02
Silver	12	0.00001	0.00001	0.00001	0.00001	0.00001	0.00005	0.00005	0.00002	0.00002	9.3E-01
Sodium	12	384	384	392	408	420	443	461	409	22	5.4E-02
Strontium	12	1.20	1.24	1.31	1.35	1.42	1.51	1.60	1.37	0.10	7.4E-02
Sulphur	7	268	269	273	276	280	282	282	276	5	1.9E-02
Thallium	12	0.0000	0.0000	0.0000	0.0000	0.0000	0.0005	0.0005	0.0001	0.0002	1.9E+00
Tin	12	0.0001	0.0001	0.0001	0.0001	0.0013	0.0043	0.0078	0.0010	0.0022	2.1E+00
Titanium	11	0.005	0.005	0.008	0.010	0.010	0.014	0.017	0.009	0.003	3.7E-01
Uranium	12	0.0005	0.0006	0.0007	0.0008	0.0015	0.0019	0.0021	0.0011	0.0005	4.8E-01
Vanadium	12	0.001	0.001	0.001	0.001	0.001	0.003	0.003	0.001	0.001	4.7E-01
Zinc	12	0.0025	0.0025	0.0030	0.0030	0.0030	0.0179	0.0221	0.0055	0.0062	1.1E+00
Organics											
Carbon Organic (Dissolved)	9	4.3	4.7	5.3	5.7	5.9	7.2	7.6	5.7	0.9	1.6E-01
Carbon Organic (Total)	12	4.2	4.5	4.9	5.3	5.8	7.2	8.0	5.5	1.0	1.8E-01
Nitrogen Organic (Dissolved)	6	0.13	0.13	0.14	0.15	0.17	0.23	0.24	0.17	0.04	2.5E-01
Nitrogen Organic (Total)	5	0.14	0.14	0.15	0.15	0.26	0.29	0.29	0.20	0.07	3.6E-01

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.43 - MW11-10D

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	12	1856	1903	1957	2143	2702	2965	3019	2336	439	1.9E-01
Oxygen Dissolved %	11	1	2	2	3	8	14	16	6	5	9.0E-01
Oxygen Dissolved	12	0.1	0.1	0.2	0.3	0.9	1.4	1.9	0.6	0.5	9.6E-01
pH (unitless)	12	6.0	6.7	7.5	7.5	8.0	9.0	9.1	7.7	0.8	1.1E-01
Redox Potential mV	10	-338	-275	-194	-139	-133	2	83	-148	105	-7.1E-01
Salinity ppt	10	1.45	1.45	1.49	1.50	1.56	1.76	1.83	1.55	0.12	7.7E-02
Specific Conductivity µS/cm	11	1940	1961	2415	2795	2887	3335	3469	2692	492	1.8E-01
Temperature °C	12	7.8	7.9	8.6	9.3	10.4	12.0	12.2	9.6	1.5	1.6E-01
Total Dissolved Solids	10	2	819	1870	1878	2052	1018513	1850000	186561	584473	3.1E+00
Turbidity NTU	12	-2.1	-0.9	1.8	3.0	14.8	74.7	82.7	17.8	29.7	1.7E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	-	-
Alkalinity (Total as CaCO3)	12	152	164	223	244	246	261	266	228	34	1.5E-01
Bicarbonate Alkalinity	10	152	162	233	245	247	262	266	230	37	1.6E-01
Carbonate Alkalinity	10	0.5	0.5	1.0	1.0	1.0	1.0	1.0	0.9	0.2	2.3E-01
Color TCU	9	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	-	-
Hardness as CaCO3 (Dissolved)	11	1410	1445	1525	1580	1615	1625	1630	1557	69	4.4E-02
Hydroxide Alkalinity	10	0.5	0.5	1.0	1.0	1.0	1.0	1.0	0.9	0.2	2.3E-01
pH (unitless)	12	7.9	7.9	8.0	8.0	8.1	8.2	8.2	8.0	0.1	1.3E-02
Specific Conductivity µS/cm	12	2680	2680	2758	2845	2885	2920	2920	2817	92	3.3E-02
Total Dissolved Solids	12	2490	2540	2678	2735	2798	2844	2860	2719	108	4.0E-02
Total Suspended Solids	10	2	2	4	9	11	134	163	32	55	1.7E+00
Turbidity NTU	10	3	3	9	11	12	94	97	26	36	1.4E+00
Dissolved Anions											
Bromide	12	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	-	-
Chloride	12	5	5	5	5	5	7	10	5	1	2.7E-01
Fluoride	12	0.19	0.19	0.20	0.20	0.20	0.42	0.67	0.24	0.14	5.7E-01
Sulphate	12	1640	1651	1715	1725	1740	1765	1770	1719	38	2.2E-02
Nutrients											
Ammonia (Total)	12	0.052	0.053	0.056	0.063	0.074	0.123	0.148	0.072	0.028	3.8E-01
Nitrate (as N)	12	0	0	0	0	0	0	0	0	-	-
Nitrite (as N)	12	0.010	0.010	0.010	0.010	0.010	0.024	0.042	0.013	0.009	7.3E-01
Nitrogen (Dissolved)	4	0.18	0.19	0.20	0.24	0.29	0.33	0.34	0.25	0.07	2.8E-01
Nitrogen (Total)	8	0	0	0	0	0	0	0	0	0	3.2E-01
Nitrogen Kjeldahl (Total)	12	0.21	0.21	0.22	0.22	0.27	0.32	0.36	0.25	0.05	1.8E-01
Orthophosphate (Dissolved)	5	0.001	0.001	0.001	0.001	0.001	0.003	0.004	0.002	0.001	7.8E-01
Phosphorus - Dissolved	10	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	9.5E-01
Phosphorus - Total	12	0.011	0.013	0.020	0.021	0.022	0.024	0.024	0.020	0.004	1.9E-01
Cyanide										-	
Cyanide (Free)	12	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	11	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (WAD)	12	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	12	0.0005	0.0008	0.0011	0.0020	0.0030	0.0050	0.0050	0.0023	0.0015	6.5E-01
Antimony	12	0.00005	0.00005	0.00005	0.00010	0.00046	0.00359	0.00737	0.00081	0.00208	2.6E+00
Arsenic	12	0.0045	0.0048	0.0053	0.0055	0.0056	0.0058	0.0058	0.0054	0.0004	6.5E-02
Barium	12	0.007	0.007	0.008	0.009	0.013	0.045	0.059	0.016	0.016	9.8E-01
Beryllium	12	0.0001	0.0001	0.0001	0.0001	0.0001	0.0010	0.0010	0.0002	0.0004	1.6E+00
Bismuth	12	0.00025	0.00025	0.00025	0.00050	0.00050	0.10000	0.10000	0.01698	0.03878	2.3E+00
Boron	12	0.050	0.065	0.083	0.089	0.089	0.096	0.100	0.085	0.012	1.4E-01
Cadmium	12	0.000005	0.000005	0.000005	0.000010	0.000010	0.000017	0.000017	0.000009	0.000004	4.8E-01
Calcium	12	244	254	264	279	285	295	299	276	15	5.5E-02
Chromium	12	0.0001	0.0001	0.0001	0.0001	0.0001	0.0010	0.0010	0.0002	0.0004	1.5E+00
Cobalt	12	0.00010	0.00010	0.00010	0.00012	0.00020	0.00113	0.00214	0.00032	0.00058	1.8E+00
Copper	12	0.0001	0.0001	0.0001	0.0002	0.0005	0.0010	0.0010	0.0004	0.0003	9.3E-01
Iron	12	0.015	0.088	0.691	0.980	1.020	1.030	1.030	0.776	0.377	4.9E-01
Lead	12	0.00003	0.00003	0.00003	0.00005	0.00005	0.00050	0.00050	0.00011	0.00018	1.6E+00
Lithium	12	0.0091	0.0091	0.0098	0.0106	0.0115	0.0122	0.0125	0.0106	0.0011	1.1E-01
Magnesium	12	195	195	210	218	220	225	226	214	11	5.1E-02
Manganese	12	0.153	0.224	0.327	0.342	0.357	0.367	0.368	0.326	0.059	1.8E-01
Mercury	12	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	-	-
Molybdenum	12	0.022	0.023	0.025	0.025	0.026	0.028	0.030	0.026	0.002	7.3E-02
Nickel	12	0.0003	0.0003	0.0005	0.0007	0.0011	0.0063	0.0111	0.0017	0.0030	1.8E+00
Phosphorus	12	0.03	0.03	0.03	0.03	0.15	0.15	0.15	0.07	0.06	9.2E-01
Potassium	12	14	14	14	14	15	16	18	15	1	7.7E-02
Selenium	11	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	1.6E+00
Silicon	12	11.0	12.0	13.8	14.4	14.6	14.9	14.9	14.0	1.1	8.0E-02
Silver	12	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00001	0.00001	5.7E-01
Sodium	12	156	158	161	163	168	178	183	165	7	4.4E-02
Strontium	12	2.67	2.77	3.10	3.21	3.48	3.87	4.16	3.28	0.39	1.2E-01
Sulphur	8	493	502	531	540	544	550	552	534	19	3.5E-02
Thallium	12	0.00001	0.00001	0.00001	0.00001	0.00001	0.00020	0.00020	0.00004	0.00007	1.9E+00
Tin	12	0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0005	0.0001	0.0002	1.1E+00
Titanium	12	0.0050	0.0050	0.0050	0.0050	0.0100	0.0143	0.0170	0.0078	0.0040	5.0E-01
Uranium	11	0.0024	0.0024	0.0027	0.0028	0.0028	0.0030	0.0030	0.0027	0.0002	7.4E-02
Vanadium	12	0.0005	0.0005	0.0005	0.0010	0.0010	0.0018	0.0027	0.0009	0.0006	6.5E-01
Zinc	12	0.0005	0.0005	0.0010	0.0020	0.0028	0.0036	0.0043	0.0020	0.0012	6.1E-01
Total Metals											
Aluminum	12	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	1.3E+00
Antimony	12	0.0001	0.0001	0.0001	0.0001	0.0005	0.0033	0.0068	0.0008	0.0019	2.5E+00
Arsenic	12	0.0048	0.0050	0.0054	0.0055	0.0057	0.0060	0.0060	0.0055	0.0003	6.1E-02
Barium	12	0.008	0.009	0.010	0.017	0.031	0.058	0.063	0.025	0.020	7.8E-01
Beryllium	12	0.0001	0.0001	0.0001	0.0001	0.0001	0.0010	0.0010	0.0002	0.0004	1.6E+00
Bismuth	12	0.00025	0.00025	0.00025	0.00050	0.00050	0.10000	0.10000	0.01698	0.03878	2.3E+00
Boron	12	0.050	0.069	0.092	0.096	0.100	0.110	0.110	0.093	0.016	1.7E-01
Cadmium	12	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00001	0.00000	4.4E-01
Calcium	12	252	256	270	275	278	289	291	274	11	4.1E-02
Chromium	12	0.000	0.000	0.000	0.000	0.001	0.002	0.003	0.001	0.001	1.1E+00
Cobalt	12	0.0001	0.0001	0.0001	0.0002	0.0003	0.0012	0.0023	0.0004	0.0006	1.7E+00
Copper	12	0.000	0.000	0.001	0.001	0.001	0.002	0.002	0.001	0.001	7.8E-01
Iron	12	0.17	0.34	0.92	1.01	1.02	1.03	1.04	0.88	0.27	3.1E-01
Lead	12	0.00003	0.00003	0.00003	0.00005	0.00014	0.00050	0.00050	0.00014	0.00018	1.3E+00
Lithium	12	0.0098	0.0100	0.0105	0.0111	0.0121	0.0128	0.0130	0.0113	0.0010	9.0E-02
Magnesium	12	194	198	208	213	220	226	230	213	10	4.8E-02
Manganese	12	0.29	0.29	0.34	0.35	0.37	0.37	0.38	0.34	0.03	8.8E-02
Mercury	12	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	-	-
Molybdenum	12	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.00	6.0E-02
Nickel	12	0.000	0.000	0.001	0.001	0.002	0.006	0.011	0.002	0.003	1.5E+00
Phosphorus	12	0.03	0.03	0.03	0.03	0.15	0.15	0.15	0.07	0.06	9.2E-01
Potassium	12	13	13	14	14	15	18	18	15	2	1.0E-01
Selenium	12	0.000	0.000	0.000	0.000	0.000	0.004	0.008	0.001	0.002	2.6E+00
Silicon	12	10.8	12.0	13.9	14.4	14.5	15.0	15.2	14.0	1.1	8.2E-02
Silver	12	0.00001	0.00001	0.00001	0.00001	0.00001	0.00006	0.00011	0.00002	0.00003	1.6E+00
Sodium	12	155	156	163	166	175	181	183	168	9	5.2E-02
Strontium	12	2.68	2.90	3.21	3.38	3.62	3.99	4.12	3.41	0.38	1.1E-01
Sulphur	8	518	521	528	544	551	564	570	542	17	3.1E-02
Thallium	12	0.0000	0.0000	0.0000	0.0000	0.0000	0.0002	0.0002	0.0000	0.0001	1.9E+00
Tin	12	0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0005	0.0002	0.0002	1.1E+00
Titanium	12	0.005	0.005	0.005	0.010	0.010	0.014	0.017	0.009	0.004	4.4E-01
Uranium	12	0.0025	0.0026	0.0028	0.0029	0.0029	0.0136	0.0263	0.0048	0.0068	1.4E+00
Vanadium	12	0.001	0.001	0.001	0.001	0.001	0.002	0.003	0.001	0.001	6.1E-01
Zinc	12	0.0015	0.0015	0.0015	0.0028	0.0030	0.0073	0.0108	0.0032	0.0026	8.0E-01
Organics											
Carbon Organic (Dissolved)	9	3.4	3.6	4.0	4.7	5.2	12.5	15.4	6.0	3.8	6.4E-01
Carbon Organic (Total)	12	3.3	3.3	3.5	4.1	4.9	10.8	14.1	5.2	3.1	6.0E-01
Nitrogen Organic (Dissolved)	3	0.11	0.11	0.14	0.17	0.18	0.19	0.19	0.16	0.05	2.9E-01
Nitrogen Organic (Total)	4	0.07	0.08	0.14	0.17	0.18	0.20	0.21	0.15	0.06	4.0E-01

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.44 - MW12-01

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	7	2229	2274	2393	2558	3093	3401	3431	2741	479	1.7E-01
Oxygen Dissolved %	7	2	2	2	6	21	65	80	19	29	1.5E+00
Oxygen Dissolved	8	0.2	0.2	0.3	1.0	2.2	7.1	9.2	2.1	3.0	1.4E+00
pH (unitless)	8	7.2	7.2	7.3	7.5	7.5	7.6	7.6	7.4	0.1	1.9E-02
Redox Potential mV	8	2	26	92	116	199	232	236	132	80	6.1E-01
Salinity ppt	7	1.71	1.72	1.77	1.78	1.88	2.06	2.11	1.84	0.14	7.6E-02
Specific Conductivity µS/cm	8	2270	2296	3008	3321	3463	3878	3976	3192	600	1.9E-01
Temperature °C	8	8.2	8.3	8.4	8.7	9.6	10.2	10.3	9.0	0.8	8.8E-02
Total Dissolved Solids	7	2121	2144	2199	2230	2493	27515	38200	7419	13574	1.8E+00
Turbidity NTU	7	-2.2	-2.1	-0.9	1.5	1.8	2.0	2.0	0.4	1.8	4.2E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	-	-
Alkalinity (Total as CaCO3)	8	173	174	177	179	184	188	189	180	5	3.0E-02
Bicarbonate Alkalinity	7	173	174	178	179	184	188	189	181	5	3.0E-02
Carbonate Alkalinity	7	0.5	0.7	1.0	1.0	1.0	1.0	1.0	0.9	0.2	2.0E-01
Color TCU	3	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	-	-
Hardness as CaCO3 (Dissolved)	7	1620	1662	1785	1860	1895	1941	1950	1827	111	6.1E-02
Hydroxide Alkalinity	7	0.5	0.7	1.0	1.0	1.0	1.0	1.0	0.9	0.2	2.0E-01
pH (unitless)	8	7.9	7.9	8.0	8.1	8.1	8.1	8.1	8.0	0.1	9.1E-03
Specific Conductivity µS/cm	8	3190	3215	3275	3315	3365	3430	3440	3320	82	2.5E-02
Total Dissolved Solids	8	3070	3102	3190	3280	3313	3396	3420	3258	111	3.4E-02
Total Suspended Solids	6	2	2	2	5	7	8	9	5	3	6.6E-01
Turbidity NTU	6	0	0	0	0	0	0	1	0	0	5.0E-01
Dissolved Anions											
Bromide	8	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	-	-
Chloride	8	17	17	17	18	19	20	20	18	1	6.6E-02
Fluoride	8	0.17	0.17	0.20	0.20	0.27	0.47	0.47	0.26	0.13	4.9E-01
Sulphate	8	1660	1664	1693	1725	1790	1797	1800	1733	55	3.2E-02
Nutrients											
Ammonia (Total)	8	0.003	0.003	0.003	0.003	0.003	0.016	0.021	0.005	0.007	1.3E+00
Nitrate (as N)	8	81	83	88	88	89	90	90	88	3	3.4E-02
Nitrite (as N)	8	0.097	0.120	0.167	0.199	0.322	0.396	0.429	0.238	0.111	4.6E-01
Nitrogen (Dissolved)	1	85.90	85.90	85.90	85.90	85.90	85.90	85.90	85.90	-	-
Nitrogen (Total)	4	84	84	84	86	94	107	110	91	13	1.4E-01
Nitrogen Kjeldahl (Total)	8	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	-	-
Orthophosphate (Dissolved)	5	0.004	0.006	0.015	0.016	0.017	0.018	0.018	0.014	0.006	4.2E-01
Phosphorus - Dissolved	8	0.00	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.01	3.0E-01
Phosphorus - Total	6	0.015	0.016	0.017	0.018	0.019	0.020	0.020	0.018	0.002	9.7E-02
Cyanide										-	
Cyanide (Free)	7	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	7	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (WAD)	7	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	8	0.0021	0.0021	0.0023	0.0031	0.0041	0.0043	0.0044	0.0032	0.0009	3.0E-01
Antimony	8	0.00353	0.00357	0.00369	0.00372	0.00397	0.00407	0.00412	0.00380	0.00020	5.3E-02
Arsenic	8	0.0043	0.0044	0.0048	0.0050	0.0052	0.0056	0.0058	0.0050	0.0004	8.6E-02
Barium	8	0.030	0.030	0.031	0.034	0.037	0.046	0.049	0.036	0.006	1.8E-01
Beryllium	8	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000	3.8E-01
Bismuth	8	0.00025	0.00025	0.00025	0.00025	0.00050	0.00050	0.00050	0.00034	0.00013	3.8E-01
Boron	8	0.098	0.099	0.104	0.112	0.116	0.119	0.120	0.110	0.008	7.3E-02
Cadmium	8	0.000050	0.000155	0.000388	0.000500	0.000628	0.000737	0.000750	0.000483	0.000224	4.6E-01
Calcium	8	238	239	242	244	247	257	258	246	7	2.8E-02
Chromium	8	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000	3.8E-01
Cobalt	8	0.00071	0.00072	0.00074	0.00085	0.00100	0.00168	0.00192	0.00099	0.00041	4.1E-01
Copper	8	0.0027	0.0028	0.0030	0.0031	0.0037	0.0063	0.0071	0.0038	0.0015	4.0E-01
Iron	8	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	-	-
Lead	8	0.00003	0.00003	0.00003	0.00003	0.00005	0.00005	0.00005	0.00003	0.00001	3.8E-01
Lithium	8	0.0280	0.0281	0.0291	0.0307	0.0329	0.0331	0.0331	0.0307	0.0022	7.1E-02
Magnesium	8	247	258	291	297	312	318	318	295	23	7.9E-02
Manganese	8	0.046	0.046	0.051	0.057	0.073	0.088	0.088	0.063	0.017	2.7E-01
Mercury	8	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	-	-
Molybdenum	8	3.100	3.156	3.343	3.415	3.560	3.610	3.620	3.415	0.176	5.1E-02
Nickel	8	0.0100	0.0100	0.0117	0.0126	0.0138	0.0146	0.0148	0.0125	0.0018	1.4E-01
Phosphorus	8	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	-	-
Potassium	8	41	41	42	45	47	49	50	45	3	6.8E-02
Selenium	8	0.039	0.040	0.041	0.042	0.044	0.045	0.046	0.043	0.002	5.1E-02
Silicon	8	6.9	6.9	7.1	7.3	7.3	7.4	7.4	7.2	0.2	2.5E-02
Silver	8	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00000	3.8E-01
Sodium	8	132	136	145	148	150	151	151	146	6	4.3E-02
Strontium	8	3.01	3.13	3.39	3.45	3.51	3.56	3.58	3.41	0.18	5.1E-02
Sulphur	8	448	477	537	547	555	578	587	539	41	7.5E-02
Thallium	8	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00002	0.00001	0.00000	2.7E-01
Tin	8	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000	3.8E-01
Titanium	8	0.0050	0.0050	0.0050	0.0050	0.0100	0.0100	0.0100	0.0069	0.0026	3.8E-01
Uranium	8	0.0138	0.0138	0.0140	0.0144	0.0148	0.0153	0.0153	0.0144	0.0006	4.0E-02
Vanadium	8	0.0026	0.0026	0.0028	0.0029	0.0030	0.0037	0.0040	0.0030	0.0004	1.4E-01
Zinc	8	0.0010	0.0010	0.0019	0.0024	0.0028	0.0036	0.0038	0.0023	0.0010	4.2E-01
Total Metals											
Aluminum	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7E-01
Antimony	8	0.0035	0.0036	0.0039	0.0039	0.0040	0.0043	0.0043	0.0039	0.0002	6.0E-02
Arsenic	8	0.0043	0.0045	0.0049	0.0052	0.0054	0.0058	0.0059	0.0052	0.0005	9.2E-02
Barium	8	0.028	0.029	0.031	0.035	0.038	0.047	0.050	0.036	0.007	1.9E-01
Beryllium	8	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000	3.8E-01
Bismuth	8	0.00025	0.00025	0.00025	0.00025	0.00050	0.00050	0.00050	0.00034	0.00013	3.8E-01
Boron	8	0.104	0.105	0.111	0.121	0.128	0.132	0.132	0.120	0.011	9.1E-02
Cadmium	8	0.00010	0.00019	0.00039	0.00048	0.00053	0.00125	0.00160	0.00056	0.00044	7.9E-01
Calcium	8	234	235	239	242	249	256	257	244	8	3.3E-02
Chromium	8	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.2E-01
Cobalt	8	0.0008	0.0008	0.0008	0.0009	0.0011	0.0017	0.0019	0.0011	0.0004	3.5E-01
Copper	8	0.003	0.003	0.003	0.004	0.005	0.008	0.009	0.005	0.002	4.4E-01
Iron	8	0.01	0.01	0.03	0.03	0.04	0.08	0.10	0.04	0.03	7.3E-01
Lead	8	0.00003	0.00003	0.00003	0.00004	0.00006	0.00025	0.00034	0.00008	0.00011	1.4E+00
Lithium	8	0.0279	0.0282	0.0296	0.0337	0.0342	0.0350	0.0352	0.0322	0.0029	9.0E-02
Magnesium	8	255	262	292	299	310	331	340	298	25	8.5E-02
Manganese	8	0.05	0.05	0.05	0.06	0.08	0.09	0.09	0.07	0.02	2.6E-01
Mercury	8	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	-	-
Molybdenum	8	3.13	3.21	3.50	3.60	3.66	3.87	3.95	3.57	0.24	6.8E-02
Nickel	8	0.011	0.011	0.012	0.013	0.014	0.015	0.015	0.013	0.002	1.3E-01
Phosphorus	8	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	-	-
Potassium	8	41	41	42	44	47	50	50	45	4	8.3E-02
Selenium	8	0.040	0.040	0.043	0.044	0.044	0.045	0.045	0.043	0.002	4.5E-02
Silicon	8	7.0	7.0	7.1	7.3	7.3	7.6	7.7	7.3	0.2	2.9E-02
Silver	8	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00000	3.8E-01
Sodium	8	131	136	145	149	153	159	161	148	9	6.1E-02
Strontium	8	2.98	3.13	3.45	3.60	3.64	3.73	3.74	3.51	0.24	6.9E-02
Sulphur	8	473	496	542	557	563	609	633	554	44	7.9E-02
Thallium	8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.0E-01
Tin	8	0.0001	0.0001	0.0002	0.0002	0.0005	0.0011	0.0015	0.0004	0.0005	1.1E+00
Titanium	8	0.005	0.005	0.005	0.005	0.010	0.010	0.010	0.007	0.003	3.8E-01
Uranium	8	0.0141	0.0141	0.0145	0.0148	0.0155	0.0164	0.0166	0.0151	0.0009	5.8E-02
Vanadium	8	0.003	0.003	0.003	0.003	0.003	0.004	0.004	0.003	0.000	1.1E-01
Zinc	8	0.0015	0.0015	0.0026	0.0031	0.0033	0.0055	0.0065	0.0032	0.0016	4.9E-01
Organics											
Carbon Organic (Dissolved)	5	2.5	2.5	2.6	2.7	2.7	2.7	2.7	2.6	0.1	3.5E-02
Carbon Organic (Total)	8	2.3	2.3	2.4	2.4	2.5	2.8	2.8	2.5	0.2	7.5E-02
Nitrogen Organic (Dissolved)	1	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50	-	-
Nitrogen Organic (Total)	1	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.45 - MW12-02

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	7	2122	2216	2452	2540	3326	3767	3924	2877	653	2.3E-01
Oxygen Dissolved %	7	2	2	7	17	26	34	36	17	13	7.5E-01
Oxygen Dissolved	8	0.2	0.2	1.0	2.3	3.4	3.9	4.1	2.2	1.5	6.9E-01
pH (unitless)	8	7.3	7.3	7.4	7.5	7.6	7.7	7.8	7.5	0.2	2.2E-02
Redox Potential mV	8	30	42	82	142	168	204	221	128	64	5.0E-01
Salinity ppt	7	1.62	1.64	1.73	1.76	1.86	2.03	2.08	1.80	0.15	8.4E-02
Specific Conductivity µS/cm	8	2180	2215	2888	3248	3417	3825	3924	3119	610	2.0E-01
Temperature °C	8	7.4	7.5	7.9	8.9	9.9	11.2	11.4	9.1	1.5	1.6E-01
Total Dissolved Solids	7	2011	2038	2136	2172	2289	2495	2550	2226	179	8.1E-02
Turbidity NTU	7	-3.9	-3.3	-1.0	2.0	2.3	2.6	2.7	0.5	2.6	5.1E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	1	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	-	-
Alkalinity (Total as CaCO3)	8	169	170	171	175	182	187	188	177	7	4.1E-02
Bicarbonate Alkalinity	7	169	170	173	176	184	187	188	178	7	4.1E-02
Carbonate Alkalinity	7	0.5	0.7	1.0	1.0	1.0	1.0	1.0	0.9	0.2	2.0E-01
Color TCU	3	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	-	-
Hardness as CaCO3 (Dissolved)	7	1730	1733	1760	1810	1855	1887	1890	1809	63	3.5E-02
Hydroxide Alkalinity	7	0.5	0.7	1.0	1.0	1.0	1.0	1.0	0.9	0.2	2.0E-01
pH (unitless)	8	7.9	7.9	8.0	8.1	8.1	8.1	8.1	8.1	0.1	9.5E-03
Specific Conductivity µS/cm	8	3120	3162	3255	3275	3345	3367	3370	3280	81	2.5E-02
Total Dissolved Solids	8	1470	1967	3070	3155	3203	3338	3390	2953	615	2.1E-01
Total Suspended Solids	6	2	2	2	3	8	10	10	5	4	8.2E-01
Turbidity NTU	6	0	0	0	1	1	1	1	1	0	4.7E-01
Dissolved Anions											
Bromide	8	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	-	-
Chloride	8	15	15	15	16	17	18	19	16	1	9.0E-02
Fluoride	8	0.18	0.18	0.20	0.20	0.20	0.39	0.49	0.23	0.10	4.5E-01
Sulphate	8	1650	1671	1718	1730	1768	1797	1800	1736	48	2.8E-02
Nutrients											
Ammonia (Total)	8	0.003	0.003	0.003	0.003	0.003	0.015	0.020	0.005	0.006	1.2E+00
Nitrate (as N)	8	70	72	77	80	83	86	87	80	6	6.9E-02
Nitrite (as N)	8	0.280	0.312	0.412	0.489	0.533	0.541	0.545	0.458	0.096	2.1E-01
Nitrogen (Dissolved)	1	73.50	73.50	73.50	73.50	73.50	73.50	73.50	73.50	-	-
Nitrogen (Total)	4	70	71	73	75	77	77	78	75	3	4.5E-02
Nitrogen Kjeldahl (Total)	8	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	-	-
Orthophosphate (Dissolved)	5	0.008	0.010	0.018	0.023	0.027	0.028	0.028	0.021	0.008	3.9E-01
Phosphorus - Dissolved	8	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.02	0.01	3.3E-01
Phosphorus - Total	6	0.020	0.020	0.021	0.021	0.026	0.031	0.032	0.024	0.005	2.1E-01
Cyanide										-	
Cyanide (Free)	7	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	7	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (WAD)	7	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	8	0.0010	0.0012	0.0016	0.0017	0.0021	0.0035	0.0041	0.0020	0.0009	4.7E-01
Antimony	8	0.00750	0.00775	0.00920	0.01075	0.01693	0.01869	0.01960	0.01253	0.00460	3.7E-01
Arsenic	8	0.0104	0.0106	0.0131	0.0149	0.0225	0.0250	0.0261	0.0171	0.0059	3.5E-01
Barium	8	0.021	0.021	0.022	0.025	0.028	0.032	0.033	0.026	0.004	1.7E-01
Beryllium	8	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000	3.7E-01
Bismuth	8	0.00025	0.00025	0.00025	0.00025	0.00031	0.00050	0.00050	0.00031	0.00012	3.7E-01
Boron	8	0.094	0.097	0.111	0.116	0.118	0.120	0.120	0.112	0.009	8.3E-02
Cadmium	8	0.000100	0.000184	0.000385	0.000500	0.000525	0.000665	0.000700	0.000455	0.000181	4.0E-01
Calcium	8	230	231	233	235	237	241	243	235	4	1.7E-02
Chromium	8	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000	3.7E-01
Cobalt	8	0.00098	0.00119	0.00164	0.00175	0.00193	0.00252	0.00275	0.00181	0.00050	2.8E-01
Copper	8	0.0033	0.0042	0.0064	0.0077	0.0087	0.0145	0.0173	0.0083	0.0041	4.9E-01
Iron	8	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	-	-
Lead	8	0.00003	0.00003	0.00003	0.00003	0.00003	0.00005	0.00005	0.00003	0.00001	3.7E-01
Lithium	8	0.0288	0.0293	0.0304	0.0324	0.0342	0.0354	0.0360	0.0323	0.0025	7.8E-02
Magnesium	8	278	278	288	294	305	318	321	296	15	5.1E-02
Manganese	8	0.075	0.078	0.095	0.101	0.109	0.117	0.121	0.100	0.015	1.5E-01
Mercury	8	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000161	0.0000220	0.0000071	0.0000060	8.4E-01
Molybdenum	8	3.030	3.132	3.320	3.330	3.403	3.466	3.480	3.330	0.135	4.1E-02
Nickel	8	0.0214	0.0215	0.0223	0.0234	0.0267	0.0278	0.0282	0.0243	0.0026	1.1E-01
Phosphorus	8	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	-	-
Potassium	8	38	38	39	42	44	53	57	43	6	1.4E-01
Selenium	8	0.037	0.038	0.040	0.040	0.041	0.042	0.042	0.040	0.001	3.6E-02
Silicon	8	7.0	7.0	7.3	7.3	7.5	7.8	8.0	7.4	0.3	4.1E-02
Silver	8	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00000	3.7E-01
Sodium	8	135	139	150	154	155	160	160	152	8	5.3E-02
Strontium	8	3.28	3.34	3.47	3.62	3.66	3.71	3.72	3.56	0.15	4.2E-02
Sulphur	8	510	517	531	545	555	568	571	543	20	3.6E-02
Thallium	8	0.00002	0.00002	0.00002	0.00003	0.00003	0.00004	0.00004	0.00003	0.00001	2.6E-01
Tin	8	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0001	0.0000	4.7E-01
Titanium	8	0.0050	0.0050	0.0050	0.0050	0.0063	0.0100	0.0100	0.0063	0.0023	3.7E-01
Uranium	8	0.0103	0.0105	0.0115	0.0129	0.0132	0.0143	0.0147	0.0125	0.0014	1.2E-01
Vanadium	8	0.0018	0.0019	0.0023	0.0026	0.0031	0.0037	0.0039	0.0027	0.0007	2.5E-01
Zinc	8	0.0010	0.0010	0.0011	0.0015	0.0026	0.0043	0.0044	0.0021	0.0014	6.6E-01
Total Metals											
Aluminum	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8E-01
Antimony	8	0.0075	0.0079	0.0092	0.0108	0.0165	0.0184	0.0191	0.0125	0.0044	3.5E-01
Arsenic	8	0.0102	0.0106	0.0129	0.0149	0.0226	0.0248	0.0259	0.0170	0.0059	3.5E-01
Barium	8	0.022	0.022	0.022	0.025	0.028	0.032	0.033	0.026	0.004	1.5E-01
Beryllium	8	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000	3.7E-01
Bismuth	8	0.00025	0.00025	0.00025	0.00025	0.00031	0.00050	0.00050	0.00031	0.00012	3.7E-01
Boron	8	0.094	0.099	0.110	0.126	0.128	0.137	0.140	0.120	0.015	1.3E-01
Cadmium	8	0.00005	0.00015	0.00040	0.00050	0.00053	0.00070	0.00075	0.00046	0.00020	4.5E-01
Calcium	8	222	223	225	228	235	244	246	231	9	3.7E-02
Chromium	8	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.2E-01
Cobalt	8	0.0010	0.0012	0.0017	0.0018	0.0020	0.0026	0.0028	0.0019	0.0005	2.7E-01
Copper	8	0.005	0.006	0.008	0.009	0.010	0.017	0.021	0.010	0.005	4.7E-01
Iron	8	0.01	0.01	0.02	0.03	0.04	0.07	0.08	0.03	0.02	6.9E-01
Lead	8	0.00003	0.00003	0.00003	0.00003	0.00005	0.00006	0.00006	0.00004	0.00002	4.3E-01
Lithium	8	0.0277	0.0284	0.0318	0.0340	0.0343	0.0344	0.0345	0.0326	0.0026	7.9E-02
Magnesium	8	270	272	282	297	306	323	326	296	19	6.6E-02
Manganese	8	0.08	0.08	0.10	0.10	0.11	0.12	0.12	0.10	0.01	1.4E-01
Mercury	8	0.000005	0.000005	0.000005	0.000005	0.000005	0.000038	0.000056	0.000011	0.000018	1.6E+00
Molybdenum	8	3.05	3.07	3.23	3.43	3.45	3.60	3.67	3.36	0.20	6.0E-02
Nickel	8	0.022	0.022	0.023	0.024	0.028	0.029	0.029	0.025	0.003	1.1E-01
Phosphorus	8	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	-	-
Potassium	8	36	37	39	43	43	51	55	43	6	1.4E-01
Selenium	8	0.038	0.038	0.038	0.039	0.041	0.042	0.042	0.039	0.002	4.1E-02
Silicon	8	6.9	7.0	7.2	7.5	7.7	7.9	8.0	7.4	0.4	4.7E-02
Silver	8	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00000	3.7E-01
Sodium	8	142	145	153	157	160	162	162	155	7	4.3E-02
Strontium	8	3.11	3.20	3.44	3.60	3.73	3.85	3.91	3.56	0.26	7.2E-02
Sulphur	8	518	521	531	561	571	592	602	556	28	5.1E-02
Thallium	8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.4E-01
Tin	8	0.0001	0.0001	0.0001	0.0001	0.0002	0.0003	0.0003	0.0001	0.0001	6.8E-01
Titanium	8	0.005	0.005	0.005	0.005	0.006	0.010	0.010	0.006	0.002	3.7E-01
Uranium	8	0.0101	0.0103	0.0111	0.0131	0.0135	0.0148	0.0153	0.0126	0.0018	1.4E-01
Vanadium	8	0.002	0.002	0.003	0.003	0.003	0.004	0.004	0.003	0.001	2.3E-01
Zinc	8	0.0015	0.0015	0.0015	0.0023	0.0032	0.0046	0.0049	0.0026	0.0013	5.1E-01
Organics											
Carbon Organic (Dissolved)	5	2.5	2.5	2.6	2.6	2.7	2.7	2.7	2.6	0.1	3.7E-02
Carbon Organic (Total)	8	2.2	2.3	2.4	2.5	2.5	2.6	2.6	2.4	0.1	5.5E-02
Nitrogen Organic (Dissolved)	1	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	-	-
Nitrogen Organic (Total)	1	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX D6 - GROUNDWATER QUALITY SUMMARY STATISTICS

TABLE D6.46 - MW12-04

Parameter	Total Count	Percentiles							Average	Standard Deviation	Coefficient of Variation
		Min	5th	25th	50th	75th	95th	Max			
In Situ Parameters											
Conductivity µS/cm	7	823	826	836	847	969	1133	1180	923	134	1.4E-01
Oxygen Dissolved %	6	0	1	1	9	41	54	56	21	25	1.2E+00
Oxygen Dissolved	7	0.1	0.1	0.1	0.5	3.8	6.2	6.4	2.1	2.8	1.3E+00
pH (unitless)	8	7.7	7.7	7.8	7.9	8.0	8.0	8.0	7.9	0.1	1.4E-02
Redox Potential mV	8	-160	-154	-129	-96	53	118	151	-45	115	-2.6E+00
Salinity ppt	7	0.58	0.58	0.59	0.61	0.65	0.71	0.73	0.63	0.05	8.7E-02
Specific Conductivity µS/cm	8	787	917	1163	1202	1261	1407	1447	1191	190	1.6E-01
Temperature °C	8	7.0	7.2	7.9	8.4	9.8	10.1	10.1	8.6	1.2	1.4E-01
Total Dissolved Solids	7	756	758	767	791	836	919	941	813	67	8.3E-02
Turbidity NTU	7	-0.4	-0.3	1.4	3.1	4.9	12.9	15.7	4.4	5.5	1.2E+00
Physical Tests											
Acidity to pH 8.3 (as CaCO3)	0	-	-	-	-	-	-	-	-	-	-
Alkalinity (Total as CaCO3)	8	182	183	186	191	206	221	222	197	16	7.9E-02
Bicarbonate Alkalinity	7	182	183	186	189	198	216	222	194	14	7.2E-02
Carbonate Alkalinity	7	0.5	0.5	0.8	1.0	1.0	1.0	1.0	0.9	0.2	2.8E-01
Color TCU	4	2.5	2.5	2.5	2.5	3.7	6.4	7.1	3.7	2.3	6.3E-01
Hardness as CaCO3 (Dissolved)	7	359	370	400	415	421	449	460	411	31	7.4E-02
Hydroxide Alkalinity	7	0.5	0.5	0.8	1.0	1.0	1.0	1.0	0.9	0.2	2.8E-01
pH (unitless)	8	8.1	8.1	8.2	8.2	8.3	8.3	8.3	8.2	0.1	6.7E-03
Specific Conductivity µS/cm	8	1150	1161	1195	1215	1253	1260	1260	1216	40	3.3E-02
Total Dissolved Solids	8	770	771	786	824	841	882	899	821	43	5.3E-02
Total Suspended Solids	7	3	3	6	8	16	22	25	11	8	6.9E-01
Turbidity NTU	7	1	1	2	3	6	8	8	4	3	7.7E-01
Dissolved Anions											
Bromide	8	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	-	-
Chloride	8	6	6	13	21	25	28	28	18	9	4.8E-01
Fluoride	8	0.04	0.06	0.10	0.15	0.26	0.36	0.37	0.19	0.12	6.6E-01
Sulphate	8	423	428	436	440	461	479	484	448	21	4.6E-02
Nutrients											
Ammonia (Total)	8	0.211	0.222	0.290	0.319	0.373	0.390	0.397	0.318	0.065	2.1E-01
Nitrate (as N)	8	0	0	0	0	0	0	0	0	-	-
Nitrite (as N)	8	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	-	-
Nitrogen (Dissolved)	1	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	-	-
Nitrogen (Total)	4	0	0	0	0	0	0	0	0	0	1.1E-01
Nitrogen Kjeldahl (Total)	8	0.33	0.36	0.42	0.44	0.47	0.57	0.58	0.45	0.08	1.7E-01
Orthophosphate (Dissolved)	5	0.069	0.077	0.111	0.126	0.127	0.137	0.140	0.115	0.028	2.4E-01
Phosphorus - Dissolved	8	0.08	0.08	0.12	0.14	0.16	0.18	0.18	0.14	0.04	2.7E-01
Phosphorus - Total	6	0.095	0.107	0.146	0.162	0.178	0.194	0.198	0.157	0.036	2.3E-01
Cyanide										-	
Cyanide (Free)	7	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (Total)	7	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Cyanide (WAD)	7	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	-
Dissolved Metals											
Aluminum	8	0.0024	0.0024	0.0025	0.0033	0.0049	0.0149	0.0193	0.0056	0.0057	1.0E+00
Antimony	8	0.00005	0.00005	0.00005	0.00005	0.00013	0.00047	0.00063	0.00015	0.00020	1.4E+00
Arsenic	8	0.0038	0.0039	0.0043	0.0046	0.0053	0.0102	0.0118	0.0056	0.0027	4.7E-01
Barium	8	0.051	0.052	0.061	0.070	0.076	0.092	0.098	0.070	0.015	2.1E-01
Beryllium	8	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	8	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	8	0.087	0.088	0.092	0.097	0.098	0.101	0.102	0.095	0.005	5.2E-02
Cadmium	8	0.000005	0.000009	0.000019	0.000025	0.000025	0.000025	0.000025	0.000021	0.000007	3.5E-01
Calcium	8	40	41	43	46	46	50	51	45	3	7.7E-02
Chromium	8	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Cobalt	8	0.00039	0.00040	0.00043	0.00045	0.00052	0.00077	0.00084	0.00051	0.00015	3.0E-01
Copper	8	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003	0.0004	0.0001	0.0001	8.3E-01
Iron	8	0.012	0.016	0.024	0.025	0.042	0.080	0.081	0.037	0.027	7.1E-01
Lead	8	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	-	-
Lithium	8	0.0012	0.0014	0.0022	0.0027	0.0028	0.0033	0.0035	0.0025	0.0007	3.0E-01
Magnesium	8	63	66	71	73	75	82	83	73	6	8.1E-02
Manganese	8	0.092	0.132	0.232	0.264	0.312	0.377	0.394	0.263	0.091	3.5E-01
Mercury	8	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	-	-
Molybdenum	8	0.101	0.108	0.124	0.147	0.170	0.196	0.204	0.149	0.034	2.3E-01
Nickel	8	0.0012	0.0013	0.0014	0.0015	0.0017	0.0028	0.0033	0.0017	0.0007	4.0E-01
Phosphorus	8	0.07	0.07	0.11	0.14	0.16	0.17	0.17	0.13	0.04	2.9E-01
Potassium	8	37	37	38	39	41	43	44	40	2	6.0E-02
Selenium	8	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	9.5E-01
Silicon	8	10.8	11.0	11.5	12.2	12.3	12.7	12.8	12.0	0.7	5.5E-02
Silver	8	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	8	90	90	92	95	102	113	116	98	9	9.2E-02
Strontium	8	0.26	0.26	0.28	0.30	0.33	0.35	0.35	0.30	0.03	1.1E-01
Sulphur	8	136	136	141	144	149	152	153	144	6	4.2E-02
Thallium	8	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Tin	8	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0003	0.0001	0.0001	7.7E-01
Titanium	8	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	-	-
Uranium	8	0.0008	0.0009	0.0010	0.0010	0.0011	0.0013	0.0013	0.0011	0.0002	1.5E-01
Vanadium	8	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	-	-
Zinc	8	0.0005	0.0005	0.0005	0.0005	0.0013	0.0016	0.0016	0.0009	0.0005	5.8E-01
Total Metals											
Aluminum	8	0.0	0.0	0.1	0.2	0.3	0.4	0.4	0.2	0.2	7.4E-01
Antimony	8	0.0001	0.0001	0.0001	0.0001	0.0002	0.0005	0.0006	0.0002	0.0002	1.1E+00
Arsenic	8	0.0038	0.0040	0.0044	0.0045	0.0054	0.0099	0.0113	0.0056	0.0025	4.5E-01
Barium	8	0.052	0.054	0.061	0.070	0.077	0.099	0.106	0.072	0.017	2.4E-01
Beryllium	8	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	-	-
Bismuth	8	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	-	-
Boron	8	0.089	0.091	0.099	0.100	0.101	0.113	0.119	0.101	0.008	8.4E-02
Cadmium	8	0.00001	0.00001	0.00002	0.00003	0.00003	0.00004	0.00005	0.00003	0.00001	5.1E-01
Calcium	8	40	40	42	44	46	50	53	44	4	9.5E-02
Chromium	8	0.000	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.000	6.8E-01
Cobalt	8	0.0004	0.0004	0.0005	0.0006	0.0008	0.0010	0.0011	0.0007	0.0002	3.6E-01
Copper	8	0.000	0.000	0.001	0.002	0.002	0.003	0.004	0.002	0.001	6.5E-01
Iron	8	0.06	0.07	0.13	0.28	0.44	0.63	0.70	0.31	0.22	7.1E-01
Lead	8	0.00003	0.00003	0.00003	0.00009	0.00014	0.00018	0.00019	0.00009	0.00007	7.3E-01
Lithium	8	0.0016	0.0016	0.0023	0.0027	0.0029	0.0034	0.0037	0.0026	0.0007	2.7E-01
Magnesium	8	65	66	68	71	76	78	79	72	5	6.8E-02
Manganese	8	0.10	0.14	0.24	0.28	0.31	0.40	0.42	0.27	0.10	3.5E-01
Mercury	8	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	-	-
Molybdenum	8	0.11	0.12	0.13	0.15	0.18	0.20	0.21	0.15	0.03	2.2E-01
Nickel	8	0.001	0.001	0.002	0.002	0.003	0.004	0.005	0.003	0.001	4.5E-01
Phosphorus	8	0.08	0.09	0.12	0.16	0.18	0.18	0.19	0.15	0.04	2.6E-01
Potassium	8	37	37	37	39	42	43	43	40	3	7.0E-02
Selenium	8	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	8.1E-01
Silicon	8	11.7	11.7	12.2	12.5	12.5	12.5	12.5	12.3	0.4	2.9E-02
Silver	8	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	-	-
Sodium	8	89	89	91	97	103	111	115	98	9	9.1E-02
Strontium	8	0.27	0.27	0.29	0.31	0.34	0.35	0.35	0.31	0.03	1.0E-01
Sulphur	8	139	139	141	143	153	156	156	146	7	4.9E-02
Thallium	8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-	-
Tin	8	0.0001	0.0001	0.0001	0.0002	0.0005	0.0006	0.0006	0.0003	0.0002	8.5E-01
Titanium	8	0.005	0.005	0.005	0.012	0.021	0.025	0.026	0.014	0.009	6.5E-01
Uranium	8	0.0009	0.0009	0.0010	0.0010	0.0012	0.0014	0.0014	0.0011	0.0002	1.7E-01
Vanadium	8	0.001	0.001	0.001	0.001	0.002	0.002	0.002	0.001	0.001	6.5E-01
Zinc	8	0.0015	0.0015	0.0015	0.0015	0.0020	0.0063	0.0079	0.0025	0.0023	8.9E-01
Organics											
Carbon Organic (Dissolved)	5	2.5	2.5	2.5	2.6	2.6	3.6	3.8	2.8	0.6	2.0E-01
Carbon Organic (Total)	8	2.0	2.1	2.2	2.3	2.5	3.2	3.6	2.5	0.5	2.0E-01
Nitrogen Organic (Dissolved)	1	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	-	-
Nitrogen Organic (Total)	1	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	-	-

NOTES:
1. UNITS ARE mg/L UNLESS STATED OTHERWISE.

APPENDIX E

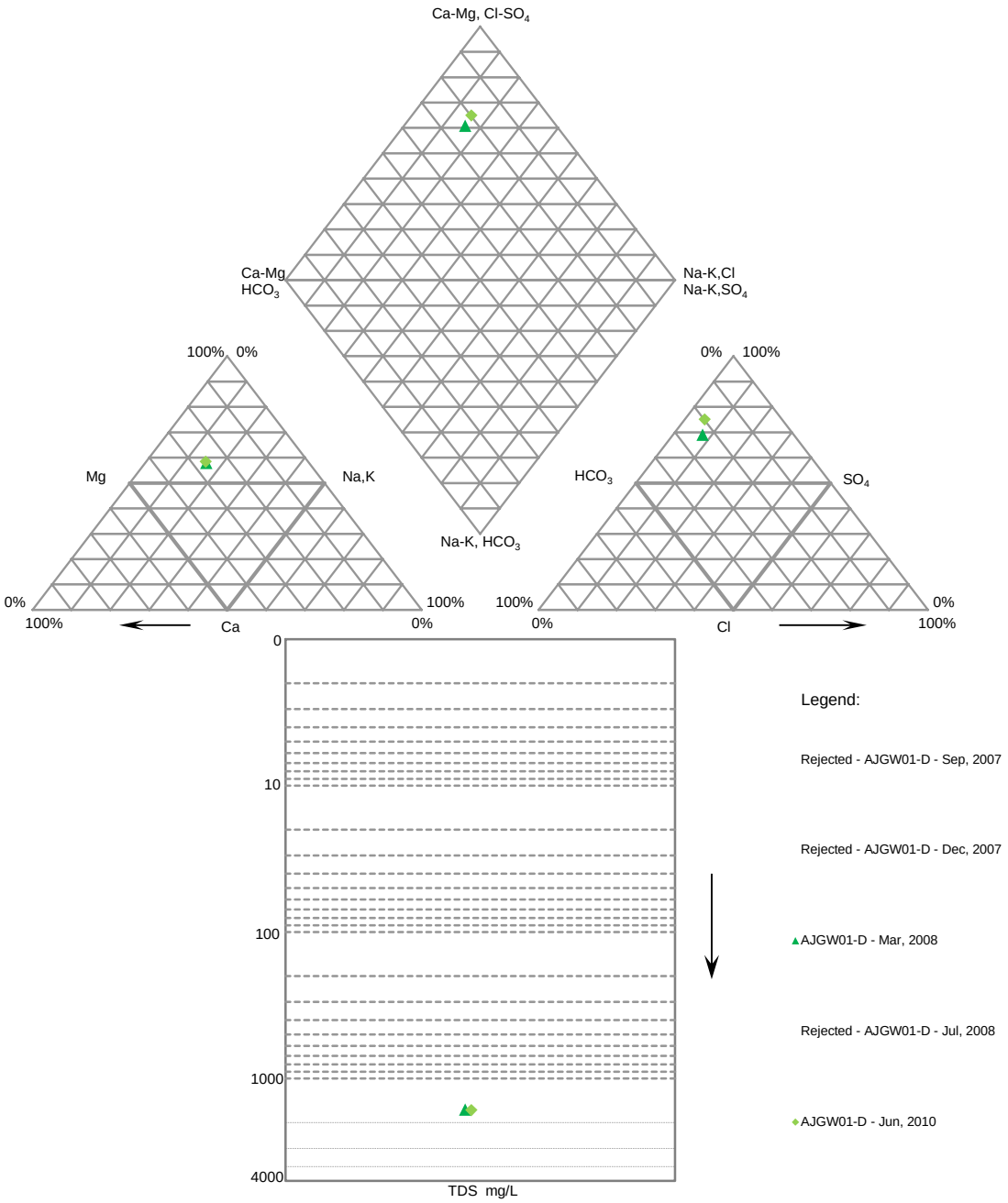
GROUNDWATER QUALITY PIPER DIAGRAMS

Appendix E1 AJG Piper Plots
Appendix E2 BGC Piper Plots
Appendix E3 KAX Piper Plots
Appendix E4 MW Piper Plots

APPENDIX E1

AJG PIPER PLOTS

(Pages E1-1 to E1-8)



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	13MAY'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

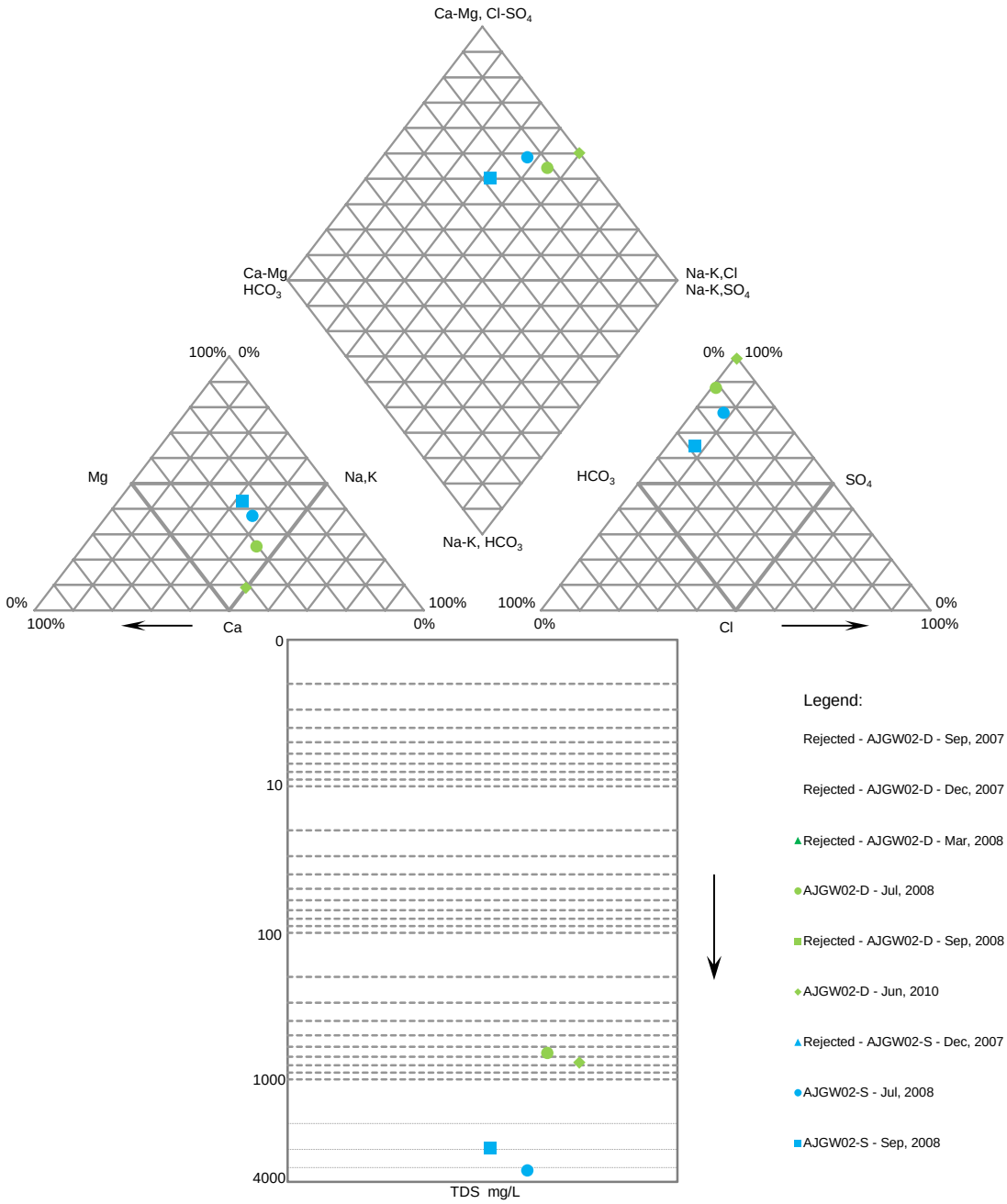
AJAX PROJECT

Piper Plot
AJGW01-D

Knight Piésold CONSULTING

P/A NO. VA101-246/31 | REF. NO. 3

FIGURE E1.1 | REV 0



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.
3. TOTAL METALS CONCENTRATIONS WERE USED IN LIEU OF DISSOLVED METALS FOR AJGW02-S-8/05/2014.
4. THE ION BALANCE FOR AJGW02-S IS ABOVE THE DWO OF 10%.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	13MAY'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

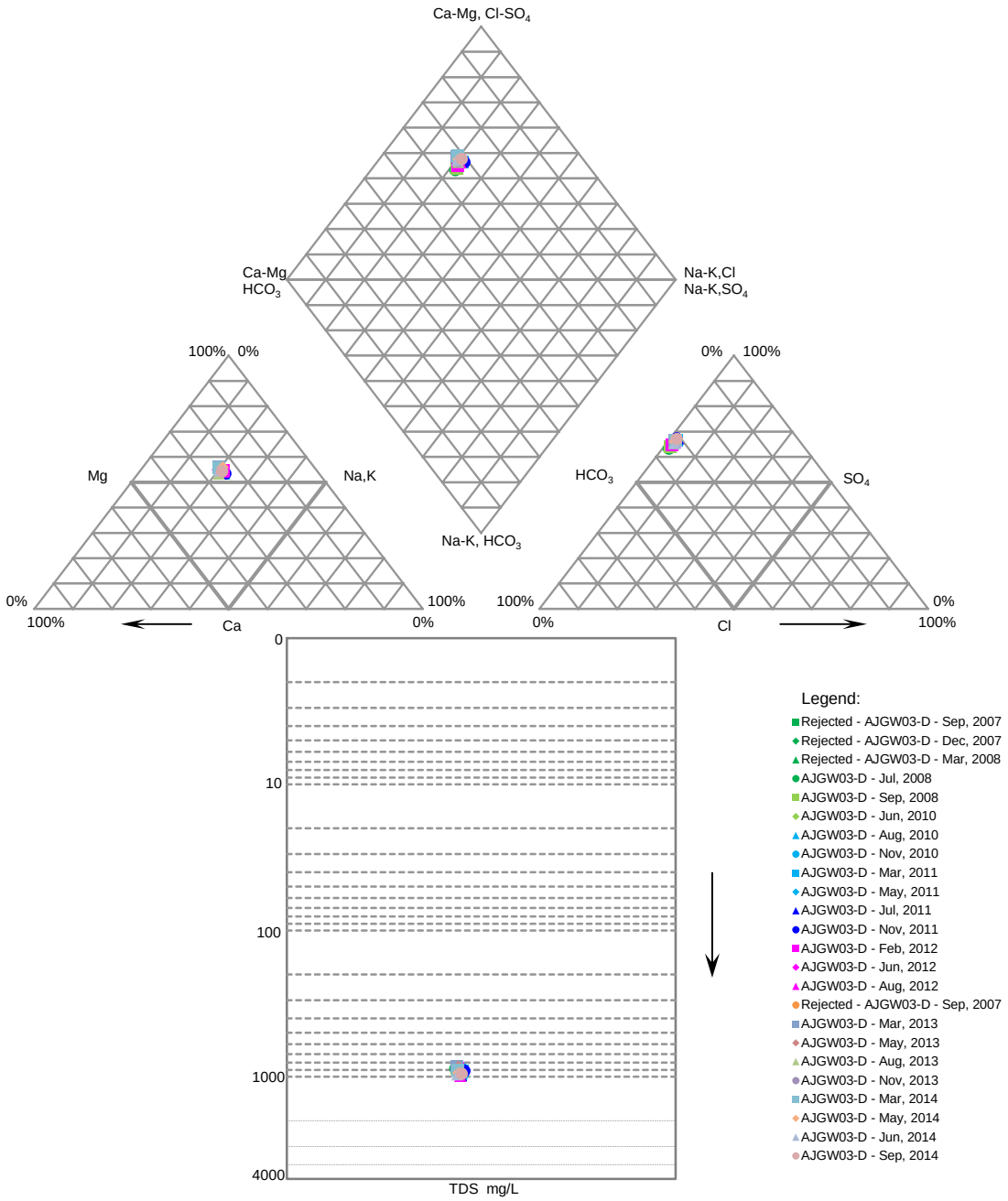
AJAX PROJECT

Piper Plot
AJGW02-D/S

Knight Piésold CONSULTING

P/A NO. VA101-246/31 | REF. NO. 3

FIGURE E1.2 | REV 0



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	13MAY'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

AJAX PROJECT

PIPER PLOT
AJGW03-D

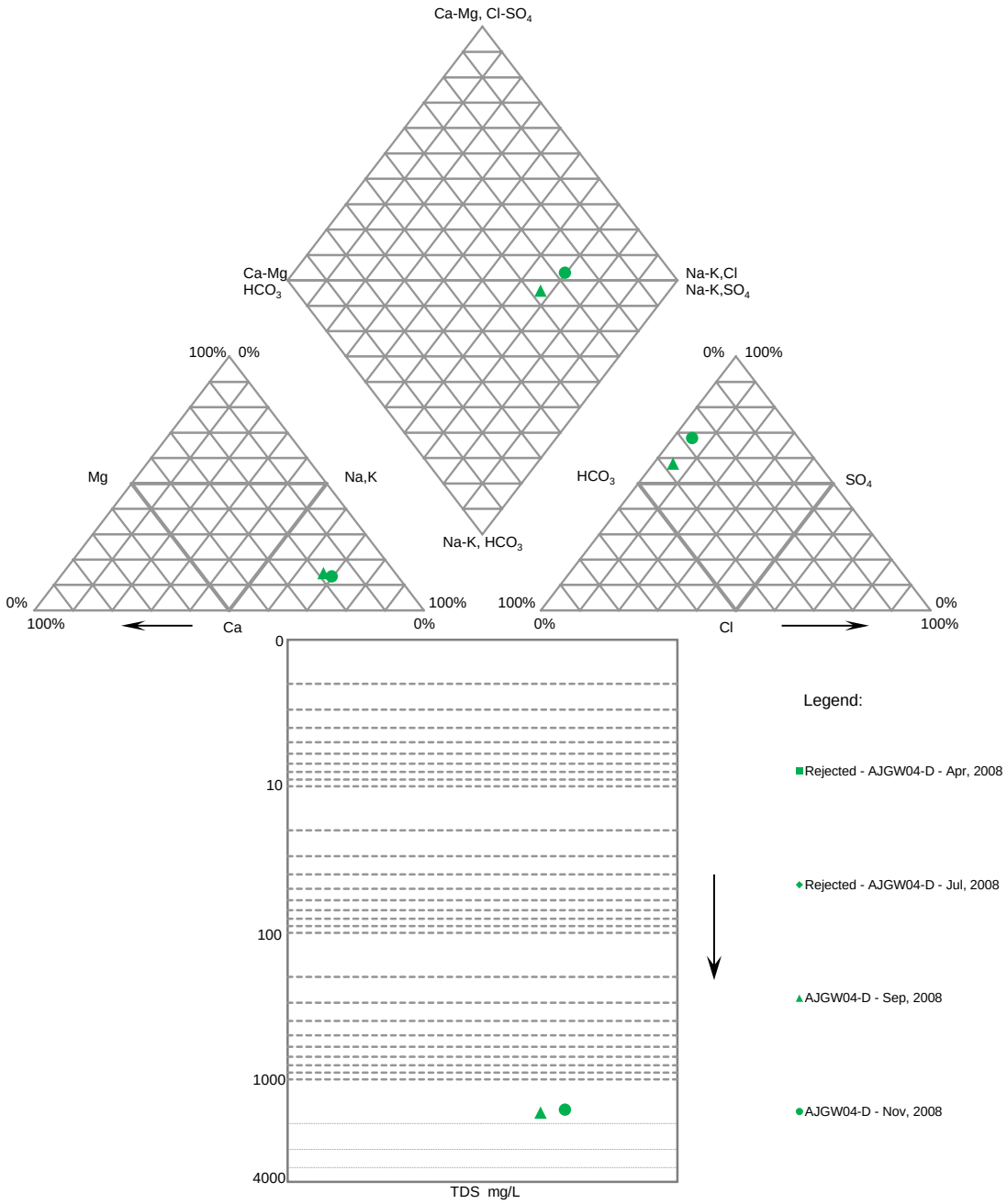
Knight Piésold CONSULTING

P/A NO. VA101-246/31

REF. NO. 3

FIGURE E1.3

REV 0



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	13MAY'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

AJAX PROJECT

PIPER PLOT
AJGW04-D AND AJGW05-S

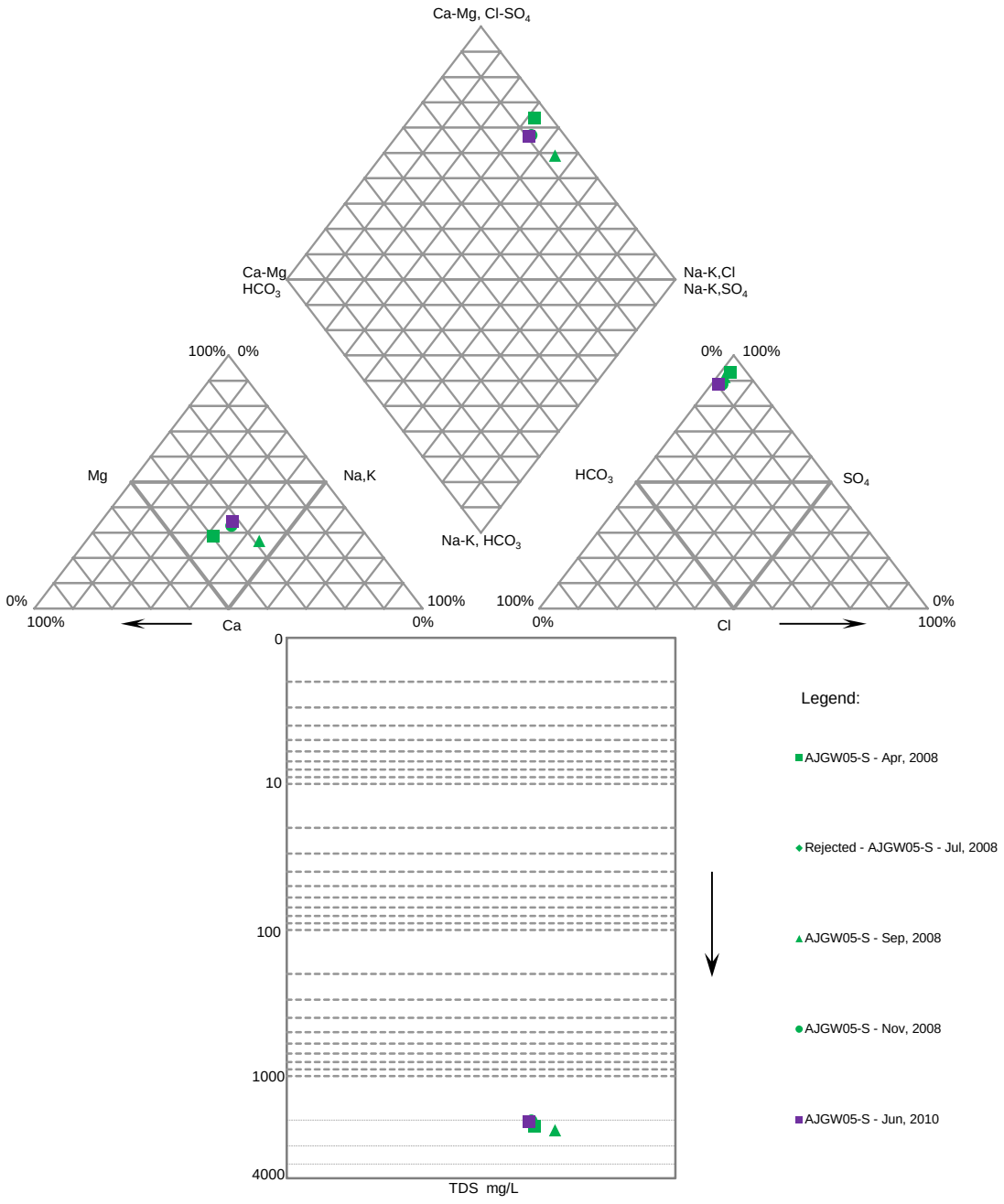
Knight Piésold CONSULTING

P/A NO. VA101-246/31

REF. NO. 3

FIGURE E1.4

REV 0



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	13MAY'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

AJAX PROJECT

PIPER PLOT
AJGW04-D AND AJGW05-S

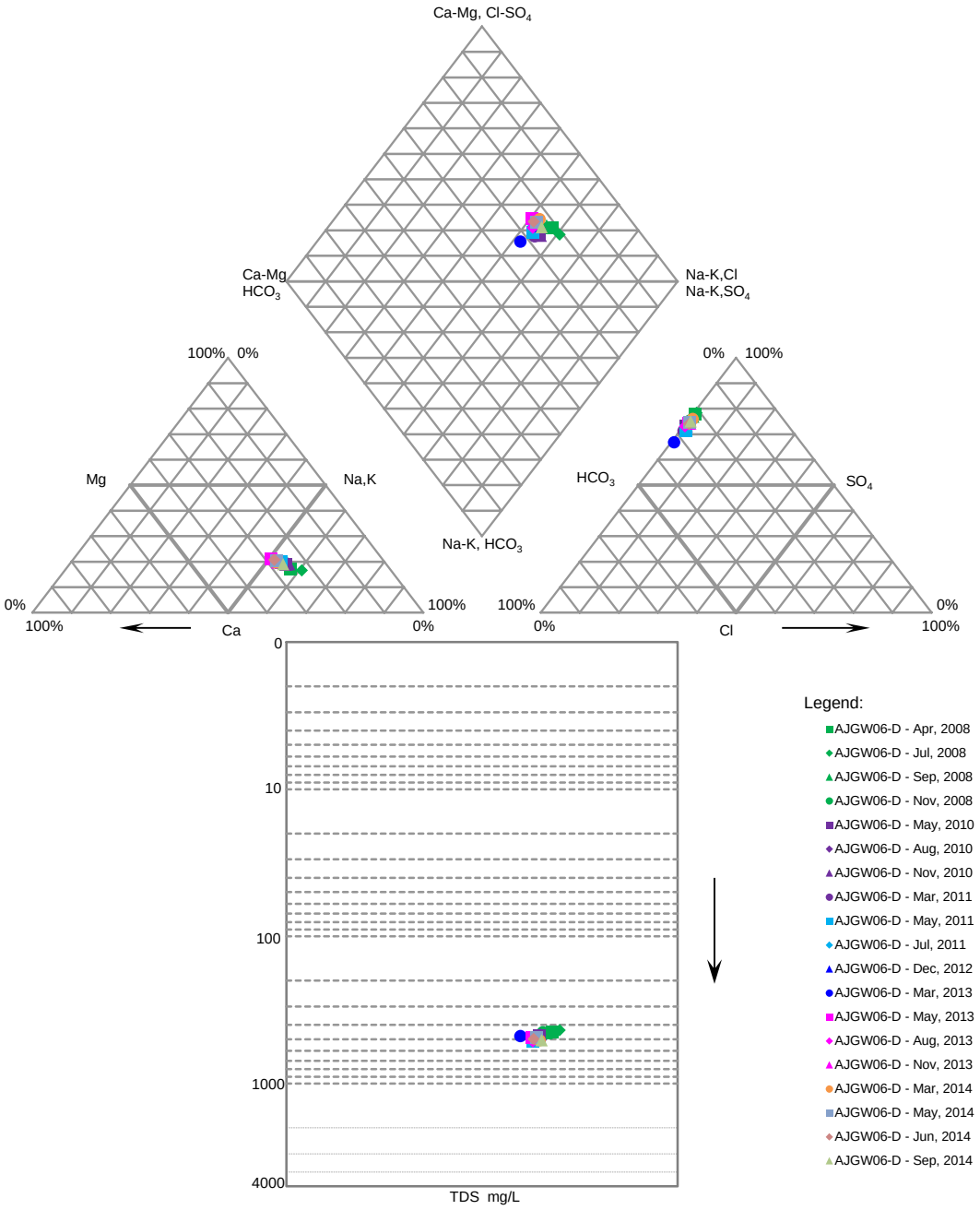
Knight Piésold CONSULTING

P/A NO. VA101-246/31

REF. NO. 3

FIGURE E1.5

REV 0



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	13MAY'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

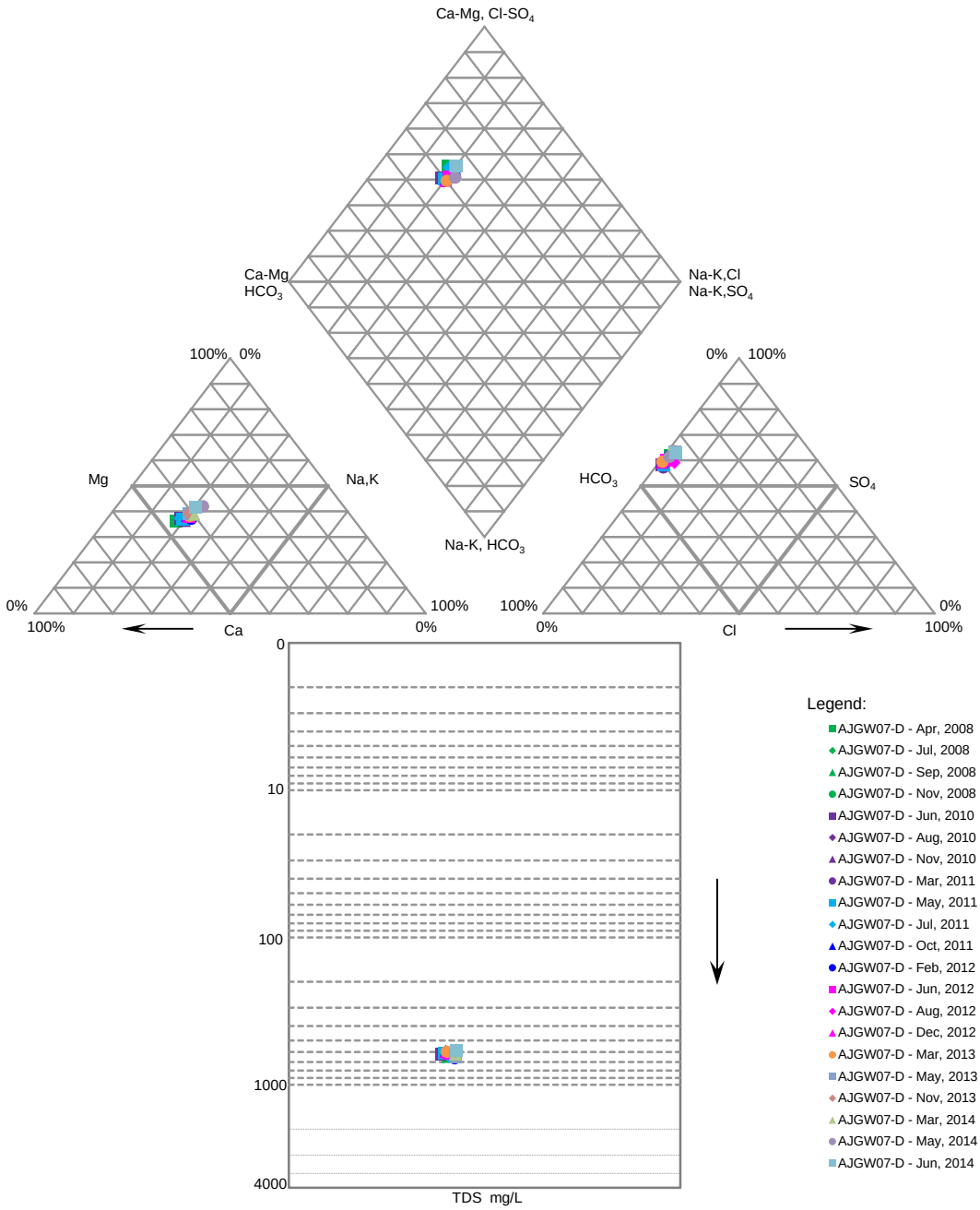
AJAX PROJECT

PIPER PLOT
AJGW06-D

Knight Piésold CONSULTING

P/A NO. VA101-246/31 | REF. NO. 3

FIGURE E1.6 | REV 0



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	13MAY'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

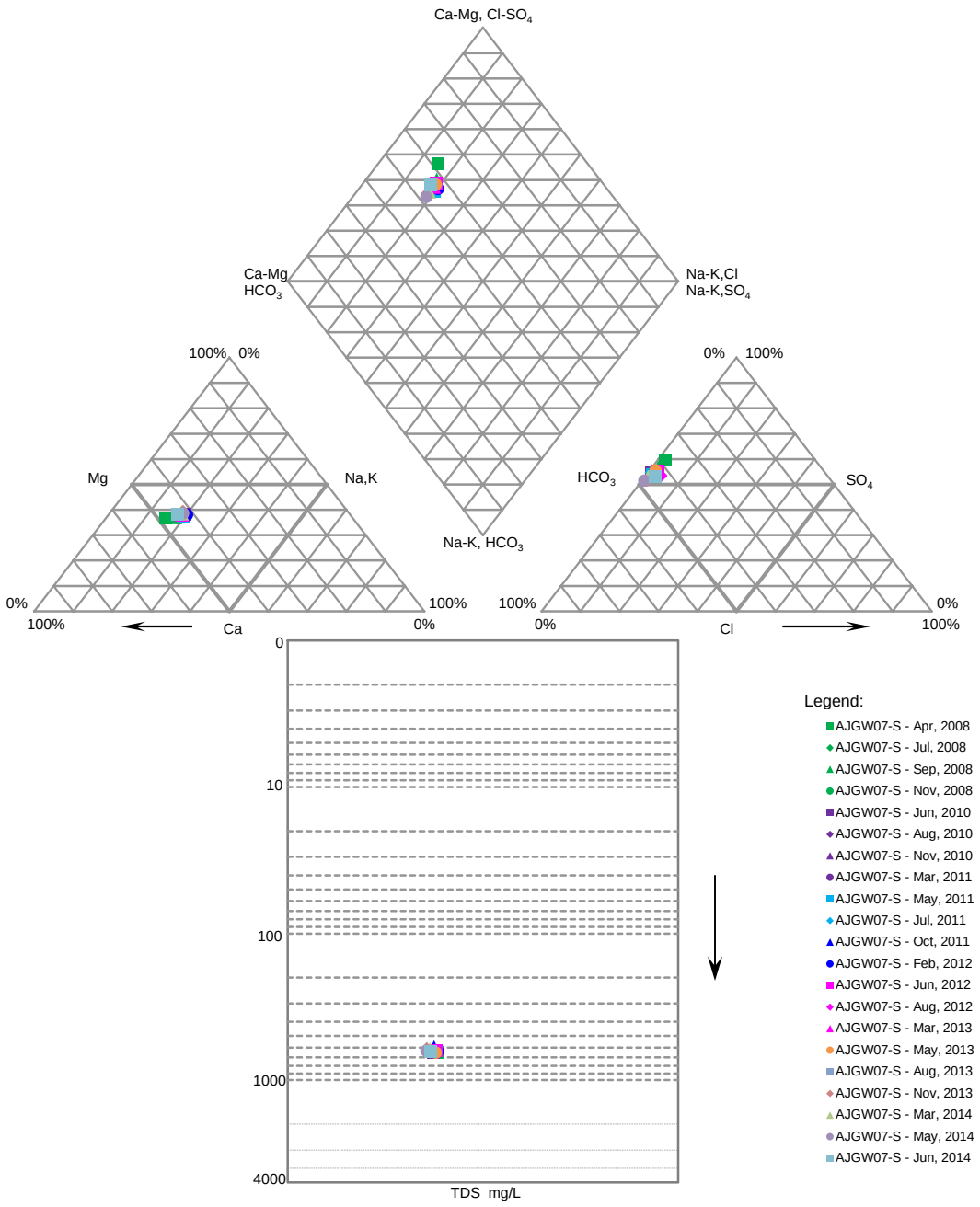
AJAX PROJECT

PIPER PLOT
AJGW07-D

Knight Piésold CONSULTING

P/A NO. VA101-246/31 | REF. NO. 3

FIGURE E1.7 | REV 0



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	13MAY'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

AJAX PROJECT

PIPER PLOT
AJGW07-S

Knight Piésold CONSULTING

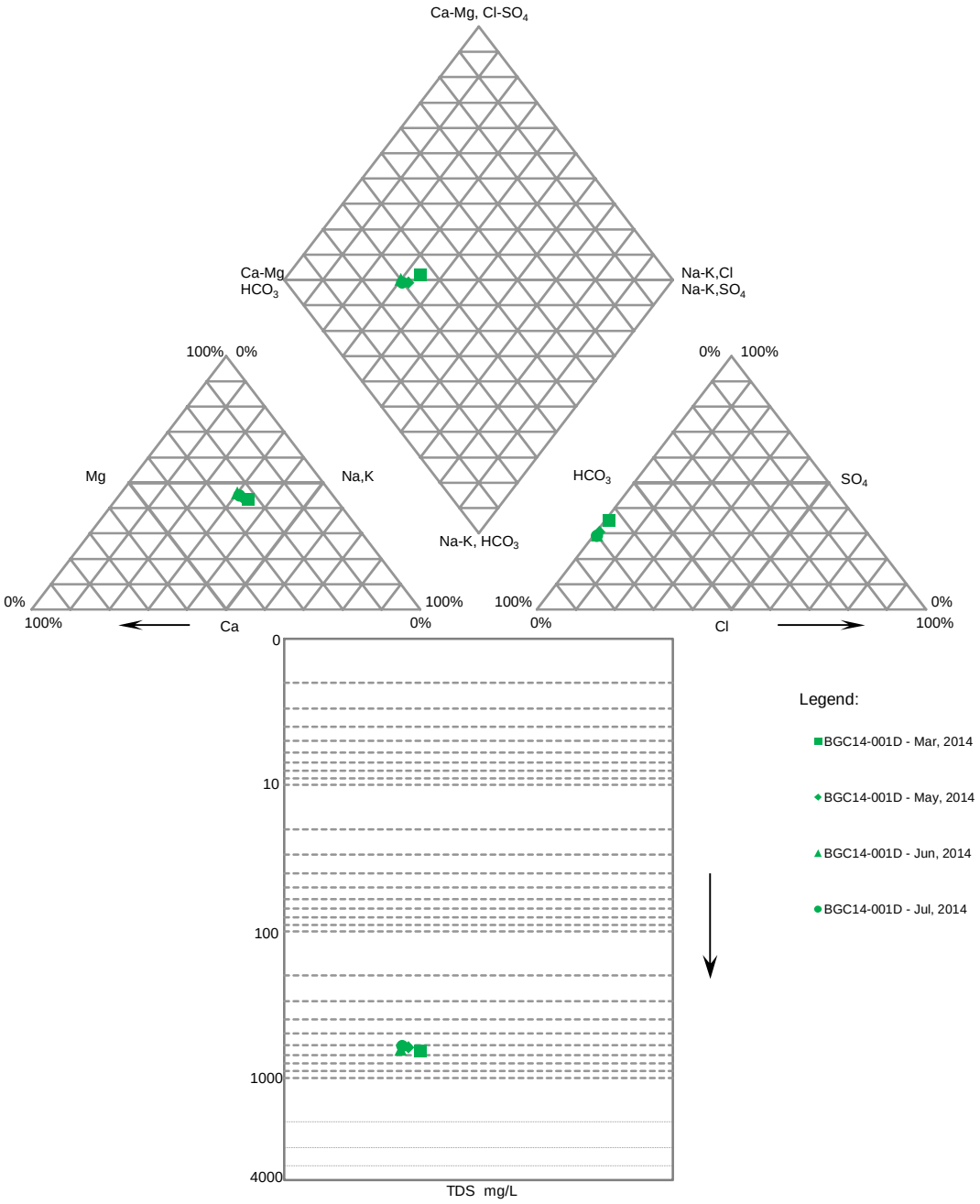
P/A NO. VA101-246/31 | REF. NO. 3

FIGURE E1.8 | REV 0

APPENDIX E2

BGC PIPER PLOTS

(Pages E2-1 to E2-14)



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	13MAY'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

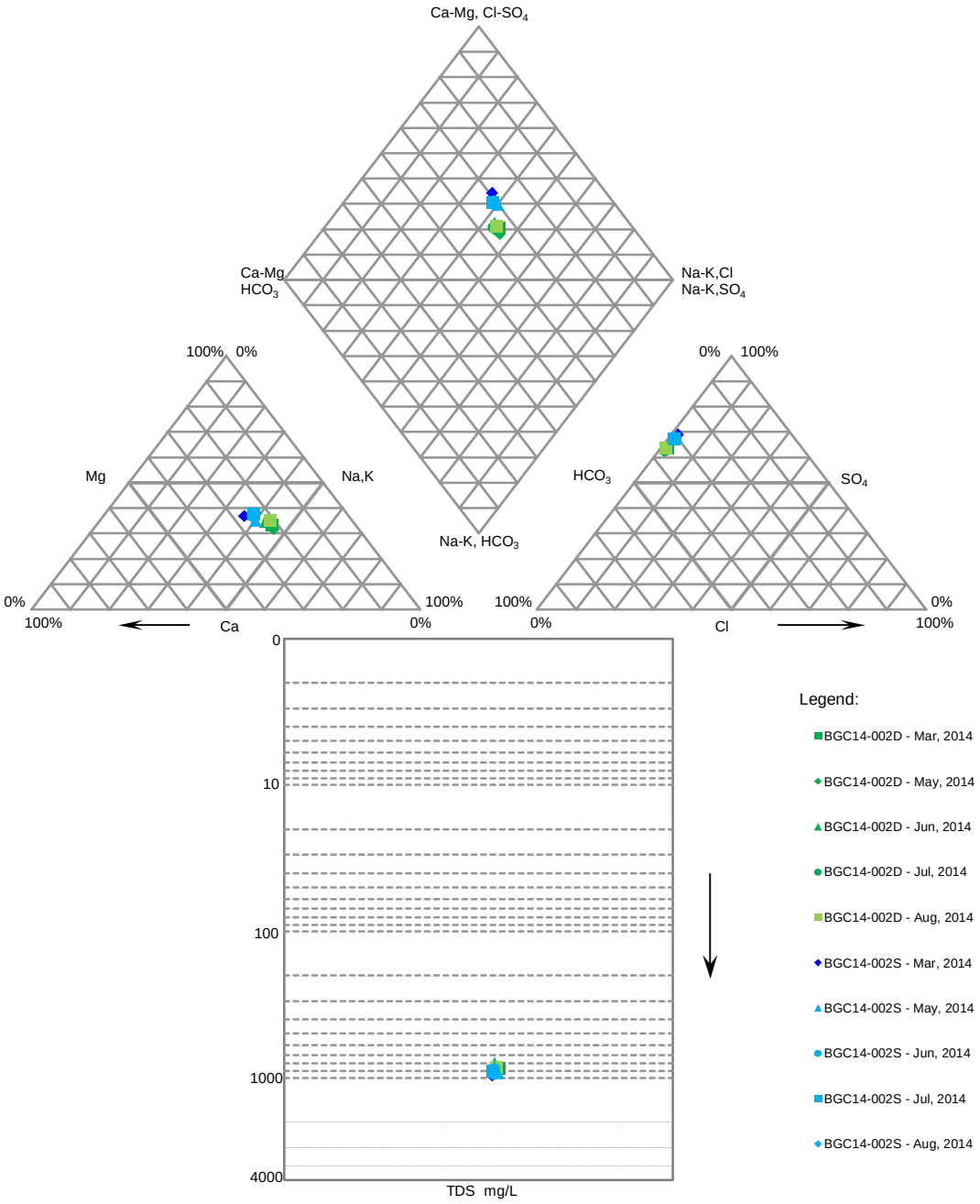
AJAX PROJECT

PIPER PLOT
BGC14-001D

Knight Piésold CONSULTING

P/A NO. VA101-246/31 | REF. NO. 3

FIGURE E2.1 | REV A



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	13MAY'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

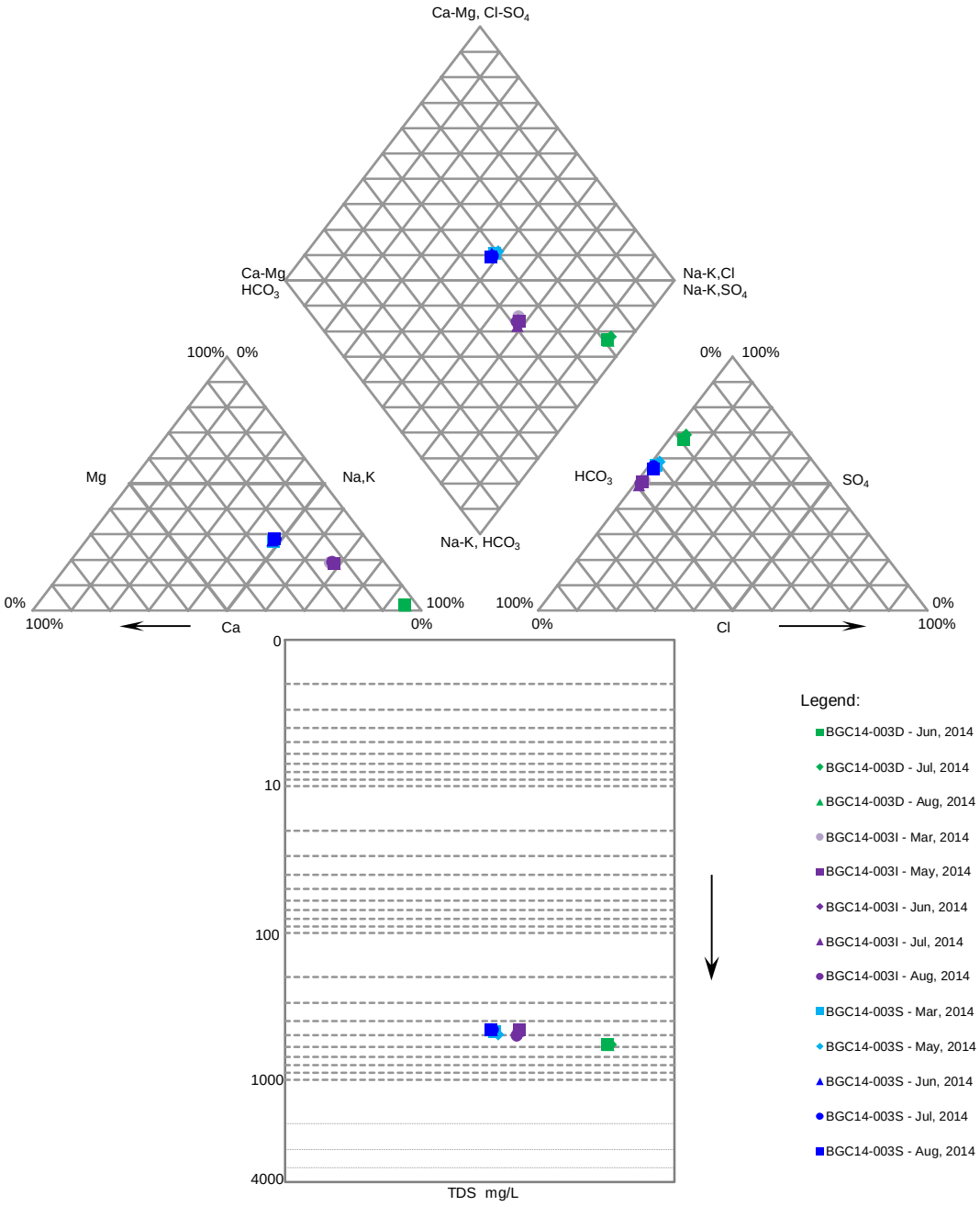
AJAX PROJECT

PIPER PLOT
BGC14-002D/S

Knight Piésold CONSULTING

P/A NO. VA101-246/31 | REF. NO. 3

FIGURE E2.2 | REV A



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	13MAY'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

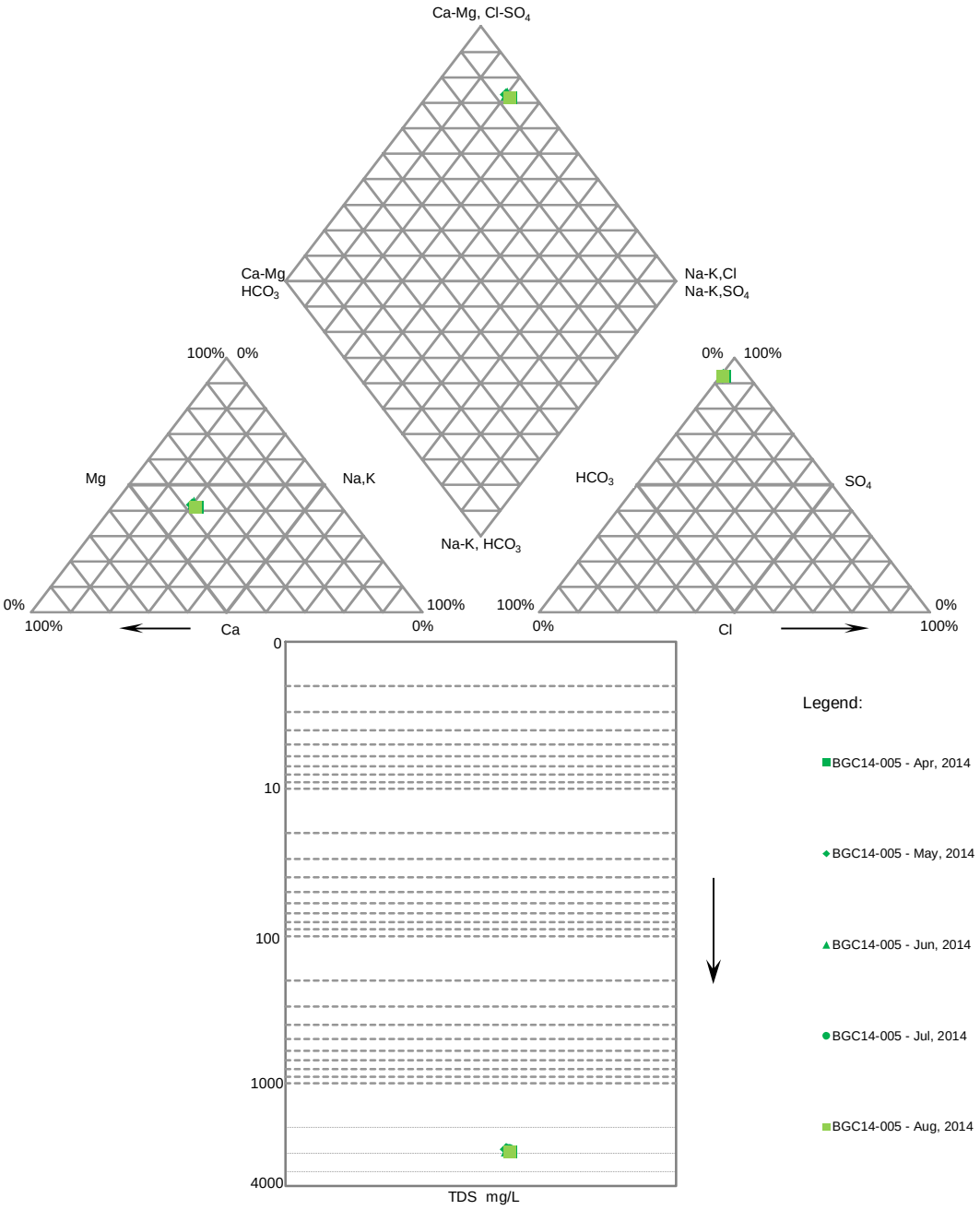
AJAX PROJECT

PIPER PLOT
BGC14-003D/I/S

Knight Piésold CONSULTING

P/A NO. VA101-246/31 | REF. NO. 3

FIGURE E2.3 | REV A



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.

KGHM AJAX MINING INC.

AJAX PROJECT

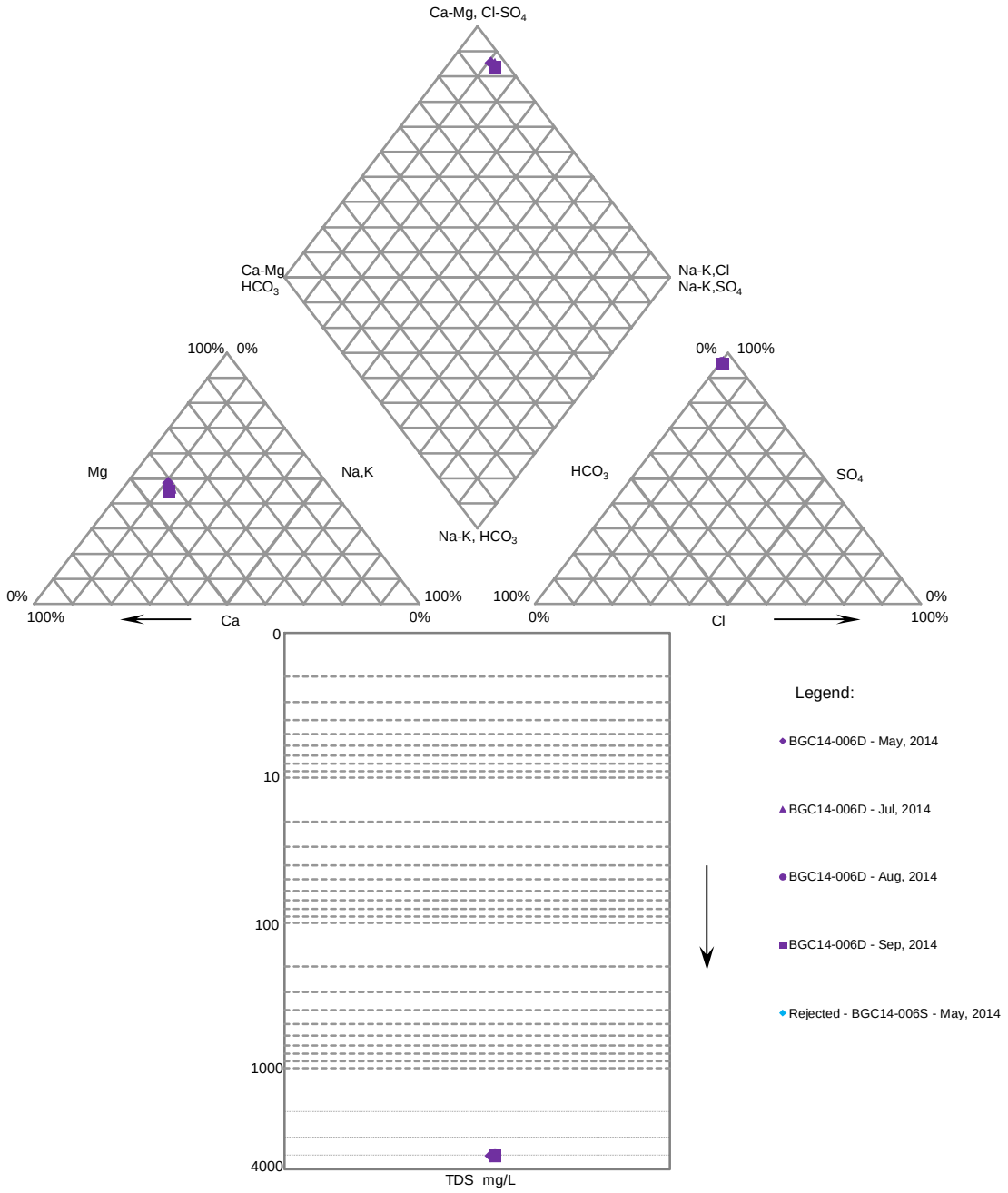
PIPER PLOT
BGC14-005

Knight Piésold CONSULTING

P/A NO. VA101-246/31 | REF. NO. 3

FIGURE E2.4 | REV A

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	13MAY'15	ISSUED WITH REPORT	CJ	JEM



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	13MAY'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

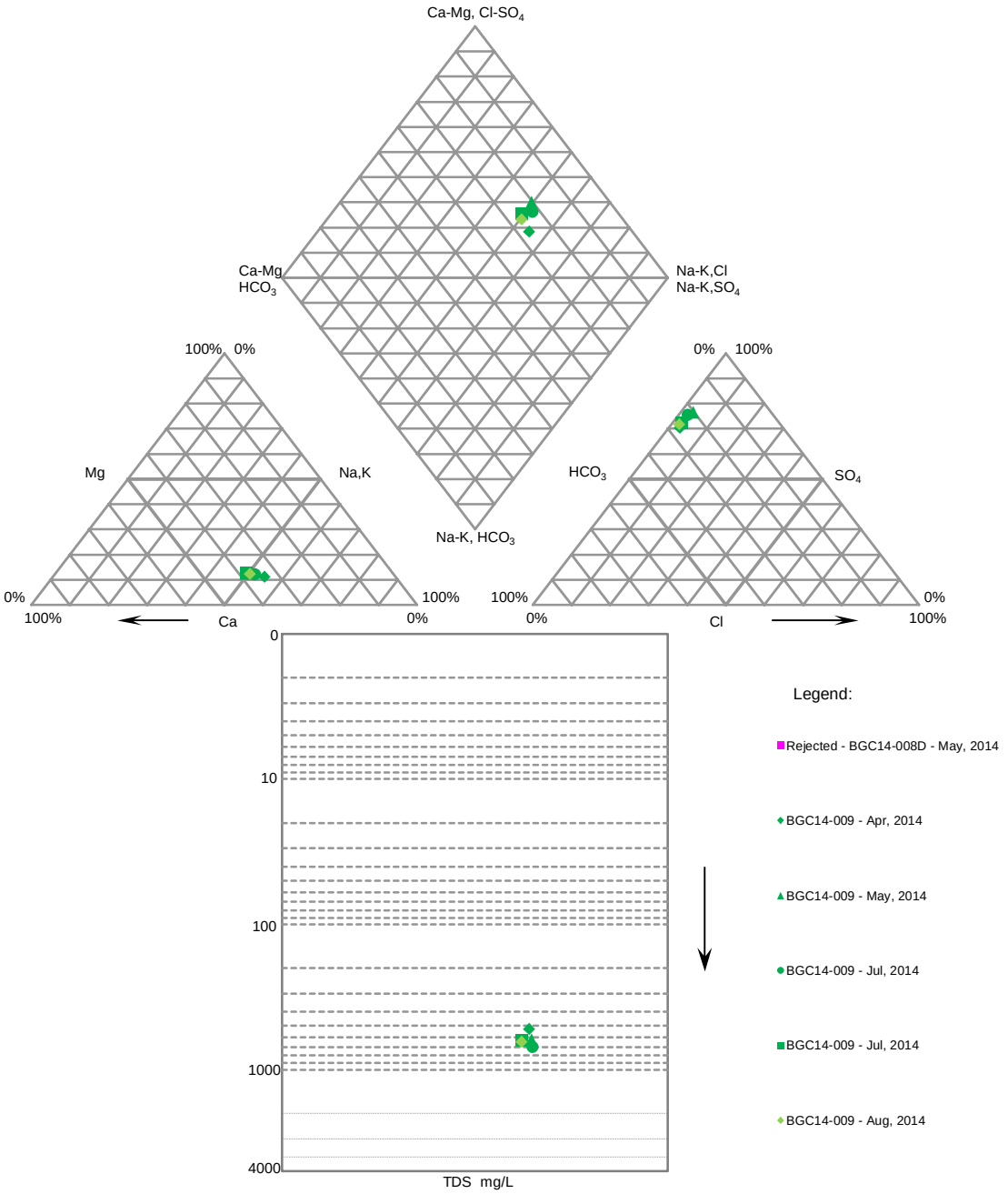
AJAX PROJECT

PIPER PLOT
BGC14-006D

Knight Piésold CONSULTING

P/A NO. VA101-246/31 | REF. NO. 3

FIGURE E2.5 | REV A



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. DATA USED FOR THESE PLOTS ARE AVERAGE VALUES, BASED ON SAMPLES COLLECTED FROM DECEMBER 2011 TO MAY 2014.
3. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	13MAY'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

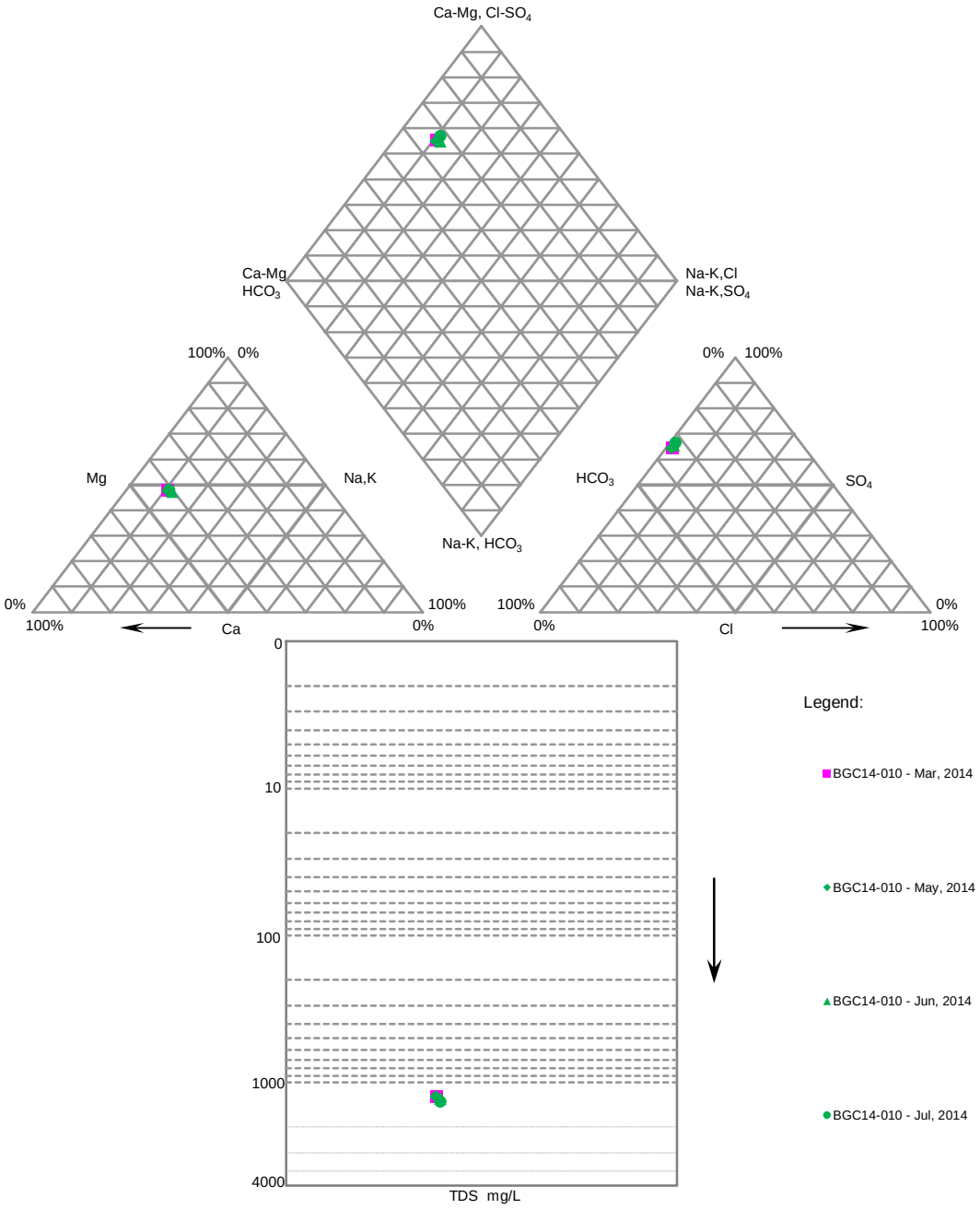
AJAX PROJECT

PIPER PLOT
BGC14-009

Knight Piésold CONSULTING

P/A NO. VA101-246/31 | REF. NO. 3

FIGURE E2.6 | REV A



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	13MAY'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

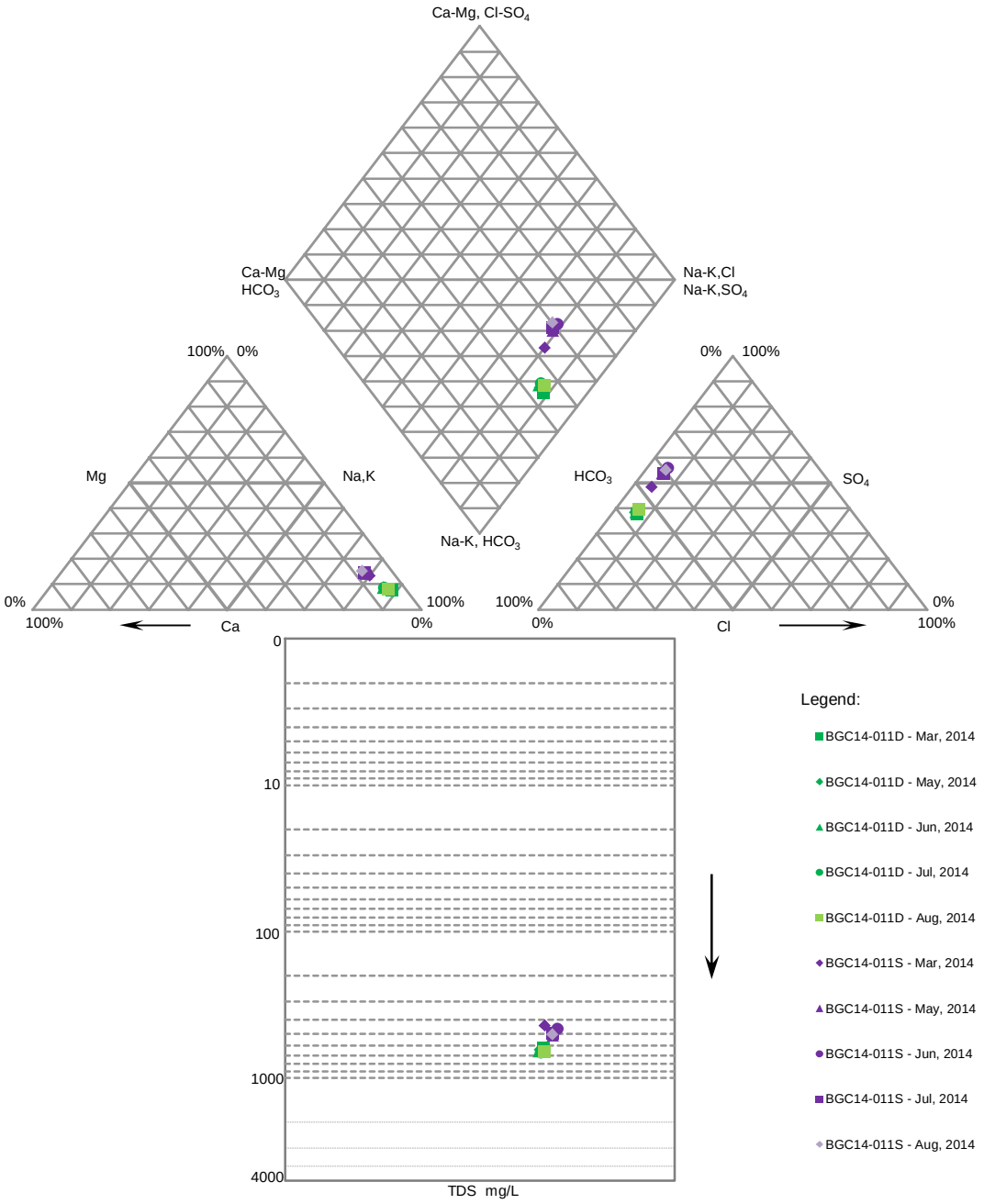
AJAX PROJECT

PIPER PLOT
BGC14-0010

Knight Piésold CONSULTING

P/A NO. VA101-246/31 | REF. NO. 3

FIGURE E2.7 | REV A



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	13MAY'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

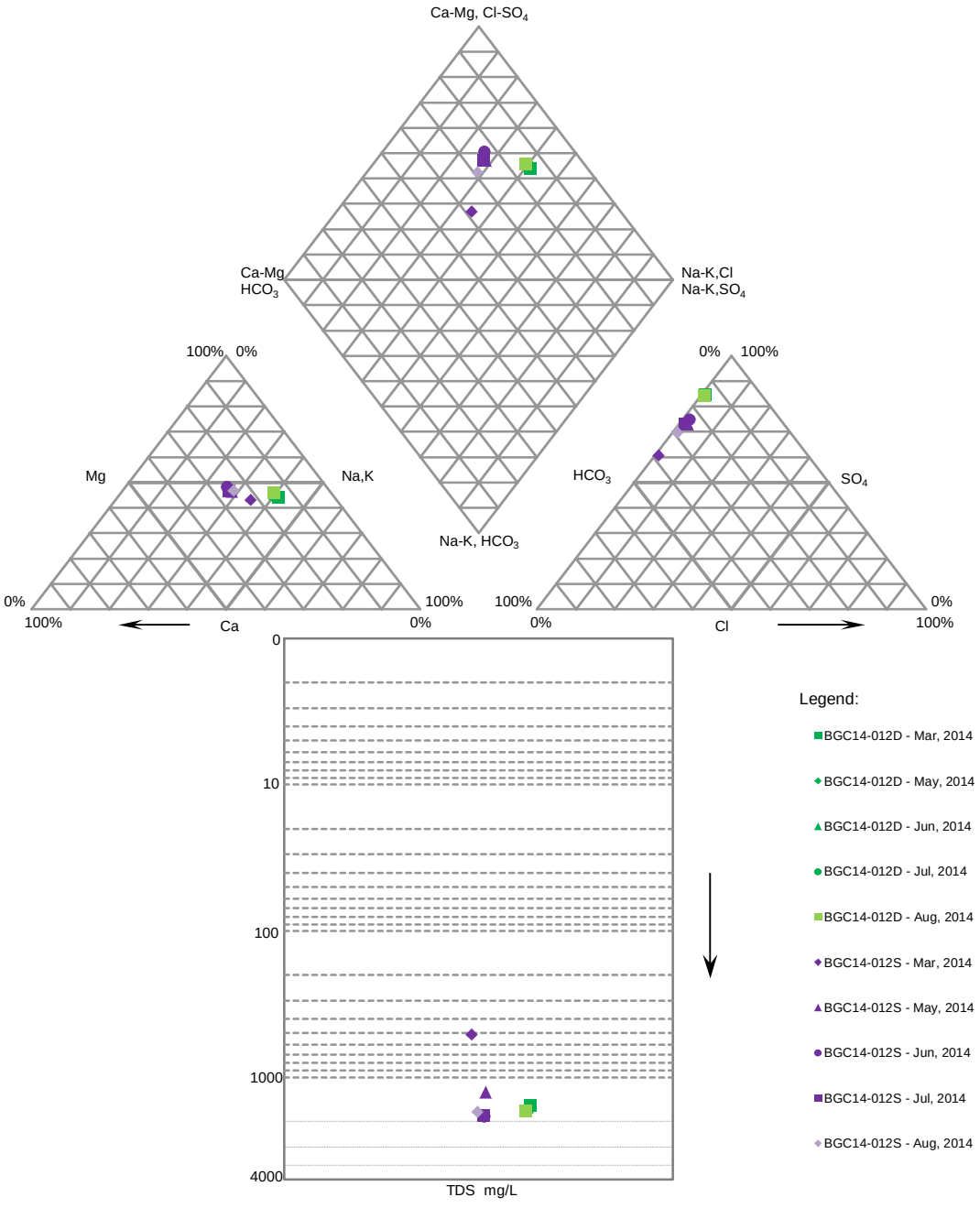
AJAX PROJECT

PIPER PLOT
BGC14-011D/S

Knight Piésold CONSULTING

P/A NO. VA101-246/31 | REF. NO. 3

FIGURE E2.8 | REV A



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. DATA USED FOR THESE PLOTS ARE AVERAGE VALUES, BASED ON SAMPLES COLLECTED FROM DECEMBER 2011 TO MAY 2014.
3. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	13MAY'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

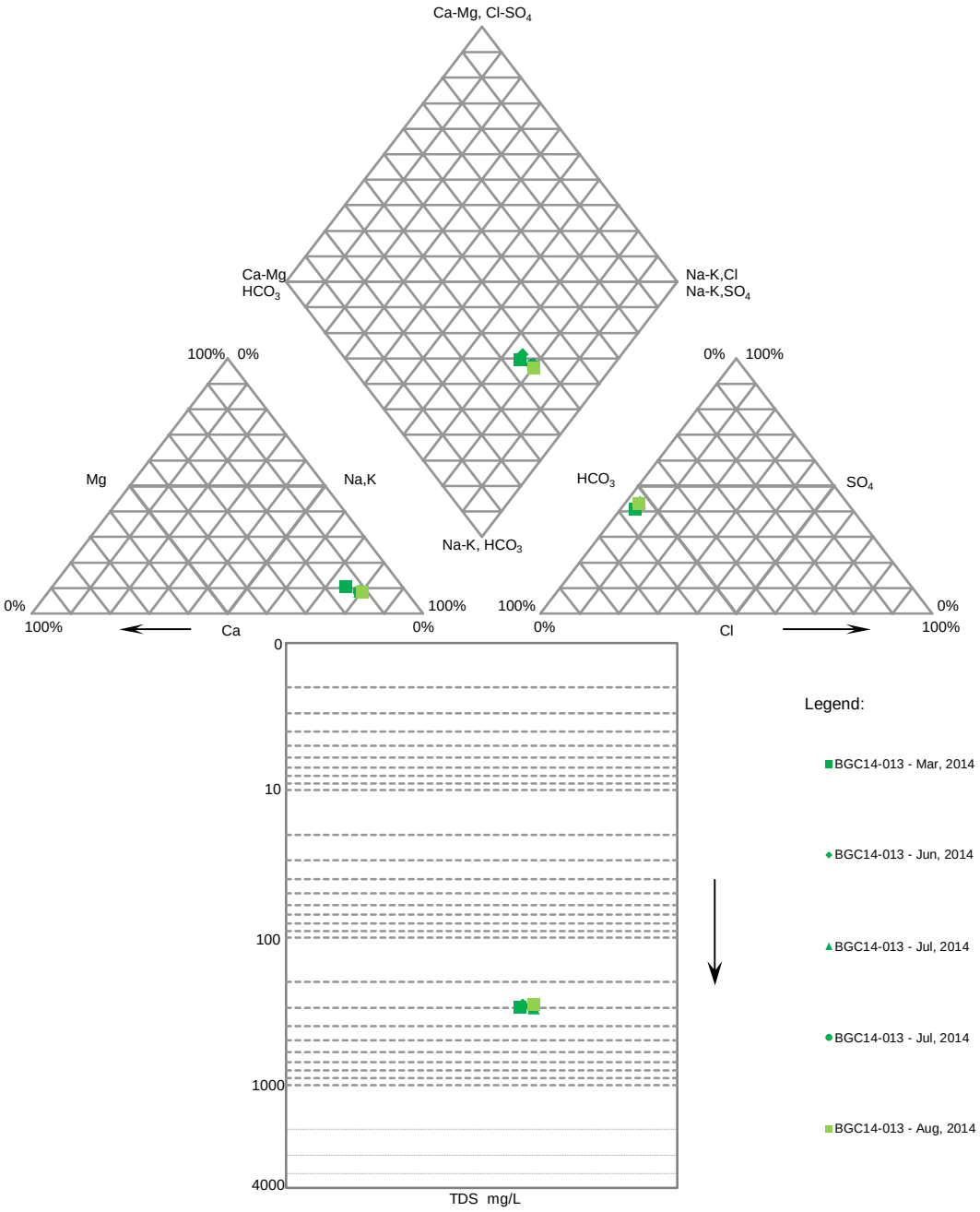
AJAX PROJECT

PIPER PLOT
BGC14-012D/S

Knight Piésold CONSULTING

P/A NO.	REF. NO.
VA101-246/31	3

FIGURE E2.9 REV A



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	13MAY'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

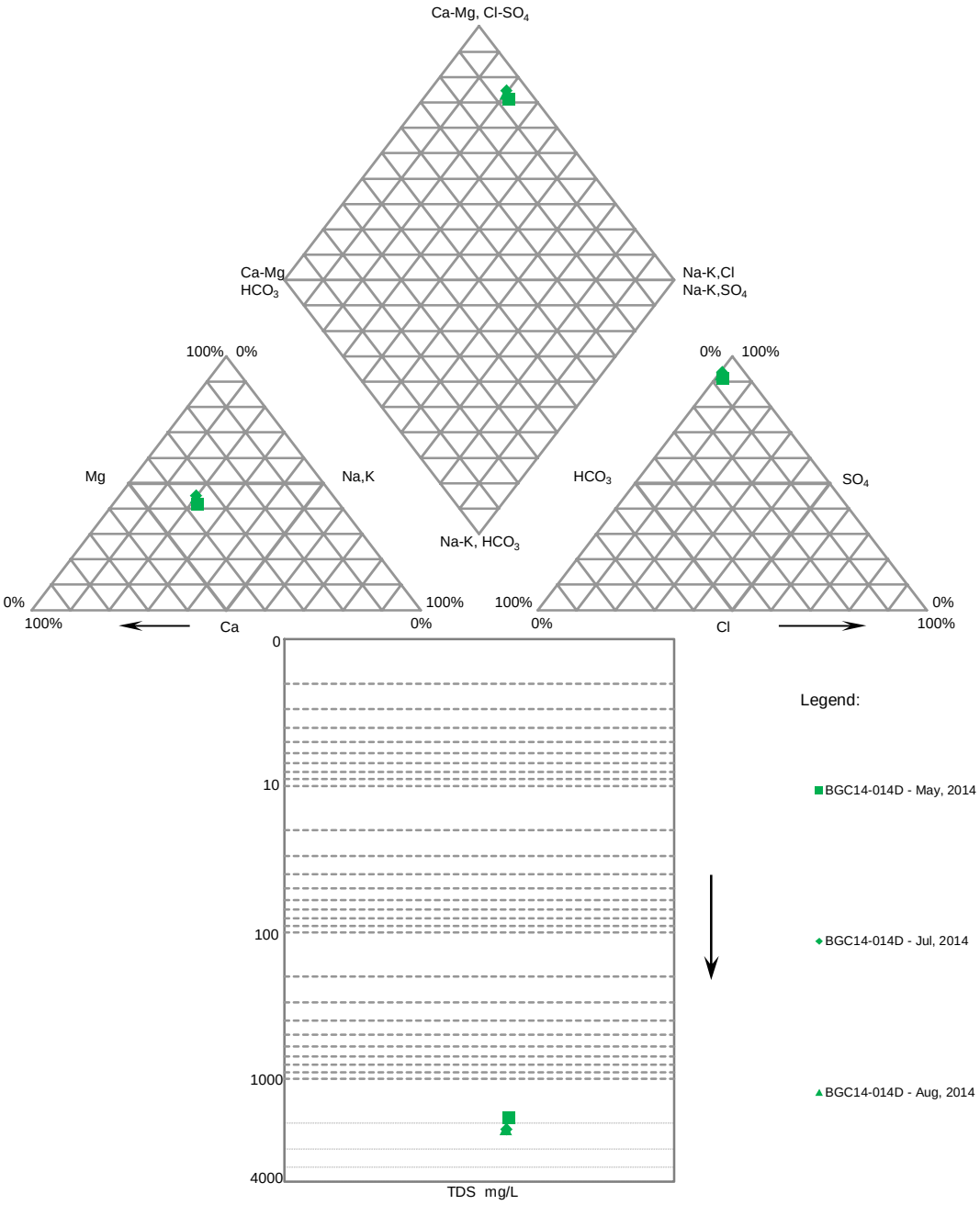
AJAX PROJECT

PIPER PLOT
BGC14-013

Knight Piésold CONSULTING

P/A NO. VA101-246/31 | REF. NO. 3

FIGURE E2.10 | REV A



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	13MAY'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

AJAX PROJECT

PIPER PLOT
BGC14-014D

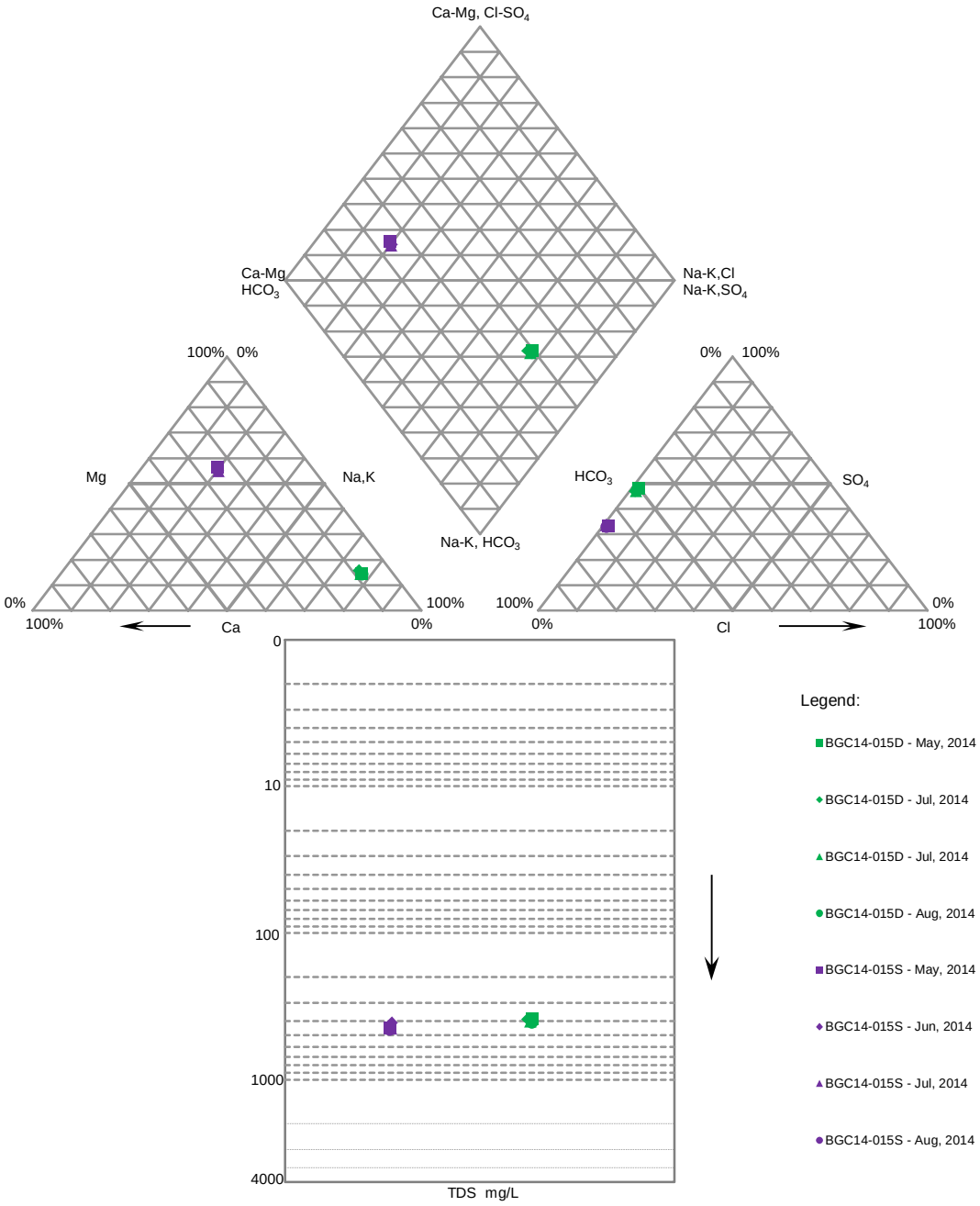
Knight Piésold CONSULTING

P/A NO. VA101-246/31

REF. NO. 3

FIGURE E2.11

REV A



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	13MAY'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

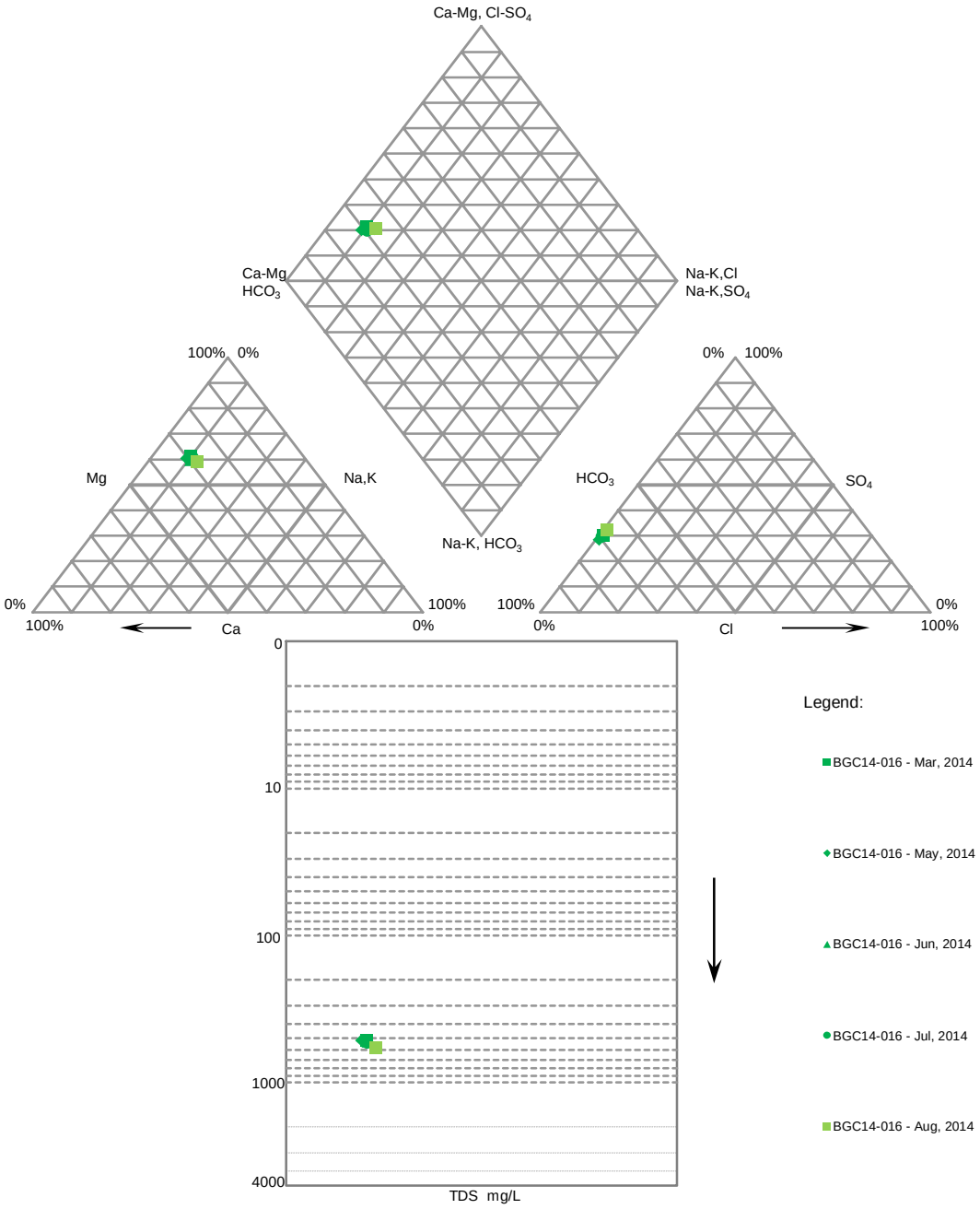
AJAX PROJECT

PIPER PLOT
BGC14-015D/S

Knight Piésold CONSULTING

P/A NO. VA101-246/31 | REF. NO. 3

FIGURE E2.12 | REV A



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	13MAY'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

AJAX PROJECT

PIPER PLOT
BGC14-016

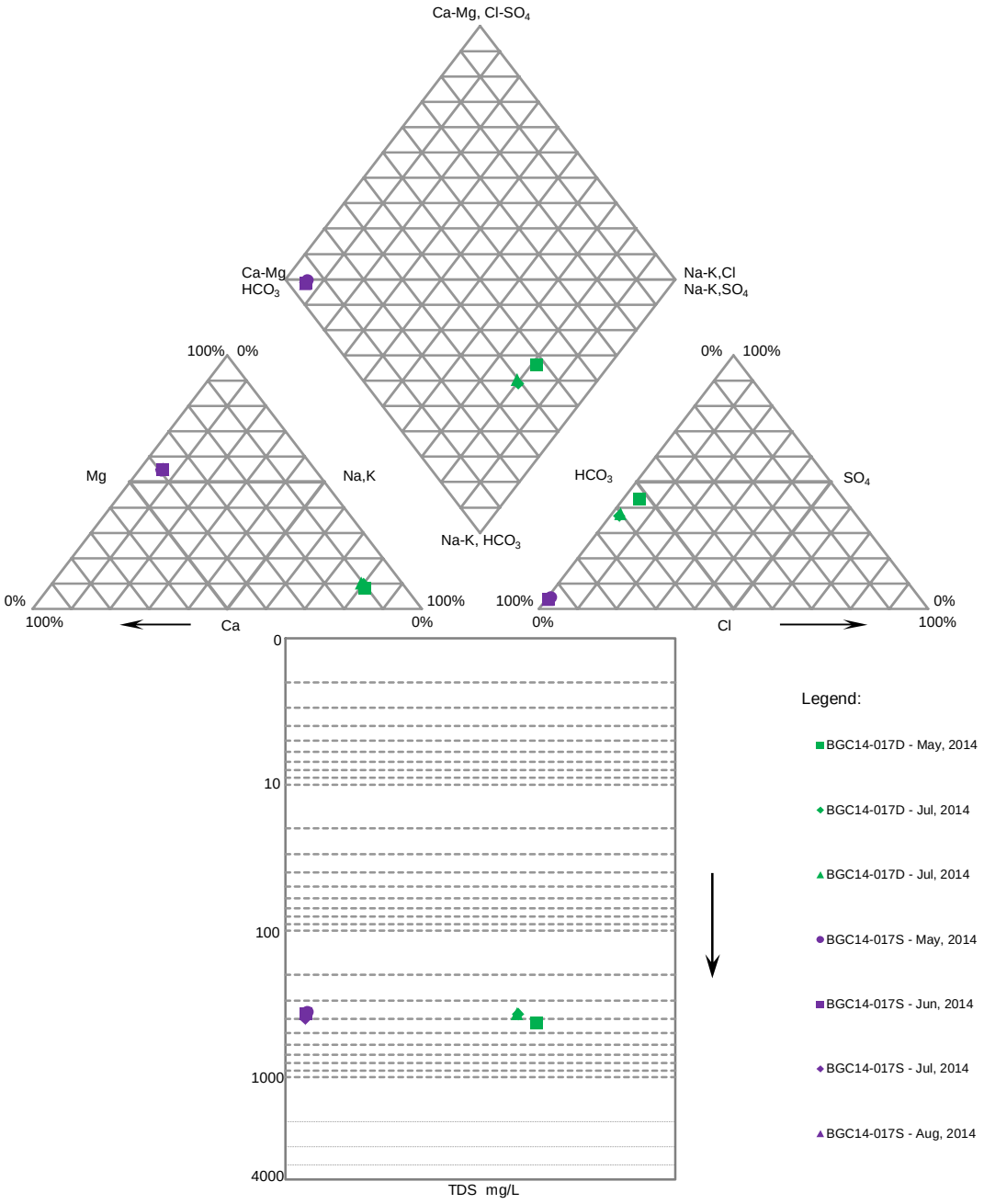
Knight Piésold CONSULTING

P/A NO. VA101-246/31

REF. NO. 3

FIGURE E2.13

REV A



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	13MAY'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

AJAX PROJECT

PIPER PLOT
BGC14-017D/S

Knight Piésold CONSULTING

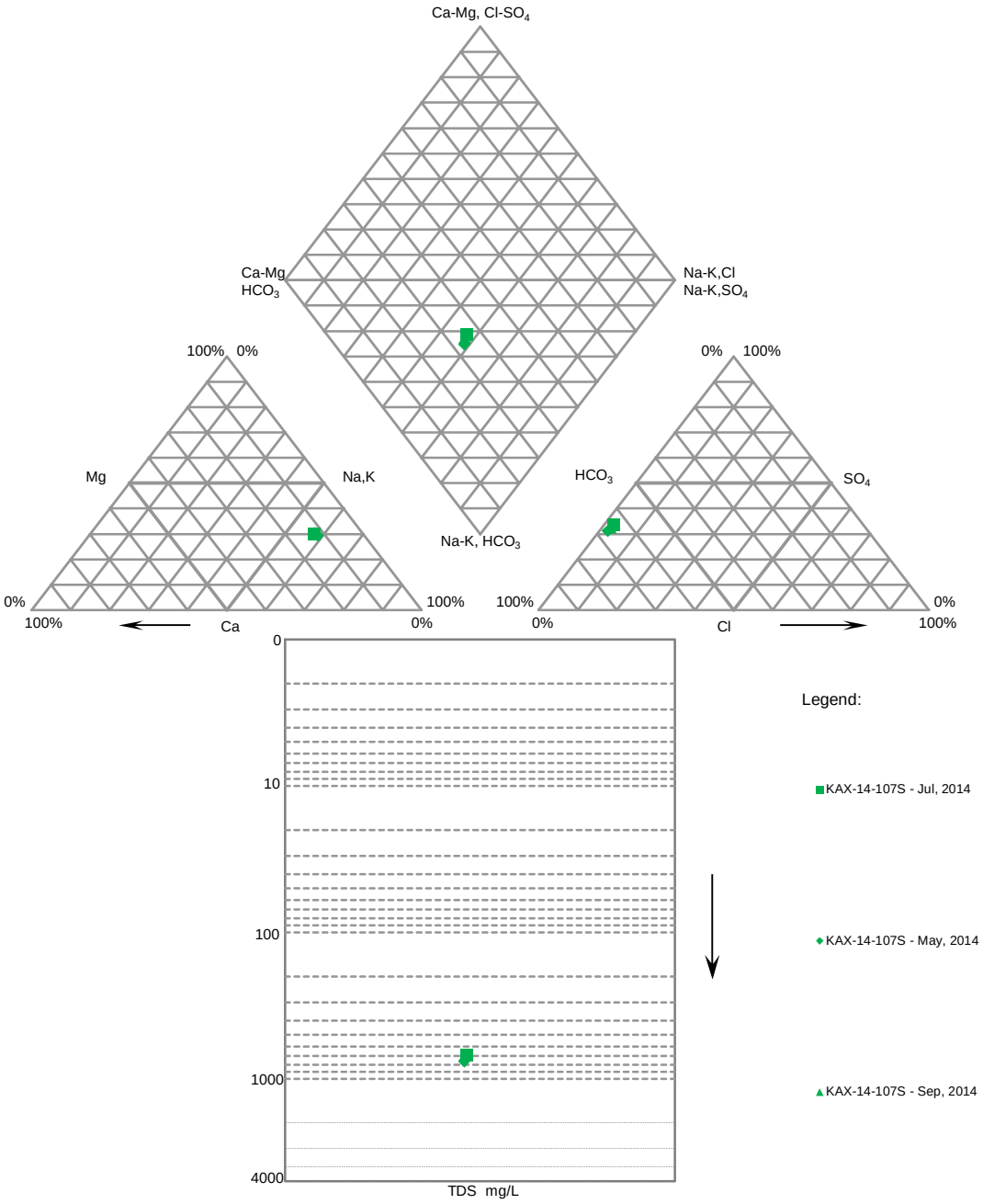
P/A NO. VA101-246/31 | REF. NO. 3

FIGURE E2.14 | REV A

APPENDIX E3

KAX PIPER PLOTS

(Pages E3-1 to E3-4)



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	13MAY'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

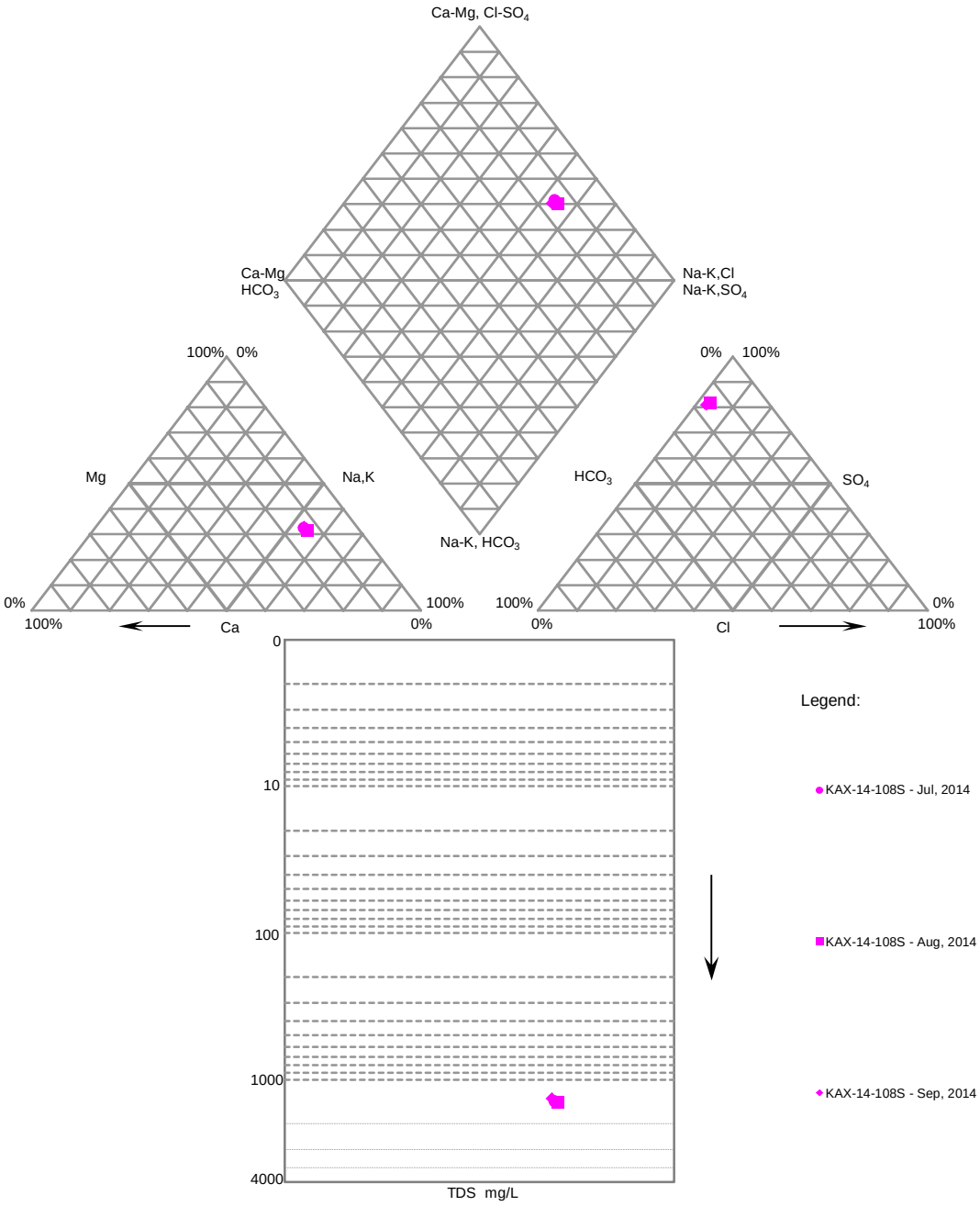
AJAX PROJECT

PIPER PLOT
KAX-14-107S

Knight Piésold CONSULTING

P/A NO.	REF. NO.
VA101-246/31	3

FIGURE E3.1 | REV 0



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	13MAY'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

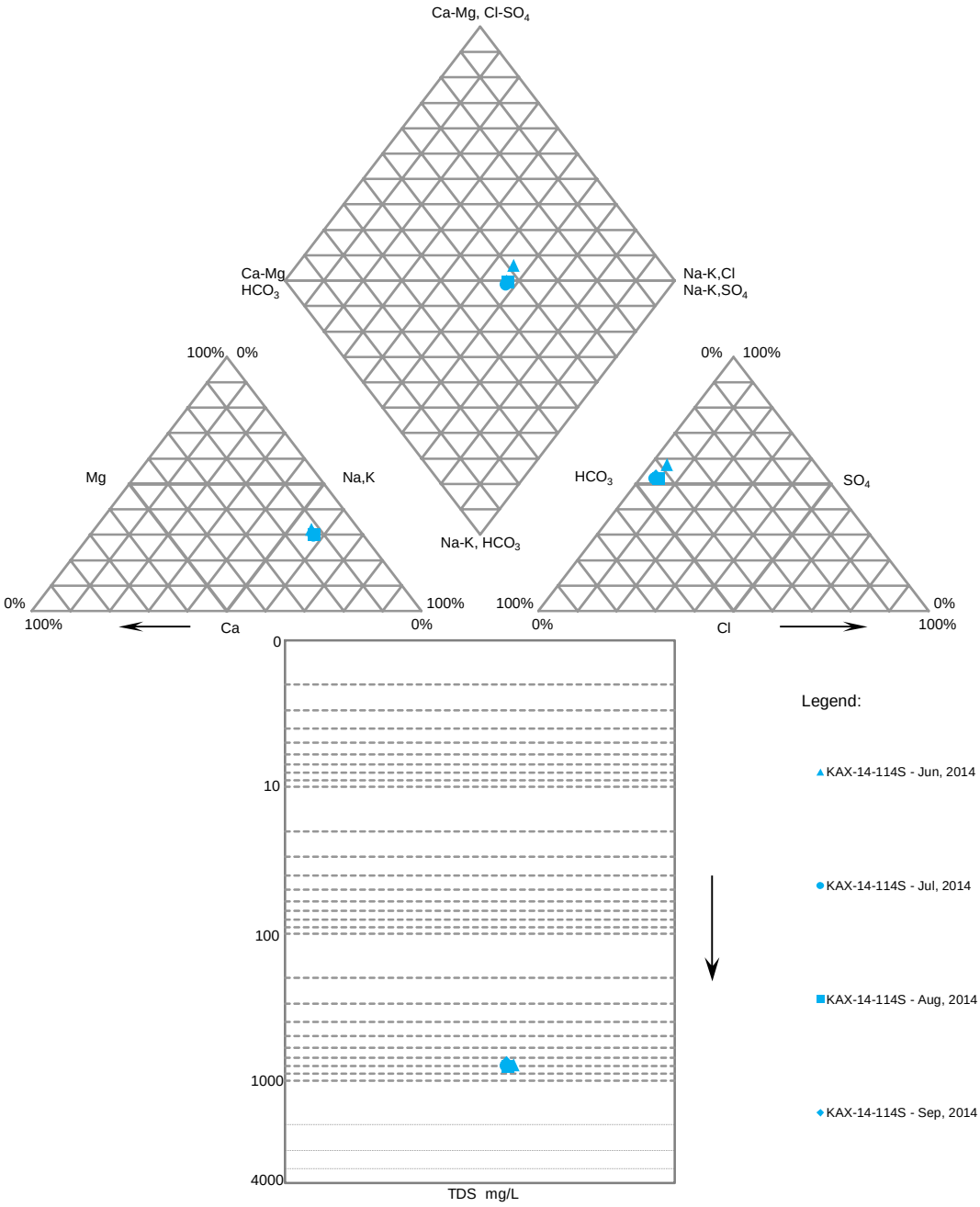
AJAX PROJECT

PIPER PLOT
KAX-14-108S

Knight Piésold CONSULTING

P/A NO. VA101-246/31 | REF. NO. 3

FIGURE E3.2 | REV 0



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	13MAY'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

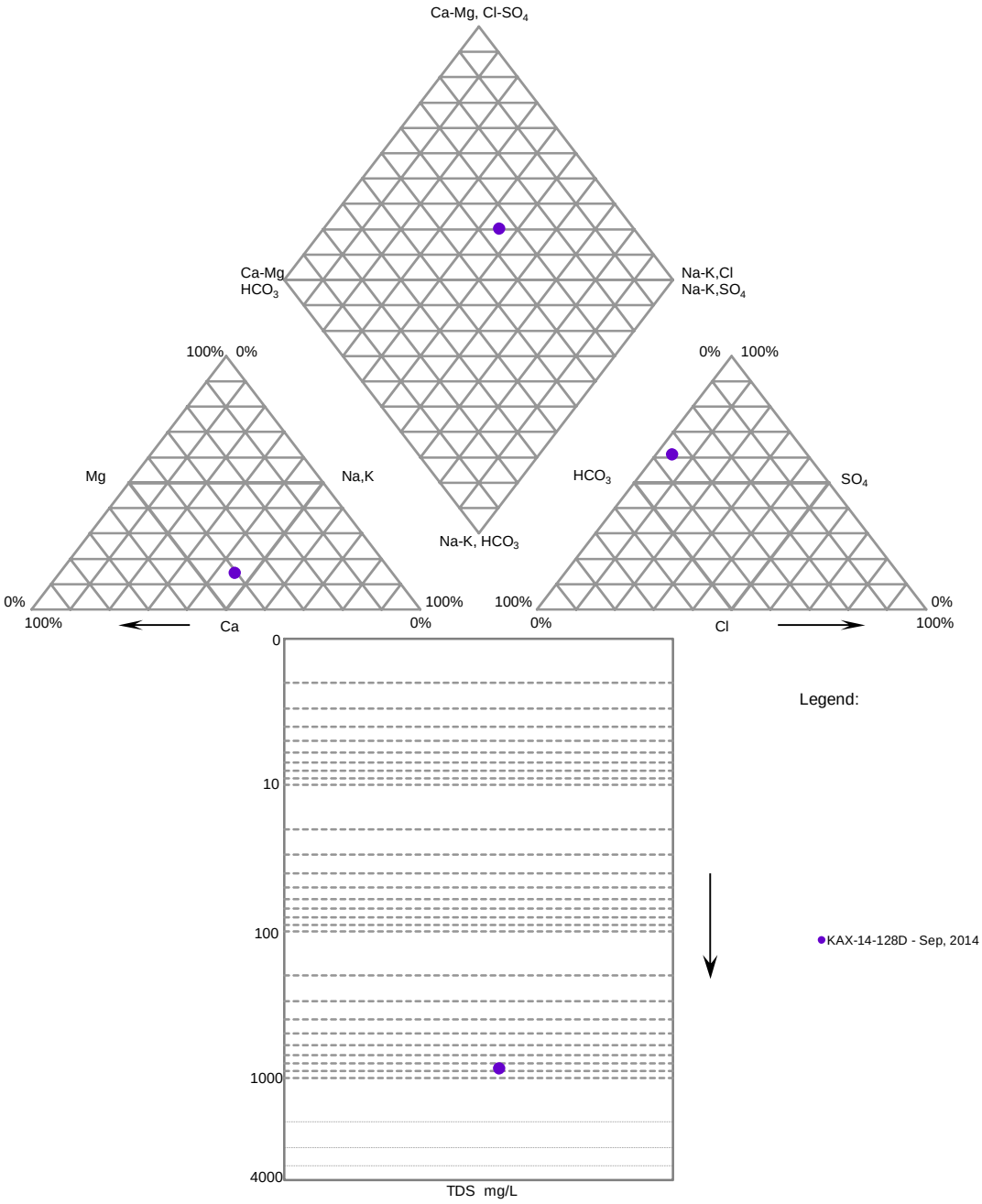
AJAX PROJECT

PIPER PLOT
KAX-14-114S

Knight Piésold CONSULTING

P/A NO. VA101-246/31 | REF. NO. 3

FIGURE E3.3 | REV 0



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	13MAY'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

AJAX PROJECT

PIPER PLOT
KAX-14-128D

Knight Piésold CONSULTING

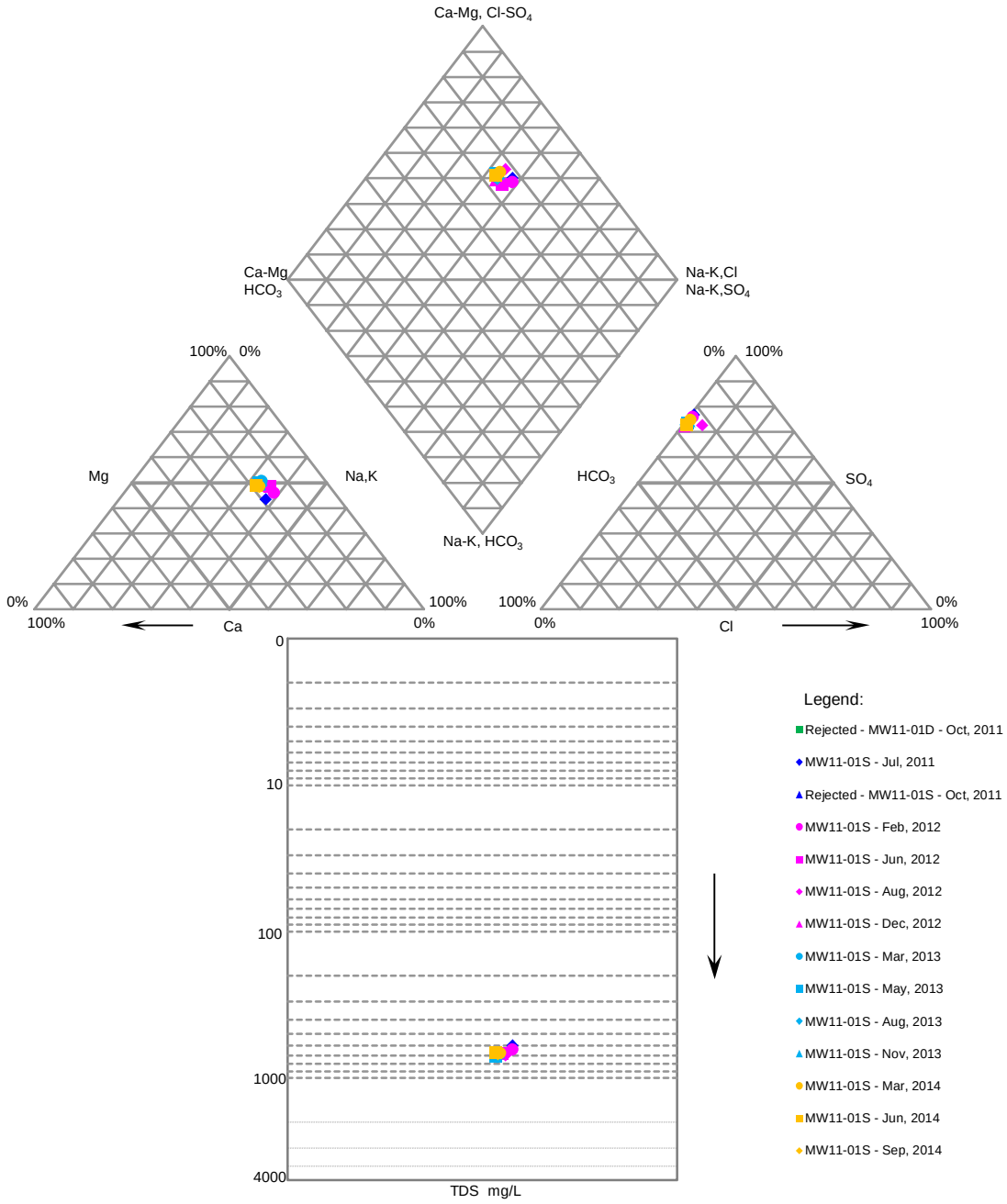
P/A NO. VA101-246/31 | REF. NO. 3

FIGURE E3.4 | REV 0

APPENDIX E4

MW PIPER PLOTS

(Pages E4-1 to E4-11)



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	13MAY'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

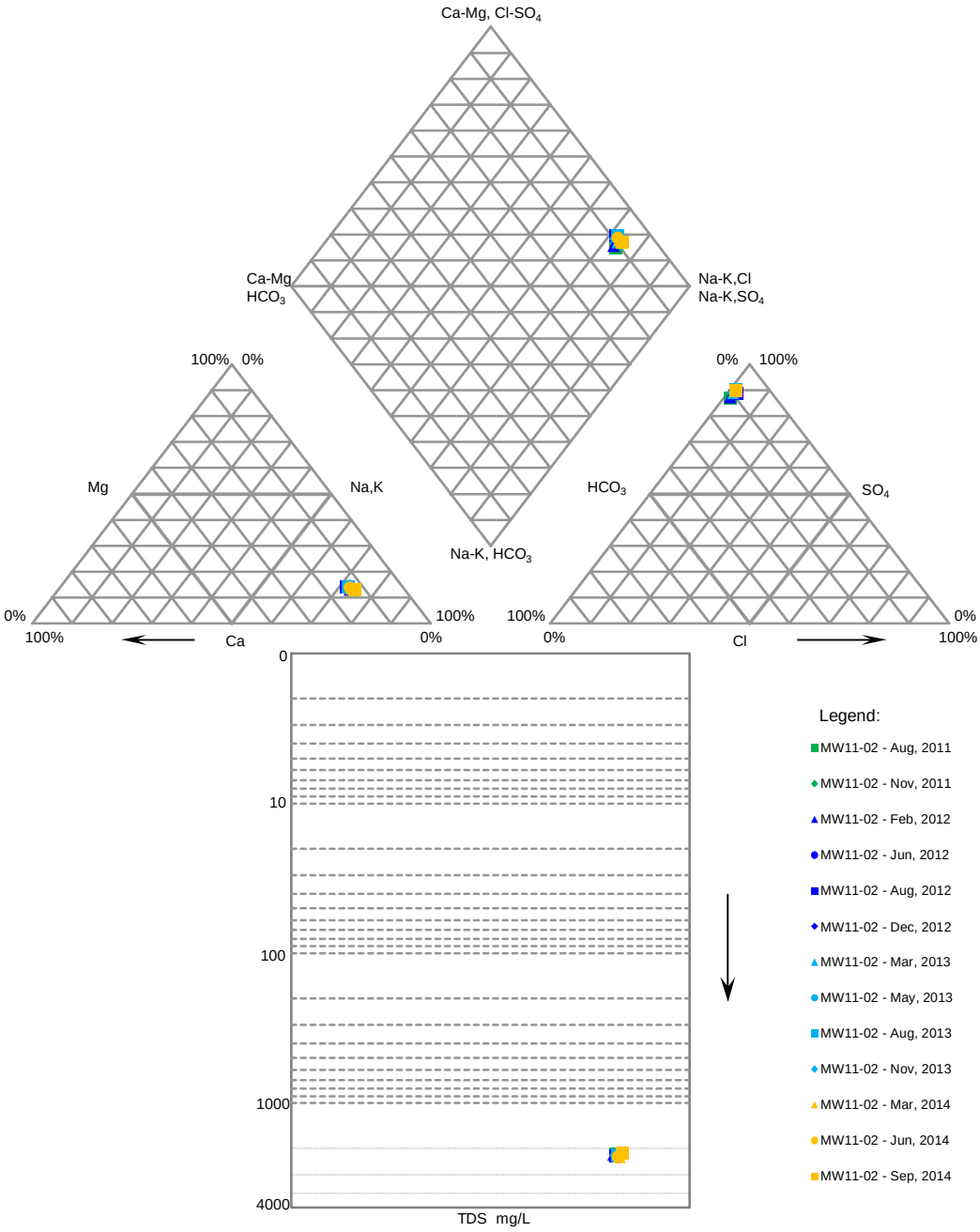
AJAX PROJECT

PIPER PLOT
MW11-01S

Knight Piésold CONSULTING

P/A NO. VA101-246/31 | REF. NO. 3

FIGURE E4.1 | REV 0



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	13MAY'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

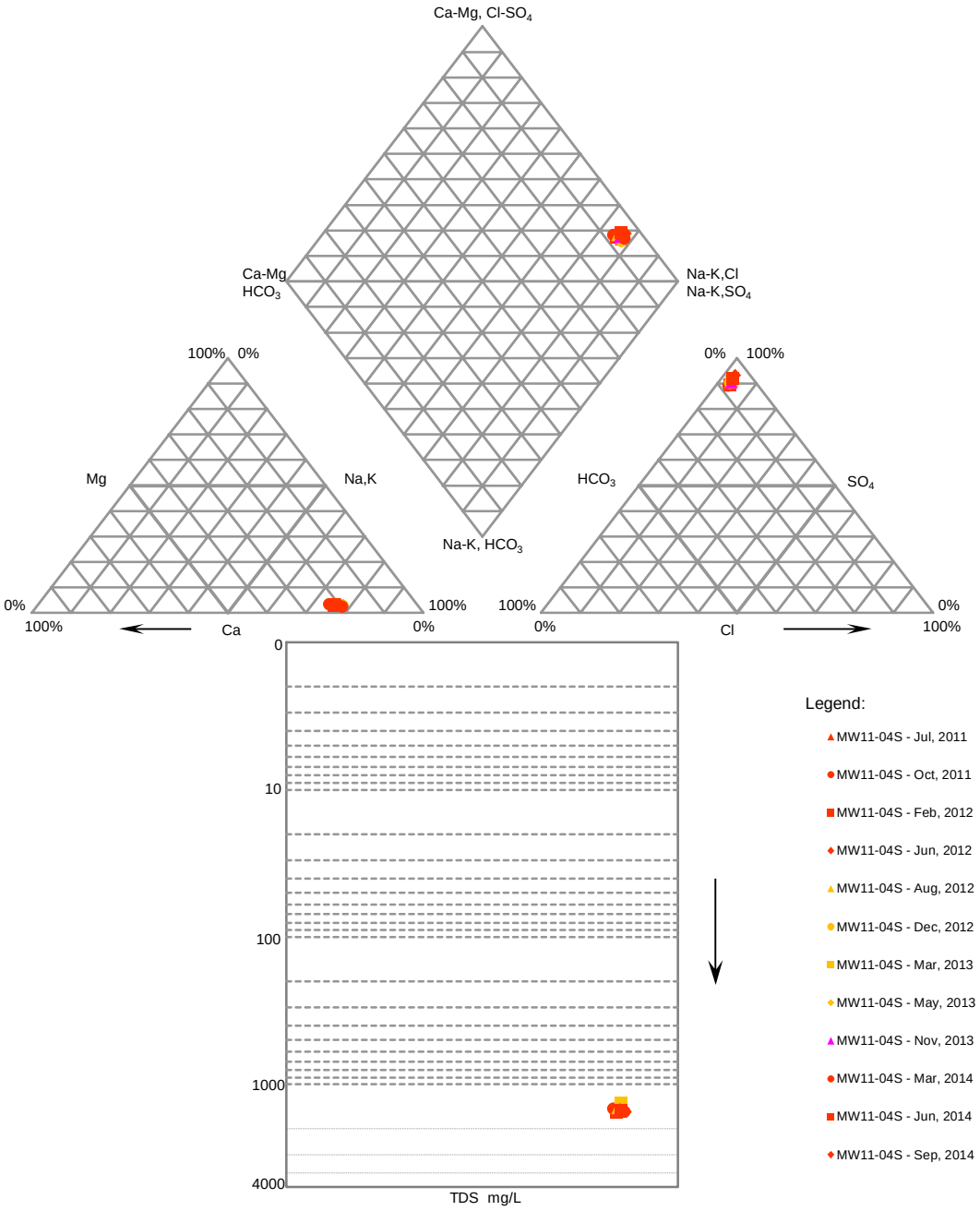
AJAX PROJECT

PIPER PLOT
MW11-02

Knight Piésold CONSULTING

P/A NO. VA101-246/31 | REF. NO. 3

FIGURE E4.2 | REV 0



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. DATA USED FOR THESE PLOTS ARE AVERAGE VALUES, BASED ON SAMPLES COLLECTED FROM DECEMBER 2011 TO MAY 2014.
3. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	13MAY'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

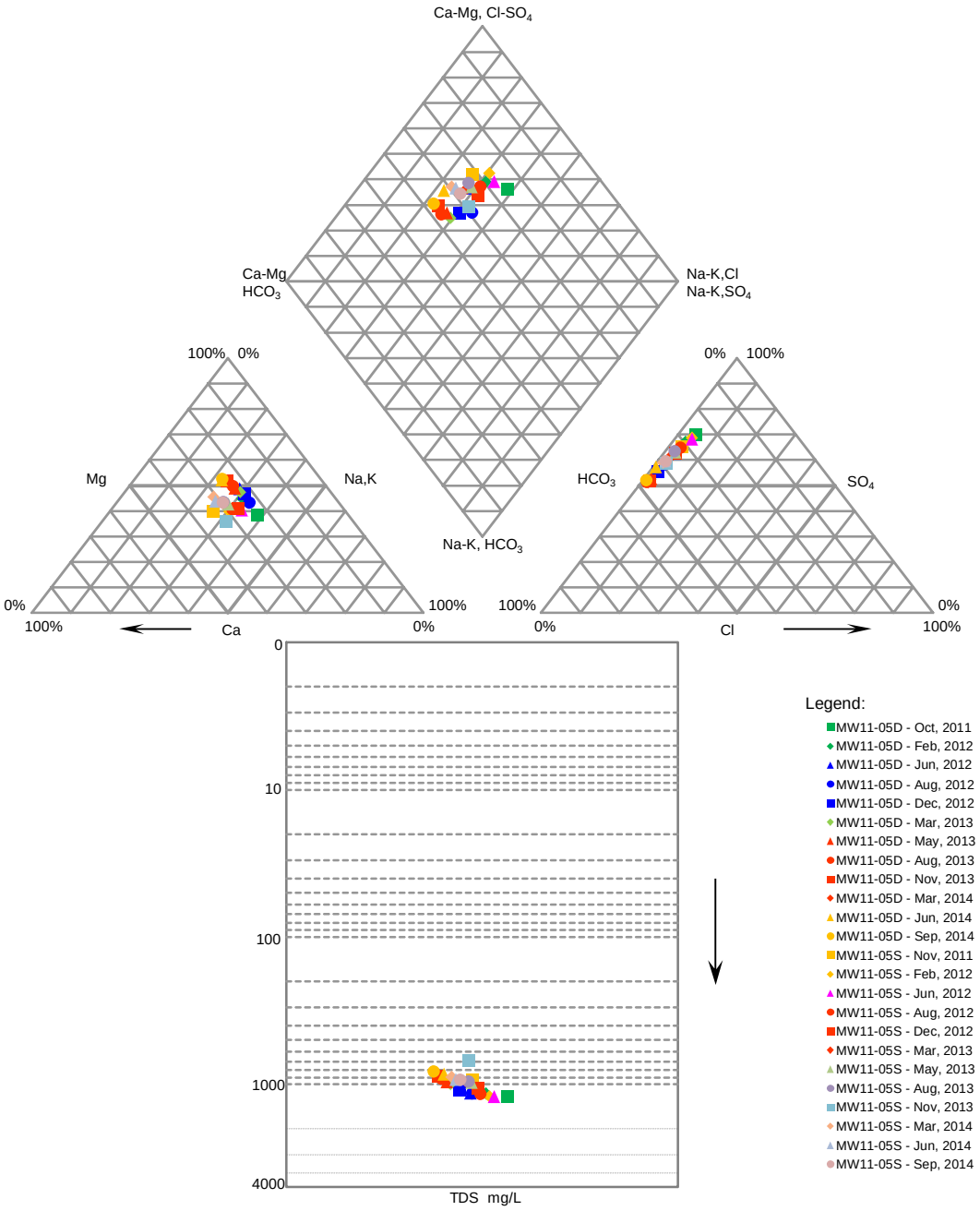
AJAX PROJECT

PIPER PLOT
MW11-04D/S

Knight Piésold CONSULTING

P/A NO.	REF. NO.
VA101-246/31	3

FIGURE E4.3 | REV 0



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	13MAY'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

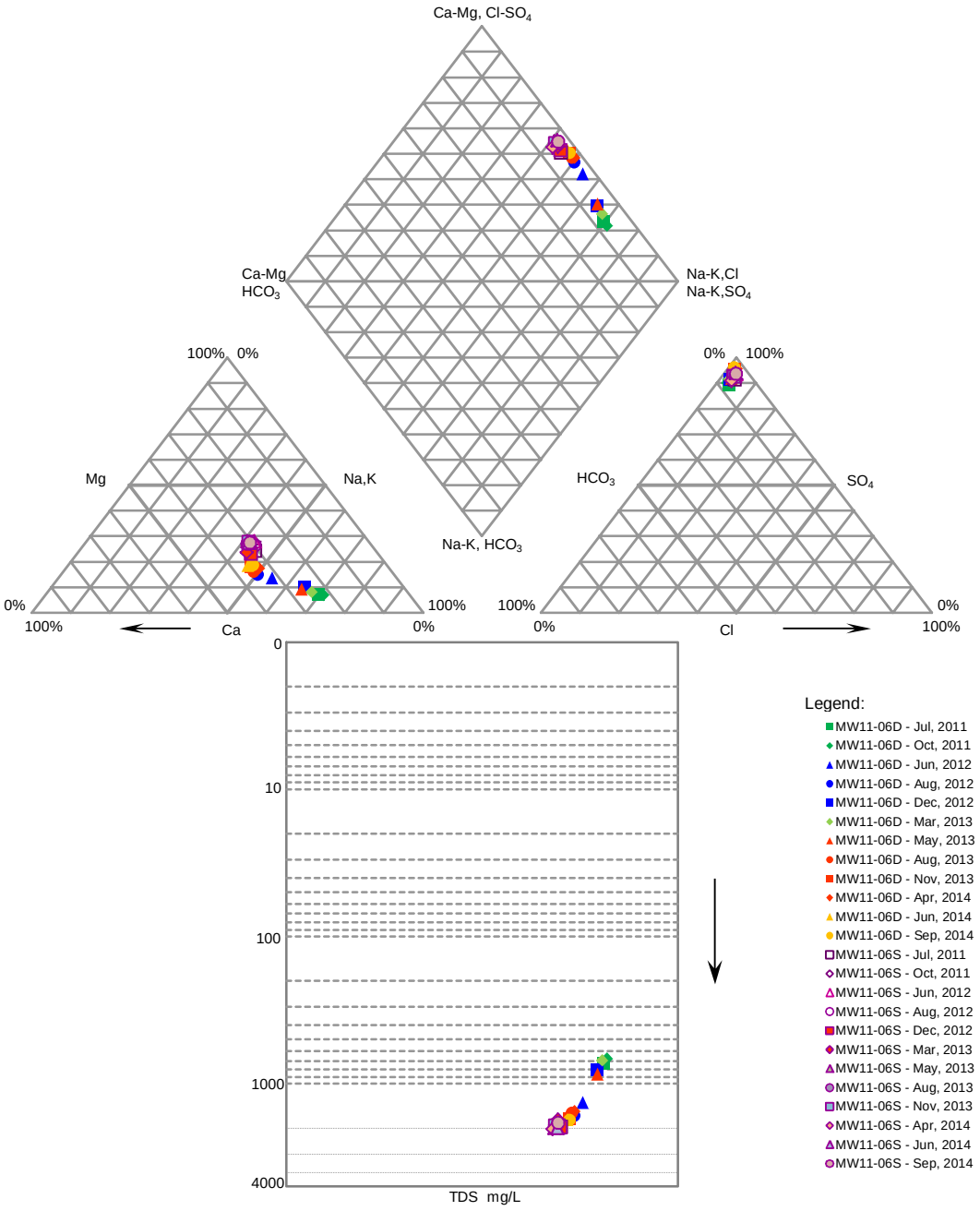
AJAX PROJECT

PIPER PLOT
MW11-05D/S

Knight Piésold CONSULTING

P/A NO.	REF. NO.
VA101-246/31	3

FIGURE E4.4 REV 0



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	13MAY'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

AJAX PROJECT

PIPER PLOT
MW11-06D/S

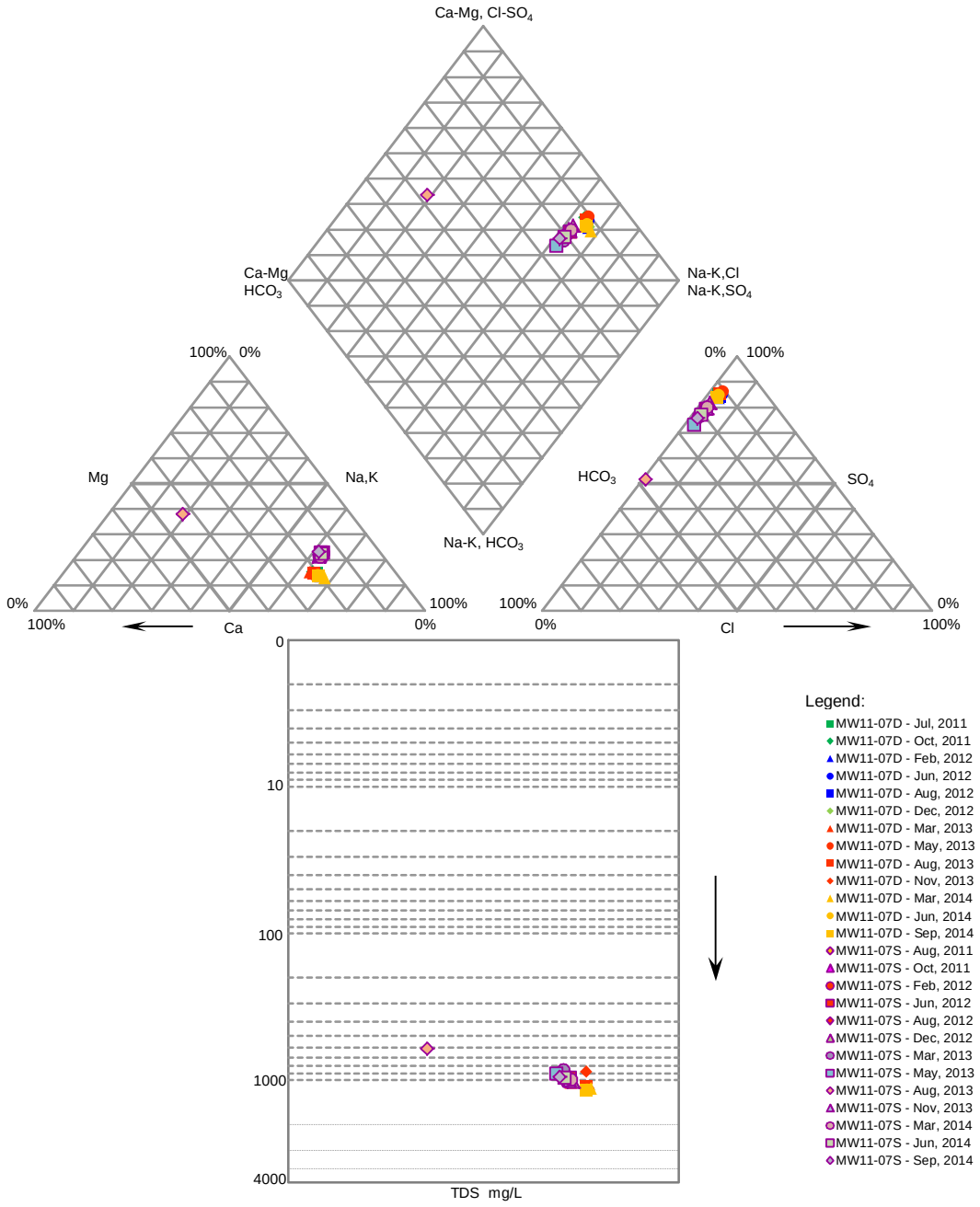
Knight Piésold CONSULTING

P/A NO. VA101-246/31

REF. NO. 3

FIGURE E4.5

REV 0



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	13MAY'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

AJAX PROJECT

PIPER PLOT
MW11-07D/S

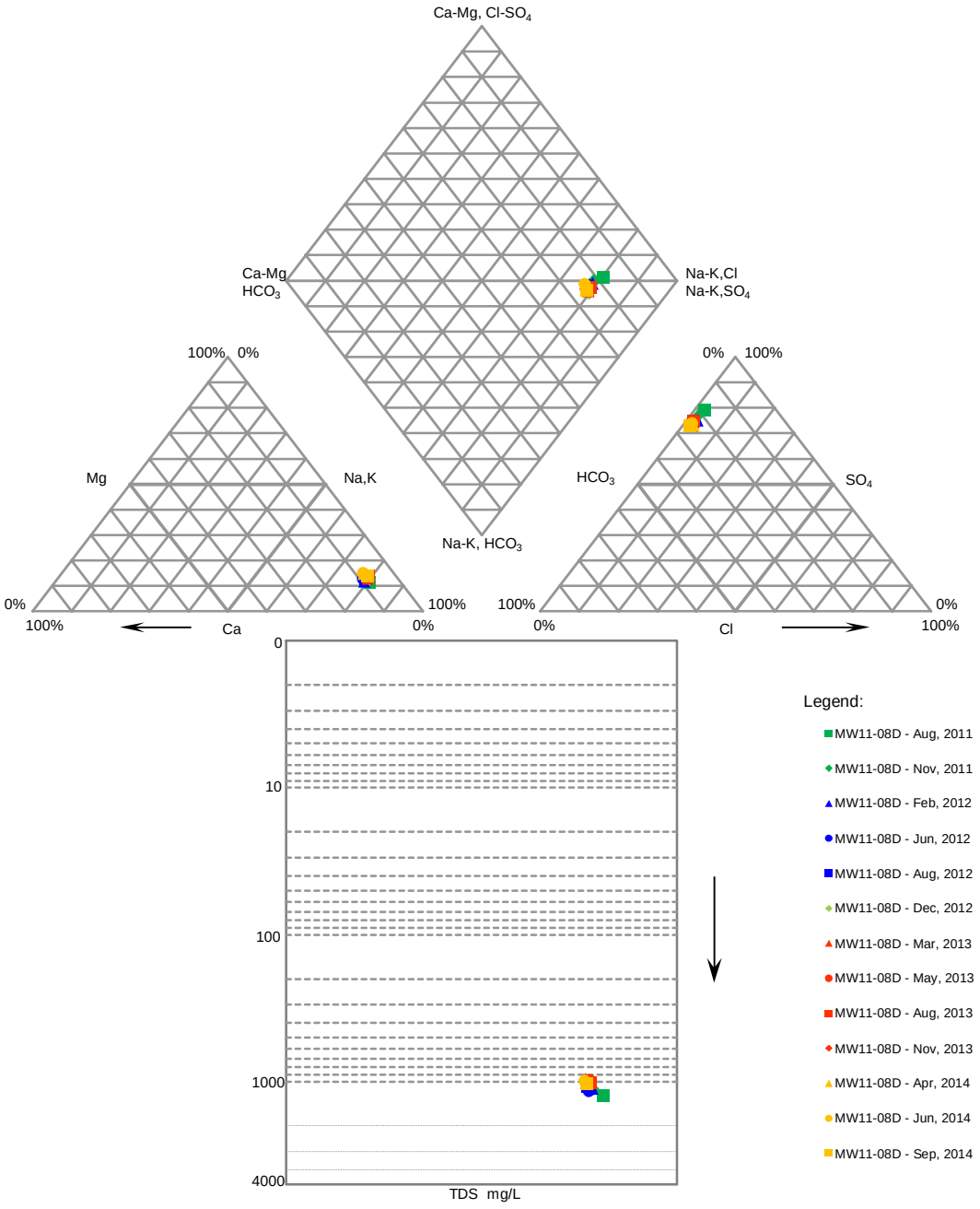
Knight Piésold CONSULTING

P/A NO. VA101-246/31

REF. NO. 3

FIGURE E4.6

REV 0



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	13MAY'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

AJAX PROJECT

PIPER PLOT
MW11-08D

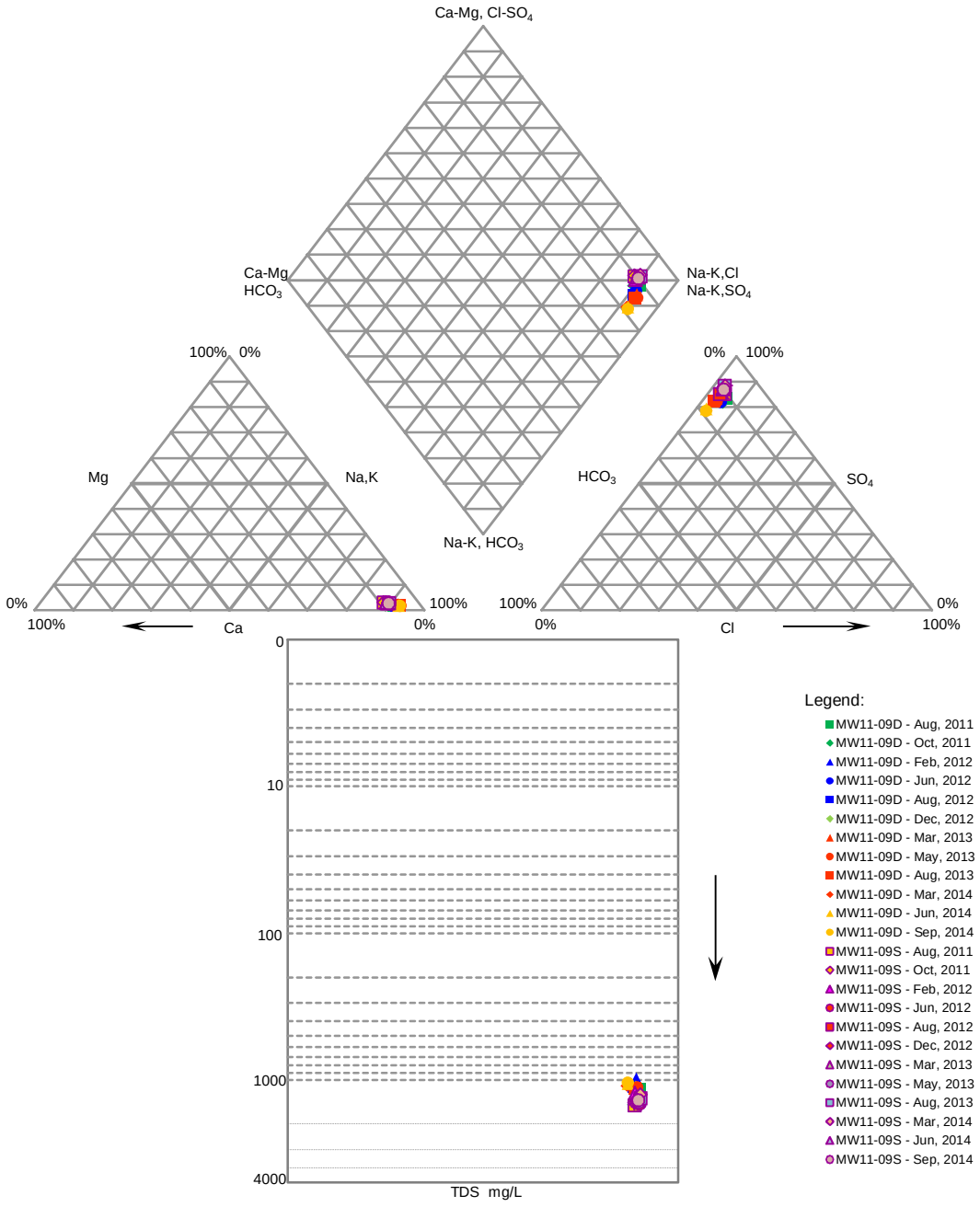
Knight Piésold CONSULTING

P/A NO. VA101-246/31

REF. NO. 3

FIGURE E4.7

REV 0



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	13MAY'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

AJAX PROJECT

PIPER PLOT
MW11-09D/S

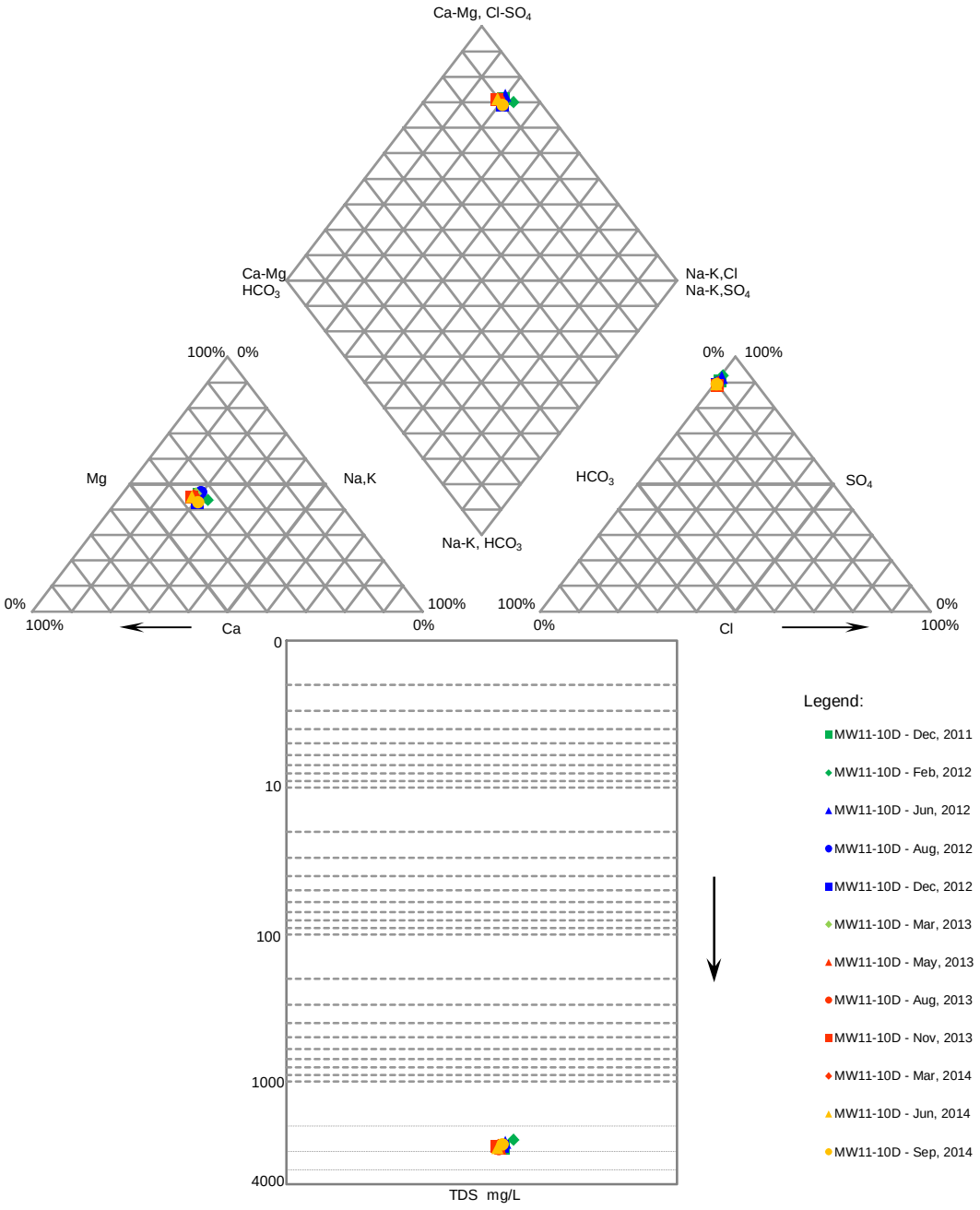
Knight Piésold CONSULTING

P/A NO. VA101-246/31

REF. NO. 3

FIGURE E4.8

REV 0



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	13MAY'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

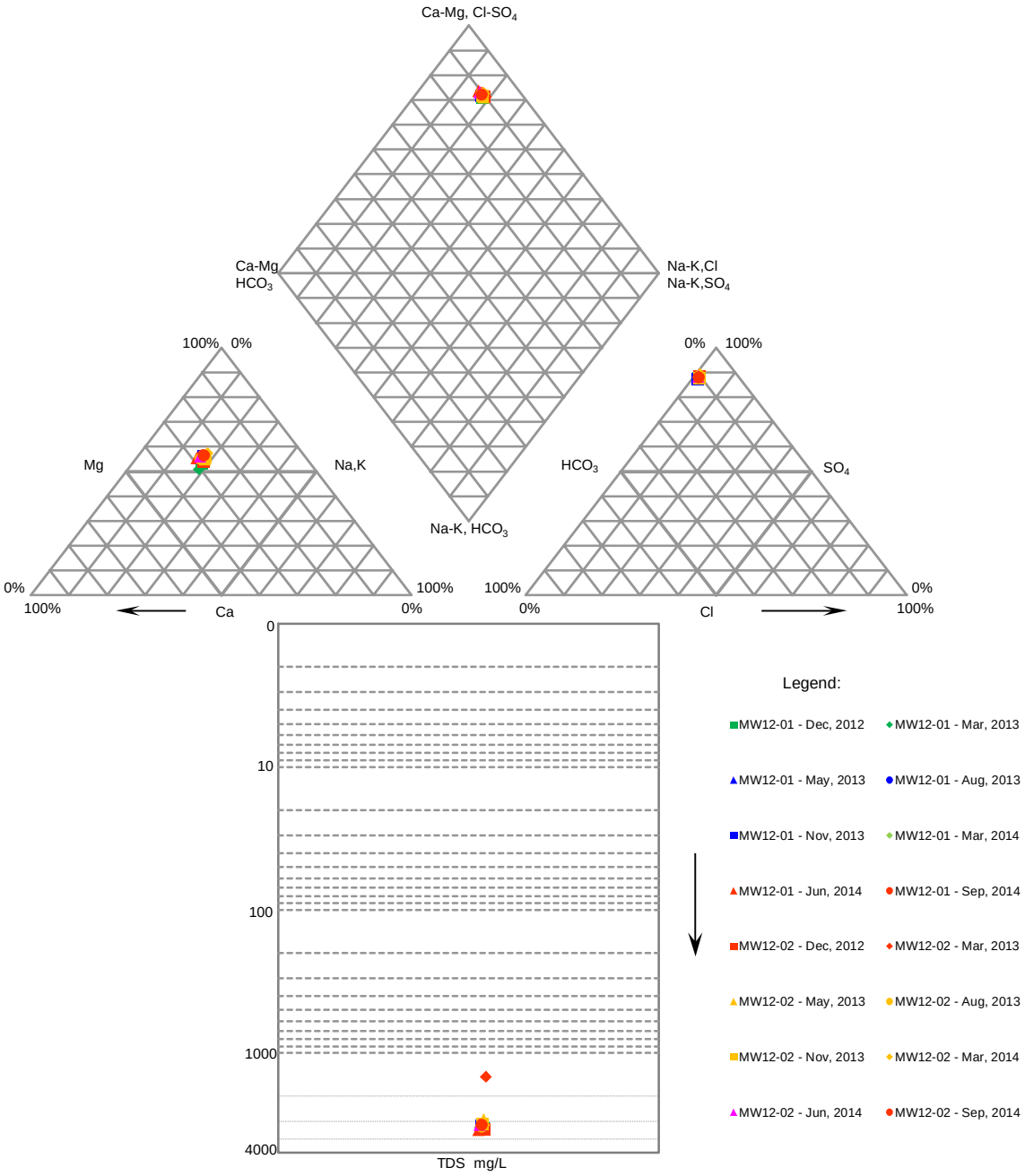
AJAX PROJECT

PIPER PLOT
MW11-10D

Knight Piésold CONSULTING

P/A NO. VA101-246/31 | REF. NO. 3

FIGURE E4.9 | REV 0



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. DATA USED FOR THESE PLOTS ARE AVERAGE VALUES, BASED ON SAMPLES COLLECTED FROM DECEMBER 2011 TO MAY 2014.
3. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	13MAY'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

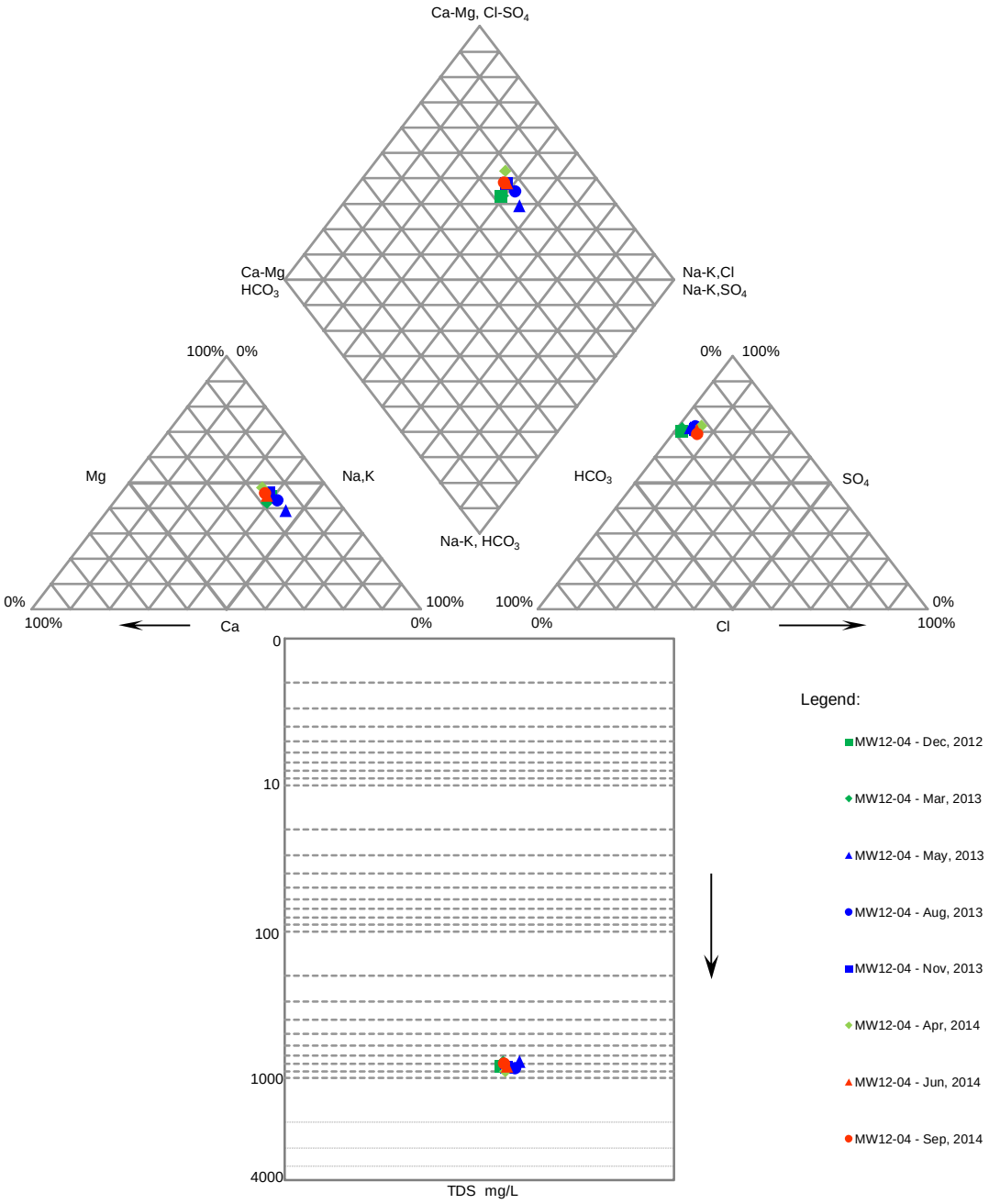
AJAX PROJECT

PIPER PLOT
MW12-01 AND MW12-02

Knight Piésold CONSULTING

P/A NO. VA101-246/31 | REF. NO. 3

FIGURE E4.10 | REV 0



NOTES:
1. PIPER DATA ARE PLOTTED IN %meq/L.
2. DATA USED FOR THESE PLOTS ARE AVERAGE VALUES, BASED ON SAMPLES COLLECTED FROM DECEMBER 2011 TO MAY 2014.
3. VALUES BELOW THE METHOD DETECTION LIMIT (MDL) WERE ASSUMED TO EQUAL HALF THE MDL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	13MAY'15	ISSUED WITH REPORT	CJ	JEM

KGHM AJAX MINING INC.

AJAX PROJECT

PIPER PLOT
MW12-04

Knight Piésold CONSULTING

P/A NO.	REF. NO.
VA101-246/31	3

FIGURE E4.11 | REV 0

APPENDIX F

GROUNDWATER MONITORING WELL COMPLETION LOGS

Appendix F1 AJGW Logs
Appendix F2 MW11 Series Wells
Appendix F3 MW12 Series Wells
Appendix F4 BGC14 Series Wells
Appendix F5 KAX-14 Series Wells

APPENDIX F1

AJGW LOGS

(Pages F1-1 to F1-11)

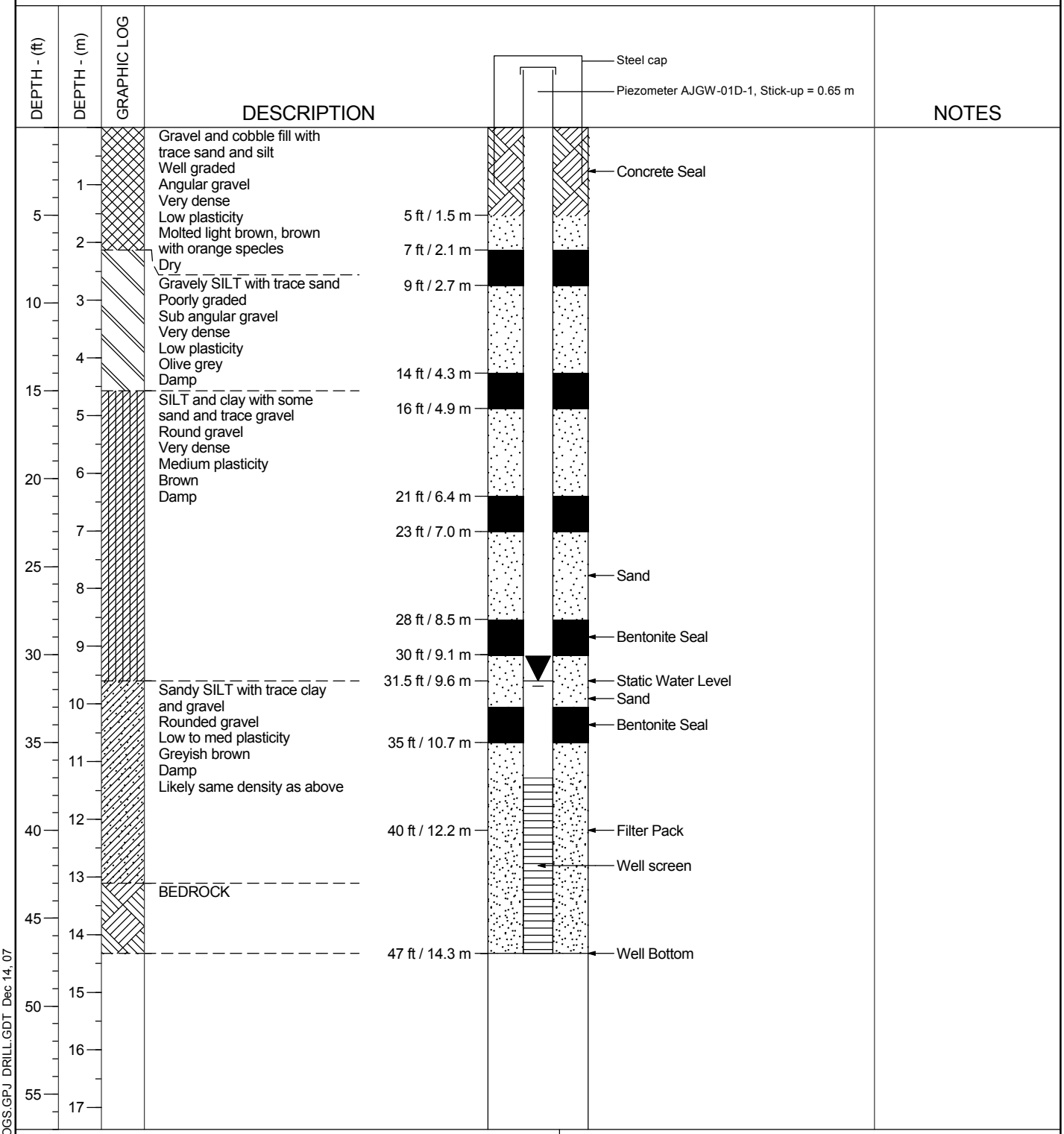
Project: AFTON PROJECT | Drill Hole No.: AJGW-01D | Page 1 of 1

Hole Depth: 47 ft / 14.3 m | Hole Diameter: 102 mm | Date Started: Sep 10, 07 | Date Completed: Sep 10, 07

Collar Elev: 901 ft / 274.6 m | PVC Pipe I.D.: 51 mm | Logged by: BG | Reviewed by:

Water Level Readings: Depth to Water / Date Measured

Well 1: 9.60 / Sep 10, 07



ABACUS MINING AND EXPLORATION CORPORATION
AFTON PROJECT
Well Completion Details For AJGW-01D

Knight Piésold CONSULTING

Project No.	Ref. No.	Rev.
101-246/5	1	0

AJGW-01D

Rev. 0 - Issued for Report

WELL AJGW WELL LOGS.GPJ DRILL.GDT Dec 14, 07

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Date Revised: Dec 14, 07

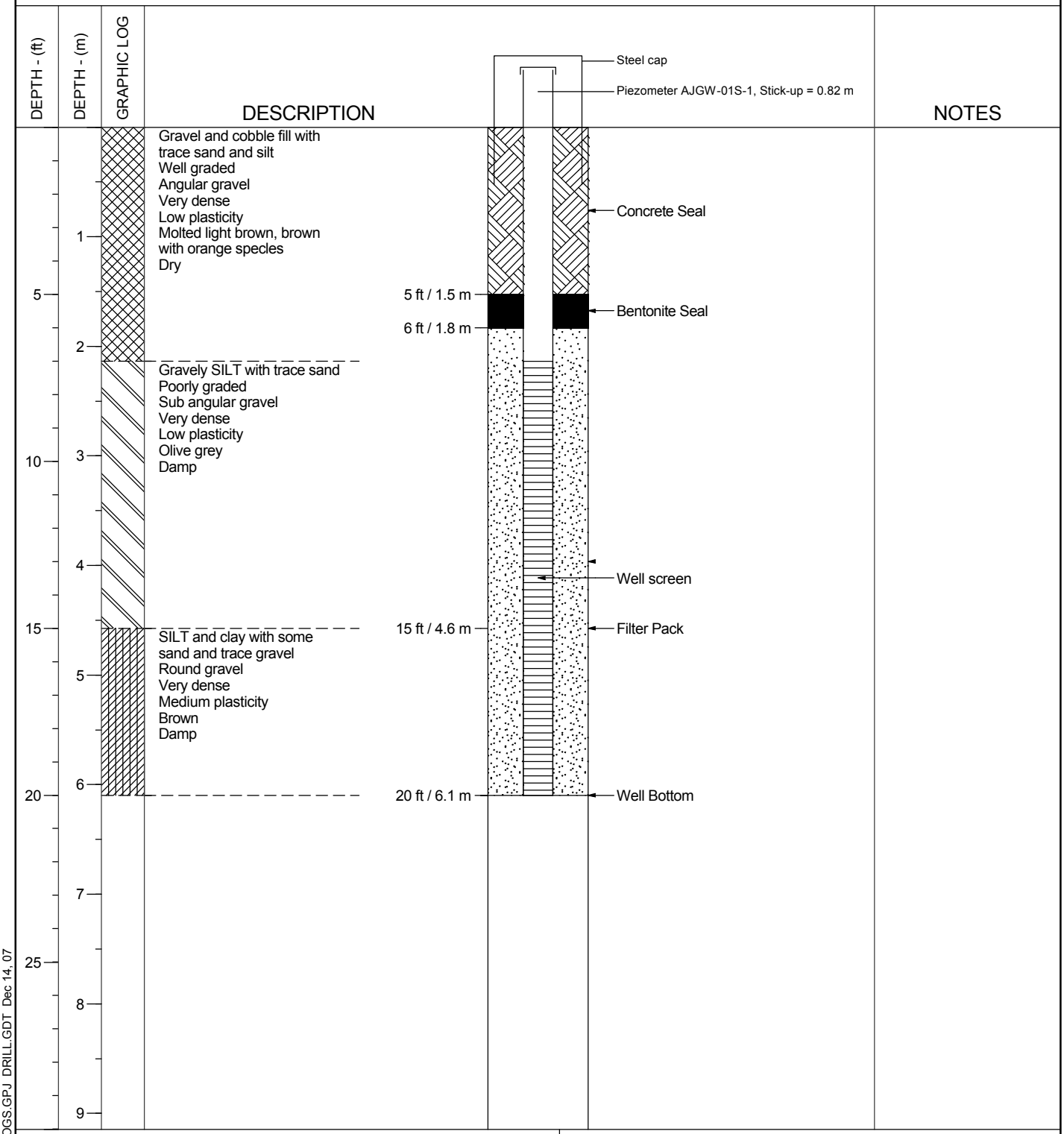
Project: AFTON PROJECT | Drill Hole No.: AJGW-01S | Page 1 of 1

Hole Depth: 20 ft / 6.1 m | Hole Diameter: 102 mm | Date Started: Sep 10, 07 | Date Completed: Sep 10, 07

Collar Elev: 901 ft / 274.6 m | PVC Pipe I.D.: 51 mm | Logged by: BG | Reviewed by:

Water Level Readings: Depth to Water / Date Measured

Well 1: / Sep 10, 07



ABACUS MINING AND EXPLORATION CORPORATION
AFTON PROJECT
Well Completion Details For AJGW-01S

Knight Piésold CONSULTING

Project No.	Ref. No.	Rev.
101-246/5	1	0

AJGW-01S

Rev. 0 - Issued for Report

WELL AJGW WELL LOGS.GPJ DRILL.GDT Dec 14, 07

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Date Revised: Dec 14, 07

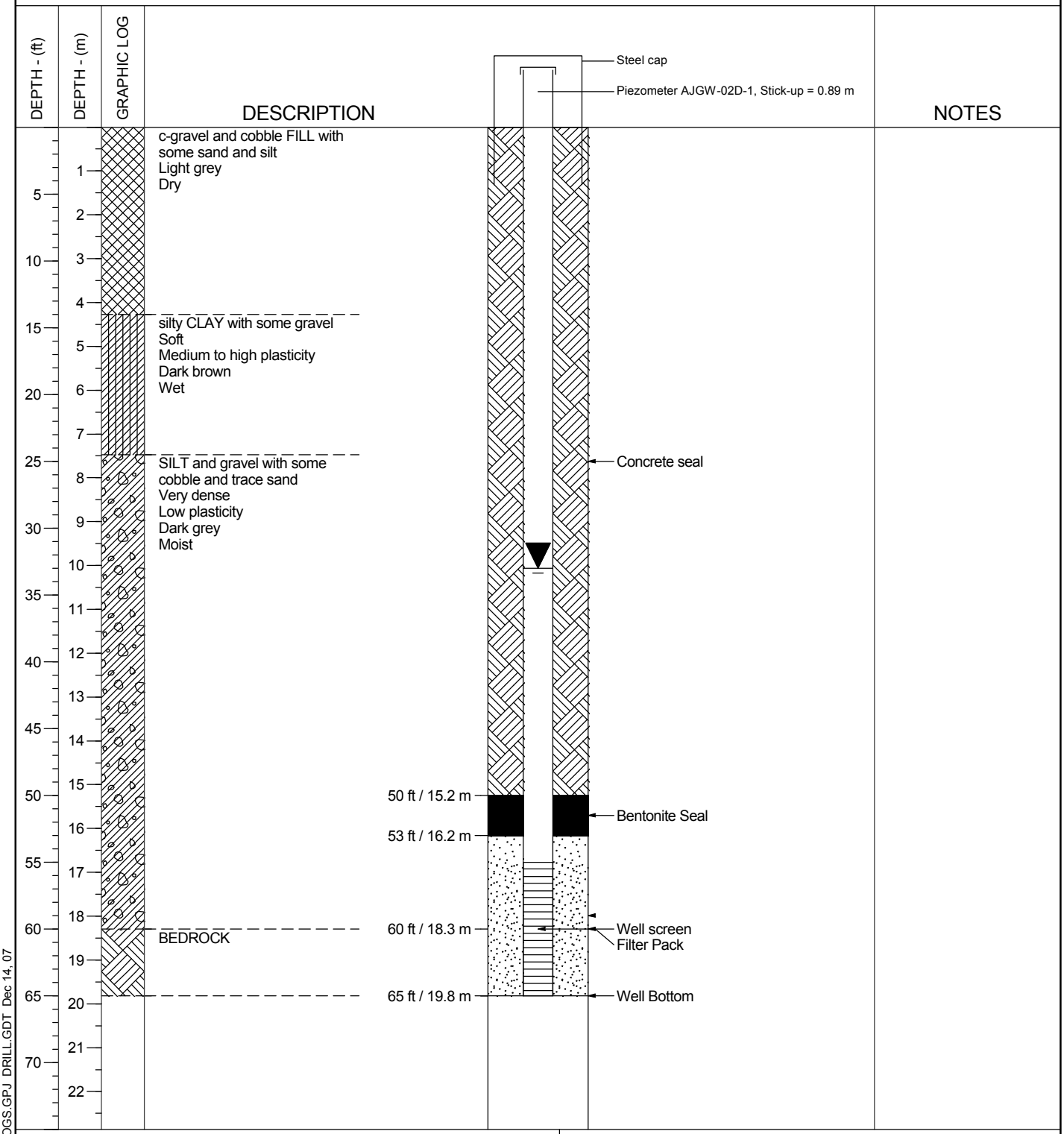
Project: AFTON PROJECT | Drill Hole No.: AJGW-02D | Page 1 of 1

Hole Depth: 65 ft / 19.8 m | Hole Diameter: 102 mm | Date Started: Sep 10, 07 | Date Completed: Sep 11, 07

Collar Elev: 899 ft / 274.0 m | PVC Pipe I.D.: 51 mm | Logged by: BG | Reviewed by:

Water Level Readings: Depth to Water / Date Measured

Well 1: 10.06 / Sep 11, 07



ABACUS MINING AND EXPLORATION CORPORATION
AFTON PROJECT
Well Completion Details For AJGW-02D

Knight Piésold CONSULTING

Project No.	Ref. No.	Rev.
101-246/5	1	0

AJGW-02D

Rev. 0 - Issued for Report

WELL AJGW WELL LOGS.GPJ DRILL.GDT Dec 14, 07

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Date Revised: Dec 14, 07

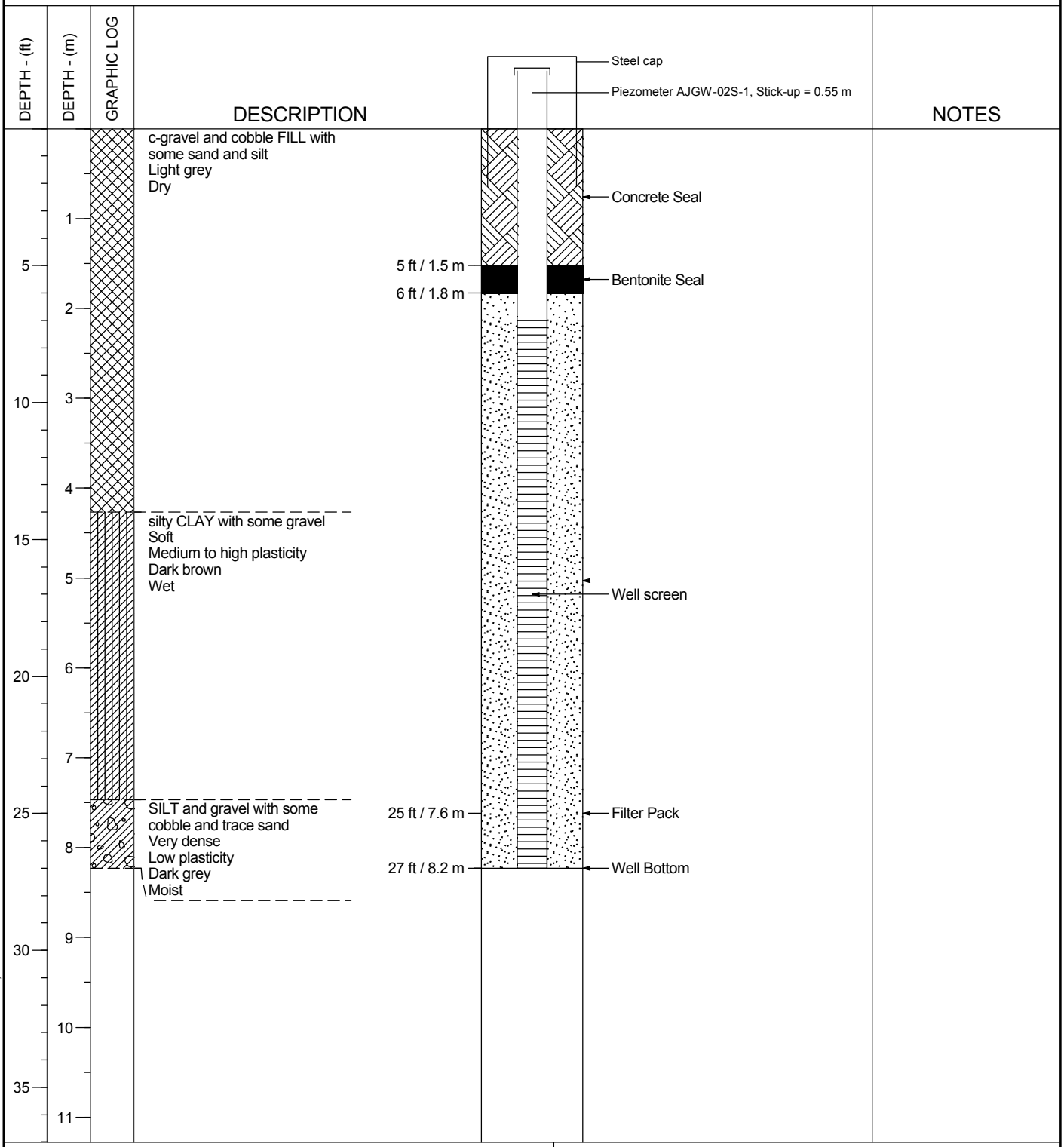
Project: AFTON PROJECT | Drill Hole No.: AJGW-02S | Page 1 of 1

Hole Depth: 65 ft / 19.8 m | Hole Diameter: 102 mm | Date Started: Sep 10, 07 | Date Completed: Sep 11, 07

Collar Elev: 899 ft / 274.0 m | PVC Pipe I.D.: 51 mm | Logged by: BG | Reviewed by:

Water Level Readings: Depth to Water / Date Measured

Well 1: / Sep 11, 07



ABACUS MINING AND EXPLORATION CORPORATION
AFTON PROJECT
Well Completion Details For AJGW-02S

Knight Piésold CONSULTING

Project No.	Ref. No.	Rev.
101-246/5	1	0

AJGW-02S

Rev. 0 - Issued for Report

WELL AJGW WELL LOGS.GPJ DRILL.GDT Dec 14, 07

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Date Revised: Dec 14, 07

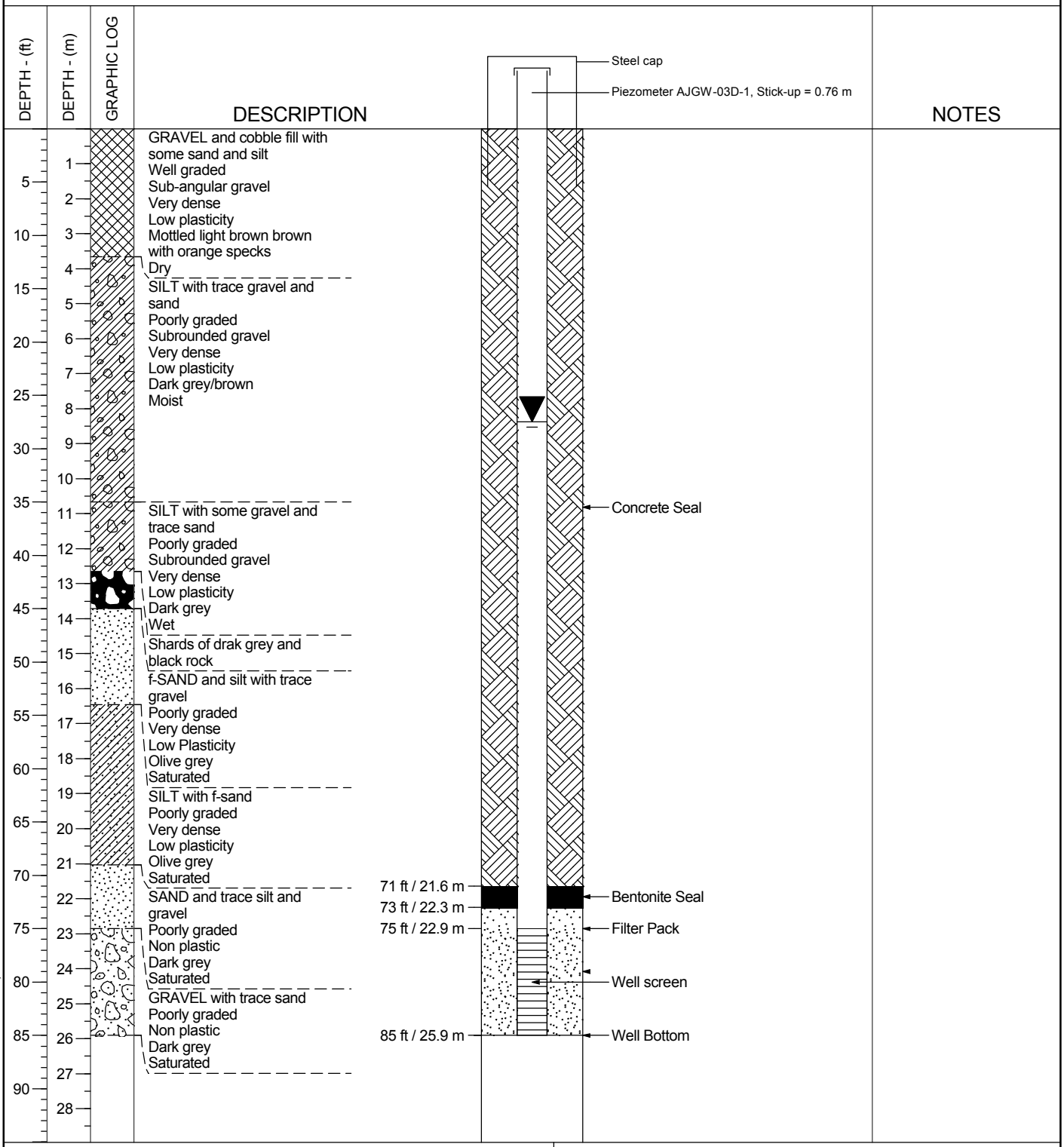
Project: AFTON PROJECT | Drill Hole No.: AJGW-03D | Page 1 of 1

Hole Depth: 85 ft / 25.9 m | Hole Diameter: 102 mm | Date Started: Sep 12, 07 | Date Completed: Sep 13, 07

Collar Elev: 894 ft / 272.5 m | PVC Pipe I.D.: 51 mm | Logged by: BG | Reviewed by:

Water Level Readings: Depth to Water / Date Measured

Well 1: 8.38 / Sep 13, 07



ABACUS MINING AND EXPLORATION CORPORATION
AFTON PROJECT
Well Completion Details For AJGW-03D

Knight Piésold CONSULTING

Project No.	Ref. No.	Rev.
101-246/5	1	0

AJGW-03D

Rev. 0 - Issued for Report

WELL AJGW WELL LOGS.GPJ DRILL.GDT Dec 14, 07

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Date Revised: Dec 14, 07

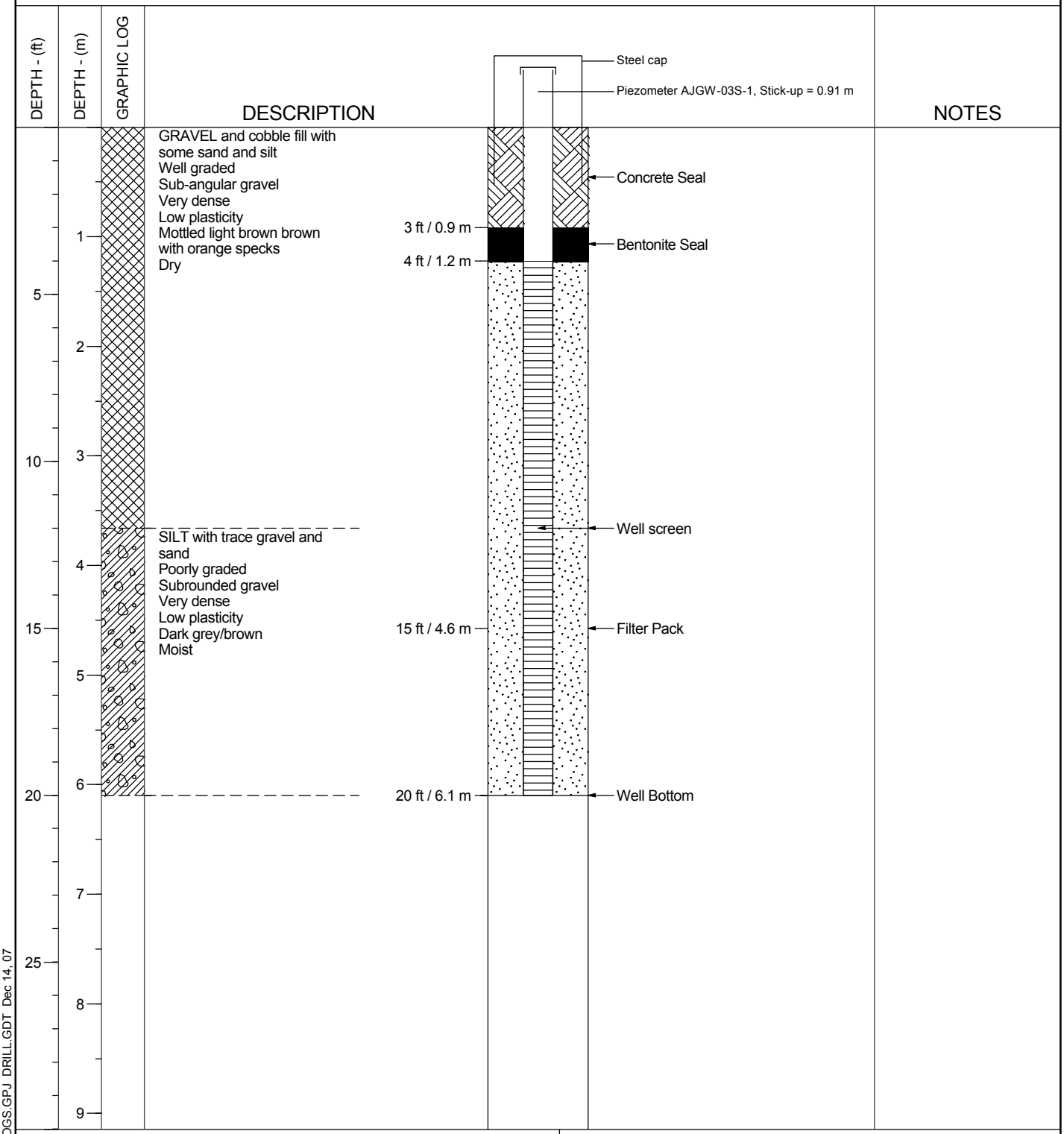
Project: AFTON PROJECT | Drill Hole No.: AJGW-03S | Page 1 of 1

Hole Depth: 85 ft / 25.9 m | Hole Diameter: 102 mm | Date Started: Sep 12, 07 | Date Completed: Sep 13, 07

Collar Elev: 894 ft / 272.5 m | PVC Pipe I.D.: 51 mm | Logged by: BG | Reviewed by:

Water Level Readings: Depth to Water / Date Measured

Well 1: / Sep 13, 07



ABACUS MINING AND EXPLORATION CORPORATION
AFTON PROJECT
Well Completion Details For AJGW-03S

Knight Piésold CONSULTING

Project No.	Ref. No.	Rev.
101-246/5	1	0

AJGW-03S

Rev. 0 - Issued for Report

WELL AJGW WELL LOGS.GPJ DRILL.GDT Dec 14, 07

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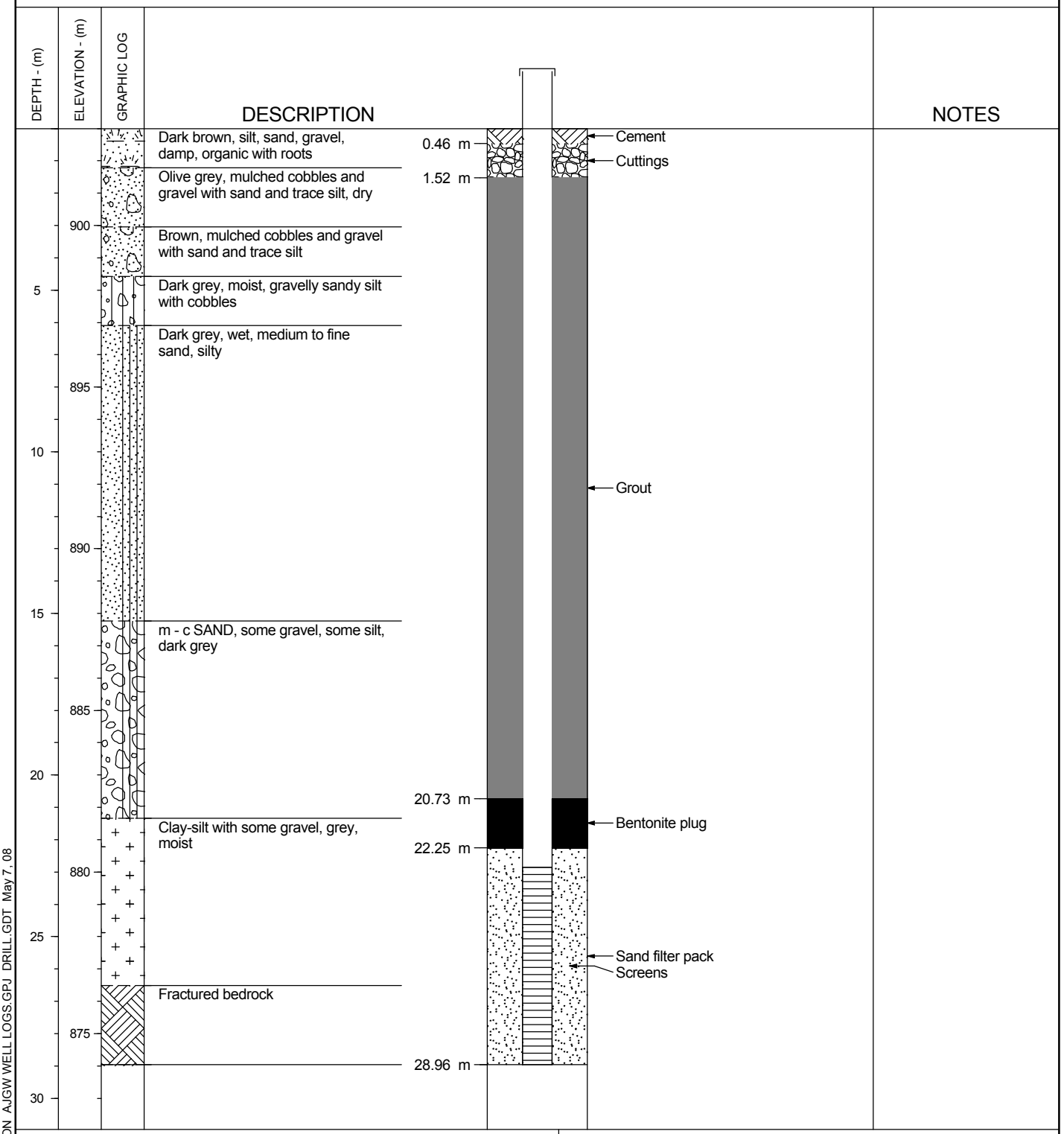
Date Revised: Dec 14, 07

Project:	**AFTON MINE - Ajax Pit Area**			Drill Hole No.:	**AJGW - 04 D**	Page	**1** of **1**
Hole Depth:	**29.0 m**	Hole Diameter:	**102 mm**	Date Started:	**Apr 23, 08**	Date Completed:	**May 7, 08**
Collar Elev:	**903.0 m**	PVC Pipe I.D.:	**51 mm**	Logged by:	**ALL**	Reviewed by:	**BG**

Water Level Readings: Depth to Water / Date Measured

Well 1: m /



ABACUS MINING AND EXPLORATION CORPORATION
AFTON MINE
Well Completion Details For AJGW - 04 D

Knight Piésold CONSULTING

Project No.	Ref. No.	Rev.
101-246/06		

FIGURE Yes

Rev. - For review

WELL WITH ELEVATION AJGW WELL LOGS.GPJ DRILL.GDT May 7, 08

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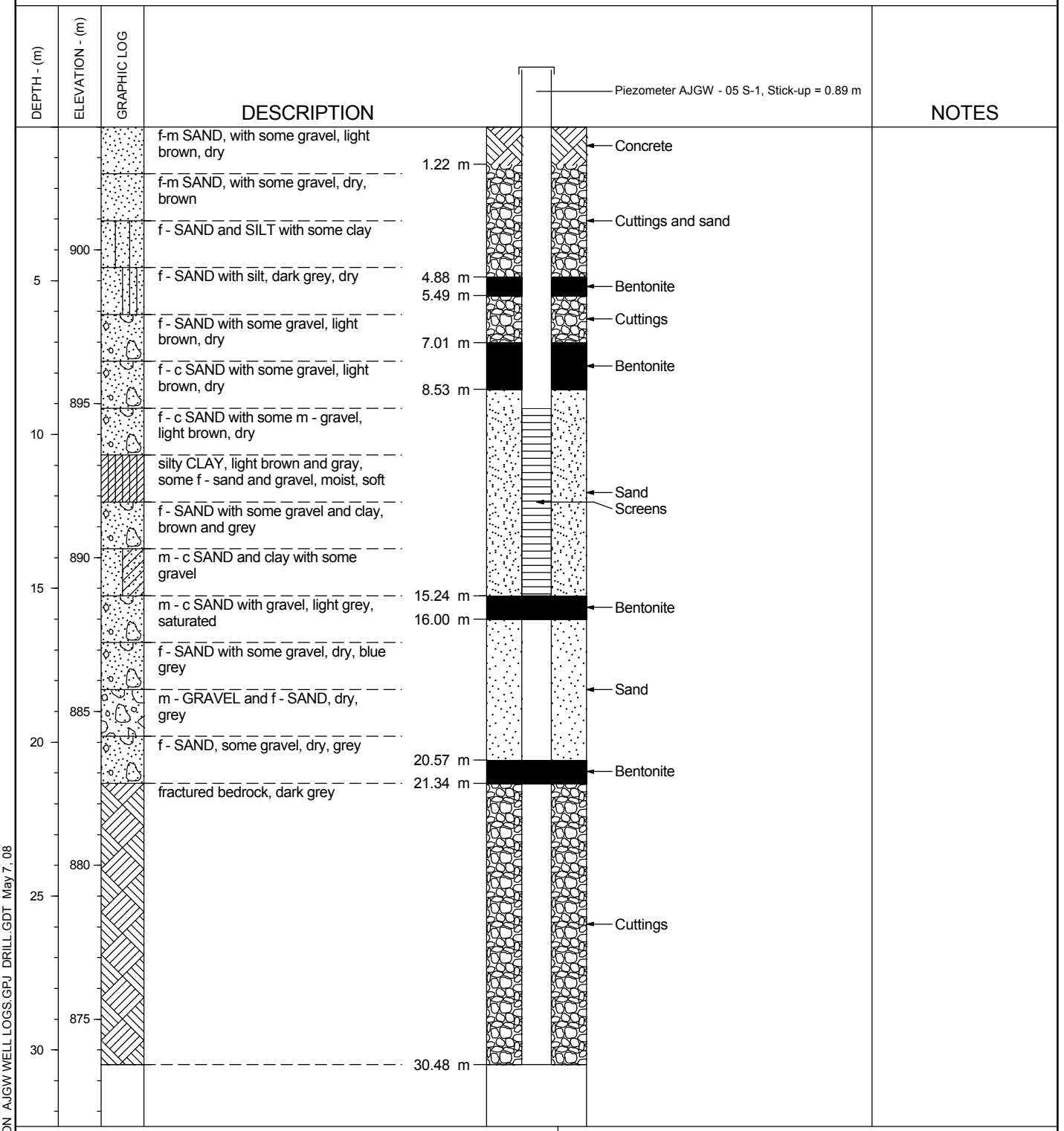
Date Revised:

Project:	**AFTON MINE - Ajax Pit Area**			Drill Hole No.:	**AJGW - 05 S**	Page	**1** of **1**
Hole Depth:	**30.5 m**	Hole Diameter:	**102 mm**	Date Started:	**Apr 24, 08**	Date Completed:	**May 6, 08**
Collar Elev:	**904.0 m**	PVC Pipe I.D.:	**51 mm**	Logged by:	**ALL**	Reviewed by:	**BG**

Water Level Readings: Depth to Water / Date Measured

Well 1: m /



ABACUS MINING AND EXPLORATION CORPORATION
AFTON MINE
Well Completion Details For AJGW - 05 S

Knight Piésold CONSULTING

Project No.	Ref. No.	Rev.
101-246/06		

FIGURE Yes

Rev. - For review

WELL WITH ELEVATION AJGW WELL LOGS.GPJ DRILL.GDT May 7, 08

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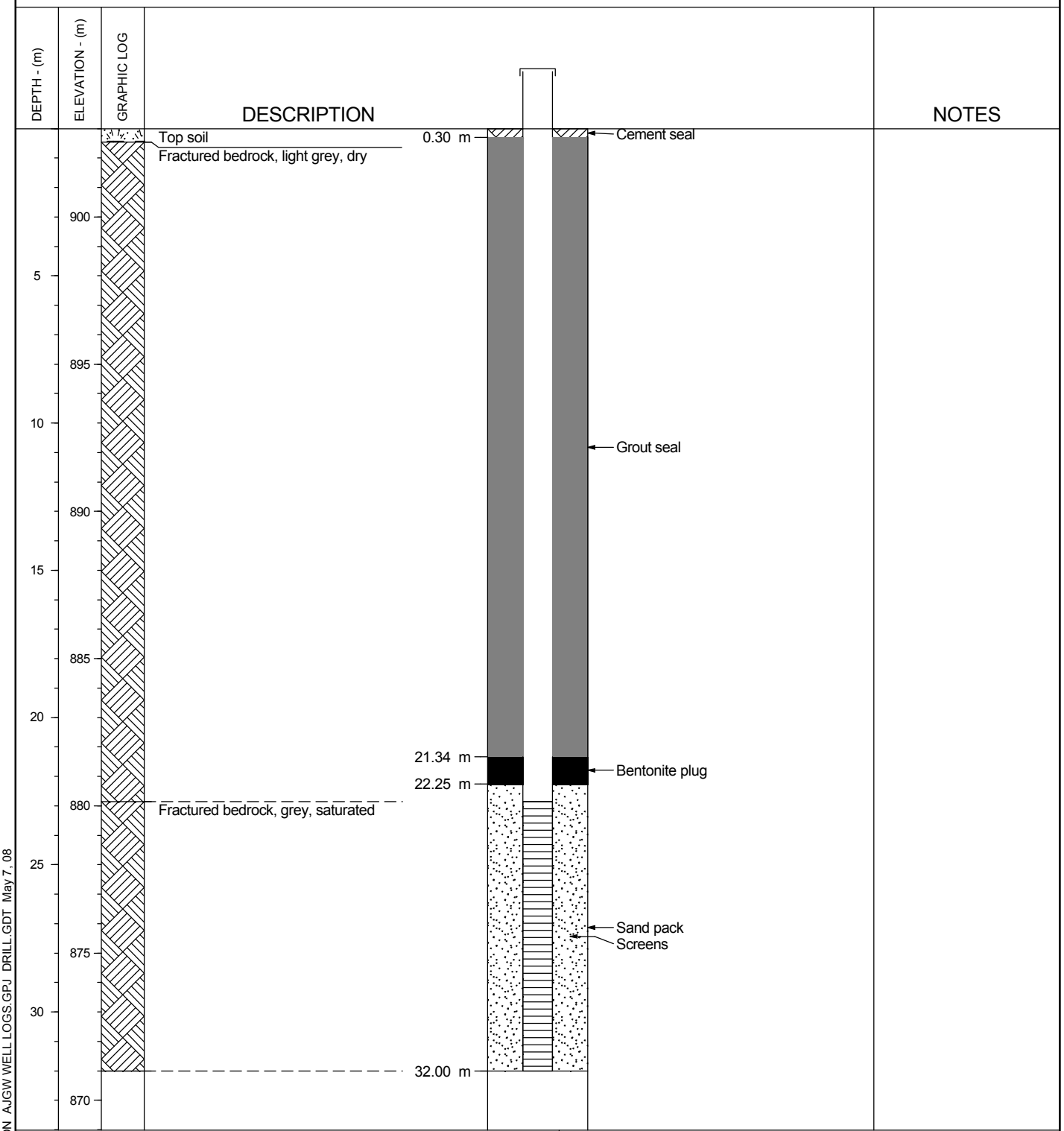
Date Revised:

Project:	**AFTON MINE - Ajax Pit Area**			Drill Hole No.:	**AJGW - 06 D**	Page	**1** of **1**
Hole Depth:	**32.0 m**	Hole Diameter:	**102 mm**	Date Started:	**Apr 25, 08**	Date Completed:	**May 7, 08**
Collar Elev:	**903.0 m**	PVC Pipe I.D.:	**51 mm**	Logged by:	**ALL**	Reviewed by:	**BG**

Water Level Readings: Depth to Water / Date Measured

Well 1: m /



ABACUS MINING AND EXPLORATION CORPORATION
AFTON MINE
Well Completion Details For AJGW - 06 D

Knight Piésold CONSULTING

Project No.	Ref. No.	Rev.
101-246/06		

FIGURE Yes

Rev. - For review

WELL WITH ELEVATION AJGW WELL LOGS.GPJ DRILL.GDT May 7, 08

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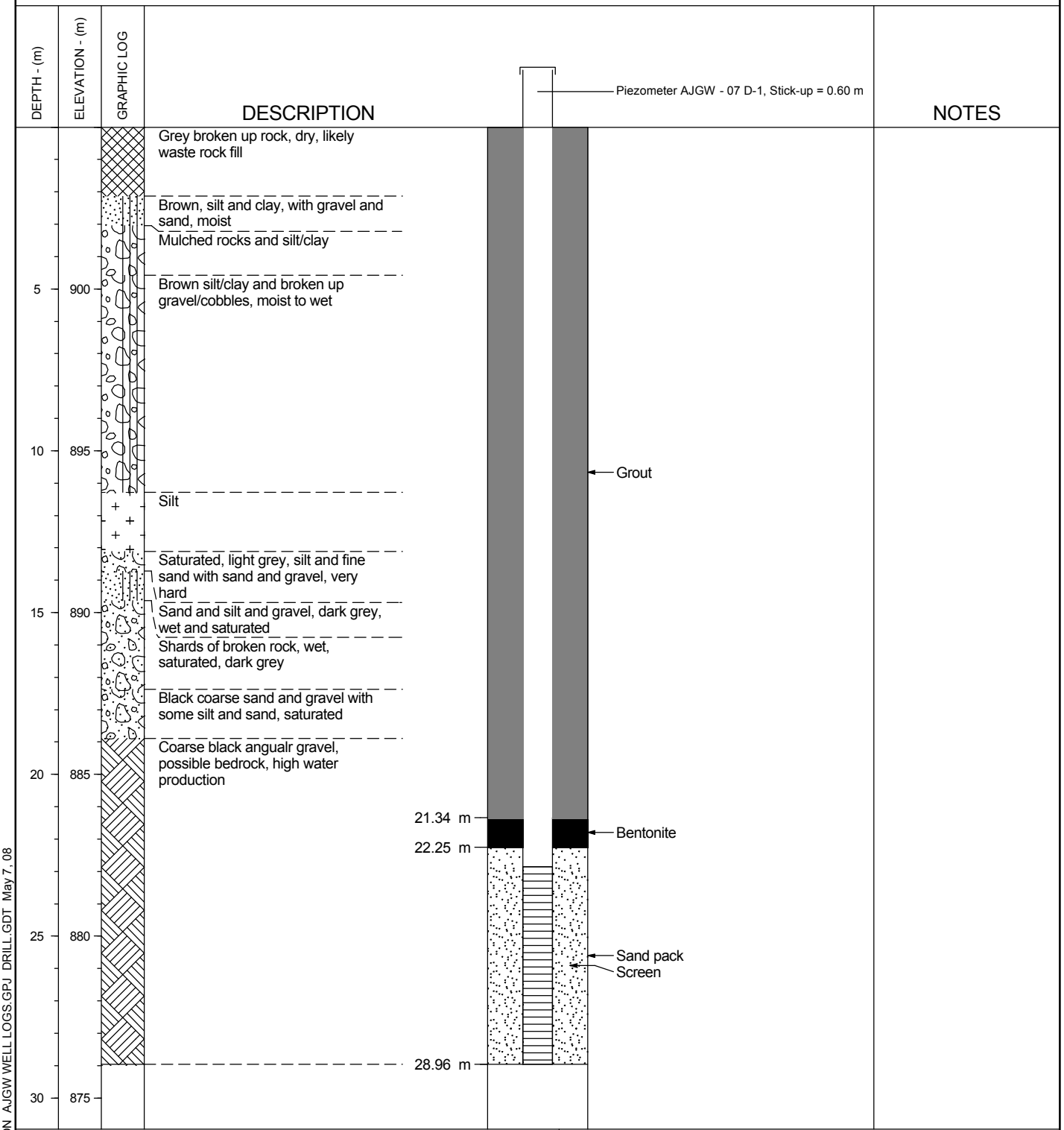
Date Revised:

Project:	**AFTON MINE - Ajax Pit Area**			Drill Hole No.:	**AJGW - 07 D**	Page	**1** of **1**
Hole Depth:	**29.0 m**	Hole Diameter:	**102 mm**	Date Started:	**Apr 26, 08**	Date Completed:	**May 7, 08**
Collar Elev:	**905.0 m**	PVC Pipe I.D.:	**51 mm**	Logged by:	**ALL**	Reviewed by:	**BG**

Water Level Readings: Depth to Water / Date Measured

Well 1: m /



ABACUS MINING AND EXPLORATION CORPORATION
AFTON MINE
Well Completion Details For AJGW - 07 D

Knight Piésold CONSULTING

Project No.	Ref. No.	Rev.
101-246/06		

Rev. - For review

FIGURE Yes

WELL WITH ELEVATION AJGW WELL LOGS.GPJ DRILL.GDT May 7, 08

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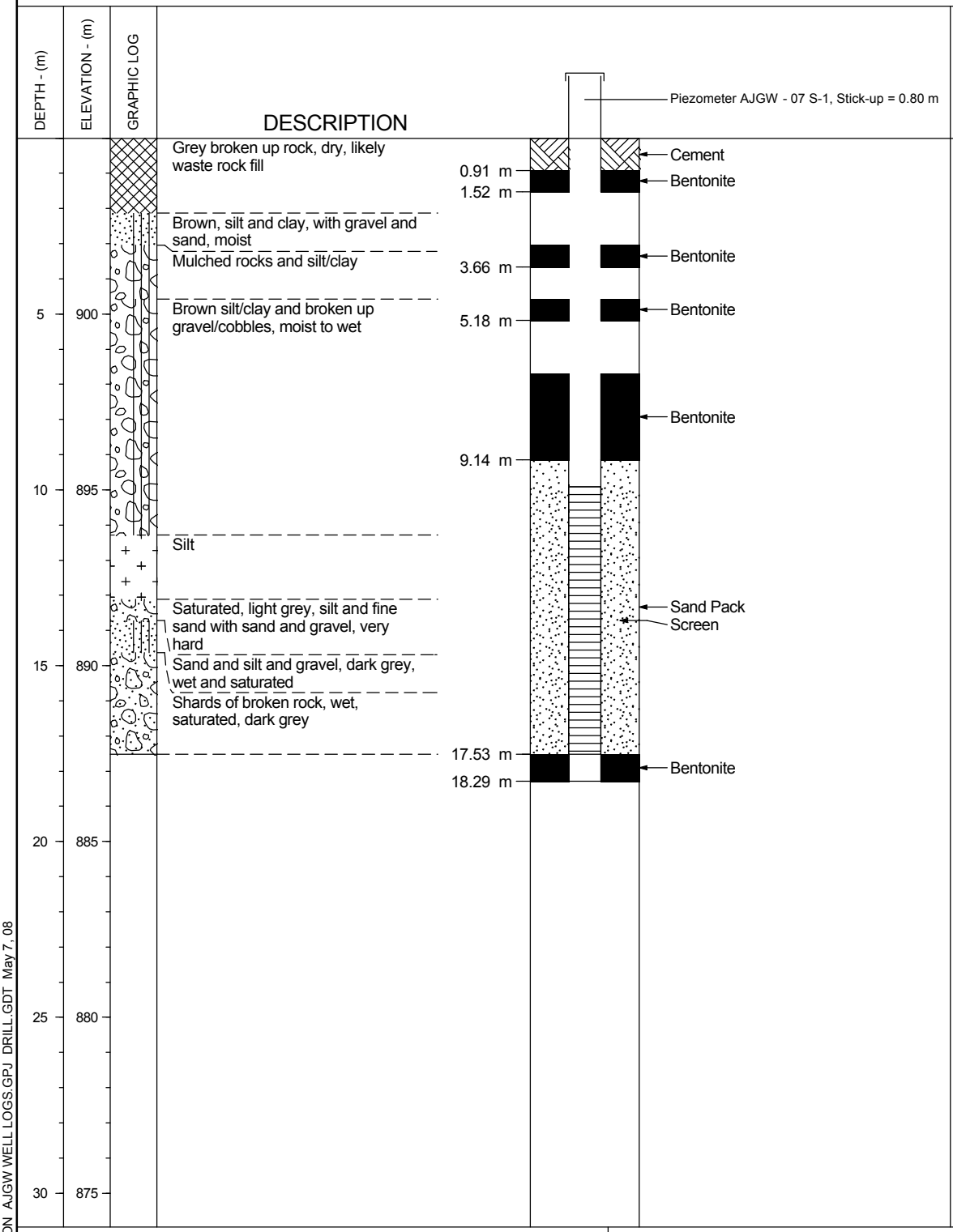
Date Revised:

Project:	**AFTON MINE - Ajax Pit Area**			Drill Hole No.:	**AJGW - 07 S**	Page	**1** of **1**
Hole Depth:	**29.0 m**	Hole Diameter:	**102 mm**	Date Started:	**Apr 27, 08**	Date Completed:	**May 7, 08**
Collar Elev:	**905.0 m**	PVC Pipe I.D.:	**51 mm**	Logged by:	**ALL**	Reviewed by:	**BG**

Water Level Readings: Depth to Water / Date Measured

Well 1: m /



ABACUS MINING AND EXPLORATION CORPORATION
AFTON MINE
Well Completion Details For AJGW - 07 S

Knight Piésold CONSULTING

Project No.	Ref. No.	Rev.
101-246/06		

FIGURE Yes

Rev. - For review

WELL WITH ELEVATION AJGW WELL LOGS.GPJ DRILL.GDT May 7, 08

M:\1\01\00246\06\A\DATA\HYDROGEOLOGY\GINT\AJGW WELL LOGS.GPJ

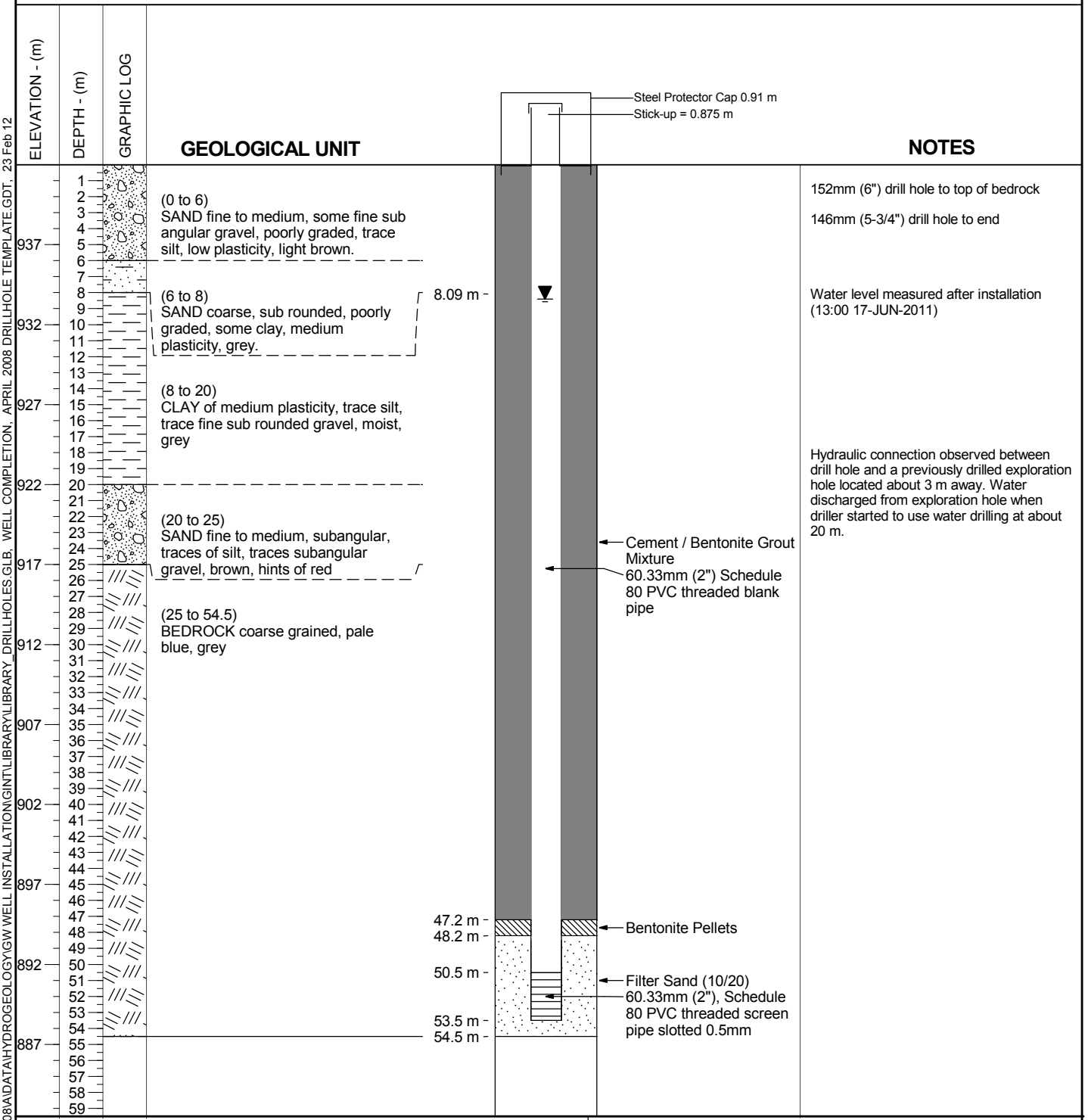
Date Revised:

APPENDIX F2

MW11 SERIES WELLS

(Pages F2-1 to F2-19)

Project:	**AJAX PROJECT**	Drill Hole No.	**MW11-01D**	**PAGE**	1 of 1
Contractor:	**JR DRILLING LTD**	Sample Type:	**Cuttings**	Date Drilling:	**16-JUN-2011**
Location:	**North of Proposed TSF**	Total Depth:	**54.5 m**	Date Installation:	**17-JUN-2011**
Coordinates:	**5,612,463 N , 679,733 E (UTM / NAD 83)**	Elevation:	**942 m**	Supervised by:	**AM**
Drilling Method:	**Air Rotary**			Reviewed by:	**CHS**



GENERAL REMARKS:

REV. 0 - Issued for Report

KGHM AJAX MINING INC.
AJAX PROJECT
MONITORING WELL DETAILS FOR MW11-01D

Knight Piésold CONSULTING

PROJECT/ASSIGNMENT NO.	REF. NO.
VA101-246/8	3
FIGURE. 1	REV. 0

Logging conducted according to the Canadian Foundation Engineering Manual, 4th Edition, 2006.

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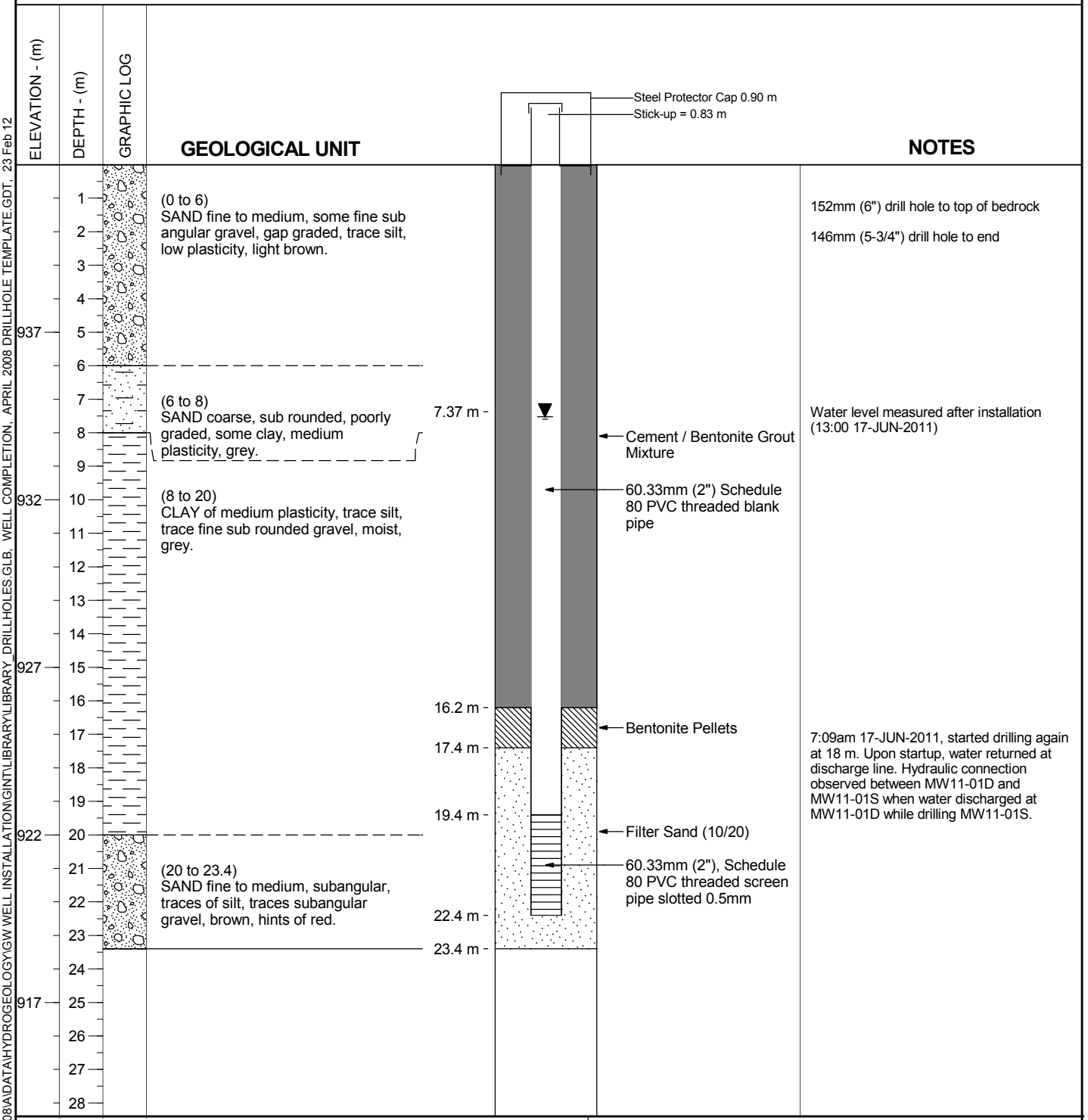
Project:	**AJAX PROJECT**	Drill Hole No.	**MW11-01S**	**PAGE**	1 of 1
Contractor:	**JR DRILLING LTD**	Sample Type:	**Cuttings**	Date Drilling:	**16-JUN-2011**
Location:	**North of Proposed TSF**	Total Depth:	**23.4 m**	Date Installation:	**17-JUN-2011**
Coordinates:	**5,612,460 N , 679,734 E (UTM / NAD 83)**	Elevation:	**942 m**	Supervised by:	**AM**
Drilling Method:	**Air Rotary**			Reviewed by:	**CHS**



GENERAL REMARKS:

REV. 0 - Issued for Report

KGHM AJAX MINING INC.
AJAX PROJECT
MONITORING WELL DETAILS FOR MW11-01S

Knight Piésold CONSULTING

PROJECT/ASSIGNMENT NO.	REF. NO.
VA101-246/8	3
FIGURE. 2	REV. 0

Logging conducted according to the Canadian Foundation Engineering Manual, 4th Edition, 2006.

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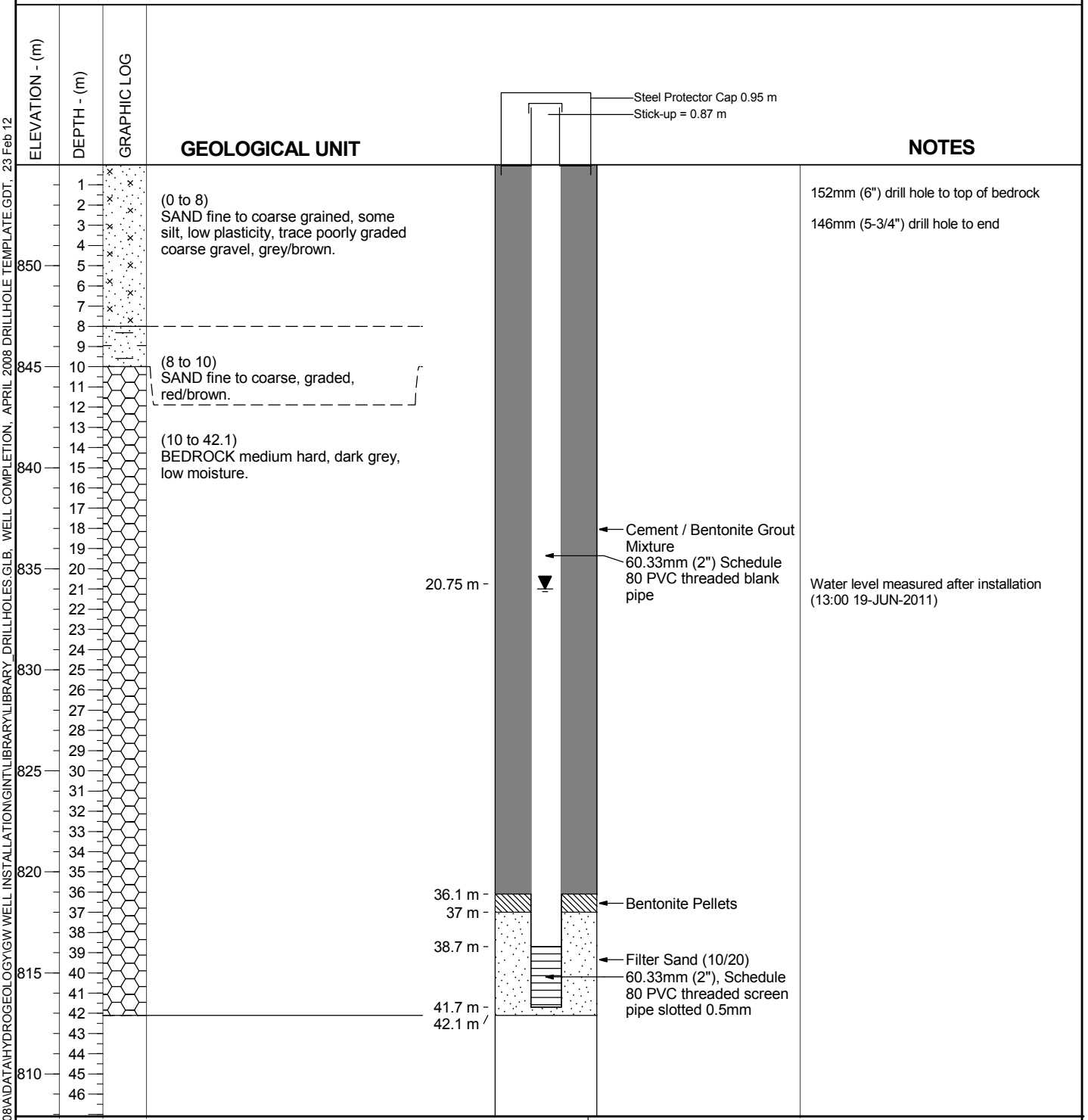
Project:	**AJAX PROJECT**	Drill Hole No.	**MW11-02**	**PAGE**	1 of 1
Contractor:	**JR DRILLING LTD**	Sample Type:	**Cuttings**	Date Drilling:	**18-JUN-2011**
Location:	**East of Proposed TSF**	Total Depth:	**42.1 m**	Date Installation:	**19-JUN-2011**
Coordinates:	**5,610,459 N , 680,492 E (UTM / NAD 83)**	Elevation:	**855 m**	Supervised by:	**AM**
Drilling Method:	**Air Rotary**			Reviewed by:	**CHS**



GENERAL REMARKS:

REV. 0 - Issued for Report

KGHM AJAX MINING INC.
AJAX PROJECT
MONITORING WELL DETAILS FOR MW11-02

Knight Piésold CONSULTING

PROJECT/ASSIGNMENT NO.	REF. NO.
VA101-246/8	3
FIGURE. 3	REV. 0

Logging conducted according to the Canadian Foundation Engineering Manual, 4th Edition, 2006.

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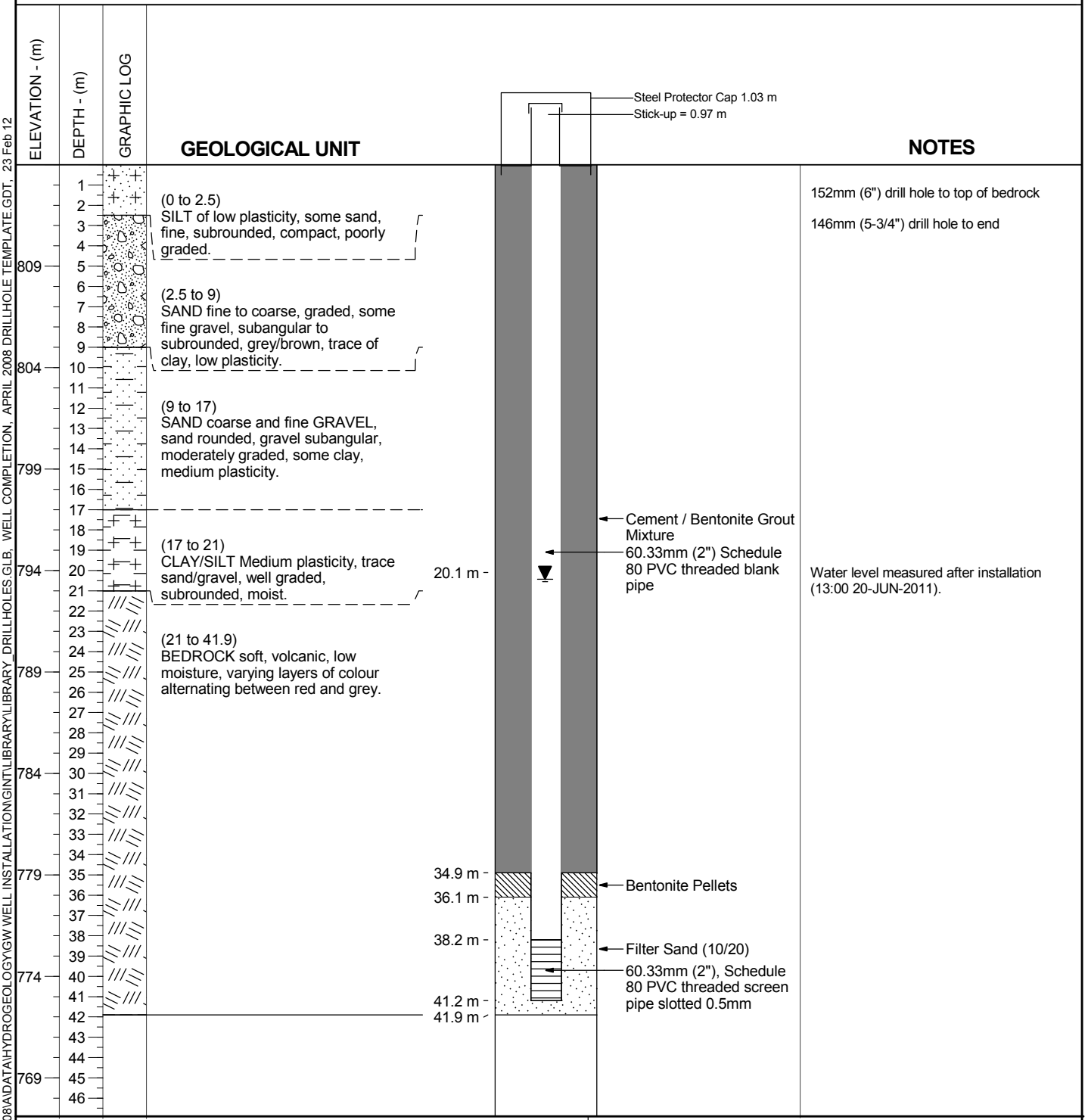
Project:	**AJAX PROJECT**	Drill Hole No.	**MW11-03D**	**PAGE**	1 of 1
Contractor:	**JR DRILLING LTD**	Sample Type:	**Cuttings**	Date Drilling:	**19-JUN-2011**
Location:	**West of Proposed TSF**	Total Depth:	**41.9 m**	Date Installation:	**19/20-JUN-2011**
Coordinates:	**5,611,335 N , 678,802 E (UTM / NAD 83)**	Elevation:	**814 m**	Supervised by:	**AM**
Drilling Method:	**Air Rotary**			Reviewed by:	**CHS**



GENERAL REMARKS:

REV. 0 - Issued for Report

KGHM AJAX MINING INC.
AJAX PROJECT
MONITORING WELL DETAILS FOR MW11-03D

Knight Piésold CONSULTING

PROJECT/ASSIGNMENT NO.	REF. NO.
VA101-246/8	3
FIGURE. 4	REV. 0

Logging conducted according to the Canadian Foundation Engineering Manual, 4th Edition, 2006.

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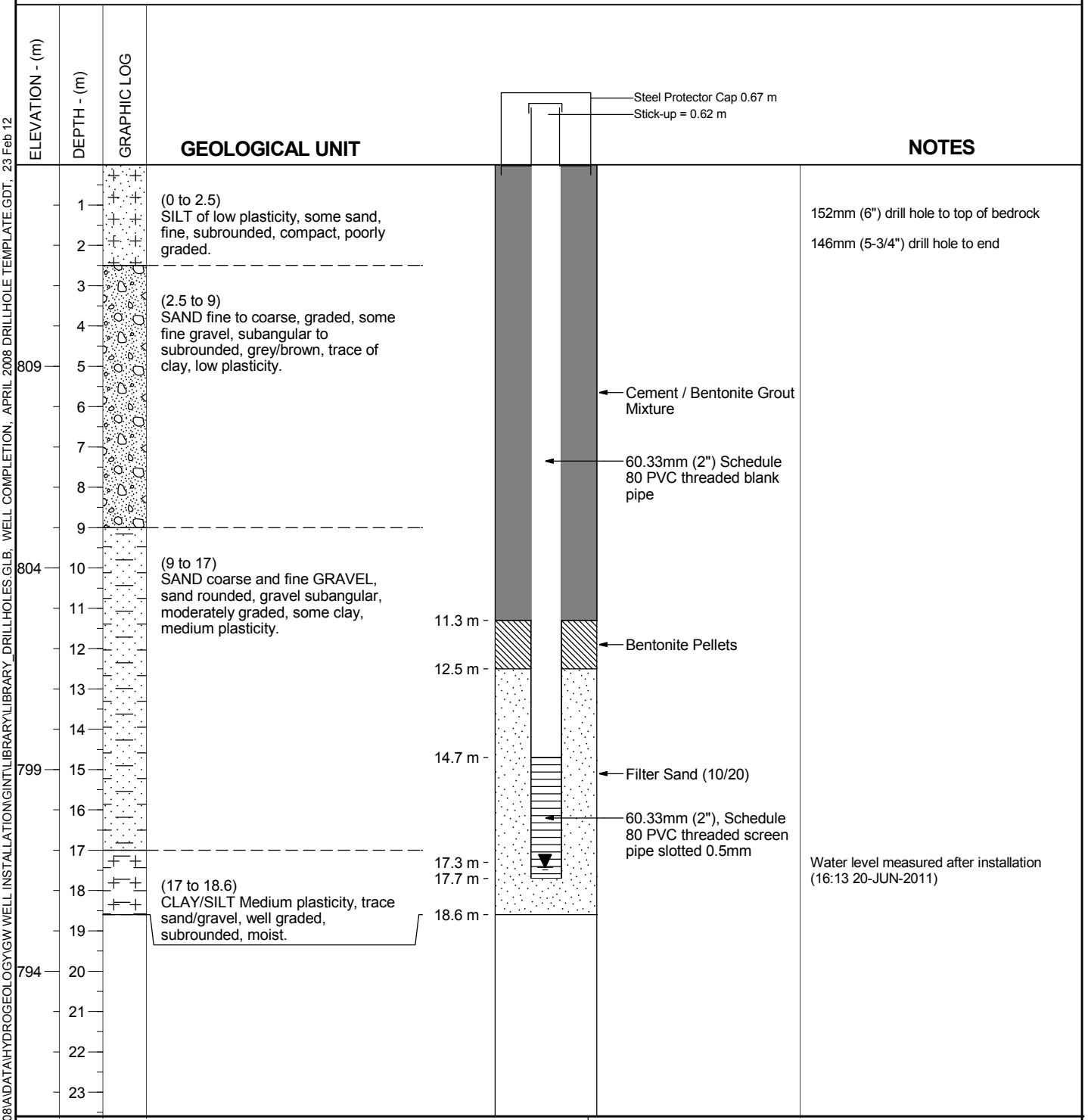
Project:	**AJAX PROJECT**	Drill Hole No.	**MW11-03S**	**PAGE**	1 of 1
Contractor:	**JR DRILLING LTD**	Sample Type:	**Cuttings**	Date Drilling:	**20-JUN-2011**
Location:	**West of Proposed TSF**	Total Depth:	**18.6 m**	Date Installation:	**20-JUN-2011**
Coordinates:	**5,611,337 N , 678,805 E (UTM / NAD 83)**	Elevation:	**814 m**	Supervised by:	**AM**
Drilling Method:	**Air Rotary**			Reviewed by:	**CHS**



GENERAL REMARKS:

REV. 0 - Issued for Report

KGHM AJAX MINING INC.
AJAX PROJECT
MONITORING WELL DETAILS FOR MW11-03S

Knight Piésold CONSULTING

PROJECT/ASSIGNMENT NO.	REF. NO.
VA101-246/8	3
FIGURE. 5	REV. 0

Logging conducted according to the Canadian Foundation Engineering Manual, 4th Edition, 2006.

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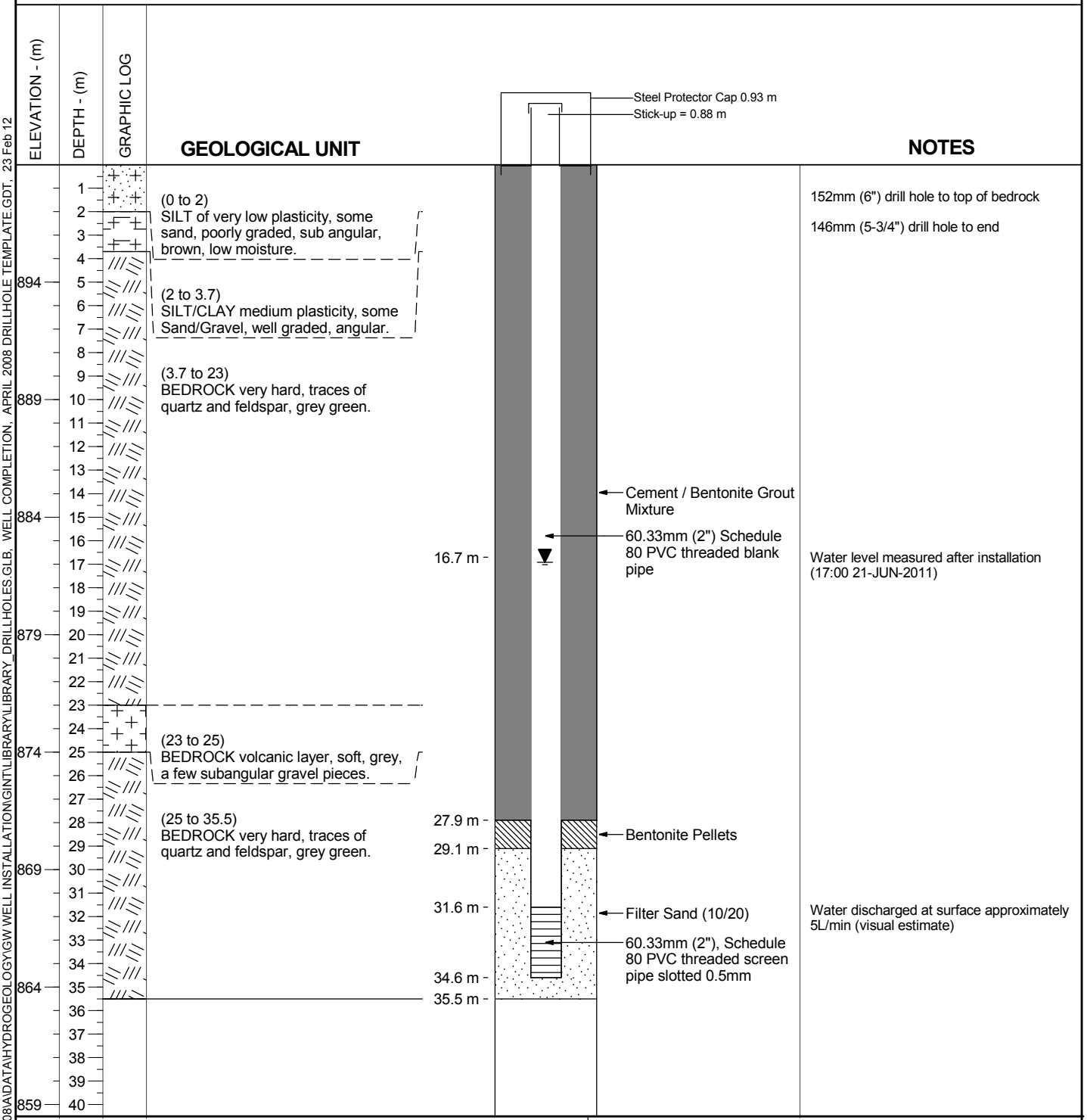
Project:	**AJAX PROJECT**	Drill Hole No.	**MW11-04D**	**PAGE**	1 of 1
Contractor:	**JR DRILLING LTD**	Sample Type:	**Cuttings**	Date Drilling:	**21-JUN-2011**
Location:	**West of Proposed Pit/North of Jacko Lake**	Total Depth:	**35.5 m**	Date Installation:	**21-JUN-2011**
Coordinates:	**5,610,364 N , 682,617 E (UTM / NAD 83)**	Elevation:	**899 m**	Supervised by:	**AM**
Drilling Method:	**Air Rotary**			Reviewed by:	**CHS**



GENERAL REMARKS:

KGHM AJAX MINING INC.
AJAX PROJECT
MONITORING WELL DETAILS FOR MW11-04D

Knight Piésold CONSULTING

PROJECT/ASSIGNMENT NO.	REF. NO.
VA101-246/8	3
FIGURE. 6	REV. 0

REV. 0 - Issued for Report

Logging conducted according to the Canadian Foundation Engineering Manual, 4th Edition, 2006.

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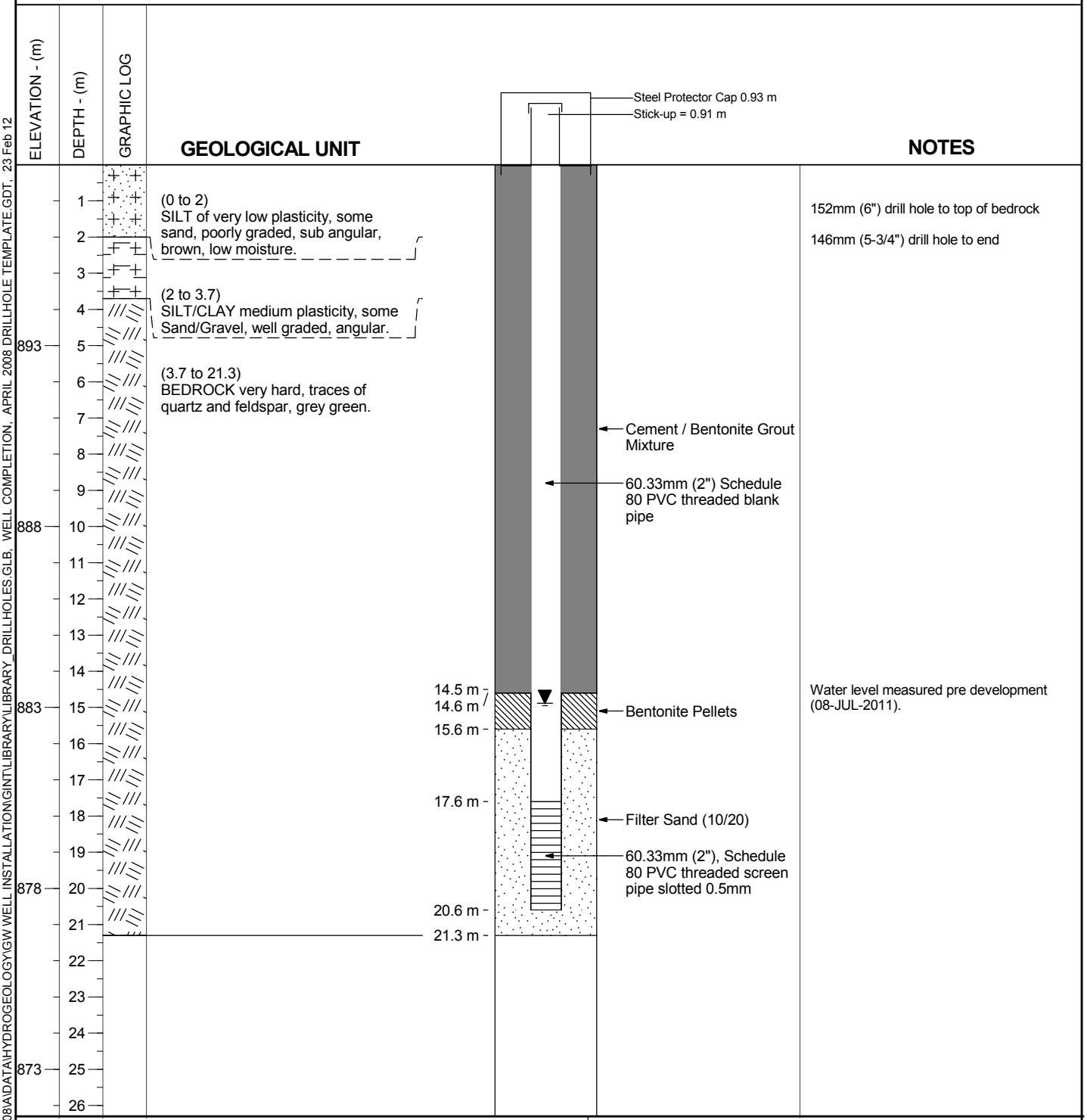
Project:	**AJAX PROJECT**	Drill Hole No.	**MW11-04S**	**PAGE**	1 of 1
Contractor:	**JR DRILLING LTD**	Sample Type:	**Cuttings**	Date Drilling:	**21-JUN-2011**
Location:	**West of Proposed Pit/North of Jacko Lake**	Total Depth:	**21.3 m**	Date Installation:	**21-JUN-2011**
Coordinates:	**5,610,367 N , 682,619 E (UTM / NAD 83)**	Elevation:	**898 m**	Supervised by:	**AM**
Drilling Method:	**Air Rotary**			Reviewed by:	**CHS**



GENERAL REMARKS:

REV. 0 - Issued for Report

KGHM AJAX MINING INC.
AJAX PROJECT
MONITORING WELL DETAILS FOR MW11-04S

Knight Piésold CONSULTING

PROJECT/ASSIGNMENT NO.	REF. NO.
VA101-246/8	3
FIGURE. 7	REV. 0

Logging conducted according to the Canadian Foundation Engineering Manual, 4th Edition, 2006.

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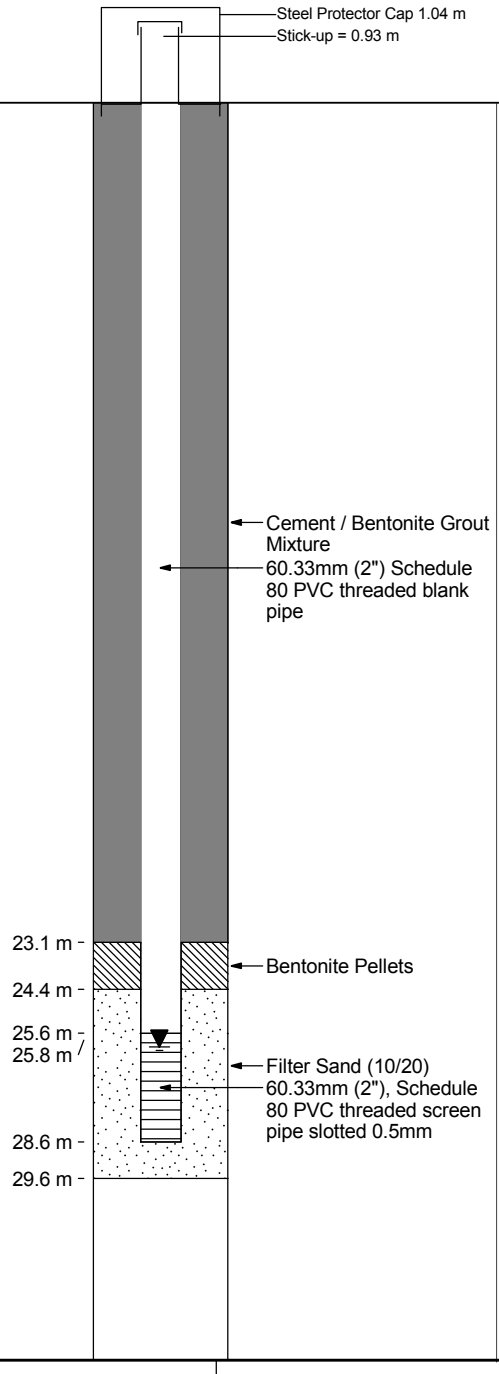
Project:	**AJAX PROJECT**	Drill Hole No.	**MW11-05D**	**PAGE**	1 of 1
Contractor:	**JR DRILLING LTD**	Sample Type:	**Cuttings**	Date Drilling:	**22-JUN-2011**
Location:	**North of East Waste Rock Facility**	Total Depth:	**29.6 m**	Date Installation:	**22-JUN-2011**
Coordinates:	**5,610,692 N , 686,723 E (UTM / NAD 83)**	Elevation:	**976 m**	Supervised by:	**AM**
Drilling Method:	**Air Rotary**			Reviewed by:	**CHS**

ELEVATION - (m)	DEPTH - (m)	GRAPHIC LOG	GEOLOGICAL UNIT
	1–4		(0 to 5) SILT/CLAY, low to medium plasticity, some fine to coarse sand, trace of fine, sub angular gravel, light brown.
971	5		
	6–9		(5 to 9.5) CLAY medium plasticity, some gravel, fine to coarse, angular, grey.
966	10		
	11–12		(9.5 to 12) BEDROCK hard, grey with some green and red minerals.
	13–30		(12 to 29.6) BEDROCK volcanic layer, soft, trace of subrounded gravel, alternating pink and grey.
961	15		
956	20		
951	25		
946	30		
	31–34		



NOTES

152mm (6") drill hole to top of bedrock

146mm (5-3/4") drill hole to end

Water level measured (11-JUL-2011).

GENERAL REMARKS:

REV. 0 - Issued for Report

KGHM AJAX MINING INC.
AJAX PROJECT
MONITORING WELL DETAILS FOR MW11-05D

Knight Piésold CONSULTING

PROJECT/ASSIGNMENT NO.	REF. NO.
VA101-246/8	3
FIGURE. 8	REV. 0

Logging conducted according to the Canadian Foundation Engineering Manual, 4th Edition, 2006.

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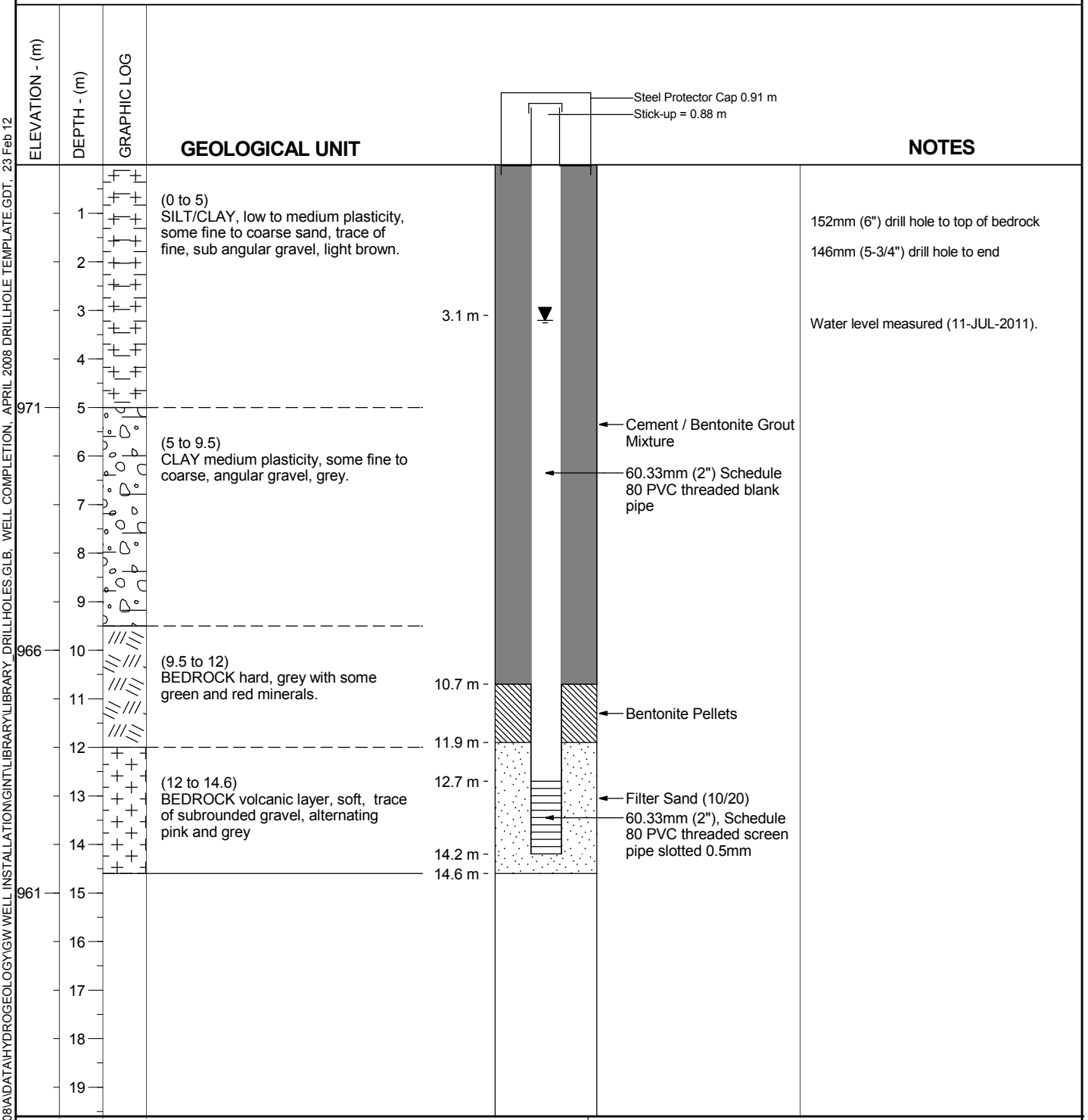
Project:	**AJAX PROJECT**	Drill Hole No.	**MW11-05S**	**PAGE**	1 of 1
Contractor:	**JR DRILLING LTD**	Sample Type:	**Cuttings**	Date Drilling:	**22-JUN-2011**
Location:	**North of East Waste Rock Facility**	Total Depth:	**14.6 m**	Date Installation:	**22-JUN-2011**
Coordinates:	**5,610,689 N , 686,723 E (UTM / NAD 83)**	Elevation:	**976 m**	Supervised by:	**AM**
Drilling Method:	**Air Rotary**			Reviewed by:	**CHS**



GENERAL REMARKS:

REV. 0 - Issued for Report

KGHM AJAX MINING INC.
AJAX PROJECT
MONITORING WELL DETAILS FOR MW11-05S

Knight Piésold CONSULTING

PROJECT/ASSIGNMENT NO.	REF. NO.
VA101-246/8	3
FIGURE. 9	REV. 0

Logging conducted according to the Canadian Foundation Engineering Manual, 4th Edition, 2006.

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Project:	**AJAX PROJECT**	Drill Hole No.	**MW11-06D**	**PAGE**	1 of 1
Contractor:	**JR DRILLING LTD**	Sample Type:	**Cuttings**	Date Drilling:	**23-JUN-2011**
Location:	**North East Side of North Waste Rock Facility**	Total Depth:	**45.7 m**	Date Installation:	**23-JUN-2011**
Coordinates:	**5,612,236 N , 683,405 E (UTM / NAD 83)**	Elevation:	**942 m**	Supervised by:	**AM**
Drilling Method:	**Air Rotary**			Reviewed by:	**CHS**

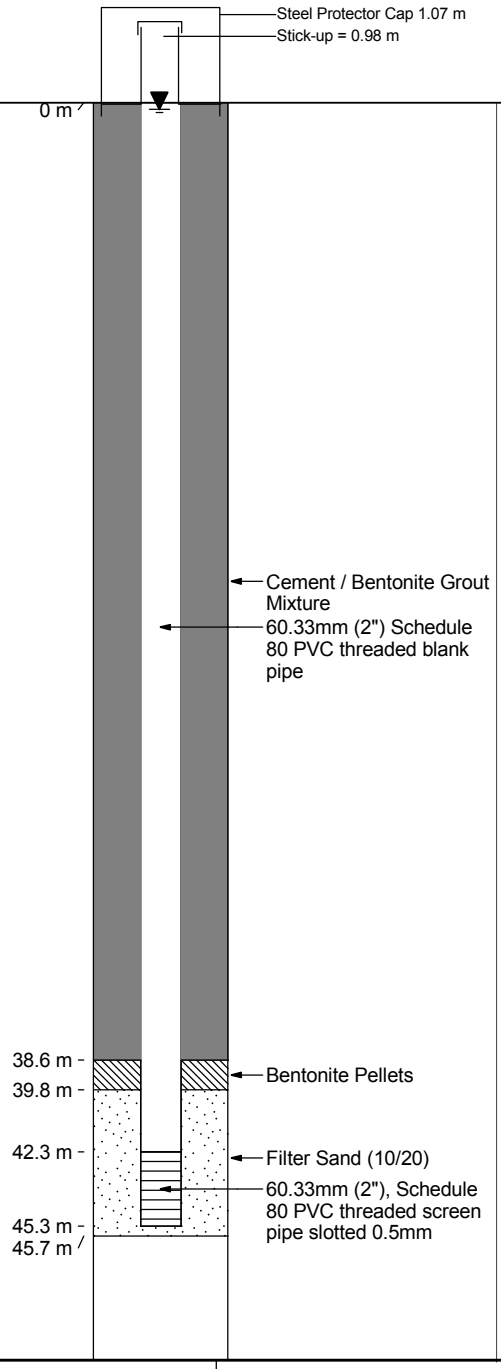
ELEVATION - (m) | DEPTH - (m) | GRAPHIC LOG

GEOLOGICAL UNIT

(0 to 9)
CLAY, medium plasticity, some well graded sand and gravel, sub angular, grey.

(9 to 10.4)
SAND/GRAVEL, well graded sand and gravel, sub angular, some clay, medium plasticity, moist, grey.

(10.4 to 45.7)
BEDROCK, Soft, conglomerate with rounded well graded gravel and sand embedded, colour alternating from red to grey.



NOTES

Water level measured after installation (23-JUN-2011).

152mm (6") drill hole to top of bedrock

146mm (5-3/4") drill hole to end

High moisture zone around ~9 m

Moisture level increased with water produced shortly after 42 m. Discharge approximately 8L/min (visual estimate).

GENERAL REMARKS:

REV. 0 - Issued for Report

KGHM AJAX MINING INC.
AJAX PROJECT
MONITORING WELL DETAILS FOR MW11-06D

Knight Piésold CONSULTING

PROJECT/ASSIGNMENT NO.	REF. NO.
VA101-246/8	3
FIGURE. 10	REV. 0

Logging conducted according to the Canadian Foundation Engineering Manual, 4th Edition, 2006.

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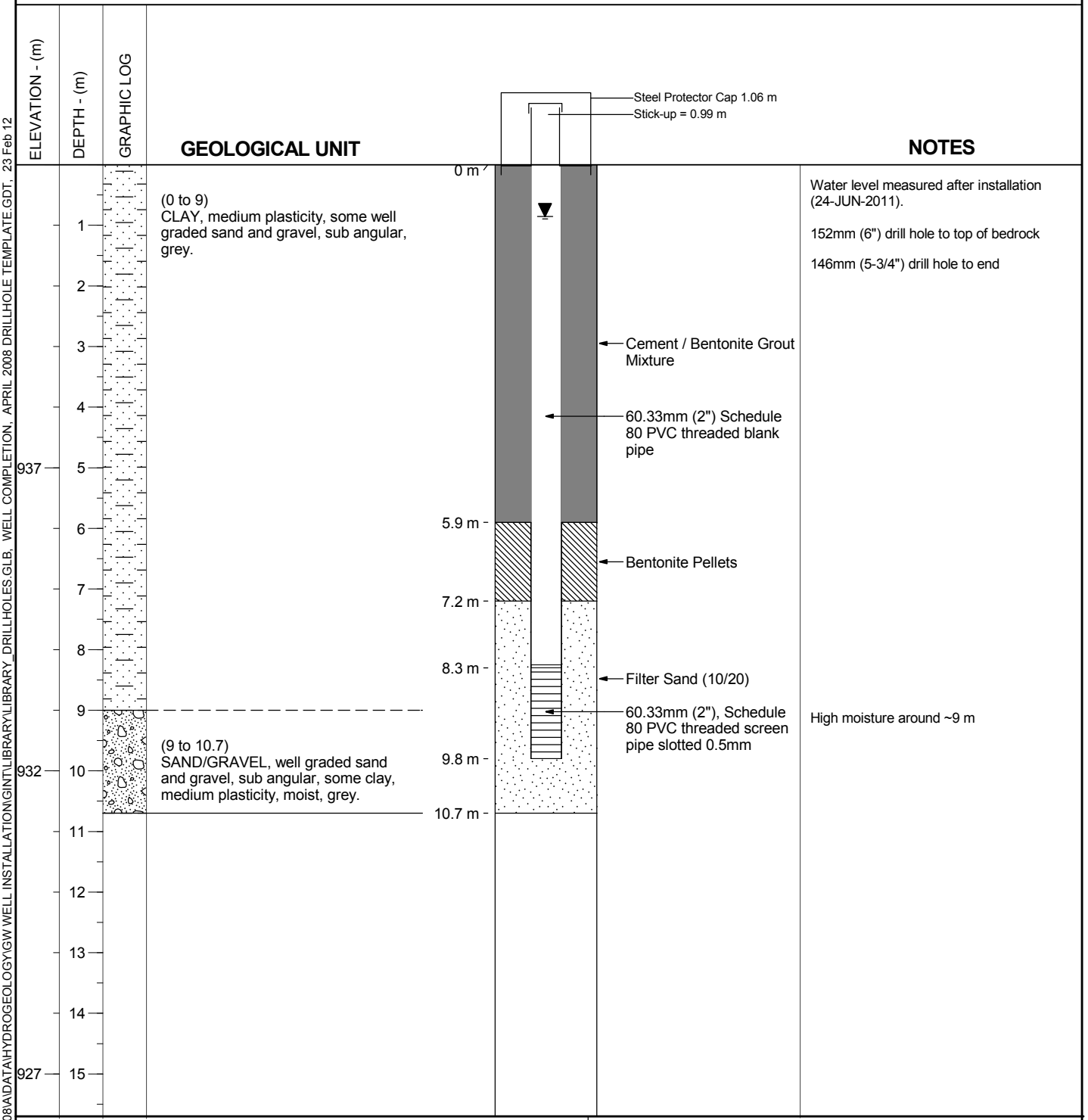
Project:	**AJAX PROJECT**	Drill Hole No.	**MW11-06S**	**PAGE**	1 of 1
Contractor:	**JR DRILLING LTD**	Sample Type:	**Cuttings**	Date Drilling:	**23-JUN-2011**
Location:	**North East Side of North Waste Rock Facility**	Total Depth:	**10.7 m**	Date Installation:	**24-JUN-2011**
Coordinates:	**5,612,239 N , 683,404 E (UTM / NAD 83)**	Elevation:	**942 m**	Supervised by:	**AM**
Drilling Method:	**Air Rotary**			Reviewed by:	**CHS**



GENERAL REMARKS:

KGHM AJAX MINING INC.
AJAX PROJECT
MONITORING WELL DETAILS FOR MW11-06S

Knight Piésold CONSULTING

PROJECT/ASSIGNMENT NO.	REF. NO.
VA101-246/8	3
FIGURE. 11	REV. 0

REV. 0 - Issued for Report

Logging conducted according to the Canadian Foundation Engineering Manual, 4th Edition, 2006.

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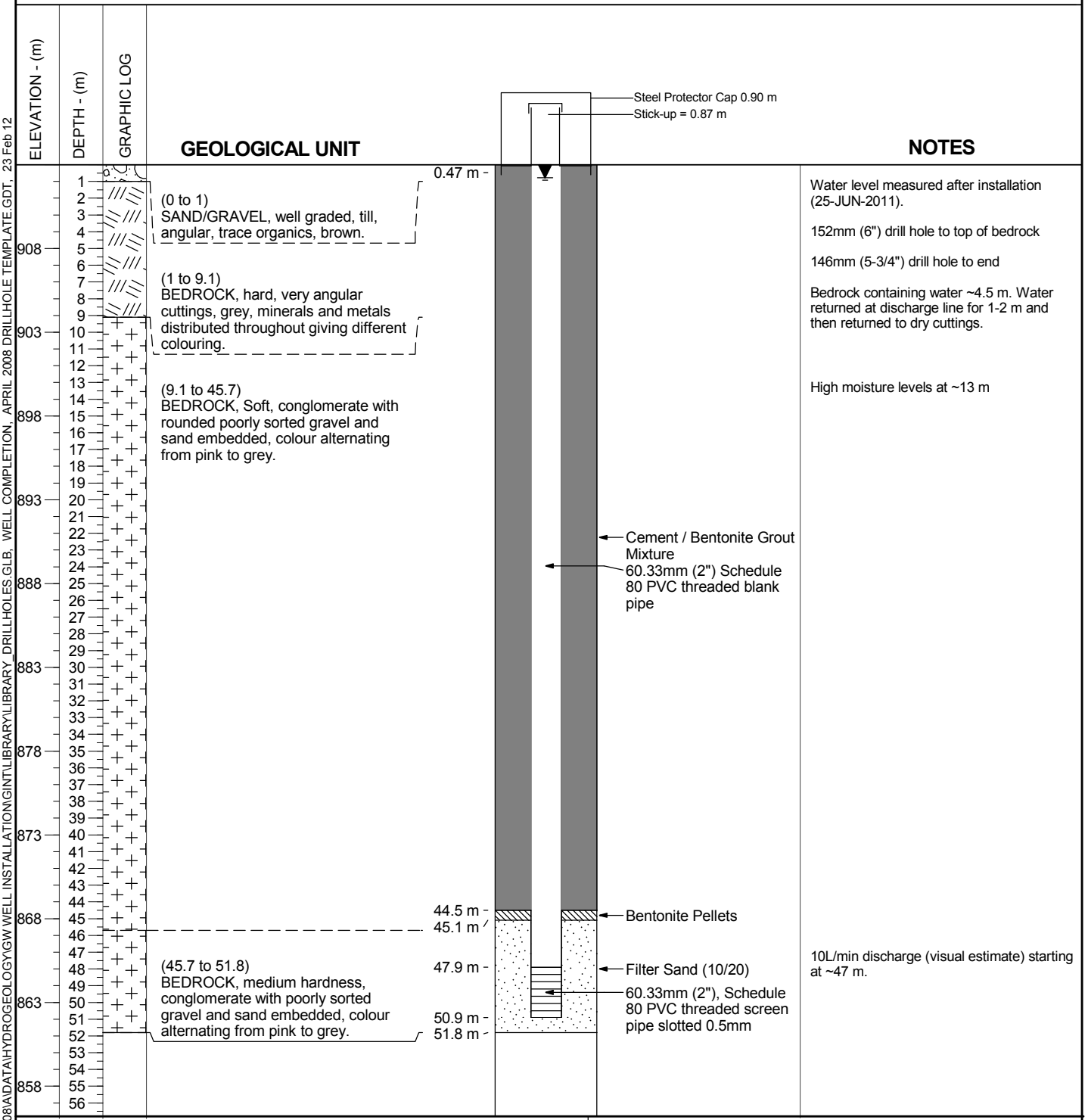
Project:	**AJAX PROJECT**	Drill Hole No.	**MW11-07D**	**PAGE**	1 of 1
Contractor:	**JR DRILLING LTD**	Sample Type:	**Cuttings**	Date Drilling:	**24-JUN-2011**
Location:	**North Side of North Waste Rock Facility**	Total Depth:	**51.8 m**	Date Installation:	**24-JUN-2011**
Coordinates:	**5,612,893 N , 681,751 E (UTM / NAD 83)**	Elevation:	**913 m**	Supervised by:	**AM**
Drilling Method:	**Air Rotary**			Reviewed by:	**CHS**



GENERAL REMARKS:

REV. 0 - Issued for Report

KGHM AJAX MINING INC.
AJAX PROJECT
MONITORING WELL DETAILS FOR MW11-07D

Knight Piésold CONSULTING

PROJECT/ASSIGNMENT NO.	REF. NO.
VA101-246/8	3
FIGURE. 12	REV. 0

Logging conducted according to the Canadian Foundation Engineering Manual, 4th Edition, 2006.

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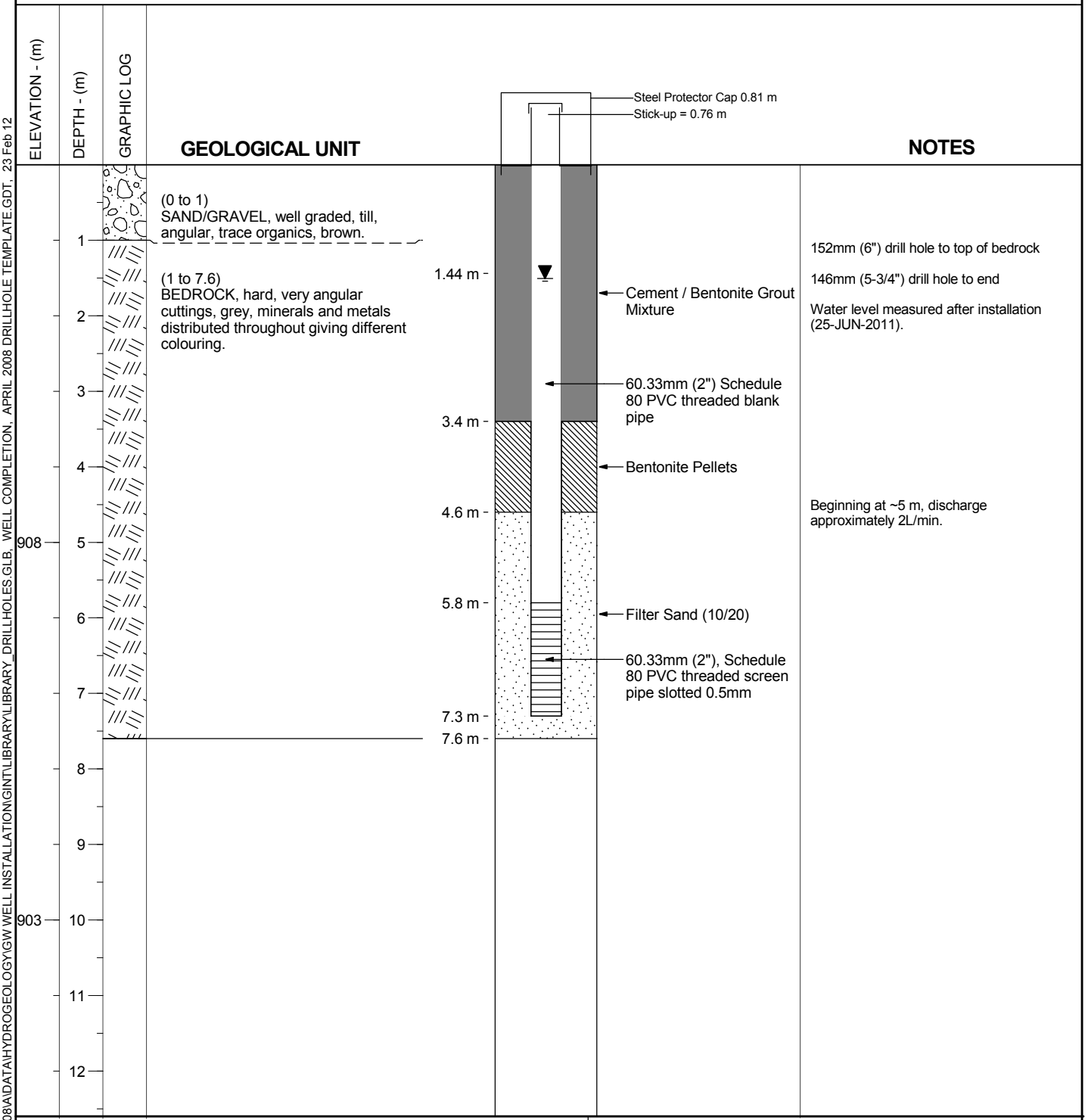
Project:	**AJAX PROJECT**	Drill Hole No.	**MW11-07S**	**PAGE**	1 of 1
Contractor:	**JR DRILLING LTD**	Sample Type:	**Cuttings**	Date Drilling:	**24-JUN-2011**
Location:	**North Side of North Waste Rock Facility**	Total Depth:	**7.6 m**	Date Installation:	**24-JUN-2011**
Coordinates:	**5,612,894 N , 681,750 E (UTM / NAD 83)**	Elevation:	**913 m**	Supervised by:	**AM**
Drilling Method:	**Air Rotary**			Reviewed by:	**CHS**



GENERAL REMARKS:

REV. 0 - Issued for Report

KGHM AJAX MINING INC.
AJAX PROJECT
MONITORING WELL DETAILS FOR MW11-07S

Knight Piésold CONSULTING

PROJECT/ASSIGNMENT NO.	REF. NO.
VA101-246/8	3
FIGURE. 13	REV. 0

Logging conducted according to the Canadian Foundation Engineering Manual, 4th Edition, 2006.

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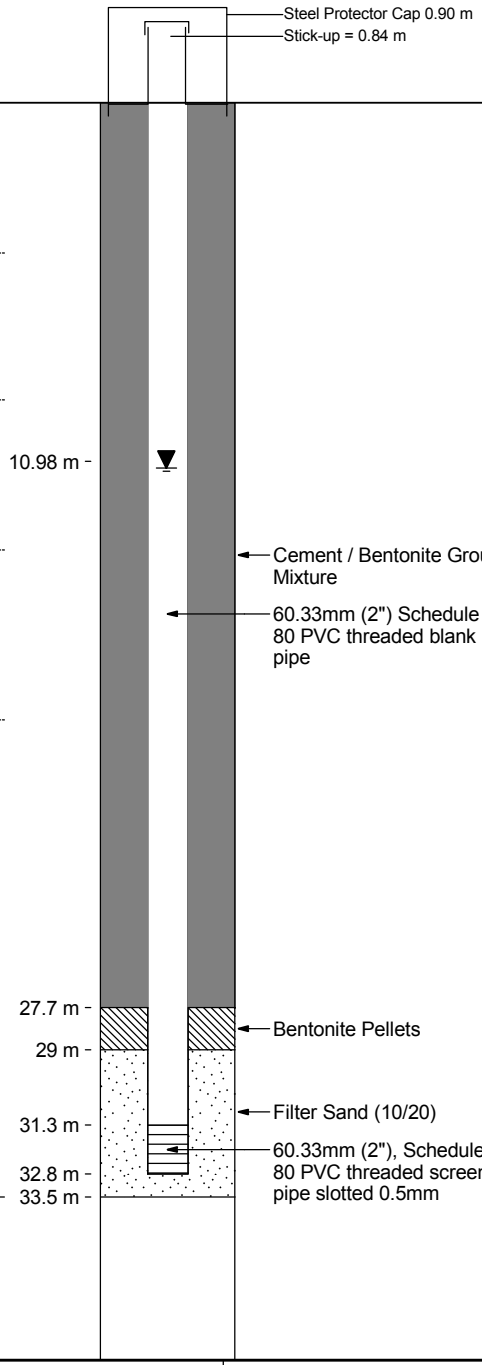
Project:	**AJAX PROJECT**	Drill Hole No.	**MW11-08D**	**PAGE**	1 of 1
Contractor:	**JR DRILLING LTD**	Sample Type:	**Cuttings**	Date Drilling:	**25-JUN-2011**
Location:	**South West of Jacko Lake**	Total Depth:	**33.5 m**	Date Installation:	**25-JUN-2011**
Coordinates:	**5,609,123 N , 681,390 E (UTM / NAD 83)**	Elevation:	**909 m**	Supervised by:	**AM**
Drilling Method:	**Air Rotary**			Reviewed by:	**CHS**

ELEVATION - (m)	DEPTH - (m)	GRAPHIC LOG	GEOLOGICAL UNIT
	1–4		(0 to 4.6) SILT, of low plasticity, fine sand, subrounded, poorly graded, dry, low cohesiveness, brown.
904	5–9		(4.6 to 9.1) SAND, fine to coarse, well graded, sub angular, some silt, low plasticity, trace fine gravel, angular, brown.
899	10–13		(9.1 to 13.7) SAND/GRAVEL, fine to coarse, well graded, angular, some clay, medium plasticity, grey.
894	14–19		(13.7 to 18.9) CLAY medium to high plasticity, trace silt, some well graded sand, angular, cohesive, moisture varies with depth, increased sand and moisture at lower depth.
889	20–33		(18.9 to 33.5) BEDROCK, medium hardness, grey green.
884	34		
879	35		
874	36–38		



NOTES

152mm (6") drill hole to top of bedrock

146mm (5-3/4") drill hole to end

Water level measured after installation (26-JUN-2011).

5L/min discharge (visual estimate) at ~32 m

GENERAL REMARKS:

REV. 0 - Issued for Report

KGHM AJAX MINING INC.
AJAX PROJECT
MONITORING WELL DETAILS FOR MW11-08D

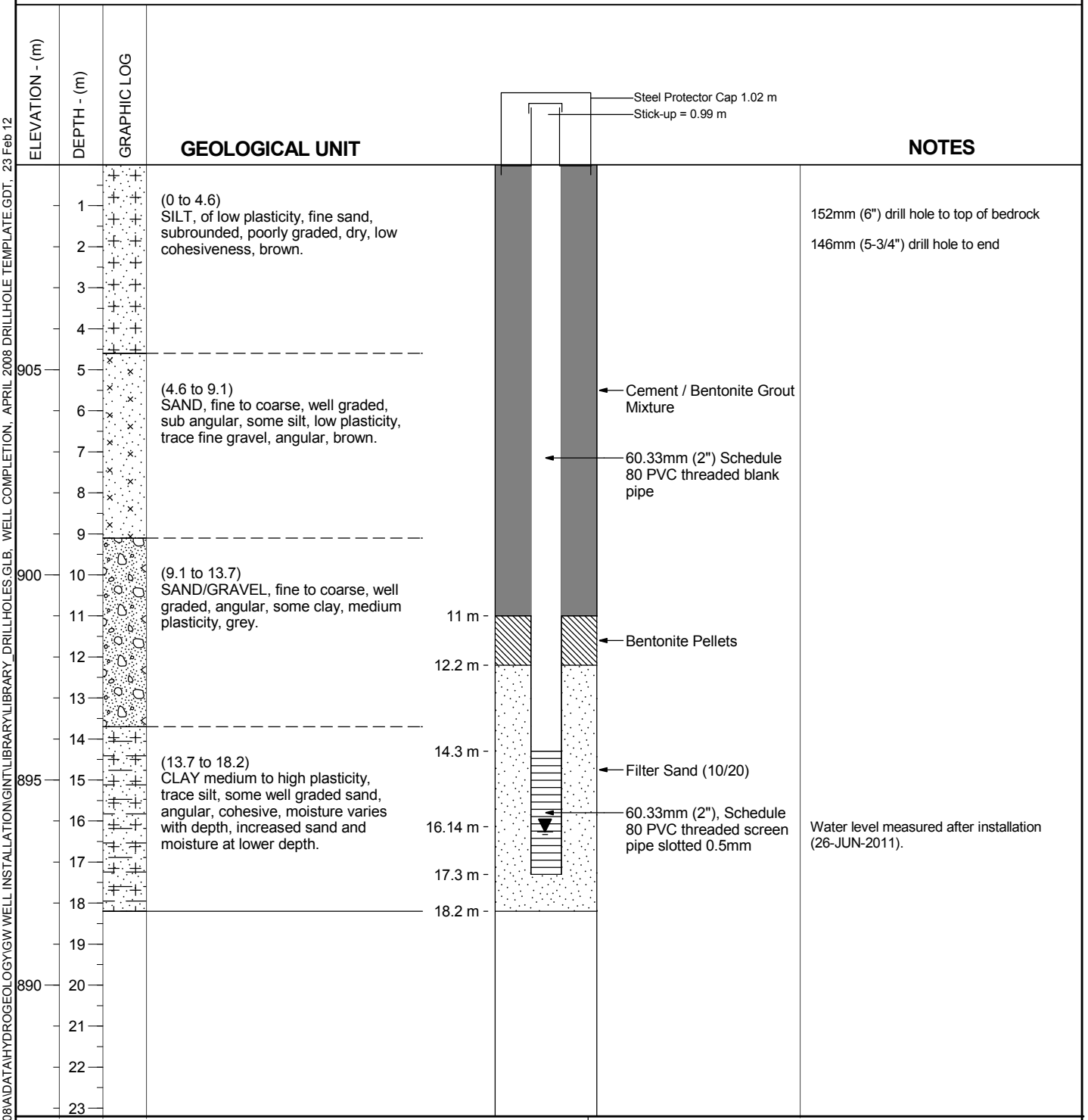
Knight Piésold CONSULTING

PROJECT/ASSIGNMENT NO.	REF. NO.
VA101-246/8	3
FIGURE. 14	REV. 0

Logging conducted according to the Canadian Foundation Engineering Manual, 4th Edition, 2006.

File:M:\101\00246\08\DATA\HYDROGEOLOGY\GW WELL INSTALLATION\GINT\PROJECTS\AJAX-WELL INSTALLATION.GPJ
Library: M:\101\00246\08\DATA\HYDROGEOLOGY\GW WELL INSTALLATION\GINT\LIBRARY_DRILLHOLES.GLB, WELL COMPLETION, APRIL 2008 DRILLHOLE TEMPLATE.GDT, 23 Feb 12

Project:	**AJAX PROJECT**	Drill Hole No.	**MW11-08S**	**PAGE**	1 of 1
Contractor:	**JR DRILLING LTD**	Sample Type:	**Cuttings**	Date Drilling:	**25-JUN-2011**
Location:	**South West of Jacko Lake**	Total Depth:	**18.2 m**	Date Installation:	**26-JUN-2011**
Coordinates:	**5,609,124 N , 681,385 E (UTM / NAD 83)**	Elevation:	**910 m**	Supervised by:	**AM**
Drilling Method:	**Air Rotary**			Reviewed by:	**CHS**



GENERAL REMARKS:

REV. 0 - Issued for Report

KGHM AJAX MINING INC.
AJAX PROJECT
MONITORING WELL DETAILS FOR MW11-08S

Knight Piésold CONSULTING

PROJECT/ASSIGNMENT NO.	REF. NO.
VA101-246/8	3
FIGURE. 15	REV. 0

Logging conducted according to the Canadian Foundation Engineering Manual, 4th Edition, 2006.

File:M:\101\00246\08\AIDATA\HYDROGEOLOGY\GW WELL INSTALLATION\GINT\PROJECTS\AJAX-WELL INSTALLATION.GPJ
Library: M:\101\00246\08\AIDATA\HYDROGEOLOGY\GW WELL INSTALLATION\GINT\LIBRARY\LIBRARY_DRILLHOLES.GLB, WELL COMPLETION, APRIL 2008 DRILLHOLE TEMPLATE.GDT, 23 Feb 12

Project:	**AJAX PROJECT**	Drill Hole No.	**MW11-09D**	**PAGE**	1 of 1
Contractor:	**JR DRILLING LTD**	Sample Type:	**Cuttings**	Date Drilling:	**26-JUN-2011**
Location:	**South Side of Proposed TSF**	Total Depth:	**30.5 m**	Date Installation:	**26-JUN-2011**
Coordinates:	**5,609,076 N , 679,861 E (UTM / NAD 83)**	Elevation:	**895 m**	Supervised by:	**AM**
Drilling Method:	**Air Rotary**			Reviewed by:	**CHS**

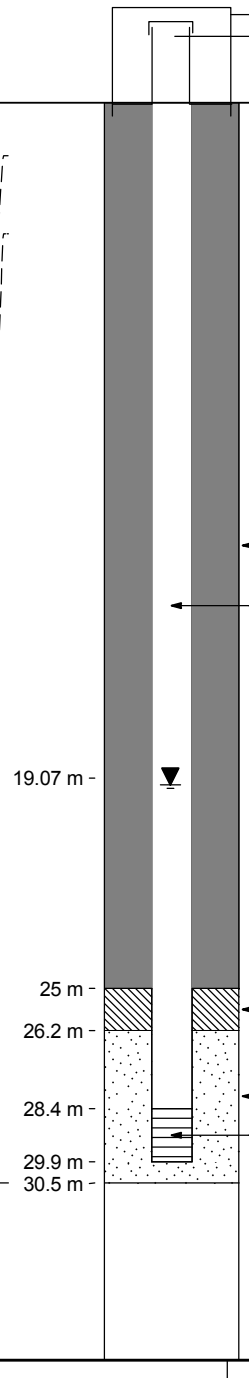
ELEVATION - (m) | DEPTH - (m) | GRAPHIC LOG

GEOLOGICAL UNIT

(0 to 1.5)
SILT/CLAY of low plasticity, well graded sand and gravel, sub angular, trace organics, dry.

(1.5 to 3.7)
CLAY, medium plasticity, some organics, trace sand and gravel, sub rounded, moist, dark grey brown.

(3.7 to 30.5)
BEDROCK, medium hardness, small angular cuttings, grey pink.



NOTES

152mm (6") drill hole to top of bedrock

146mm (5-3/4") drill hole to end

Moist zone in bedrock at ~13 m

Water level measured after installation (26-JUN-2011).

Fractured zone with 5L/min (visual estimate) water between 28-30 m

GENERAL REMARKS:

REV. 0 - Issued for Report

Logging conducted according to the Canadian Foundation Engineering Manual, 4th Edition, 2006.

KGHM AJAX MINING INC.
AJAX PROJECT
MONITORING WELL DETAILS FOR MW11-09D

Knight Piésold CONSULTING

PROJECT/ASSIGNMENT NO.	REF. NO.
VA101-246/8	3
FIGURE. 16	REV. 0

File:M:\101\00246\08\A\DATA\HYDROGEOLOGY\GW WELL INSTALLATION\GINT\PROJECTS\AJAX-WELL INSTALLATION.GPJ
Library: M:\101\00246\08\A\DATA\HYDROGEOLOGY\GW WELL INSTALLATION\GINT\LIBRARY\LIBRARY_DRILLHOLES.GLB, WELL COMPLETION, APRIL 2008 DRILLHOLE TEMPLATE.GDT, 23 Feb 12

Project:	**AJAX PROJECT**	Drill Hole No.	**MW11-09S**	**PAGE**	1 of 1
Contractor:	**JR DRILLING LTD**	Sample Type:	**Cuttings**	Date Drilling:	**26-JUN-2011**
Location:	**South Side of Proposed TSF**	Total Depth:	**15.4 m**	Date Installation:	**26-JUN-2011**
Coordinates:	**5,609,079 N , 679,860 E (UTM / NAD 83)**	Elevation:	**895 m**	Supervised by:	**AM**
Drilling Method:	**Air Rotary**			Reviewed by:	**CHS**

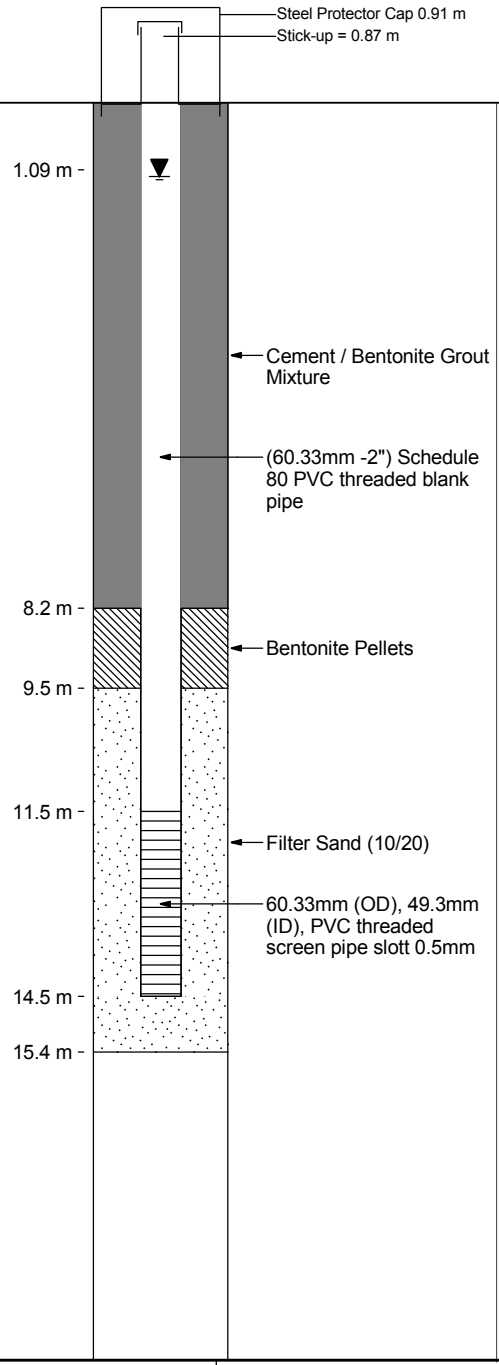
ELEVATION - (m) | DEPTH - (m) | GRAPHIC LOG

GEOLOGICAL UNIT

(0 to 1.5)
SILT/CLAY of low plasticity, well graded sand and gravel, sub angular, trace organics, dry.

(1.5 to 3.7)
CLAY, medium plasticity, some organics, trace sand and gravel, sub rounded, moist, dark grey brown.

(3.7 to 15.4)
BEDROCK, medium hardness, small angular cuttings, grey pink.



NOTES

152mm (6") drill hole to top of bedrock

Water level measured (27-JUN-2011).

146mm (5-3/4") drill hole to end

GENERAL REMARKS:

REV. 0 - Issued for Report

KGHM AJAX MINING INC.
AJAX PROJECT
MONITORING WELL DETAILS FOR MW11-09S

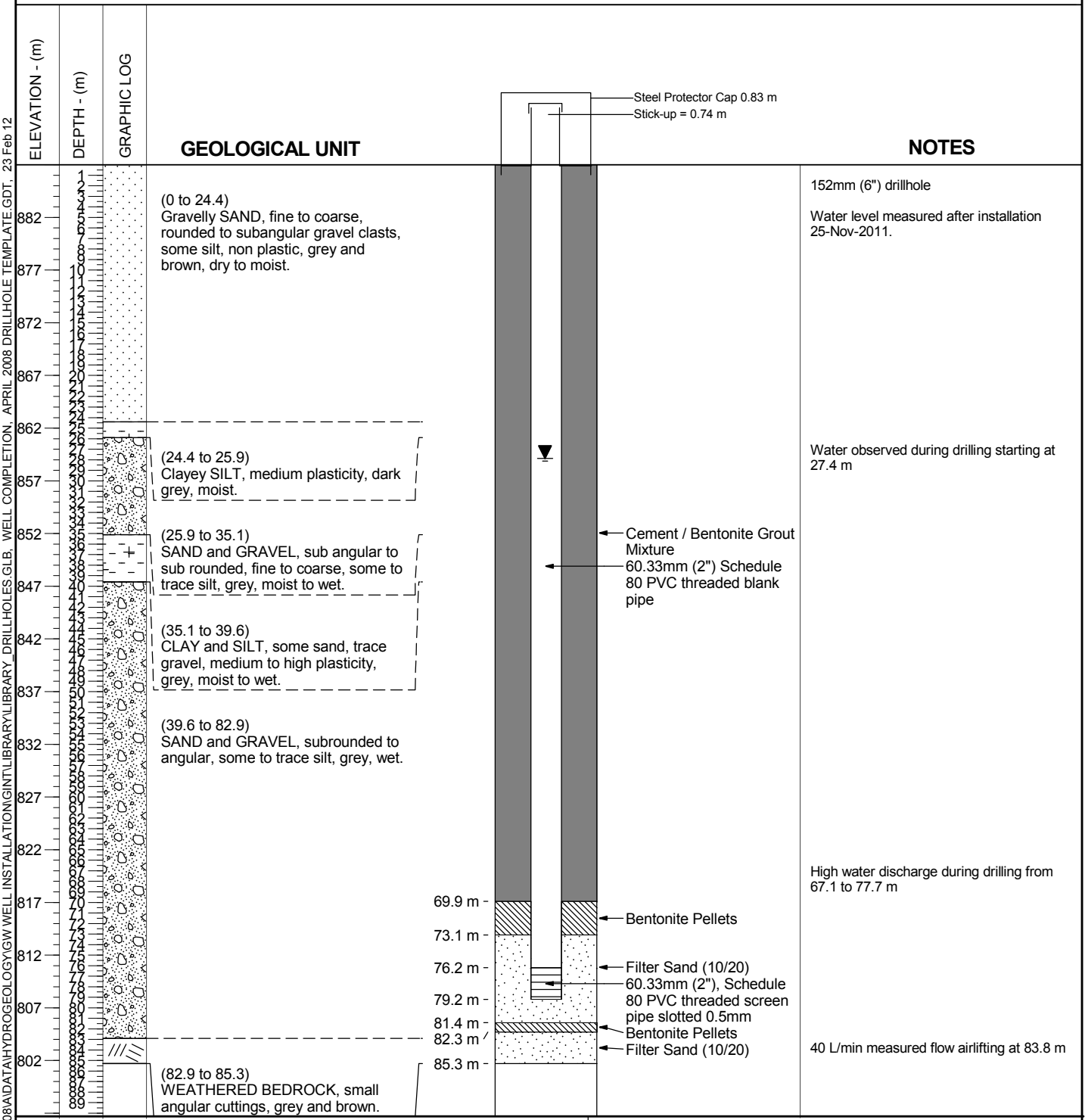
Knight Piésold CONSULTING

PROJECT/ASSIGNMENT NO.	REF. NO.
VA101-246/8	3
FIGURE. 17	REV. 0

Logging conducted according to the Canadian Foundation Engineering Manual, 4th Edition, 2006.

File:M:\101\00246\08\AIDATA\HYDROGEOLOGY\GW WELL INSTALLATION\GINT\PROJECTS\AJAX-WELL INSTALLATION.GPJ
Library: M:\101\00246\08\AIDATA\HYDROGEOLOGY\GW WELL INSTALLATION\GINT\LIBRARY\LIBRARY_DRILLHOLES.GLB, WELL COMPLETION, APRIL 2008 DRILLHOLE TEMPLATE.GDT, 23 Feb 12

Project:	**AJAX PROJECT**	Drill Hole No.	**MW11-10D**	**PAGE**	1 of 1
Contractor:	**JR DRILLING LTD**	Sample Type:	**Cuttings**	Date Drilling:	**21-NOV-2011**
Location:	**South East of East Waste Rock Facility**	Total Depth:	**85.3 m**	Date Installation:	**22-NOV-2011**
Coordinates:	**5,609,466 N , 687,494 E (UTM / NAD 83)**	Elevation:	**887 m**	Supervised by:	**DLP**
Drilling Method:	**Air Rotary**			Reviewed by:	**CHS**



GENERAL REMARKS:

REV. 0 - Issued for Report

KGHM AJAX MINING INC.
AJAX PROJECT
MONITORING WELL DETAILS FOR MW11-10D

Knight Piésold CONSULTING

PROJECT/ASSIGNMENT NO.	REF. NO.
VA101-246/8	3
FIGURE. 18	REV. 0

Logging conducted according to the Canadian Foundation Engineering Manual, 4th Edition, 2006.

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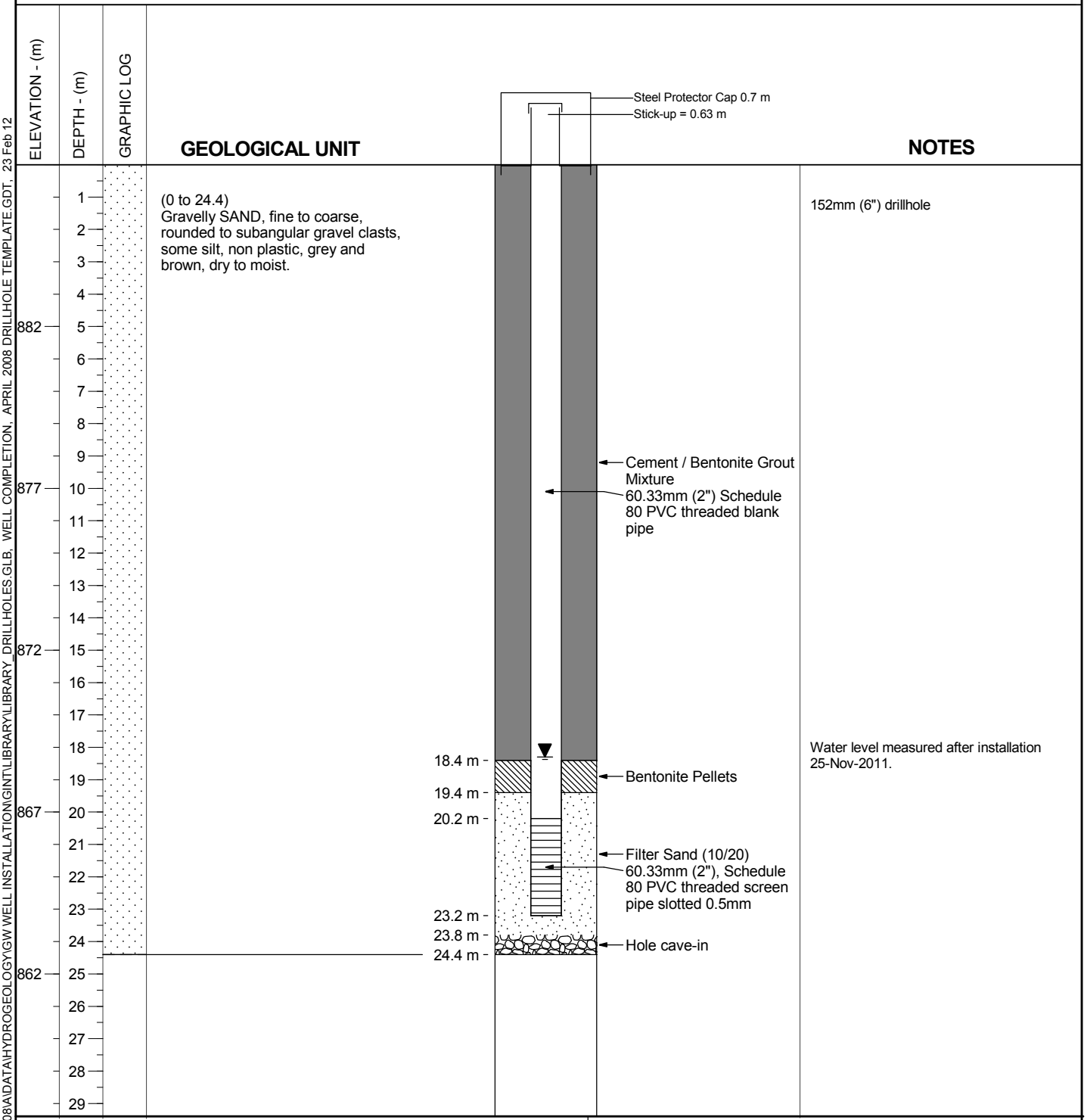
Library: M:\101\00246\08\AIDATA\HYDROGEOLOGY\GW WELL INSTALLATION\GINT\LIBRARY\LIBRARY_DRILLHOLES.GLB, WELL COMPLETION, APRIL 2008 DRILLHOLE TEMPLATE.GDT, 23 Feb 12

Project:	**AJAX PROJECT**	Drill Hole No.	**MW11-10S**	**PAGE**	1 of 1
Contractor:	**JR DRILLING LTD**	Sample Type:	**Cuttings**	Date Drilling:	**23-NOV-2011**
Location:	**South East of East Waste Rock Facility**	Total Depth:	**24.4 m**	Date Installation:	**24-NOV-2011**
Coordinates:	**5,609,467 N , 687,487 E (UTM / NAD 83)**	Elevation:	**887 m**	Supervised by:	**DLP**
Drilling Method:	**Air Rotary**			Reviewed by:	**CHS**



GENERAL REMARKS:

KGHM AJAX MINING INC.
AJAX PROJECT
MONITORING WELL DETAILS FOR MW11-10S

REV. 0 - Issued for Report

Knight Piésold CONSULTING

PROJECT/ASSIGNMENT NO.	REF. NO.
VA101-246/8	3
FIGURE. 19	REV. 0

Logging conducted according to the Canadian Foundation Engineering Manual, 4th Edition, 2006.

File:M:\101\00246\08\AIDATA\HYDROGEOLOGY\GW WELL INSTALLATION\GINT\PROJECTS\AJAX-WELL INSTALLATION.GPJ
Library: M:\101\00246\08\AIDATA\HYDROGEOLOGY\GW WELL INSTALLATION\GINT\LIBRARY\LIBRARY_DRILLHOLES.GLB, WELL COMPLETION, APRIL 2008 DRILLHOLE TEMPLATE.GDT, 23 Feb 12

APPENDIX F3

MW12 SERIES WELLS

(Pages F3-1 to F3-4)

Borehole Log of LE12-01

(Sheet 1 of 1)

KGHM Ajax Mining Inc.

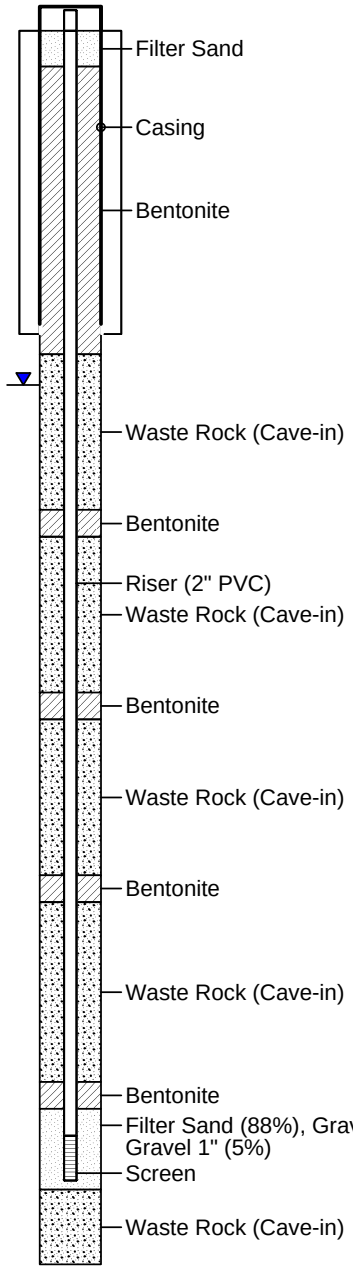
Ajax

Project #: J933-2

Date Started	: Nov.27, 2012	Northing Coord.	: 5609892
Date Completed	: Nov.29, 2012	Easting Coord.	: 0684638
Hole Diameter	: 187 mm	Logged By	: JH
Drilling Method	: Dual Rotary		
Drilling Company	: J.R. Drilling Central		

Depth (m)	GRAPHIC	DESCRIPTION	Sample	Sample Type	% Recovery
0		SAND, SILT and CLAY, some gravel, grasses on surface, moist			
		WASTE ROCK, silt-gravel size drill cuttings, grey-blue, dry		DC	
5				DC	
				DC	
10				DC	
				DC	
15				DC	
				DC	
20				DC	
				DC	
25				DC	
				DC	
30				DC	
		Boulder at approx. 31.9 m		DC	
35		Drill hole produced approx. 225 L of groundwater per minute			
40		BEDROCK, drilling advancement slowed		DC	
		EOH @ 41.2 m			
45					

Well: LE12-01



01-11-2013 P:\J933 Ajax\MW installation program\Data\BH Logs\LE12-01.bor

Borehole Log of LE12-02

(Sheet 1 of 1)

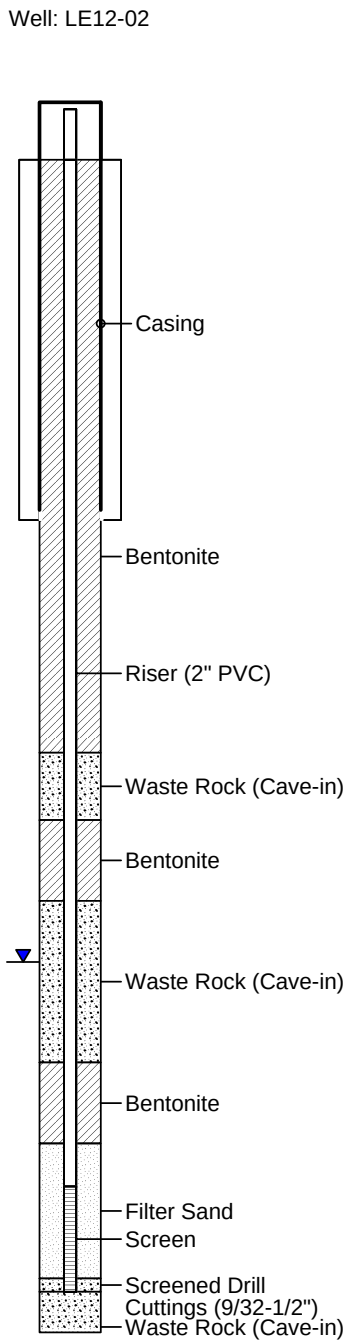
KGHM Ajax Mining Inc.

Ajax

Project #: J933-2

Date Started	: Nov.28, 2012	Northing Coord.	: 5609894
Date Completed	: Nov.29, 2012	Easting Coord.	: 0684637
Hole Diameter	: 187 mm	Logged By	: JH
Drilling Method	: Dual Rotary		
Drilling Company	: J.R. Drilling Central		

Depth (m)	GRAPHIC	DESCRIPTION	Sample	Sample Type	% Recovery
0		SAND, SILT, and CLAY, some gravel, grasses on surface, moist			
		WASTE ROCK, silt to gravel size drill cuttings, grey/blue, dry			
				DC	
5				DC	
				DC	
10				DC	
		Moist drill cuttings at 12.2 m			
15		Boulder at 12.5 m		DC	
		EOH @ 17.4 m			
20					



01-11-2013 P:\J933 Ajax\MW installation program\Data\BH Logs\LE12-02.bor

Borehole Log of LE12-03

(Sheet 1 of 1)

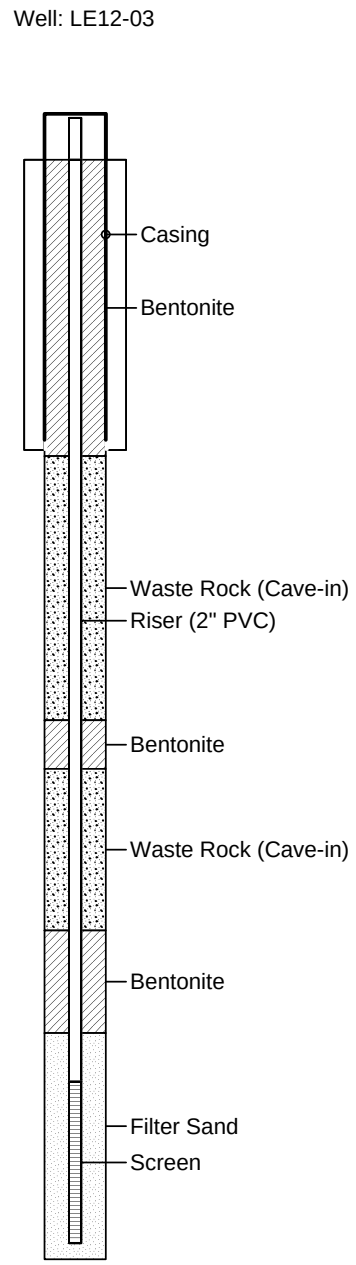
KGHM Ajax Mining Inc.

Ajax

Project #: J933-2

Date Started	: Nov.29, 2012	Northing Coord.	: 5608830
Date Completed	: Nov.30, 2012	Easting Coord.	: 0684387
Hole Diameter	: 187 mm	Logged By	: JH
Drilling Method	: Dual Rotary		
Drilling Company	: J.R. Drilling Central		

Depth (m)	GRAPHIC	DESCRIPTION	Sample	Sample Type	% Recovery
0		SAND, SILT and CLAY, some gravel, grasses on surface, moist to wet			
		WASTE ROCK, silt to gravel size drill cuttings, blue/grey, dry			
				DC	
5				DC	
				DC	
10				DC	
				DC	
15				DC	
		CLAY, with some sand, silt, and gravel, rounded gravel at top of layer		DC	
20				DC	
		EOH @20.4 m			
25					



01-11-2013 P:\J933 Ajax\MW installation program\Data\BH Logs\LE12-03.bor

Borehole Log of LE12-04

(Sheet 1 of 1)

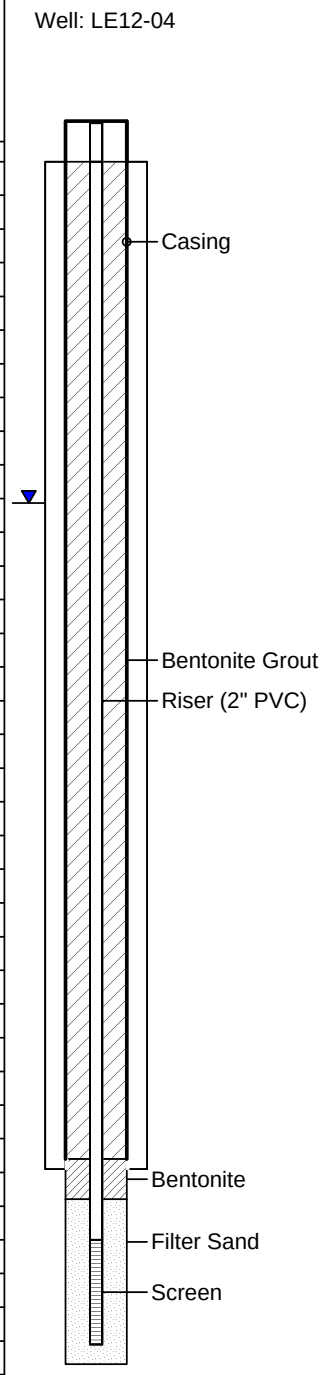
KGHM Ajax Mining Inc.

Ajax

Project #: J933-2

Date Started	: Nov.30, 2012	Northing Coord.	: 5609146
Date Completed	: Nov.30, 2012	Easting Coord.	: 0684327
Hole Diameter	: 187 mm	Logged By	: JH
Drilling Method	: Dual Rotary		
Drilling Company	: J.R. Drilling Central		

Depth (m)	GRAPHIC	DESCRIPTION	Sample	Sample Type	% Recovery
0		SILTY SAND, some gravel, brown, dry			
		Slightly moist, small roots observed at 2.9-3.0 m			
				SS	0
		TILL, sand, silt, and clay, some gravel, grey, very stiff to hard, slightly moist		SS	30
5		Wet seam at 7.6 m		SS	0
		Gravel content increasing with depth		SS	20
10				SS	80
15					
20					
25		SILTY SAND, fine grained, grey, wet			
30				SS	50
		GRAVEL, wet			
35		SILTY SAND, fine grained, grey, wet			
		EOH 35.7 m			
40					



01-11-2013 P:\J933 Ajax\MW installation program\Data\BH Logs\LE12-04.bor

APPENDIX F4

BGC14 SERIES WELLS

(Pages F4-1 to F4-105)

LEGEND FOR WELL LOGS

The various parameters depicted on the well logs are described below according to the select headings found on the form.

Location

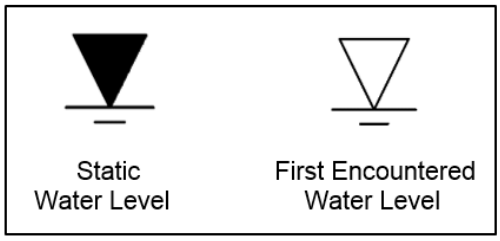
TSF – Tailings Storage Facility
EMRSF – East Mine Rock Storage Facility
SMRSF – South Mine Rock Storage Facility

Depth

Depth below ground surface is measured in metres.

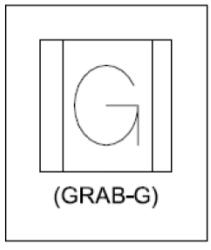
Water Levels

Groundwater levels are represented by the symbols shown below. First encountered water levels were obtained during drilling progress, static water levels were measured after drilling and piezometer installation is complete.



Sample Type and Sample Number

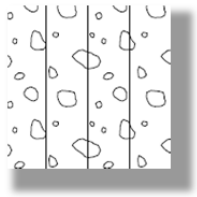
Samples were collected to permit cross-checking of logged geology by the KGHM Ajax site geologist and were limited to grab samples collected from the Dual Rotary drill cuttings. Samples are numbered and represented graphically by the symbol shown below. All samples collected from test holes are shown on the logs; however, will not be tested, as they are considered to be “disturbed” due to aggressive drilling methods.



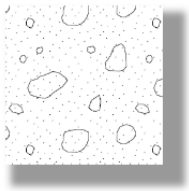
Symbol

Sediment types and rock are represented graphically by the following symbols:

GRAVEL



Silt/Gravel (GM)

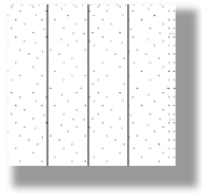


Sand/Gravel (GSP)

Poorly-graded Gravel (GP)

Well-graded Gravel (GW)

SAND

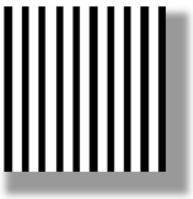


Silt/Sand (SM)

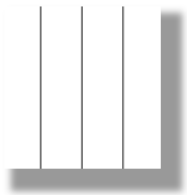
Poorly-graded Sand (SP)

Well-graded Sand (SW)

SILT

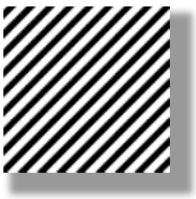


High Plastic Silt (MH)

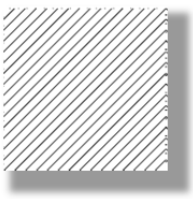


Low Plastic Silt (ML)

CLAY



High Plastic Clay (CH)

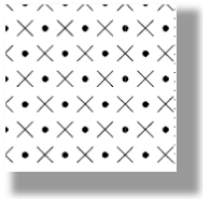


Low Plastic Clay (CI/CL)

OTHER

Boulders and Cobbles (BLDRCBBL)

BEDROCK



Ironmask Hybrid

Nicola Group

Undifferentiated Bedrock

Lithologic Description

Due to the aggressive nature of Dual Rotary drilling, sediments and lithology are considered to be of disturbed nature, and are described using simplified observations, where possible.
Disturbed sediments are classified according to the Unified Soil Classification System (USCS), and are described typically by the following features: primary constituent; particle size range; secondary constituents; gradation; colour; particle shape and angularity; maximum particle size; moisture content; presence of foreign materials.
Disturbed bedrock cuttings are described according to the International Society for Rock Mechanics (ISRM 1978). The following descriptions are typically listed for each main lithological unit on the logs: grain size; colour; alteration and weathering; vein and faulting characteristics.

Weathering Grade

Weathering and alteration of the rock mass is described according to Bieniawski 1976 parameters defined below.

Alteration and Weathering Rating (Bieniawski 1976)

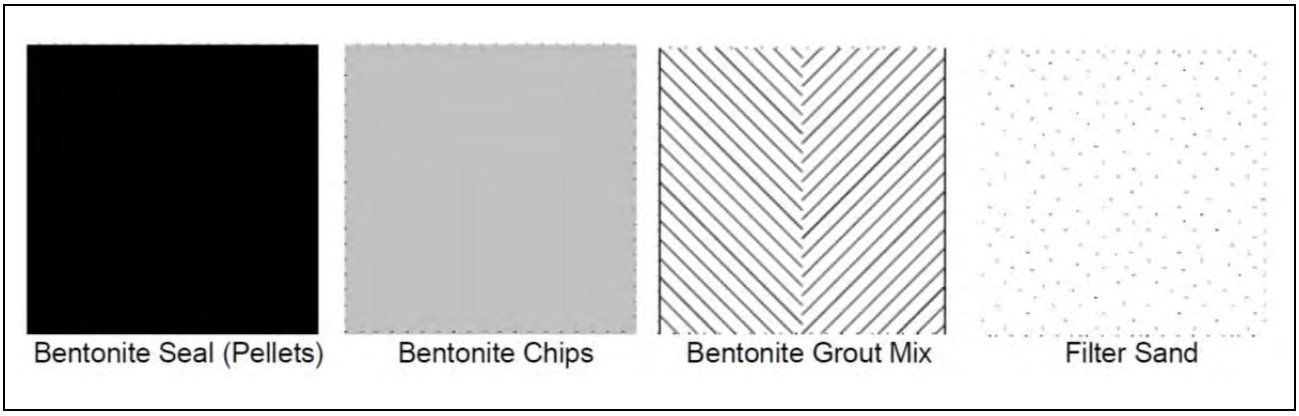
Degree of Alteration/Weathering	Description	Rating
Fresh	Alteration may result in an improvement in rock competency (e.g. silicification)	W1
Slightly Weathered/Altered	Rock strength unchanged; weathering on joints only	W2
Moderately Weathered/Altered	Rock is discoloured but rock strength only slightly affected; discontinuities are weathered	W3
Highly Weathered/Altered	Rock is discoloured and strength is significantly reduced by weathering	W4
Completely Weathered/Altered	Original fabric and relict structures remain but rock is decomposed and friable	W5
Residual Soil	Original fabric destroyed	W6

Note: If alteration/weathering is > W4 or UCS grade ≤R0, then RQD is 0% for that section. Also, if the UCS grade ≤R0, the number of discontinuities is recorded as the default 99.

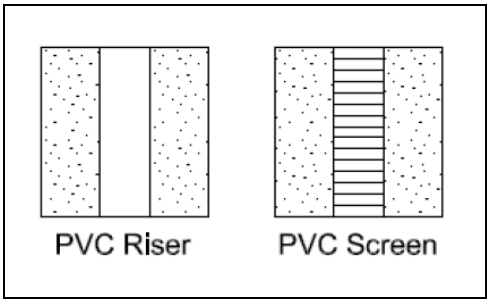
Instrument Details

Fill materials placed in the test holes are graphically represented by the symbols below. All test holes contain standpipe piezometers. These instruments are shown below in a default filter sand fill.

MATERIALS PLACED DOWN HOLE



INSTRUMENTATION SHOWN IN FILTER SAND



DRILL HOLE # BGC14-001D

Coordinates (m): 682286E - 5608796N
Ground Elevation (m): 936
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.83

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 3.04

Start Date: 11 Feb 2014
Finish Date: 13 Feb 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 5.18
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
935	0				SAND AND GRAVEL (GM) Silty, sand is fine, well graded, light greyish brown, trace rootlets and organics. [TOPSOIL]	0	At grade, dry	11/02/2014 12:25	Logged from sump.
934	1				SAND (SM) Fine, some silt, uniformly graded, light brown.		Dry	11/02/2014 12:30	
933	2								
932	3				SILT (ML) Some sand, some clay, trace gravel, well graded, dark brown with grey clasts. [TILL]		Dry	11/02/2014 12:30	
931	4								
930	5				GRAVEL AND SAND (GM) Some silt, sand is medium, gravel is fine, well graded, dark brown with grey clasts. [FLUVIAL]		Dry	11/02/2014 12:40	Nearing bedrock?
929	6				BEDROCK Drill cuttings: fine to medium grained, angular to subrounded, dark to light grey, unweathered to slightly weathered. [NICOLA VOLCANICS]		Dry	11/02/2014 12:42	
928	7								
927	8								
926	9								
	10								

(Continued on next page)

DRILL HOLE # BGC14-001D

Coordinates (m): 682286E - 5608796N
Ground Elevation (m): 936
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.83

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 3.04

Start Date: 11 Feb 2014
Finish Date: 13 Feb 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 5.18
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
925	10				Below 10.67 m - fine, light grey.		Dry	11/02/2014 12:53	
924	11								
923	12								At 11.71 m - static water level, measured 3/12/2014 9:55.
922	13								
921	14								
920	15					14.63			
919	16								
918	17					17.07	Dry	11/02/2014 13:15	Drill returns are very dry, dusty.
917	18					17.98			
916	19						Wet, light grey	11/02/2014 13:34	At 19.20 m -water encountered. AIRLIFT #1 2.6 US GPM 3.2 US GPM
	20								

(Continued on next page)

DRILL HOLE # BGC14-001D

Coordinates (m): 682286E - 5608796N
Ground Elevation (m): 936
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.83

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 3.04

Start Date: 11 Feb 2014
Finish Date: 13 Feb 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 5.18
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
	20								3.4 US GPM Average 3.1 US GPM
915	21								
914	22								
913	23				Below 22.86 m - fine, smaller clast size than above, dark green.		Wet, green	11/02/2014 13:42	Possible chloritization.
912	24					24.08			
911	25					24.69			
910	26				At 25.90 m - colour change to brownish red.		Wet	11/02/2014 13:50	
909	27				At 26.52 m - colour change to grey.		Wet	11/02/2014 13:53	
908	28								
907	29						Wet	11/02/2014 14:00	AIRLIFT #2 3.4 US GPM 2.9 US GPM 2.6 US GPM Average 3.0 US GPM
906	30				END OF HOLE AT 29.56 m				

(Continued on next page)

DRILL HOLE # BGC14-001D

Coordinates (m): 682286E - 5608796N
Ground Elevation (m): 936
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.83

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 3.04

Start Date: 11 Feb 2014
Finish Date: 13 Feb 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 5.18
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
905	30				NOTES: 1. 2" PVC standpipe piezometer installed with screen from 17.98 to 24.08 metres. 2. Filter sand placed from 17.07 to 24.69 metres. 3. Bentonite seal placed from 14.63 to 17.07 metres. 4. Hole backfilled from 24.69 m to 29.56 m with bentonite chips.				
904	31								
903	32								
902	33								
901	34								
900	35								
899	36								
898	37								
897	38								
896	39								
	40								

Project No.: 1125-007

Project: Ajax Project Environmental Assessment

DRILL HOLE # BGC14-001S

Location: Ajax Project Site

Coordinates (m): 682286E - 5608796N
Ground Elevation (m): 934
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.84

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 1.52

Start Date: 12 Feb 2014
Finish Date: 12 Feb 2014
Final Depth (m): 6.40
Depth to Top of Rock (m): 5.49
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
934	0				SAND AND GRAVEL (GM) Silty, well graded, light greyish brown. [TOPSOIL]	0	Dry	12/02/2014 10:30	
933	1				SAND (SM) Fine, trace silt, uniformly graded, light brown, no odour. [TILL]		Dry	12/02/2014 10:33	
932	2					1.83			
	3				SILT (ML) Some sand, some gravel, trace clay, gap graded, dark brown, no odour. [TILL]		Dry	12/02/2014 10:35	
931						3.66			
930	4					3.96			
929	5				SAND AND GRAVEL (GM) Some silt, well graded, light brown with grey clasts. [FLUVIAL]		Dry	12/02/2014 10:40	
	6	G	G1		BEDROCK Drill cuttings: fine to medium grained, angular to subrounded, light grey to light brown. [NICOLA VOLCANICS]	5.49	Dry	12/02/2014 10:43	
928	7				END OF HOLE AT 6.40 m NOTES: 1. 2" PVC standpipe piezometer installed with screen from 3.96 to 5.49 metres. 2. Filter sand placed from 3.66 to 6.40 metres. 3. Bentonite seal placed from 1.83 to 3.66 metres.		Dry	12/02/2014 10:45	
927	8								
926	9								
925	10								

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Client: KGHM Ajax Mining Inc.

Print Date: 5/28/2015

AJAX (HYDROGEO) AJAX_SOIL_HYDROGEO.GDL BGC.GDT 5/28/15

DRILL HOLE # BGC14-002D

Coordinates (m): 682756E - 5608900N
Ground Elevation (m): 925
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.73

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 12 Feb 2014
Finish Date: 13 Feb 2014
Final Depth (m): 29.87
Depth to Top of Rock (m): 15.24
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
925	0				SAND (SW) Fine to medium, some gravel, trace silt, well graded, dark brown with grey clasts. [FILL]	0	Dry	12/02/2014 13:00	Logged from road cut.
					SAND AND GRAVEL (GW) Silty, sand is fine to medium, gravel is fine to coarse, well graded, light brown with grey clasts, gravel size range from 3 mm to 20 mm. [FLUVIAL]		Dry	12/02/2014 13:06	
924	1								
		G	G1				Dry	12/02/2014 13:12	
923	2								
922	3	G	G2		SILT (ML) Gravelly, some fine sand, gravel is multilithic, well graded, angular to subrounded, grey, light greyish brown matrix. [TILL]		Dry	12/02/2014 13:18	
921	4								
		G	G3		GRAVEL (GM) Silty, some fine sand, trace clay, gravel is multilithic, angular to subrounded, grey to purple, gravel size range from 2 mm to 15 mm. [FLUVIAL]		Dry	12/02/2014 13:25	Welding time 13:30 to 13:42.
920	5								
919	6								
					SILT (ML) Some sand, some gravel, trace clay, uniformly graded, low plasticity, light brown with grey clasts. [TILL]		Moist	12/02/2014 13:47	
918	7								
							Moist	12/02/2014 13:50	
917	8								
									At 8.53 m - static water level, measured 2/13/2014 8:55.
916	9				Below 9.14 m - increase in clay content to some, colour change to dark grey.		Moist	12/02/2014 13:54	Slight increase in moisture.
	10								

(Continued on next page)

DRILL HOLE # BGC14-002D

Coordinates (m): 682756E - 5608900N
Ground Elevation (m): 925
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.73

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 12 Feb 2014
Finish Date: 13 Feb 2014
Final Depth (m): 29.87
Depth to Top of Rock (m): 15.24
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
915	10						Moist	12/02/2014 13:57	
914	11						Moist	12/02/2014 14:00	Welding time 14:00 to 14:11.
913	12	G	G4		Below 12.19 m - decrease in gravel content, dark greyish brown.		Moist	12/02/2014 14:15	
912	13								
911	14	G	G5			14.02	Moist	12/02/2014 14:17	
910	15								
909	16	G	G6		BEDROCK Drill cuttings: fine to coarse grained, light reddish brown to organish brown, slightly to moderately weathered, some oxidation. [NICOLA VOLCANICS]	15.85	Dry	12/02/2014 14:22	
908	17				Below 16.76 m - fine, dark grey.	16.76 ▽		12/02/2014 14:40	At 16.76 m - potential groundwater.
907	18								
906	19				Below 18.29 m - colour change to dark bluish grey.			12/02/2014 14:47	
	20								

(Continued on next page)

DRILL HOLE # BGC14-002D

Coordinates (m): 682756E - 5608900N
Ground Elevation (m): 925
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.73

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 12 Feb 2014
Finish Date: 13 Feb 2014
Final Depth (m): 29.87
Depth to Top of Rock (m): 15.24
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
905	20				At 20.12 m - significant colour change to light yellowish brown.			12/02/2014 14:50	Slightly softer drilling.
					At 20.42 m - colour change to dark grey.				
							Moist	12/02/2014 14:53	
904	21								
903	22								
					At 22.56 m - colour change to dark brown.			12/02/2014 14:55	
902	23				At 22.86 m - colour change to dark bluish grey.	22.86		12/02/2014 14:57	
						23.77			
901	24								
		G	G7						
900	25								
899	26	G	G8						
					At 26.21 m - colour change to orangish brown.		Dry	12/02/2014 15:07	Possible oxidation.
					At 26.52 m - colour change to grey.		Dry	12/02/2014 15:09	
898	27								
		G	G9				Moist		
897	28								
896	29	G	G10				Wet	12/02/2014 15:15	AIRLIFT #1 0.6 US GPM 0.5 US GPM 0.5 US GPM Average 0.5 US GPM
	30								

(Continued on next page)

DRILL HOLE # BGC14-002D

Coordinates (m): 682756E - 5608900N
Ground Elevation (m): 925
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.73

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 12 Feb 2014
Finish Date: 13 Feb 2014
Final Depth (m): 29.87
Depth to Top of Rock (m): 15.24
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
895	30				END OF HOLE AT 29.87 m NOTES: 1. 2" PVC standpipe piezometer installed with screen from 16.76 to 22.86 metres. 2. Filter sand placed from 15.85 to 23.77 metres. 3. Bentonite seal placed from 14.02 to 15.85 metres. 4. Hole backfilled from 23.77 m to 29.87 m with bentonite chips.			12/02/2014 16:30	AIRLIFT #2 0.8 US GPM 0.9 US GPM 0.8 US GPM Average 0.8 US GPM
894	31								
893	32								
892	33								
891	34								
890	35								
889	36								
888	37								
887	38								
886	39								
	40								

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Client: KGHM Ajax Mining Inc.
Print Date: 5/28/2015

DRILL HOLE # BGC14-002S

Coordinates (m): 682756E - 5608900N
Ground Elevation (m): 925
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.85

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 13 Feb 2014
Finish Date: 13 Feb 2014
Final Depth (m): 15.70
Depth to Top of Rock (m): 15.24
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
925	0				SAND (SW) Fine to medium, some fine gravel, some silt, light brown. [FILL]	0	At grade, dry	13/02/2014 14:00	
924	1								
					GRAVEL (GP) Fine, some medium to coarse sand, trace silt, poorly graded, light brown with grey clasts, maximum particle size is 10 mm. [FLUVIAL]		Dry	13/02/2014 14:05	
923	2								
922	3						Dry	13/02/2014 14:07	
921	4								
920	5						Dry	13/02/2014 14:11	Welding time 14:13 to 14:30.
919	6				SILT (ML) Some gravel, trace fine sand, trace clay, well graded, low plasticity, dark brown with dark grey clasts. [TILL]		Moist	13/02/2014 14:33	
						6.71			
918	7								
					Below 7.62 m - increase in gravel content to gravelly, clasts are dark to light grey.		Moist	13/02/2014 14:35	
917	8								At 7.87 m - static water level, measured 3/3/2014 15:11.
						8.53			
916	9					9.09			
					Below 9.14 m - significant decrease in gravel content to trace, increase in clay content to some, increase in moisture content.		Moist	13/02/2014 14:38	
	10								

(Continued on next page)

DRILL HOLE # BGC14-002S

Coordinates (m): 682756E - 5608900N
Ground Elevation (m): 925
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.85

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 13 Feb 2014
Finish Date: 13 Feb 2014
Final Depth (m): 15.70
Depth to Top of Rock (m): 15.24
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
915	10								
					Below 10.67 m - colour change of matrix from dark brown to dark grey.		Moist	13/02/2014 14:40	Welding time 14:41 to 14:55.
914	11								
913	12						Moist	13/02/2014 14:58	
912	13								
911	14						Moist	13/02/2014 15:01	
910	15				Below 14.78 m - slight increase in moisture content.		Moist	13/02/2014 15:03	
						15.19			
					BEDROCK Drill cuttings: fine to coarse grained, light reddish brown to organish brown, slightly to moderately weathered, some oxidation. [NICOLA VOLCANICS]		Dry	13/02/2014 15:05	
909	16				END OF HOLE AT 15.70 m				
908	17				NOTES: 1. 2" PVC standpipe piezometer installed with screen from 9.09 to 15.19 metres. 2. Filter sand placed from 8.53 to 15.70 metres. 3. Bentonite seal placed from 6.71 to 8.53 metres.				
907	18								
906	19								
	20								

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: KGHM Ajax Mining Inc.
Print Date: 5/28/2015

Project No.: 1125-007

Project: Ajax Project Environmental Assessment

DRILL HOLE # BGC14-003D

Location: Ajax Project Site

Coordinates (m): 683544E - 5608858N
Ground Elevation (m): 897
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 1.2

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 3.04

Start Date: 14 Feb 2014
Finish Date: 14 Feb 2014
Final Depth (m): 32.34
Depth to Top of Rock (m): 21.95
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
	0				SAND (SW) Gravelly, silty, well graded, light brown with grey clasts, trace organics (rootlets 1 mm diameter). [TOPSOIL]	0	Dry	14/02/2014 08:17	Logged from sump.
896	1								
		G	G1				Dry	14/02/2014 08:22	
895	2								
894					SILT (ML) Some gravel, some fine sand, trace to some clay, low plasticity, dark brown matrix with grey pockets and grey clasts. [TILL]		Dry	14/02/2014 08:24	
	3	G	G2				Dry	14/02/2014 08:25	
893	4								
		G	G3		Below 4.57 m - decrease in clay content.		Moist	14/02/2014 08:27	At 4.43 m - static water level, measured 5/7/2014 9:16. Welding time 8:28 to 8:48.
892	5								
891					Below 5.79 m - colour change to dark greyish brown.				
	6	G	G4				Moist	14/02/2014 08:50	
890	7								
889							Moist	14/02/2014 08:52	
	8								
888	9								
		G	G5				Dry to moist	14/02/2014 08:57	
887	10								

(Continued on next page)

DRILL HOLE # BGC14-003D

Coordinates (m): 683544E - 5608858N
Ground Elevation (m): 897
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 1.2

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 3.04

Start Date: 14 Feb 2014
Finish Date: 14 Feb 2014
Final Depth (m): 32.34
Depth to Top of Rock (m): 21.95
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
	10				Below 10.36 m - decrease in gravel content to trace, colour change to dark brown.				
886	11						Moist	14/02/2014 09:03	Welding time 9:04 to 9:20.
					SAND (SM) Coarse, some silt, trace gravel, dark greyish brown. [TILL]				
885	12						Moist	14/02/2014 09:23	
884	13								
883	14				Below 13.72 m - sand is medium, increase in silt content to silty, medium plasticity.		Moist	14/02/2014 09:25	
882	15	G	G6		SILT (ML) Clayey, some fine sand, dark grey, low plasticity. [TILL]		Moist	14/02/2014 09:35	
881	16								
880	17	G	G7		Below 16.76 m - trace gravel, decrese in clay content to some. ▽		Moist	14/02/2014 09:37	Welding time 9:48 to 10:00.
					GRAVEL AND SAND (GM) Silty, sand is coarse, gravel is coarse to fine, dark grey. [FLUVIAL]		Wet-water encountered at 17.07 m bgs.	14/02/2014 10:02	Estimated inflow 3-4 US GPM.
879	18								
		G	G8				Wet	14/02/2014 10:06	
878	19								
877	20	G			Below 19.81 m - increase in clay content to trace, sand is coarse, slight colour		Wet	14/02/2014 10:12	

(Continued on next page)

DRILL HOLE # BGC14-003D

Coordinates (m): 683544E - 5608858N
Ground Elevation (m): 897
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 1.2

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 3.04

Start Date: 14 Feb 2014
Finish Date: 14 Feb 2014
Final Depth (m): 32.34
Depth to Top of Rock (m): 21.95
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
	20	G	G9		change to lighter greyish brown.				
876	21								
		G	G10		SILT (ML) Gravelly, sandy, sand is fine to medium, grey with pockets of brown silt. [TILL]		Dry to moist	14/02/2014 10:17	
875	22				WEATHERED BEDROCK Drill cuttings: sandy, sand is fine to medium, some coarse gravel, uniform light greyish green. [NICOLA VOLCANICS]		Dry	14/02/2014 10:21	Qualities of soil, logged as a soil.
874	23	G	G11						
873	24								
		G	G12			24.38	Dry	14/02/2014 10:30	Highly chloritized bedrock?
872	25								
871	26	G	G13			26.21	Dry	14/02/2014 10:39	
870	27								
		G	G14		BEDROCK Drill cuttings: fine grained, angular to subrounded, light grey, maximum particle size is 10 mm, fresh and unweathered. [NICOLA VOLCANICS]		Dry	14/02/2014 10:40	Competent bedrock surface.
869	28					28.35			
868	29	G	G15				Dry	14/02/2014 10:45	
867	30								

(Continued on next page)

DRILL HOLE # BGC14-003D

Coordinates (m): 683544E - 5608858N
Ground Elevation (m): 897
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 1.2

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 3.04

Start Date: 14 Feb 2014
Finish Date: 14 Feb 2014
Final Depth (m): 32.34
Depth to Top of Rock (m): 21.95
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
866	30						Dry		
	31					31.39			
865	32								
864	33				END OF HOLE AT 32.34 m NOTES: 1. 2"PVC sandpipe piezometer installed with screen from 28.35 to 31.39 metres. 2. Filter sand placed from 26.21 to 32.34 metres. 3. Bentonite seal placed from 24.38 to 26.21 metres.				
863	34								
862	35								
861	36								
860	37								
859	38								
858	39								
857	40								

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Client: KGHM Ajax Mining Inc.
Print Date: 5/28/2015

DRILL HOLE # BGC14-003I

Coordinates (m): 683544E - 5608858N
Ground Elevation (m): 897
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.82

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 11.28

Start Date: 17 Feb 2014
Finish Date: 17 Feb 2014
Final Depth (m): 21.95
Depth to Top of Rock (m): 20.11
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
	0				SAND (SW) Gravelly, silty, well graded, light brown with grey clasts, trace organics (rootlets 1 mm diameter). [TOPSOIL]	0	Dry	17/02/2014 08:11	Logged from sump.
896	1								
							Dry	17/02/2014 08:15	
895	2								
894	3				SILT (ML) Some gravel, some fine sand, trace clay, low plasticity, dark brown with grey clasts. [TILL]		Dry	17/02/2014 08:17	
							Dry	17/02/2014 08:18	
893	4								
							Dry	17/02/2014 08:21	At 4.43 m - static water level, measured 3/2/2014 8:00. Welding time 8:23 to 8:52.
892	5								
891	6				Below 6.10 m - decrease in sand content to trace, colour change of matrix to dark grey.		Moist	17/02/2014 08:54	
890	7								
889	8						Moist	17/02/2014 08:56	
888	9								
							Slightly moist	17/02/2014 08:59	
887	10								

(Continued on next page)

DRILL HOLE # BGC14-003I

Coordinates (m): 683544E - 5608858N
Ground Elevation (m): 897
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.82

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 11.28

Start Date: 17 Feb 2014
Finish Date: 17 Feb 2014
Final Depth (m): 21.95
Depth to Top of Rock (m): 20.11
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
	10				Below 10.36 m - decrease in gravel content to trace, colour change of matrix to light brown.		Slightly moist	17/02/2014 09:01	
886	11								
	12				SAND (SM) Fine to coarse, some silt, trace clay, dark greyish brown. [TILL]		Moist	17/02/2014 09:02	Welding time 9:03 to 9:25.
885							Moist	17/02/2014 09:27	
884	13								
883							Moist	17/02/2014 09:28	
	14					14.02			
882	15				SILT Sandy, some clay to clayey, sand is fine, medium plasticity, dark grey. [TILL]		Moist	17/02/2014 09:34	
							Moist	17/02/2014 09:35	
881	16					15.54			
880					Below 16.76 m - gravelly, some clay.	16.76	Moist	17/02/2014 09:38	
	17								
879	18				GRAVEL AND SAND (GM) Silty, sand is coarse, dark grey. [FLUVIAL/GLACIOFLUVIAL]		Wet		At 16.67 m - water encountered at unit change.
					Below 18.29 m - increase in clay content to trace.		Wet	17/02/2014 10:10	Welding time 9:41 to 10:06.
878	19								
877	20				Below 19.81 m - decrease in silt content to trace, sand is coarse, gravel is fine,	19.81	Wet	17/02/2014 10:16	

(Continued on next page)

DRILL HOLE # BGC14-003I

Coordinates (m): 683544E - 5608858N
Ground Elevation (m): 897
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.82

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 11.28

Start Date: 17 Feb 2014
Finish Date: 17 Feb 2014
Final Depth (m): 21.95
Depth to Top of Rock (m): 20.11
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
	20				maximum particle size is 5 mm.				
					BEDROCK Drill cuttings: fine grained, light grey, fresh and unweathered. [NICOLA VOLCANICS]	20.42	Dry	17/02/2014 10:18	Cuttings are dry, dusty.
876	21								
875	22				END OF HOLE AT 21.95 m NOTES: 1. 2" PVC standpipe piezometer installed with screen from 16.76 to 19.81 metres. 2. Filter sand placed from 15.54 to 20.42 metres. 3. Bentonite seal placed from 14.02 to 15.54 metres. 4. Hole backfilled from 20.42 m to 21.95 m with bentonite chips.		Dry	17/02/2014 10:20	
874	23								
873	24								
872	25								
871	26								
870	27								
869	28								
868	29								
867	30								

Project No.: 1125-007

Project: Ajax Project Environmental Assessment

DRILL HOLE # BGC14-003S

Location: Ajax Project Site

Coordinates (m): 683544E - 5608858N
Ground Elevation (m): 897
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.8

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 3.04

Start Date: 14 Feb 2014
Finish Date: 14 Feb 2014
Final Depth (m): 11.28
Depth to Top of Rock (m): N/A
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
897	0				SAND (SW) Gravelly, some silt, well graded, light brown with grey clasts, trace organics (rootlets <2 mm diameter). [TOPSOIL]	0	Dry	14/02/2014 14:54	
896	1								
895	2								
894	3				SILT Some gravel, some fine sand, trace clay, dark brown with grey clasts. [TILL]		Dry Moist	14/02/2014 14:56 14/02/2014 14:59	
893	4								
892	5				Below 4.57 m - increase in sand content to sandy, light brown with grey clasts.		Dry	14/02/2014 15:04	At 4.43 m - static water level, measured 3/11/2014 9:20. Welding time 15:05 to 15:25.
891	6				Below 6.10 m - decrease in sand content, dark brown with grey clasts.		Dry	14/02/2014 15:29	
890	7					7.32			
889	8				Below 7.62 m - decrease in sand content to trace.		Dry to moist	14/02/2014 15:32	
888	9					9.14	Dry to moist	14/02/2014 15:35	
887	10				Below 9.75 m - decrease in gravel content to trace.	9.75			

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AJAX (HYDROGEO) AJAX_SOIL_HYDROGEO.GDL BGC.GDT 5/28/15

DRILL HOLE # BGC14-003S

Coordinates (m): 683544E - 5608858N
Ground Elevation (m): 897
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.8

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 3.04

Start Date: 14 Feb 2014
Finish Date: 14 Feb 2014
Final Depth (m): 11.28
Depth to Top of Rock (m): N/A
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
886	10 / 11						Moist	14/02/2014 15:39	
					END OF HOLE AT 11.28 m NOTES: 1. 2" PVC standpipe piezometer installed with screen from 9.75 to 11.28 metres. 2. Filter sand placed from 9.14 to 11.28 metres. 3. Bentonite seal placed from 7.32 to 9.14 metres.		Moist	14/02/2014 15:40	
885	12								
884	13								
883	14								
882	15								
881	16								
880	17								
879	18								
878	19								
877	20								

DRILL HOLE # BGC14-004

Coordinates (m): 687746E - 5609526N
Ground Elevation (m): 871
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.86

Location: EMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 18 Feb 2014
Finish Date: 19 Feb 2014
Final Depth (m): 78.33
Depth to Top of Rock (m): 63.70
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
871	0				SAND (SW) Medium, some silt, some gravel, well graded, light brown, trace organics (rootlets). [TILL]	0	Dry	19/02/2014 19:49	Logged from pad fill.
870	1								
		G	G1		Below 1.52 m - organics no longer present.		Dry	19/02/2014 07:51	
869	2								
868	3				Below 3.04 m - increase in silt content, trace gravel, slightly darker brown matrix.		Dry	19/02/2014 07:52	
867	4								
		G	G2		Below 4.57 m - decrease in silt content, decrease in gravel content, sand is fine, uniform.		Dry	19/02/2014 07:54	Welding time 7:56 to 8:18.
866	5								
865	6				SILT (MH) Sandy, some gravel, sand is coarse, gravel is fine, well graded, dark brown matrix with grey clasts. [TILL]		Moist	19/02/2014 08:20	
864	7				Below 7.67 m - sand is medium to coarse, gravel is fine to coarse, increase in moisture.				
		G	G3				Moist	19/02/2014 08:21	
863	8					▼			At 8.23 m - static water level, measured 5/13/2014 14:44.
862	9				Below 9.14 m - clayey, sand is fine, low plasticity.		Moist	19/02/2014 08:22	
	10								

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DRILL HOLE # BGC14-004

Coordinates (m): 687746E - 5609526N
Ground Elevation (m): 871
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.86

Location: EMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 18 Feb 2014
Finish Date: 19 Feb 2014
Final Depth (m): 78.33
Depth to Top of Rock (m): 63.70
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
861	10						Moist	19/02/2014 08:23	Welding time 8:24 to 8:43.
860	11								
859	12				Below 12.19 m - decrease in sand content.		Moist	19/02/2014 08:45	
858	13								
857	14	G	G4		Below 13.72 m - increase in gravel content to gravelly.		Moist	19/02/2014 08:47	
856	15	G	G5		At 15.24 m - sand is medium, colour change to dark greyish brown.		Dry to moist	19/02/2014 08:51	
855	16								
854	17	G	G6		GRAVEL (GP) Sandy, sand is medium to coarse, poorly graded, subrounded to subangular, dark brown. [FLUVIAL]		Dry	19/02/2014 08:53	Welding time 8:54 to 9:20. At 17.37 m - water encountered. AIRLIFT #1 10 US GPM 10 US GPM 11 US GPM Average 10 US GPM
853	18	G	G7		Below 18.29 m - sand no longer present, gravel is multilithic.		Wet	19/02/2014 09:23	
852	19								
	20				Below 19.81 m - coarse sand present in cuttings.		Wet, brown silty	19/02/2014 09:25	

(Continued on next page)

DRILL HOLE # BGC14-004

Coordinates (m): 687746E - 5609526N
Ground Elevation (m): 871
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.86

Location: EMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 18 Feb 2014
Finish Date: 19 Feb 2014
Final Depth (m): 78.33
Depth to Top of Rock (m): 63.70
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
851	20								
850	21	G	G8		At 21.34 m - gravel size range from 4 to 20 mm.		Wet, brown silty	19/02/2014 09:27	
849	22								
848	23	G	G9		At 22.86 m - maximum particle size is 30 mm.		Wet, clean	19/02/2014 09:29	Welding time 9:30 to 9:45.
847	24								
					Below 24.38 m - sand no longer present.		Wet, clean	19/02/2014 09:48	
846	25								
845	26				At 25.91 m - trace silt.		Wet, dark grey	19/02/2014 09:51	
844	27								
		G	G10		Below 27.43 m - silt no longer present, gravel is dark grey to black, multilithic.		Wet, brown, silty	19/02/2014 09:54	
843	28								
842	29	G	G11		Below 28.96 m - sandy, coarse.		Wet, brown, silty/clayey	19/02/2014 09:56	Welding time 9:57 to 10:22. AIRLIFT #2 80-100 US GPM
	30								

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DRILL HOLE # BGC14-004

Coordinates (m): 687746E - 5609526N
Ground Elevation (m): 871
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.86

Location: EMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 18 Feb 2014
Finish Date: 19 Feb 2014
Final Depth (m): 78.33
Depth to Top of Rock (m): 63.70
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
841	30						Wet	19/02/2014 10:26	
840	31								
839	32						Wet, clean	19/02/2014 10:29	
838	33								
837	34						Wet, clean	19/02/2014 10:30	Welding time 10:31 to 10:49.
836	35	G	G12				Wet, clean	19/02/2014 10:50	
835	36								
834	37				At 36.58 m - sandy, coarse.		Wet, dark grey	19/02/2014 10:51	
833	38						Wet, clean	19/02/2014 11:04	
832	39								
	40	G	G13				Wet, clean	19/02/2014 11:09	Welding time 11:10 to 11:40.

(Continued on next page)

DRILL HOLE # BGC14-004

Coordinates (m): 687746E - 5609526N
Ground Elevation (m): 871
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.86

Location: EMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 18 Feb 2014
Finish Date: 19 Feb 2014
Final Depth (m): 78.33
Depth to Top of Rock (m): 63.70
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
831	40								AIRLIFT #3 33 US GPM 30 US GPM 27 US GPM Average 30 US GPM
830	41						Wet, clean	19/02/2014 11:41	
829	42								
828	43						Wet	19/02/2014 11:43	
827	44								
826	45						Wet, clean	19/02/2014 11:50	
825	46								
824	47						Wet	19/02/2014 11:55	
823	48								
822	49	G	G14				Wet, clean	19/02/2014 11:57	Welding time 11:58 to 12:16.
	50						Wet, light grey	19/02/2014 12:20	

(Continued on next page)

DRILL HOLE # BGC14-004

Coordinates (m): 687746E - 5609526N
Ground Elevation (m): 871
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.86

Location: EMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 18 Feb 2014
Finish Date: 19 Feb 2014
Final Depth (m): 78.33
Depth to Top of Rock (m): 63.70
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
821	50						Wet, clean	19/02/2014 12:23	
820	51								
819	52						Wet, clean	19/02/2014 12:26	
818	53								
							Wet, dark grey	19/02/2014 12:29	Welding time 12:36 to 12:55.
817	54						Wet, clean	19/02/2014 12:30	AIRLIFT #4 50 US GPM 60 US GPM 43 US GPM Average 50 US GPM
816	55						Wet	19/02/2014 12:57	
815	56				At 56.39 m - driller described as tough, cohesive drilling, resembled compacted gravel.		Wet	19/02/2014 13:01	
814	57								
813	58						Wet, clean	19/02/2014 13:05	
812	59								
							Wet, clean	19/02/2014 13:08	Welding time 13:09 to 13:32.
	60								

(Continued on next page)

DRILL HOLE # BGC14-004

Coordinates (m): 687746E - 5609526N
Ground Elevation (m): 871
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.86

Location: EMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 18 Feb 2014
Finish Date: 19 Feb 2014
Final Depth (m): 78.33
Depth to Top of Rock (m): 63.70
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
811	60								
810	61						Wet	19/02/2014 13:43	
809	62								
					At 62.48 m - maximum particle size is 40 mm.		Wet	19/02/2014 13:48	
808	63								
807	64				BEDROCK Drill cuttings: fine to medium grained, angular to subrounded, dark grey, fresh and unweathered.		Wet, clean water	19/02/2014 13:51	Changing drill bit 13:53 to 14:30.
806	65								
		G	G15		Below 65.53 m - green with orangish speckling, slightly weathered to unweathered.		Wet, light grey, silty	19/02/2014 14:34	
805	66								
804	67					66.9			
		G	G16		Below 67.06 m - orangish brown mineralization (not iron staining), angular.		Wet, light grey	19/02/2014 14:37	
803	68					68.28			
		G	G17		Below 68.58 m - grey.		Wet, cleaner than above	19/02/2014 14:40	
802	69								
	70								

(Continued on next page)

DRILL HOLE # BGC14-004

Coordinates (m): 687746E - 5609526N
Ground Elevation (m): 871
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.86

Location: EMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 18 Feb 2014
Finish Date: 19 Feb 2014
Final Depth (m): 78.33
Depth to Top of Rock (m): 63.70
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
801	70	G	G18				Wet, light grey	19/02/2014 14:49	
800	71								
		G	G19				Wet, light grey	19/02/2014 14:47	
799	72					72.24			
798	73	G	G20		Below 73.15 m - dark green.		Wet	19/02/2014 14:50	
797	74								
		G	G21		Below 74.68 m - grey to dark grey.		Wet, grey	19/02/2014 14:55	
796	75								
795	76								
		G	G22				Wet, light grey	19/02/2014 15:03	
794	77								
793	78	G	G23				Wet	19/02/2014 15:08	
792	79				END OF HOLE AT 78.33 m NOTES: 1. 4" PVC standpipe piezometer installed with screen from 72.24 to 78.33 metres. 2. Filter sand placed from 68.28 to 78.33 metres. 3. Bentonite seal placed from 66.90 to 68.28 metres.		Wet	19/02/2014 15:10	AIRLIFT #5 4 US GPM 4.4 US GPM 4.2 US GPM Average US 4.2 GPM
	80								

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Client: KGHM Ajax Mining Inc.
Print Date: 5/28/2015

DRILL HOLE # BGC14-005

Coordinates (m): 687161E - 5609519N
Ground Elevation (m): 878
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.86

Location: EMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 19 Feb 2014
Finish Date: 20 Feb 2014
Final Depth (m): 50.46
Depth to Top of Rock (m): 43.28
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
878	0				SILT (ML) Sandy, some gravel, sand is fine, well graded, nonplastic, gravel is rounded, light brown with grey clasts. [TILL]	0	Dry	19/02/2014 15:22	
877	1								
876	2	G	G1				Dry	19/02/2014 15:24	
875	3						Dry	19/02/2014 15:26	
874	4								
873	5	G	G2		CLAY (CI) Silty, some fine sand, trace gravel, medium plasticity, light greyish brown. [TILL]		Dry to moist	19/02/2014 15:28	Welding time 15:30 to 15:50.
872	6						Dry	19/02/2014 15:52	
871	7								
870	8	G	G3		SILT (ML) Sandy, some clay, trace gravel, sand is fine, light brown with grey clasts. [TILL]		Dry	19/02/2014 15:55	
869	9								
868	10	G	G4		SAND (SW) Fine, silty, some gravel, well graded, light brown. [TILL]		Dry	19/02/2014 15:59	

(Continued on next page)

DRILL HOLE # BGC14-005

Coordinates (m): 687161E - 5609519N
Ground Elevation (m): 878
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.86

Location: EMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 19 Feb 2014
Finish Date: 20 Feb 2014
Final Depth (m): 50.46
Depth to Top of Rock (m): 43.28
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
867	10				Below 10.67 m - decrease in silt.		Dry	19/02/2014 16:02	Welding time 16:05 to 16:28.
866	11								
865	12						Dry	19/02/2014 16:31	
864	13								
863	14	G	G5		SAND (SP) Trace gravel, trace silt, uniformly graded, light brown. [GLACIOFLUVIAL]		Dry	19/02/2014 16:35	
862	15				Below 15.24 m - increase in gravel content.		Dry	19/02/2014 16:38	
861	16					▼			At 16.08 m - static water level, measured 3/24/2014 15:50.
860	17				Below 16.76 m - slight increase in silt content.		Dry	19/02/2014 16:42	
859	18				Below 18.29 m - silty, dark greyish brown.		Dry to moist	20/02/2014 07:33	
858	19								
	20						Dry	20/02/2014 07:37	

(Continued on next page)

DRILL HOLE # BGC14-005

Coordinates (m): 687161E - 5609519N
Ground Elevation (m): 878
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.86

Location: EMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 19 Feb 2014
Finish Date: 20 Feb 2014
Final Depth (m): 50.46
Depth to Top of Rock (m): 43.28
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
857	20								
	21								
		G	G6		SAND (SM) Fine, some silt, uniformly graded, light brown. [GLACIOFLUVIAL]		Dry	20/02/2014 07:40	
856	22								
855									
	23				Below 27.86 m - colour change to grey.		Dry to moist	20/02/2014 07:43	Colour change. Welding time 7:45 to 8:05.
854	24								
							Dry	20/02/2014 08:07	
853	25								
852									
	26						Dry	20/02/2014 08:11	
851	27								
							Dry	20/02/2014 08:13	
850	28								
849									
	29	G	G7		SILT (ML) Sandy, sand is fine, uniformly graded, low plasticity, grey to dark grey. [TILL]		Dry	20/02/2014 08:15	Welding time 8:19 to 8:36.
848	30								

(Continued on next page)

DRILL HOLE # BGC14-005

Coordinates (m): 687161E - 5609519N
Ground Elevation (m): 878
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.86

Location: EMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 19 Feb 2014
Finish Date: 20 Feb 2014
Final Depth (m): 50.46
Depth to Top of Rock (m): 43.28
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
847	30				Below 30.48 m - trace to some clay, increase in moisture content.		Moist	20/02/2014 08:39	
846	31								
845	32	G	G8		Below 32.00 m - slight increase in clay to some.		Moist	20/02/2014 08:43	
844	33								
843	34				Below 33.53 m - slight increase in moisture content.		Moist	20/02/2014 08:47	Slightly more moist than above.
842	35						Moist	20/02/2014 08:52	
841	36					▽	Wet	20/02/2014 08:54	Welding time 8:54 to 9:14. At 35.66 m - water encountered. Inadequate quantity of water to complete Airlift test.
840	37						Wet, dark grey, silty	20/02/2014 09:18	
839	38						Wet, dark grey, silty	20/02/2014 09:24	
838	39								
	40	G	G9				Wet, dark grey, silty	20/02/2014 09:28	

(Continued on next page)

DRILL HOLE # BGC14-005

Coordinates (m): 687161E - 5609519N
Ground Elevation (m): 878
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.86

Location: EMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 19 Feb 2014
Finish Date: 20 Feb 2014
Final Depth (m): 50.46
Depth to Top of Rock (m): 43.28
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
837	40								
	41				Below 41.15 m - decrease in moisture content.		Moist	20/02/2014 09:32	Welding time 9:33 to 10:00.
836	42								
835	43						Wet, dark grey, silty	20/02/2014 10:05	
834	44				BEDROCK Drill cuttings: fine to medium grained, angular to subrounded, dark grey, slightly weathered. [IRONMASK HYBRID]		Wet	20/02/2014 10:10	
		G	G10				Wet	20/02/2014 10:11	Changing drill bit 10:15 to 10:45.
833	45					44.5			
832		G	G11		Below 45.72 m - fine to coarse, dark grey to orangish brown, multilithic.		Wet, light grey	20/02/2014 10:49	
	46					46.02			
831	47								
		G	G12		Below 47.24 m - light greenish grey.	47.24	Wet, light grey	20/02/2014 10:51	
830	48								
829		G	G13				Wet, light greenish grey	20/02/2014 10:53	AIRLIFT #1 0.7 US GPM 1.0 US GPM 0.8 US GPM Average 0.8 US GPM
828	49								
	50								

(Continued on next page)

DRILL HOLE # BGC14-005

Coordinates (m): 687161E - 5609519N
Ground Elevation (m): 878
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.86

Location: EMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 19 Feb 2014
Finish Date: 20 Feb 2014
Final Depth (m): 50.46
Depth to Top of Rock (m): 43.28
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
	50								
827	51				END OF HOLE AT 50.46 m NOTES: 1. 4" PVC standpipe piezometer installed with screen from 47.24 to 50.46 metres. 2. Filter sand placed from 46.02 to 50.46 metres. 3. Bentonite seal placed from 44.50 to 46.02 metres.				
826	52								
825	53								
824	54								
823	55								
822	56								
821	57								
820	58								
819	59								
818	60								

DRILL HOLE # BGC14-006D

Coordinates (m): 687288E - 5610779N
Ground Elevation (m): 940
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.76

Location: EMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 21 Feb 2014
Finish Date: 22 Feb 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 14.02
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
940	0				SAND (SW) Fine, silty, some fine to coarse gravel, well graded, light brown with grey and brown clasts. [TOPSOIL]	0	Dry	22/02/2014 09:08	
939	1	G	G1				Dry	22/02/2014 09:12	
	2								
938					SILT (ML) Sandy, trace to some clay, trace gravel, sand is fine, well graded, low plasticity, light brown with grey clasts. [TILL]		Dry to slightly moist	22/02/2014 09:14	
	3								
937		G	G2				Dry to slightly moist	22/02/2014 09:16	
	4								
936									
	5	G	G3		SAND (SP) Fine, gravelly, gravel is fine to coarse, trace silt, uniformly graded, light brown with grey clasts. [TILL]		Dry	22/02/2014 09:20	Welding time 9:22 to 9:44.
935									
	6								
934					GRAVEL (GP) Fine to coarse, trace fine sand, trace silt, uniformly graded, light brown and grey clasts. [GLACIOFLUVIAL]		Dry	22/02/2014 09:47	
	7								
933		G	G4				Dry	22/02/2014 09:19	
	8								
932									
	9								At 8.64 m - static water level, measured 5/24/2014 12:01.
931		G	G5		SAND AND GRAVEL (GM) Some silt, trace clay, sand is fine to medium, gravel is fine to coarse, well graded, light brown. [TILL]		Dry	22/02/2014 09:52	
					SAND (SM)		Dry	22/02/2014 09:53	
	10								

(Continued on next page)

DRILL HOLE # BGC14-006D

Coordinates (m): 687288E - 5610779N
Ground Elevation (m): 940
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.76

Location: EMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 21 Feb 2014
Finish Date: 22 Feb 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 14.02
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
930	10				Fine, silty, some fine to coarse gravel, well graded, light grey [TILL]				
		G	G6				Dry	22/02/2014 09:55	
929	11								
	12								
928							Dry	22/02/2014 10:17	
	13					▽			
927							Moist	22/02/2014 10:19	At 13.1 m - water encountered.
	14	G	G7						
926					BEDROCK Drill cuttings: fine to medium grained, greyish green and reddish brown, slightly to moderately weathered. [IRONMASK HYBRID]		Moist	22/02/2014 10:21	Changing drill bit 10:25 to 10:45.
							Wet, brown, silty	22/02/2014 10:47	AIRLIFT #1 1 drop/sec
	15								
925		G	G8		Below 15.24 m - fine, angular, light grey, fresh and unweathered.		Dry	22/02/2014 10:50	
	16								
924									
	17						Dry	22/02/2014 10:52	
923						17.37			
	18								
922		G	G9				Dry	22/02/2014 10:56	
	19								
921					From 19.20 m to 27.43 m - brown fine sand and silt present in cuttings, gravel is subangular to rounded, moderately weathered.	19.2	Dry	22/02/2014 10:57	Possible fault.
	20	G					Dry	22/02/2014 10:58	

(Continued on next page)

DRILL HOLE # BGC14-006D

Coordinates (m): 687288E - 5610779N
Ground Elevation (m): 940
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.76

Location: EMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 21 Feb 2014
Finish Date: 22 Feb 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 14.02
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
920	20	G	G10			20.42			
919	21	G	G11		Below 21.34 m - slight decrease in sand content.		Dry	22/02/2014 11:01	Weathered zone.
918	22								
917	23	G	G12		Below 22.86 m - colour change to reddish purple.		Dry	22/02/2014 11:03	Weathered zone.
916	24	G	G13		Below 22.86 m - reddish brown, silt and fine sand present in cuttings, clasts are subrounded, slight increase in moisture, indicated by darker colour.		Dry to moist	22/02/2014 11:09	Weathered zone.
915	25								
914	26	G	G14				Dry to moist	22/02/2014 11:11	Weathered zone.
913	27	G	G15		At 27.43 m - end of weathered zone, colour change back to light grey, angular, unweathered.	26.52	Dry	22/02/2014 11:16	End of weathered zone.
912	28								
911	29	G	G16				Dry	22/02/2014 11:19	
	30				END OF HOLE AT 29.56 m				AIRLIFT #2 0.04 US GPM Inflow possibly from

(Continued on next page)

DRILL HOLE # BGC14-006D

Coordinates (m): 687288E - 5610779N
Ground Elevation (m): 940
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.76

Location: EMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 21 Feb 2014
Finish Date: 22 Feb 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 14.02
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
910	30				NOTES: 1. 4" PVC standpipe piezometer installed with screen from 20.42 to 26.52 metres. 2. Filter sand placed from 19.20 to 29.56 metres. 3. Bentonite seal placed from 17.37 to 19.20 metres.				upper unit.
909	31								
908	32								
907	33								
906	34								
905	35								
904	36								
903	37								
902	38								
901	39								
	40								

DRILL HOLE # BGC14-006S

Coordinates (m): 687288E - 5610779N
Ground Elevation (m): 940
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.8

Location: EMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 22 Feb 2014
Finish Date: 22 Feb 2014
Final Depth (m): 14.33
Depth to Top of Rock (m): 14.02
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
940	0				SAND(SW) Fine, silty, some fine to coarse gravel, well graded, light brown with grey clasts. [TOPSOIL]	0	Dry	22/02/2014 11:09	
939	1						Dry	22/02/2014 11:12	
938	2				SILT (ML) Sandy, trace clay, trace gravel, sand is fine, well graded, low plasticity, light brown to brown with grey clasts. [TILL]		Dry	22/02/2014 11:14	
937	3						Dry	22/02/2014 11:17	
936	4								
935	5				SAND (SP) Fine, gravelly, trace silt, gravel is fine to coarse, uniformly graded, brown with grey clasts, clasts are subangular. [TILL]		Dry	22/02/2014 11:20	Welding time 11:21 to 11:43.
934	6								
933	7				GRAVEL (GP) Fine to coarse, trace to some fine sand, trace silt, uniformly graded, light brown with grey clasts. [GLACIOFLUVIAL]		Dry	22/02/2014 11:45	
932	8					7.62	Dry	22/02/2014 11:50	
931	9				SAND AND GRAVEL (GM) Some silt, trace clay, sand is fine to medium, gravel is fine to coarse, well graded, light greyish brown. [TILL]	9.45	Dry	22/02/2014 11:53	At 9.15 m - static water level, measured 6/1/2014 11:15.
	10				SAND (SW)		Dry	22/02/2014 11:54	

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DRILL HOLE # BGC14-006S

Coordinates (m): 687288E - 5610779N
Ground Elevation (m): 940
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.8

Location: EMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 22 Feb 2014
Finish Date: 22 Feb 2014
Final Depth (m): 14.33
Depth to Top of Rock (m): 14.02
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
930	10				Fine, silty, some fine to coarse gravel, well graded, light grey. [TILL]				
							Dry	22/02/2014 11:55	Welding time 11:55 to 12:15.
929	11					10.97			
	12								
928					Below 12.19 m - increase in gravel content to gravelly.		Dry	22/02/2014 12:18	
	13								
927					Below 13.11 m - colour change to light greyish brown.				
							Dry	22/02/2014 12:21	
	14					14.02			
926					BEDROCK Drill cuttings: fine to medium grained, greyish green and reddish brown cuttings, slightly to moderately weathered. [IRONMASK HYBRID]		Dry	22/02/2014 12:23	
					END OF HOLE AT 14.33 m		Dry	22/02/2014 12:25	
	15				NOTES: 1. 4" PVC standpipe piezometer installed with screen from 10.97 to 14.02 metres. 2. Filter sand placed from 9.45 to 14.33 metres. 3. Bentonite seal placed from 7.62 to 9.45 metres.				
925									
	16								
924									
	17								
923									
	18								
922									
	19								
921									
	20								

DRILL HOLE # BGC14-007D

Coordinates (m): 685324E - 5608722N
Ground Elevation (m): 924
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.76

Location: SMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 23 Feb 2014
Finish Date: 23 Feb 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 24.38
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
	0				SAND (SW) Gravelly, silty, well graded, organics (rootlets, grasses) [TOPSOIL]	0	At grade, dry	23/02/2014 08:58	
924					GRAVEL (GP) Some sand, uniformly graded, angular to subrounded, grey, multilithic gravel cuttings. [GLACIOFLUVIAL]				
	1								
923		G	G1				Dry	23/02/2014 09:00	
	2								
922									
	3	G	G2		SILT (ML) Gravelly, some fine sand, gravel is fine to coarse, low plasticity, light brown to brown with grey clasts. [TILL]		Dry	23/02/2014 09:03	
921									
	4								
920		G	G3		Below 4.27 m - decrease in gravel content, slightly darker brown.		Dry	23/02/2014 09:06	Welding time 9:07 to 9:48.
	5								
919									
	6				Below 6.10 m - dark brown with grey clasts, increase in moisture content.		Dry to moist	23/02/2014 09:52	
918									
	7								
917		G	G4		Below 7.62 m - dark greyish brown.		Dry to moist	23/02/2014 09:54	
	8								
916									
	9						Dry to moist	23/02/2014 09:57	
915									
	10								

(Continued on next page)

DRILL HOLE # BGC14-007D

Coordinates (m): 685324E - 5608722N
Ground Elevation (m): 924
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.76

Location: SMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 23 Feb 2014
Finish Date: 23 Feb 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 24.38
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
914	10								
		G	G5		Below 10.67 m - decrease in gravel content, dark grey.		Dry to moist	23/02/2014 10:00	Welding time 10:02 to 10:34.
913	11								
	12				Below 12.19 m - decrease in gravel to trace.		Dry to moist	23/02/2014 10:39	
912									
911	13								
	14	G	G6				Dry to moist	23/02/2014 10:42	
910									
909	15				Below 15.24 m - slight increase in gravel content.		Dry to moist	23/02/2014 10:48	
908	16								
	17	G	G7				Dry to moist	23/02/2014 10:54	Welding time 10:55 to 11:19.
907									
	18								
906		G	G8		BOULDER Drill cuttings: fine, unweathered, angular, dark grey.		Dry	23/02/2014 11:25	Changing drill bit 11:27 to 11:55.
	19				SILT (ML) Gravelly, gravel is fine to coarse, uniformly graded, light brown with brown and grey clasts. [TILL]				
905									
	20						Dry	23/02/2014 12:03	

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DRILL HOLE # BGC14-007D

Coordinates (m): 685324E - 5608722N
Ground Elevation (m): 924
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.76

Location: SMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 23 Feb 2014
Finish Date: 23 Feb 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 24.38
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
904	20								
	21								
903							Dry	23/02/2014 12:14	Below 21.34 m - very little cuttings recovered, most cuttings blown away or blown out of basket.
	22								
902									
	23						Dry	23/02/2014 12:22	
901									
	24					24.03			
900		G	G9		BEDROCK Drill cuttings: fine grained, angular, dark grey, fresh and unweathered. [NICOLA VOLCANICS]		Dry	23/02/2014 12:30	
	25								
899									
	26	G	G10		Below 25.91 m - darker grey.	25.91	Dry	23/02/2014 12:36	Very little cuttings recovered.
898						26.52			
	27								
897					Below 27.43 m - light grey.		Dry	23/02/2014 12:42	
	28								
896									
	29						Dry	23/02/2014 12:50	
895									
	30				END OF HOLE AT 29.56 m				

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DRILL HOLE # BGC14-007D

Coordinates (m): 685324E - 5608722N
Ground Elevation (m): 924
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.76

Location: SMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 23 Feb 2014
Finish Date: 23 Feb 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 24.38
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
894	30				NOTES: 1. 4" PVC standpipe piezometer installed with screen from 26.52 to 29.56 metres. 2. Filter sand placed from 25.91 to 29.56 metres. 3. Bentonite seal placed from 24.03 to 25.91 metres.				
893	31								
892	32								
891	33								
890	34								
889	35								
888	36								
887	37								
886	38								
885	39								
	40								

Project No.: 1125-007

Project: Ajax Project Environmental Assessment

DRILL HOLE # BGC14-007S

Location: Ajax Project Site

Coordinates (m): 685324E - 5608722N
Ground Elevation (m): 924
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.89

Location: SMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 23 Feb 2014
Finish Date: 23 Feb 2014
Final Depth (m): 17.37
Depth to Top of Rock (m): N/A
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
	0				SAND (SW) Gravelly, silty, well graded, organics. [TOPSOIL]	0			
924					GRAVEL (GP) Fine to coarse, some coarse sand, gravel is grey, angular, multilithic. [FLUVIAL]		Dry	23/02/2014 16:05	
	1								
923							Dry	23/02/2014 16:07	
	2								
922									
	3				SILT (ML) Gravelly, gravel is fine to coarse, uniformly graded, low plasticity, light brown with grey and brown clasts. [TILL]		Dry	23/02/2014 16:10	
921									
	4								
920							Dry	23/02/2014 16:12	Welding time 16:13 to 16:30.
	5								
919									
	6				Below 6.10 m - decrease in gravel content, trace clay, darker brown.		Dry to moist	23/02/2014 16:33	
918									
	7								
917							Dry to moist	23/02/2014 16:35	
	8								
916									
	9				Below 9.14 m - dark greyish brown.		Dry to moist	23/02/2014 16:37	
915									
	10								

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BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: KGHM Ajax Mining Inc.

Print Date: 5/28/2015

AJAX (HYDROGEO) AJAX_SOIL_HYDROGEO.GDL BGC.GDT 5/28/15

DRILL HOLE # BGC14-007S

Coordinates (m): 685324E - 5608722N
Ground Elevation (m): 924
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.89

Location: SMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 23 Feb 2014
Finish Date: 23 Feb 2014
Final Depth (m): 17.37
Depth to Top of Rock (m): N/A
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
914	10				At 10.67 m - decrease in gravel content, slight increase in clay.		Moist	23/02/2014 16:42	Welding time 16:43 to 17:09.
	11					10.97			
913									
	12				Below 12.19 m - increase in gravel content.		Moist	23/02/2014 17:12	
912						12.8			
	13								
911					Below 13.72 m - increase in gravel content.		Moist	23/02/2014 17:15	
	14								
910						14.33			
	15								
909							Moist	23/02/2014 17:18	
	16								
908									
	17						Moist	23/02/2014 17:22	
907					END OF HOLE AT 17.37 m				
	18				NOTES: 1. 4" PVC standpipe piezometer installed with screen from 14.33 to 17.37 metres. 2. Filter sand placed from 12.80 to 17.37 metres. 3. Bentonite seal placed from 10.97 to 12.80 metres.				
906									
	19								
905									
	20								

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: KGHM Ajax Mining Inc.
Print Date: 5/28/2015

Project No.: 1125-007

Project: Ajax Project Environmental Assessment

DRILL HOLE # BGC14-008D

Location: Ajax Project Site

Coordinates (m): 686107E - 5608923N
Ground Elevation (m): 878
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.81

Location: SMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 24 Feb 2014
Finish Date: 25 Feb 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 15.85
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
	0				SAND Gravelly, dark brown, grasses, rootlets. [TOPSOIL]	0	Moist	25/02/2014 12:30	Moist from snow.
							Dry	25/02/2014 12:31	
877					SAND (SP) Fine to medium, some silt, trace coarse gravel, uniformly graded, light brown. [GLACIOFLUVIAL]				
	1								
876		G	G1				Dry	25/02/2014 12:32	
	2								
875									
	3	G	G2		GRAVEL (GM) Coarse to fine, silty, some fine sand, well graded, angular, brown with brown and grey clasts. [GLACIOFLUVIAL]		Dry	25/02/2014 12:35	
874									
	4								
					GRAVEL AND SAND (GW) Gravel is coarse, sand is coarse, trace silt, well graded, subangular, dark brown with brown and grey clasts. [GLACIOFLUVIAL]		Wet	25/02/2014 12:36	
873		G	G3				Wet, dark grey, sandy	25/02/2014 12:37	At 4.57 - water encountered. AIRLIFT #1 0.03 US GPM Welding time 12:38 PM to 12:59 PM.
	5								
872									
	6								
		G	G4		SAND (SM) Fine to medium, silty, some fine to coarse gravel, well graded, greyish brown with grey clasts. [TILL]		Moist	25/02/2014 13:05	
871									
	7								
870		G	G5		At 7.62 m - decrease in gravel content.		Moist	25/02/2014 13:07	
	8								
869									
	9						Moist	25/02/2014 13:10	
868									
	10								

(Continued on next page)

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: KGHM Ajax Mining Inc.

Print Date: 5/28/2015

AJAX (HYDROGEO) AJAX_SOIL_HYDROGEO.GDL BGC.GDT 5/28/15

DRILL HOLE # BGC14-008D

Coordinates (m): 686107E - 5608923N
Ground Elevation (m): 878
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.81

Location: SMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 24 Feb 2014
Finish Date: 25 Feb 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 15.85
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
867	10	G	G6		At 10.67 m - increase in gravel content.		Moist	25/02/2014 13:13	Welding time 13:15 to 13:35.
866	11								
	12	G	G7		SILT (ML) Sandy (fine), trace to some fine to coarse gravel, well graded, greyish brown. [TILL]		Moist	25/02/2014 13:39	
865	13								
864	14						Moist	25/02/2014 13:42	
863	15				At 15.24 m - sand is coarse, increase in gravel content, increase in moisture.		Moist	25/02/2014 13:47	
862	16				WEATHERED BEDROCK Drill cuttings: fine gravel, subrounded to subangular, light green, moderately to highly weathered. [IRONMASK HYBRID]		Dry	25/02/2014 13:50	Soft drilling, powdery.
861	17	G	G8				Dry	25/02/2014 13:52	Possibily chloritized Welding time 13:53 to 14:15.
860	18								
859	19	G	G9		Below 18.29 m - dark greenish grey.		Dry	25/02/2014 14:17	Powdery cuttings.
858	20	G			Below 19.81 m - dark grey.		Dry	25/02/2014 14:18	Powdery cuttings.

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DRILL HOLE # BGC14-008D

Coordinates (m): 686107E - 5608923N
Ground Elevation (m): 878
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.81

Location: SMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 24 Feb 2014
Finish Date: 25 Feb 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 15.85
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
857	20	G	G10						
	21								
856		G	G11		BEDROCK Drill cuttings: fine to medium grained, dark grey to light green, fresh and unweathered to slightly weathered. [IRONMASK HYBRID]		Dry	25/02/2014 14:21	Hard drilling.
	22								At 21.96 m - static water level, measured 5/7/2014 11:54.
855	23				Below 22.86 m - fine, angular, dark grey.	23.16	Dry	25/02/2014 14:24	
854	24								
853		G	G12		Below 24.38 m - slightly lighter grey than above.		Dry	25/02/2014 14:28	
	25					24.99			
852	26	G	G13				Dry	25/02/2014 14:32	
851						26.52			
	27								
850		G	G14				Dry	25/02/2014 14:36	
	28								
849	29						Dry	25/02/2014 14:40	
848	30				END OF HOLE AT 29.56 m		Dry	25/02/2014 14:42	

(Continued on next page)

DRILL HOLE # BGC14-008D

Coordinates (m): 686107E - 5608923N
Ground Elevation (m): 878
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.81

Location: SMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 24 Feb 2014
Finish Date: 25 Feb 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 15.85
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
847	30				NOTES: 1. 4" PVC standpipe piezometer installed with screen from 26.52 to 29.56 metres. 2. Filter sand placed from 24.99 to 29.56 metres. 3. Bentonite seal placed from 23.16 to 24.99 metres.				
846	31								
845	32								
844	33								
843	34								
842	35								
841	36								
840	37								
839	38								
838	39								
	40								

Project No.: 1125-007

Project: Ajax Project Environmental Assessment

DRILL HOLE # BGC14-008S

Location: Ajax Project Site

Coordinates (m): 686107E - 5608923N
Ground Elevation (m): 878
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.86

Location: SMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 0.91

Start Date: 25 Feb 2014
Finish Date: 25 Feb 2014
Final Depth (m): 6.10
Depth to Top of Rock (m): N/A
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
	0				SAND Gravelly, some silt, light brown, grasses and rootlets. [TOPSOIL]	0	Dry	25/02/2014 15:42	
877					SAND (SP) Fine to medium, some silt, trace coarse gravel, uniformly graded, light brown. [TILL]				
	1								
876							Dry	25/02/2014 15:44	
	2					2.13			
875									
	3				GRAVEL (GM) Fine to coarse, sandy, silty, sand is coarse, well graded, grey and brown clasts. [GLACIOFLUVIAL]		Dry	25/02/2014 15:46	
874						3.66			
	4								
873						4.57			
	5				SAND AND GRAVEL (GM) Silty, sand is fine to coarse, gravel is fine to coarse, well graded, brown with grey clasts. [GLACIOFLUVIAL]		Moist	25/02/2014 15:48	Welding time 15:49 to 16:11.
872									
	6								
871					END OF HOLE AT 6.10 m NOTES: 1. 4" PVC standpipe piezometer installed with screen from 4.57 to 6.10 metres. 2. Filter sand placed from 3.66 to 6.10 metres. 3. Bentonite seal placed from 2.13 to 3.66 metres.		Moist	25/02/2014 16:16	
	7								
870									
	8								
869									
	9								
868									
	10								

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: KGHM Ajax Mining Inc.

Print Date: 5/28/2015

AJAX (HYDROGEO) AJAX_SOIL_HYDROGEO.GDL BGC.GDT 5/28/15

DRILL HOLE # BGC14-009

Coordinates (m): 686799E - 5608547N
Ground Elevation (m): 919
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.89

Location: SMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 26 Feb 2014
Finish Date: 27 Feb 2014
Final Depth (m): 53.95
Depth to Top of Rock (m): 3.96
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
919	0				SAND (SW) Fine to coarse, some fine to coarse gravel, trace silt, well graded, light brown with grey clasts, light brown with grey clasts. [TILL]	0	Dry	26/02/2014 09:02	
918	1								
		G	G1				Dry	26/02/2014 09:04	
917	2								
916	3	G	G2		Below 3.04 m - increase in silt content.		Dry	26/02/2014 09:06	
915	4				WEATHERED BEDROCK Drill cuttings: fine to coarse, sandy, trace silt, sand is medium to coarse, well graded, ubangular to subrounded, greyish brown, moderately to highly weathered. [IRONMASK HYBRID]				
		G	G3				Dry	26/02/2014 09:10	Welding time 9:11 to 9:52.
914	5								
913	6				BEDROCK Drill cuttings: fine grained, angular to subangular, dark to light grey, fresh and unweathered. [IRONMASK HYBRID]		Dry	26/02/2014 09:54	Changing drill bit 9:56 to 10:16.
912	7								
		G	G4				Dry	26/02/2014 10:18	Consistently hard drilling.
911	8								
910	9						Dry	26/02/2014 10:20	
909	10								

(Continued on next page)

DRILL HOLE # BGC14-009

Coordinates (m): 686799E - 5608547N
Ground Elevation (m): 919
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.89

Location: SMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 26 Feb 2014
Finish Date: 27 Feb 2014
Final Depth (m): 53.95
Depth to Top of Rock (m): 3.96
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
	10								
908	11						Dry	26/02/2014 10:24	Hard drilling.
907	12	G	G5				Moist	26/02/2014 10:30	At 12.19 m - moisture encountered, unmeasurable quantity. Zone of moisture.
906	13								
905	14	G	G6		From 13.72 m to 16.76 m - fine sand, light greenish grey, moderately weathered.	▼	Dry to moist	26/02/2014 10:35	Pulverized rock, resembles sand. At 14.06 m - static water level, measured 3/26/2014 10:53.
904	15								
		G	G7				Dry to moist	26/02/2014 10:37	
903	16								
902	17	G	G8		Below 16.76 - fine, angular, dark grey, fresh and unweathered.		Dry to moist	26/02/2014 10:39	
901	18								
		G	G9				Dry	26/02/2014 10:45	
900	19								
899	20						Dry	26/02/2014 10:48	

(Continued on next page)

DRILL HOLE # BGC14-009

Coordinates (m): 686799E - 5608547N
Ground Elevation (m): 919
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.89

Location: SMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 26 Feb 2014
Finish Date: 27 Feb 2014
Final Depth (m): 53.95
Depth to Top of Rock (m): 3.96
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
898	21	G	G10				Dry	26/02/2014 10:50	
896	23				Below 22.86 m - subangular to rounded.		Dry	26/02/2014 10:52	
894	25	G	G11				Dry	26/02/2014 10:58	
893	26						Dry	26/02/2014 11:00	
891	28	G	G12				Dry	26/02/2014 11:03	
890	29						Dry	26/02/2014 11:06	

(Continued on next page)

DRILL HOLE # BGC14-009

Coordinates (m): 686799E - 5608547N
Ground Elevation (m): 919
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.89

Location: SMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 26 Feb 2014
Finish Date: 27 Feb 2014
Final Depth (m): 53.95
Depth to Top of Rock (m): 3.96
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
888	31	G	G13				Dry	26/02/2014 11:10	
887	32						Dry	26/02/2014 11:14	
886	33								
885	34	G	G14				Dry	26/02/2014 11:17	
884	35								
883	36	G	G15				Dry	26/02/2014 11:19	
882	37								
881	38								
880	39	G	G16				Dry	26/02/2014 13:15	
879	40								

(Continued on next page)

DRILL HOLE # BGC14-009

Coordinates (m): 686799E - 5608547N
Ground Elevation (m): 919
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.89

Location: SMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 26 Feb 2014
Finish Date: 27 Feb 2014
Final Depth (m): 53.95
Depth to Top of Rock (m): 3.96
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
	40								
878	41	G	G17				Dry	26/02/2014 13:19	
877	42								
876	43								
875	44	G	G18		Below 44.20 m - rounded to subangular, dark greenish grey, slightly softer than previous.		Dry to slightly moist	26/02/2014 13:37	
874	45					45.11			
873	46						Dry	26/02/2014 13:31	
872	47					46.94			
		G	G19				Dry	26/02/2014 13:33	
871	48				At 47.80 m - possible fault.	47.85	Moist	26/02/2014 13:34	Driller described a moist fracture.
870	49				At 47.77 m - subrounded to rounded, dark grey.		Moist	26/02/2014 13:35	Slowing increasing moisture.
869	50								

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DRILL HOLE # BGC14-009

Coordinates (m): 686799E - 5608547N
Ground Elevation (m): 919
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.89

Location: SMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 26 Feb 2014
Finish Date: 27 Feb 2014
Final Depth (m): 53.95
Depth to Top of Rock (m): 3.96
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
	50	G	G20		At 50.46 m - increase in moisture content.		Moist	26/02/2014 13:48	
868	51								
867	52				At 51.82 m - subangular, dark greenish grey, cuttings are uniform in size.		Moist	26/02/2014 13:53	
866	53	G	G21		At 53.34 m - increase in moisture content.	▽	Wet	26/02/2014 13:58	At 53.34 m - water encountered.
865	54				END OF HOLE AT 53.95 m NOTES: 1. 2" PVC standpipe piezometer installed with screen from 47.85 to 53.95 metres. 2. Filter sand placed from 46.94 to 53.95 metres. 3. Bentonite seal placed from 45.11 to 46.94 metres.		Wet, grey, silty	26/02/2014 13:58	AIRLIFT #1 0.9 US GPM 1 US GPM 1 US GPM AVG 1 US GPM
864	55								
863	56								
862	57								
861	58								
860	59								
859	60								

DRILL HOLE # BGC14-010

Coordinates (m): 681730E - 5607414N
Ground Elevation (m): 979
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.89

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 27 Feb 2014
Finish Date: 02 Mar 2014
Final Depth (m): 78.33
Depth to Top of Rock (m): 10.97
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
979	0				GRAVEL (GP) Fine to coarse, some coarse sand, subangular to rounded, brown and grey clasts. [TOPSOIL/FILL]	0	Dry	27/02/2014 13:28	
978	1								
							Dry	27/02/2014 13:31	
977	2								
					GRAVEL AND SILT (GM) Some fine to coarse sand, gravel is fine to coarse, well graded, subangular to subrounded, brown with grey and brown clasts. [TILL]		Dry to slightly moist	27/02/2014 13:34	
976	3	G	G1						
975	4								
974	5	G	G2		SILT (ML) Some fine sand to sandy, trace fine to coarse gravel, uniformly graded, brown with grey clasts, clasts are angular to subrounded. [TILL]		Moist	27/02/2014 13:37	Welding time 13:39 to 14:02.
973	6	G	G3		Below 6.10 m - decrease in gravel content, decrease in sand content, trace clay.		Dry	27/02/2014 14:03	
972	7								
971	8	G	G4		Below 7.62 m - clayey.		Moist	27/02/2014 14:05	Sticky, cohesive drilling.
970	9				Below 9.14 m - trace to no gravel.		Dry to moist	27/02/2014 14:06	
969	10					▼			At 9.59 m - static water level, measured

(Continued on next page)

DRILL HOLE # BGC14-010

Coordinates (m): 681730E - 5607414N
Ground Elevation (m): 979
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.89

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 27 Feb 2014
Finish Date: 02 Mar 2014
Final Depth (m): 78.33
Depth to Top of Rock (m): 10.97
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
	10								3/12/2014 10:02.
968		G	G5		Below 10.67 m - trace to some fine gravel.		Dry	27/02/2014 14:07	Changing dril bit 14:08 to 14:24.
	11				BEDROCK Drill cuttings: fine to medium grained, angular to subrounded, brown and grey clasts, moderately weathered.				
967	12	G	G6		Below 12.19 m - fine, dark grey, angular.		Dry	27/02/2014 14:32	
966	13								
965	14				Below 13.72 m - slightly lighter grey than above.		Dry	27/02/2014 14:39	
964	15	G	G7		Below 15.24m - dark grey.		Dry	27/02/2014 14:45	
963	16								
962	17	G	G8		Below 16.76 m - subrounded, light grey, average clast size is 4 mm.		Dry	27/02/2014 14:49	
961	18								
960	19	G	G9		Below 18.29 m - subrounded, whitish grey.		Dry	27/02/2014 14:55	
959	20	G			Below 19.81 m - angular to subangular, grey.		Dry	27/02/2014 15:00	

(Continued on next page)

DRILL HOLE # BGC14-010

Coordinates (m): 681730E - 5607414N
Ground Elevation (m): 979
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.89

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 27 Feb 2014
Finish Date: 02 Mar 2014
Final Depth (m): 78.33
Depth to Top of Rock (m): 10.97
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
	20	G	G10						
958	21	G	G11		Below 21.34 - angular, dark grey.		Dry	27/02/2014 15:05	
957	22								
956	23	G	G12				Dry	27/02/2014 15:10	
955	24								
954	25	G	G13		Below 24.38 m - fine, angular to rounded, foliated, grey, flat and elongated.		Dry	27/02/2014 15:15	
953	26	G	G14		Below 25.91 m - light grey, shape as above.		Dry	27/02/2014 15:20	
952	27				Below 27.43 m - long, flat, rounded.		Dry	27/02/2014 15:23	Powdery cuttings.
951	28								
950	29	G	G15		Below 28.96 m - angular, grey, average clast size 2 mm.		Dry	27/02/2014 15:25	Powdery cuttings.
949	30								

(Continued on next page)

DRILL HOLE # BGC14-010

Coordinates (m): 681730E - 5607414N
Ground Elevation (m): 979
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.89

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 27 Feb 2014
Finish Date: 02 Mar 2014
Final Depth (m): 78.33
Depth to Top of Rock (m): 10.97
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
	30								
948		G	G16		Below 30.48 m - drill cuttings described as soil: fine sand, uniformly graded, whitish grey, no dry strength, pulverized, powdery.		Dry	28/02/2014 10:51	Very dusty discharge.
	31								
947									
	32				Below 32.00 m - fine, flat, elongated, dark to light grey, foliated, unweathered.		Dry	28/02/2014 10:54	
946									
	33								
		G	G17				Dry	28/02/2014 10:57	
945									
	34								
944									
	35				Below 35.05 m - average clast size is 2 mm.		Dry	28/02/2014 11:01	
943									
	36								
		G	G18				Dry	28/02/2014 11:05	
942									
	37								
941									
	38						Dry	28/02/2014 11:12	
940									
	39								
939		G	G19				Dry	28/02/2014 11:18	
	40								

(Continued on next page)

DRILL HOLE # BGC14-010

Coordinates (m): 681730E - 5607414N
Ground Elevation (m): 979
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.89

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 27 Feb 2014
Finish Date: 02 Mar 2014
Final Depth (m): 78.33
Depth to Top of Rock (m): 10.97
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
938	40								
	41				Below 41.45 m - average clast size 5 mm.		Dry	28/02/2014 11:21	
937	42					41.91			
936	43	G	G20				Dry	28/02/2014 11:30	
935	44					44.2	Dry	28/02/2014 11:36	
934	45								
933	46	G	G21			46.02	Dry	28/02/2014 11:40	
932	47							28/02/2014 11:45	At 46.63 m - moisture encountered. Unmeasurable amount of water. Driller described "break in dust".
							Dry	28/02/2014 11:47	
931	48								
930	49	G	G22				Dry	28/02/2014 11:54	
929	50								

(Continued on next page)

DRILL HOLE # BGC14-010

Coordinates (m): 681730E - 5607414N
Ground Elevation (m): 979
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.89

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 27 Feb 2014
Finish Date: 02 Mar 2014
Final Depth (m): 78.33
Depth to Top of Rock (m): 10.97
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
928	50						Dry	28/02/2014 12:00	
	51								
927	52	G	G23		Below 51.82 m - angular, elongated, flat, dark grey.		Dry	28/02/2014 12:08	
926	53						Dry	28/02/2014 12:16	
925	54								
924	55	G	G24				Dry	28/02/2014 12:20	
923	56						Dry	28/02/2014 12:25	
922	57								
921	58	G	G25		Below 57.91 m - rounded to subangular, light greyish white, average clast size is 2 mm.		Dry	28/02/2014 12:30	
						58.22			
920	59						Dry	28/02/2014 12:37	
919	60					59.74			

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DRILL HOLE # BGC14-010

Coordinates (m): 681730E - 5607414N
Ground Elevation (m): 979
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.89

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 27 Feb 2014
Finish Date: 02 Mar 2014
Final Depth (m): 78.33
Depth to Top of Rock (m): 10.97
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
	60								
918	61	G	G26				Dry	28/02/2014 12:42	
917	62								
					Below 62.48 m - subangular, light grey, average clast size is 4 mm.		Dry	28/02/2014 12:47	
916	63								
915	64	G	G27		Below 64.00 m - angular to subangular, dark grey, average clast size is 5 mm.		Dry	28/02/2014 12:52	
914	65								
							Dry	28/02/2014 12:55	
913	66								
912	67	G	G28		Below 67.06 m - average clast size is 3 mm.		Dry	28/02/2014 13:01	
911	68								
					Below 68.58 m - angular.		Dry	28/02/2014 13:04	
910	69								
909	70								

(Continued on next page)

DRILL HOLE # BGC14-010

Coordinates (m): 681730E - 5607414N
Ground Elevation (m): 979
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.89

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 4.57

Start Date: 27 Feb 2014
Finish Date: 02 Mar 2014
Final Depth (m): 78.33
Depth to Top of Rock (m): 10.97
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
	70	G	G29				Dry	28/02/2014 13:08	
908	71								
907	72						Dry	28/02/2014 13:12	
906	73	G	G30				Dry	28/02/2014 13:15	
905	74								
904	75				Below 74.68 m - equant, subrounded clasts.		Dry	28/02/2014 13:18	
903	76	G	G31		Below 76.20 m - rounded, average clast size is 4 mm.		Dry	28/02/2014 13:25	
902	77								
901	78	G	G32				Dry	28/02/2014 13:32	
900	79				END OF HOLE AT 78.33 m NOTES: 1. 2" PVC standpipe piezometer installed with screen from 46.02 to 58.22 metres. 2. Filter sand placed from 44.20 to 59.74 metres. 3. Bentonite seal placed from 41.91 to 44.20 metres. 4. Hole backfilled from 59.74 m to 78.33 m with bentonite chips.		Dry	28/02/2014 13:37	
899	80								

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: KGHM Ajax Mining Inc.
Print Date: 5/28/2015

AJAX (HYDROGEO) AJAX_SOIL_HYDROGEO.GDL BGC.GDT 5/28/15

DRILL HOLE # BGC14-011D

Coordinates (m): 682796E - 5605945N
Ground Elevation (m): 1,029
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.88

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 5.18

Start Date: 01 Mar 2014
Finish Date: 02 Mar 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 5.49
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
1029	0				SAND (SW) Fine, some fine to coarse gravel, some silt, well graded, light brown with grey clasts. [TOPSOIL/FILL]	0	Dry	01/03/2014 10:03	
1028	1	G	G1				Dry	01/03/2014 10:05	
1027	2								
	3	G	G2		SILT (ML) Sandy, trace to some gravel, sand is fine, gravel is fine to coarse, well graded, low plasticity, brown with brown and grey clasts. [TILL]		Moist	01/03/2014 10:08	
1026									
1025	4								
	5	G	G3		Below 4.57 m - trace clay.		Moist	01/03/2014 10:11	Welding time 10:12 to 10:38.
1024									
	6				WEATHERED BEDROCK Drill cuttings: sandy, some gravel, sand is fine, gravel is fine, uniformly graded, light green, highly weathered. [NICOLA VOLCANICS]		Dry	01/03/2014 10:42	Cutting casing, changing drill bit 10:43 to 10:59.
1023									
1022	7								
	8	G	G4				Dry	01/03/2014 11:03	
1021						▼			
	9								At 8.62 m - static water level, measured 3/16/2014 12:35.
1020		G	G5				Dry	01/03/2014 11:06	
	10				From 9.75 m to 10.36 m - sandy, silty, green.		Moist	01/03/2014 11:10	Possible fault.

(Continued on next page)

DRILL HOLE # BGC14-011D

Coordinates (m): 682796E - 5605945N
Ground Elevation (m): 1,029
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.88

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 5.18

Start Date: 01 Mar 2014
Finish Date: 02 Mar 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 5.49
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
1019	10								
		G	G6		BEDROCK Drill cuttings: fine grained, angular, dark grey, fresh and unweathered to slightly weathered.		Dry to moist	01/03/2014 11:14	
1018	11								
1017	12	G	G7		Below 12.19 m - angular to subrounded, average clast size is 6 mm.		Dry	01/03/2014 11:33	
1016	13								
					Below 13.72 m - average clast size is 3 mm.		Dry	01/03/2014 11:33	Hard drilling.
1015	14								
1014	15	G	G8		Below 15.24 m - rounded to subangular.		Dry	01/03/2014 11:37	
						▽	Moist		At 15.85 m - moisture encountered.
1013	16								
					Below 16.76 m - subrounded to angular, dark greenish grey.		Wet	01/03/2014 11:44	AIRLIFT #1 1.9 US GPM 1.7 US GPM 2.0 US GPM Average 1.9 US GPM
1012	17								
1011	18								
					Below 18.29 m - subangular to subrounded.		Wet	01/03/2014 11:55	
1010	19								
	20	G			WEATHERED BEDROCK	19.81	Moist	01/03/2014 12:09	

(Continued on next page)

DRILL HOLE # BGC14-011D

Coordinates (m): 682796E - 5605945N
Ground Elevation (m): 1,029
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.88

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 5.18

Start Date: 01 Mar 2014
Finish Date: 02 Mar 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 5.49
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
1009	20	G	G9		Drill cuttings: sandy, sand is fine, uniformly graded, dark green, highly weathered.				
1008	21	G	G10				Moist	01/03/2014 12:21	
1007	22					22.56			
1006	23					23.47	Moist	01/03/2014 12:26	
1005	24	G	G11		Below 24.38 m - trace gravel, subangular.		Moist	01/03/2014 12:31	
1004	25								
1003	26						Moist	01/03/2014 12:38	
1002	27	G	G12				Moist	01/03/2014 12:45	
1001	28								
1000	29						Moist	01/03/2014 12:52	AIRLIFT #2 1.5 US GPM 2 US GPM 1.8 US GPM Average 1.8 US GPM
	30				END OF HOLE AT 29.56 m				

(Continued on next page)

DRILL HOLE # BGC14-011D

Coordinates (m): 682796E - 5605945N
Ground Elevation (m): 1,029
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.88

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 5.18

Start Date: 01 Mar 2014
Finish Date: 02 Mar 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 5.49
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
999	30				NOTES: 1. 2" PVC standpipe piezometer installed with screen from 23.47 to 29.56 metres. 2. Filter sand placed from 22.56 to 29.56 metres. 3. Bentonite seal placed from 19.81 to 22.56 metres.				
998	31								
997	32								
996	33								
995	34								
994	35								
993	36								
992	37								
991	38								
990	39								
	40								

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: KGHM Ajax Mining Inc.
Print Date: 5/28/2015

DRILL HOLE # BGC14-011S

Coordinates (m): 682796E - 5605945N
Ground Elevation (m): 1,029
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.91

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 5.18

Start Date: 01 Mar 2014
Finish Date: 02 Mar 2014
Final Depth (m): 18.29
Depth to Top of Rock (m): 5.49
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
1029	0				SAND (SW) Fine, some fine to coarse gravel, some silt, well graded, light brown with grey clasts. [TOPSOIL/FILL]	0	Dry	01/03/2014 15:03	
1028	1						Dry	01/03/2014 15:06	
1027	2								
1026	3				SILT (ML) Some sand to sandy, trace to some gravel, sand is fine, gravel is fine to coarse, well graded, low plasticity, light brown to brown with grey and brown clasts. [TILL]		Moist	01/03/2014 15:09	
1025	4								
1024	5				Below 4.57 m - trace clay.		Moist	01/03/2014 15:12	Welding time 15:13 to 15:30.
1023	6				BEDROCK Drill cuttings: fine grained, angular, dark grey, average clast size is 3 mm, fresh and unweathered to slightly weathered. [NICOLA VOLCANICS]		Dry	01/03/2014 15:46	At 5.65 m - static water level, measured 3/14/2014 9:28. Cutting casing 15:35 PM to 15:43.
1022	7								
1021	8						Dry	01/03/2014 15:54	
1020	9				Below 9.14 m - subrounded, light grey.		Dry	01/03/2014 16:00	
	10								

(Continued on next page)

DRILL HOLE # BGC14-011S

Coordinates (m): 682796E - 5605945N
Ground Elevation (m): 1,029
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.91

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 5.18

Start Date: 01 Mar 2014
Finish Date: 02 Mar 2014
Final Depth (m): 18.29
Depth to Top of Rock (m): 5.49
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
1019	10				Below 10.67 m - subangular to subrounded, average particle size is 4 mm.		Dry	01/03/2014 16:08	
1018	11								
1017	12					12.5	Dry	01/03/2014 16:11	
1016	13								
1015	14				Below 13.72 m - clasts are flat and angular, average clast size is 3 mm.			01/03/2014 16:14	
						14.33	Moist	01/03/2014 16:16	
1014	15				WEATHERED BEDROCK Drill cuttings: sand , trace gravel, sand is fine, gravel is fine to coarse, uniformly graded, dark green. [NICOLA VOLCANICS]				
						15.27			
1013	16								At 15.85 m - water encountered.
1012	17						Moist	01/03/2014 16:18	AIRLIFT #1 1.5 US GPM 1 US GPM 1 US GPM Average 1.2 US GPM
1011	18								
1010	19				END OF HOLE AT 18.29 m NOTES: 1. 2" PVC standpipe piezometer installed with screen from 15.24 to 18.29 metres. 2. Filter sand placed from 14.33 to 18.29 metres. 3. Bentonite seal placed from 12.50 to 14.33 metres.		Moist	01/03/2014 16:20	
	20								

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: KGHM Ajax Mining Inc.
Print Date: 5/28/2015

AJAX (HYDROGEO) AJAX_SOIL_HYDROGEO.GDL BGC.GDT 5/28/15

DRILL HOLE # BGC14-012D

Coordinates (m): 681950E - 5608373N
Ground Elevation (m): 924
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.91

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 5.18

Start Date: 02 Mar 2014
Finish Date: 03 Mar 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 5.18
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
924	0				SAND (SW) Coarse, silty, gravelly, gravel is fine to coarse, well graded, angular to subrounded, dark brown with multilithic clasts. [TOPSOIL]	0	Dry	02/03/2014 14:41	
923	1	G	G1				Moist	02/03/2014 14:44	At 1.34 m - static water level, measured 3/17/2014 10:58.
922	2						Wet	02/03/2014 14:45	At 2.13 m - water encountered.
921	3	G	G2		GRAVEL AND SAND (GP/SP) Gravel is fine to coarse, sand is coarse, uniformly graded, angular, dark brown, multilithic. [GLACIOFLUVIAL]				
920	4				SILT (ML) Sandy, trace gravel, trace clay, sand is fine, gravel is fine, uniformly graded, low plasticity, very dark grey. [TILL]		Wet	02/03/2014 14:46	
919	5	G	G3				Moist	02/03/2014 14:47	Welding time 14:48 to 15:10.
918	6	G	G4		BEDROCK Drill cuttings: fine grained, angular to subangular, dark grey, average clast size is 3 mm, fresh and unweathered to slightly weathered. [NICOLA VOLCANICS]		Dry	02/03/2014 15:13	Hard drilling.
917	7								
916	8	G	G5		Below 7.62 m - average clast size is 5 mm.		Dry	02/03/2014 15:25	
915	9	G	G6		Below 9.14 m - average clast size is 4 mm. From 9.44 m to 10.36 m - fine sand and fine gravel, sand is uniformly graded, gravel is rounded.		Dry	02/03/2014 15:32	
914	10								

(Continued on next page)

DRILL HOLE # BGC14-012D

Coordinates (m): 681950E - 5608373N
Ground Elevation (m): 924
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.91

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 5.18

Start Date: 02 Mar 2014
Finish Date: 03 Mar 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 5.18
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
	10						Dry	02/03/2014 15:35	Soft drilling.
					Below 10.67 m - angular clasts.		Dry	02/03/2014 15:37	
913	11								
912	12	G	G7		Below 12.19 m - light grey, average clast size is 3 mm.		Dry	02/03/2014 15:47	
911	13								
910	14						Dry	02/03/2014 15:53	
909	15	G	G8		Below 15.24 m - greenish grey fine sand present in cuttings, gravel clasts as above.		Dry	02/03/2014 16:00	
908	16								
907	17					16.76	Dry	02/03/2014 16:04	
906	18	G	G9		Below 18.29 m - green sand no longer present in cuttings.		Dry	02/03/2014 16:08	
905	19					19.2			
904	20				Below 19.81 m - average clast size is 4 mm.		Dry	02/03/2014 16:16	

(Continued on next page)

DRILL HOLE # BGC14-012D

Coordinates (m): 681950E - 5608373N
Ground Elevation (m): 924
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.91

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 5.18

Start Date: 02 Mar 2014
Finish Date: 03 Mar 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 5.18
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
	20								
						20.42			
903	21								
		G	G10				Moist	02/03/2014 16:20	At 21.34 m - water encountered.
902	22								
					From 22.25 m to 25.91 m - fine sand, gravelly, rounded cuttings, dark reddish brown, highly weathered, oxidized.		Moist	02/03/2014 16:23	Possible fault. Soft drilling.
901	23	G	G11				Moist	02/03/2014 16:25	
900	24								
		G	G12		Below 24.38 m - dark purplish red.		Moist	02/03/2014 16:27	
899	25					24.99			
898	26	G	G13		Below 25.91 m - angular, grey, end of weathered zone.		Moist	02/03/2014 16:29	
						26.21			
897	27								
		G	G14		Below 27.43 m - angular, uniformly graded, dark grey.		Moist	02/03/2014 16:40	
896	28								
895	29	G	G15		Below 28.96 m - subrounded, moderately weathered.		Moist	02/03/2014 16:45	
					At 29.26 m - increase in moisture content.		Wet	02/03/2014 16:50	
894	30				END OF HOLE AT 29.56 m			02/03/2014 16:50	AIRLIFT #1 1 US GPM 0.8 US GPM

(Continued on next page)

DRILL HOLE # BGC14-012D

Coordinates (m): 681950E - 5608373N
Ground Elevation (m): 924
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.91

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 5.18

Start Date: 02 Mar 2014
Finish Date: 03 Mar 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 5.18
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
	30				NOTES: 1. 2" PVC standpipe piezometer installed with screen from 20.42 to 24.99 metres. 2. Filter sand placed from 19.20 to 26.21 metres. 3. Bentonite seal placed from 16.76 to 19.20 metres. 4. Hole backfilled from 26.21 m to 29.56 with bentonite chips.				1 US GPM Average 1 US GPM
893	31								
892	32								
891	33								
890	34								
889	35								
888	36								
887	37								
886	38								
885	39								
884	40								

Project No.: 1125-007

Project: Ajax Project Environmental Assessment

DRILL HOLE # BGC14-012S

Location: Ajax Project Site

Coordinates (m): 681950E - 5608373N
Ground Elevation (m): 924
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.89

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 0.91

Start Date: 03 Mar 2014
Finish Date: 03 Mar 2014
Final Depth (m): 3.35
Depth to Top of Rock (m): N/A
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
924	0				SAND (SW) Coarse, silty, gravelly, gravel is fine to coarse, well graded, angular to subrounded, dark brown with multilithic clasts. [TILL]	0	Dry	03/03/2014 10:22	
923	1						Dry	03/03/2014 10:23	At 1.44 m - static water level, measured 3/17/2014 8:55.
922	2					1.83			
					GRAVEL AND SAND (GP/SP) Gravel is fine to coarse, sand is coarse, uniformly graded, angular, dark brown, mulitlithic. [GLACIOFLUVIAL]	2.13			At 2.13 m - water encountered.
921	3					2.74			
					END OF HOLE AT 3.35 m NOTES: 1. 2" PVC standpipe piezometer installed with screen from 2.74 to 3.35 metres. 2. Filter sand placed from 2.13 to 3.35 metres. 3. Bentonite seal placed from 1.83 to 2.13 metres.		Wet	03/03/2014 10:25	
920	4								
919	5								
918	6								
917	7								
916	8								
915	9								
914	10								

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AN APPLIED EARTH SCIENCES COMPANY

Client: KGHM Ajax Mining Inc.

Print Date: 5/28/2015

AJAX (HYDROGEO) AJAX_SOIL_HYDROGEO.GDL BGC.GDT 5/28/15

DRILL HOLE # BGC14-013

Coordinates (m): 686466E - 5606777N
Ground Elevation (m): 987
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.75

Location: SMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 5.18

Start Date: 03 Mar 2014
Finish Date: 04 Mar 2014
Final Depth (m): 30.48
Depth to Top of Rock (m): 11.28
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
987	0				SILT (ML) Sandy, some clay, trace fine gravel, sand is fine, well graded, low plasticity, light greyish brown. [TILL]	0	Moist	03/03/2014 15:51	Soapy feeling.
986	1								
		G	G1				Moist	03/03/2014 15:52	
985	2								
					SAND AND SILT (SM) Sand is fine, trace clay, uniformly graded, low plasticity, brown. [TILL]				
984	3								
		G	G2				Moist	03/03/2014 15:34	At 3.16 m - static water level, measured 3/18/2014 8:48.
983	4								
		G	G3		Below 4.57 m - trace to some clay.		Moist	03/03/2014 15:56	Welding time 15:57 to 16:18.
982	5								
981	6								
							Moist	03/03/2014 16:20	
980	7								
		G	G4		Below 7.62 m - slight increase in silt content.		Moist	03/03/2014 16:25	
979	8								
978	9								
		G	G5		Below 9.14 m - increase in silt content.		Moist	03/03/2014 16:28	
977	10				GRAVEL (GP)				At 9.75 m - water

(Continued on next page)

DRILL HOLE # BGC14-013

Coordinates (m): 686466E - 5606777N
Ground Elevation (m): 987
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.75

Location: SMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 5.18

Start Date: 03 Mar 2014
Finish Date: 04 Mar 2014
Final Depth (m): 30.48
Depth to Top of Rock (m): 11.28
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
	10				Fine to coarse, sandy, trace clay, sand is coarse, uniformly graded, subangular to subrounded, multilithic. [GLACIOFLUVIAL]				encountered at start of unit.
976	11	G	G6				Wet	03/03/2014 16:30	AIRLIFT #1 1.5 US GPM 1.3 US GPM 1.3 US GPM Average 1.4 US GPM
	12				BEDROCK Drill cuttings: fine to coarse grained, uniformly graded, angular, multilithic, moderately weathered, oxidized.		Wet	03/03/2014 16:31	Changing drill bit 16:31 to 16:50.
975		G	G7				Wet, dark grey	03/03/2014 16:55	
974	13								
973	14				Below 13.72 m - angular, dark grey, slightly weathered, faintly oxidized.		Wet, dark grey	03/03/2014 16:57	
972	15								
		G	G8				Wet, dark grey	03/03/2014 17:01	
971	16								
970	17						Wet, light grey	03/03/2014 17:07	
969	18								
		G	G9		Below 18.29 m - subangular, dark grey to light grey, average particle size is 4 mm.		Wet, light grey to clear	04/03/2014 07:18	AIRLIFT #2 2.9 US GPM 2.8 US GPM 2.7 US GPM Average 2.8 US GPM
968	19								
967	20				Below 19.81 m - uniformly graded, angular to subangular, dark bluish grey, average		Wet, clean to light	04/03/2014 07:25	

(Continued on next page)

DRILL HOLE # BGC14-013

Coordinates (m): 686466E - 5606777N
Ground Elevation (m): 987
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.75

Location: SMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 5.18

Start Date: 03 Mar 2014
Finish Date: 04 Mar 2014
Final Depth (m): 30.48
Depth to Top of Rock (m): 11.28
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
	20				particle size is 2 mm.		grey		
966	21								
		G	G10				Wet, silty	04/03/2014 07:29	From 21.64 to 22.56 m - softer drilling, silty discharge water.
965	22								
964	23	G	G11		Below 22.86 m - trace silt, average clast size is 5 mm.		Wet, silty	04/03/2014 07:33	
								04/03/2014 07:33	AIRLIFT #3 2.5 US GPM 2.5 US GPM 2.4 US GPM Average 2.5 US GPM
963	24					24.08			
		G	G12		Below 24.38 m - angular, flat, grey, average clast size is 4 mm.		Wet, clean to light grey	04/03/2014 07:46	
962	25								
961	26				Below 25.91 m - average clast size is 2 mm.		Wet, clean to light grey	04/03/2014 07:50	
						26.52			
960	27								
		G	G13			27.43	Wet, clean to light grey	04/03/2014 07:55	
959	28	G	G14						
958	29	G	G15		From 28.04 m to 28.65 m - yellowish brown, clayey, silty discharge, cuttings are angular, dark grey and brown. At 28.91 m - angular, dark grey, as above.		Wet, yellowish brown	04/03/2014 07:56	
		G	G16				Wet, yellowish brown	04/03/2014 08:03	
957	30								

(Continued on next page)

DRILL HOLE # BGC14-013

Coordinates (m): 686466E - 5606777N
Ground Elevation (m): 987
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.75

Location: SMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 5.18

Start Date: 03 Mar 2014
Finish Date: 04 Mar 2014
Final Depth (m): 30.48
Depth to Top of Rock (m): 11.28
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
	30	G	G17		From 29.56 m to 29.87 m - silty, yellowish brown, multilithic cuttings. Below 29.87 m - fine, angular, dark grey.				
956	31				END OF HOLE AT 30.48 m NOTES: 1. 2" PVC standpipe piezometer installed with screen from 27.43 to 30.48 metres. 2. Filter sand placed from 26.52 to 30.48 metres. 3. Bentonite seal placed from 24.08 to 26.52 metres.		Wet, clean to light grey	04/03/2014 08:09	AIRLIFT #4 2.6 US GPM 2.7 US GPM 2.7 US GPM Average 2.7 US GPM
955	32								
954	33								
953	34								
952	35								
951	36								
950	37								
949	38								
948	39								
947	40								

DRILL HOLE # BGC14-014D

Coordinates (m): 686672E - 5607810N
Ground Elevation (m): 986
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.89

Location: SMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 5.18

Start Date: 04 Mar 2014
Finish Date: 05 Mar 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 18.90
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
985	0				SAND (SW) Fine, silty, gravelly, gravel is fine to coarse, well graded, dark brown with grey clasts. [TOPSOIL/FILL]	0	Moist	04/03/2014 14:00	Moist from snow.
	1								
984	2	G	G1		GRAVEL (GP) Fine to coarse, sandy, sand is coarse, uniformly graded, angular to subrounded, brown and grey. [GLACIOFLUVIAL]		Dry	04/03/2014 14:02	
983	3	G	G2		SAND [SM] Fine, silty, some gravel, gravel is fine to coarse, light brown with grey clasts. [TILL]		Dry to moist	04/03/2014 14:04	
982	4								
981	5						Dry to moist	04/03/2014 14:07	Welding time 14:08 PM to 14:32.
980	6								
979	7				SILT [ML] Sandy, trace to some gravel, sand is fine, uniformly graded, low plasticity, grey with grey and brown clasts. [TILL]		Dry to moist	04/03/2014 14:37	
978	8	G	G3		Below 7.62 m - gravel is angular to subrounded, grey.		Dry to moist	04/03/2014 14:40	
977	9						Dry to moist	04/03/2014 14:43	
976	10								

(Continued on next page)

DRILL HOLE # BGC14-014D

Coordinates (m): 686672E - 5607810N
Ground Elevation (m): 986
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.89

Location: SMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 5.18

Start Date: 04 Mar 2014
Finish Date: 05 Mar 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 18.90
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
975	10	G	G4		Below 10.67 m - trace clay, light brownish grey.		Dry to moist	04/03/2014 14:46	Welding time 14:48 to 15:04.
974	11								
	12						Dry to moist	04/03/2014 15:08	
973	13					▼			At 12.91 m - static water level, measured 5/28/2014 8:15.
972	14	G	G5		Below 13.72 m - trace gravel, multilithic.		Dry to moist	04/03/2014 15:09	
971	15								
					Below 15.24 m - decrease in gravel content.		Dry to moist	04/03/2014 15:14	
970	16								
969	17	G	G6				Dry to moist	04/03/2014 15:16	Welding time 15:17 to 15:35.
968	18								
							Dry to moist	04/03/2014 15:39	
967	19				BEDROCK Drill cuttings: sand and gravel, sand is medium to coarse, gravel is coarse, sand is rounded, gravel is angular to subrounded, brownish grey, mulitlithic, moderately weathered.				
966	20	G					Dry	04/03/2014 15:42	Changing drill bit

(Continued on next page)

DRILL HOLE # BGC14-014D

Coordinates (m): 686672E - 5607810N
Ground Elevation (m): 986
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.89

Location: SMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 5.18

Start Date: 04 Mar 2014
Finish Date: 05 Mar 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 18.90
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
	20	G	G7						15:43 to 16:00.
965						20.57			
	21								
964		G	G8		Below 21.34 m - rounded clasts, light greenish grey, fine sand present in cuttings, moderately weathered.		Dry	04/03/2014 16:05	
	22								
963						22.56			
	23	G	G9		Below 22.86 m - gravelly sand, sand is fine, light greyish green, gravel is rounded, moderately weathered.		Dry	04/03/2014 16:09	
962						23.47			
	24								
961		G	G10		Below 24.38 m - sandy gravel, gravel is dark grey, angular to subrounded, sand is coarse, grey, moderately weathered. ▽		Dry	04/03/2014 16:17	
	25							04/03/2014 16:17	At 24.69 m - moisture encountered, driller described "break in dust".
960								04/03/2014 16:17	At 25.30 m - moisture encountered, driller described "break in dust".
	26	G	G11		Below 25.91 m - fine sand, light greenish grey, uniform, trace gravel, gravel is dark grey, angular, moderately weathered.		Dry	04/03/2014 16:21	
959									
	27								
958		G	G12		Below 27.43 m - gravel, fine to coarse, some sand (fine), gravel is grey, subrounded, sand is greenish grey, moderately weathered.		Dry	04/03/2014 16:28	
	28								
957									
	29	G	G13						
956					END OF HOLE AT 29.56 m				
	30								

(Continued on next page)

DRILL HOLE # BGC14-014D

Coordinates (m): 686672E - 5607810N
Ground Elevation (m): 986
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.89

Location: SMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 5.18

Start Date: 04 Mar 2014
Finish Date: 05 Mar 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 18.90
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
955	30				NOTES: 1. 2" PVC standpipe piezometer installed with screen from 23.47 to 29.56 metres. 2. Filter sand placed from 22.56 to 29.56 metres. 3. Bentonite seal placed from 20.57 to 22.56 metres.				
954	31								
953	32								
952	33								
951	34								
950	35								
949	36								
948	37								
947	38								
946	39								
	40								

Project No.: 1125-007

Project: Ajax Project Environmental Assessment

DRILL HOLE # BGC14-014S

Location: Ajax Project Site

Coordinates (m): 686672E - 5607810N
Ground Elevation (m): 986
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.89

Location: SMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 5.18

Start Date: 05 Mar 2014
Finish Date: 05 Mar 2014
Final Depth (m): 18.90
Depth to Top of Rock (m): N/A
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
986	0				SAND (SW) Fine to coarse, gravelly, silty, well graded, dark brown with grey clasts. [TOPSOIL]	0	Moist from snow melt	05/03/2014 11:28	
985	1								
984	2				GRAVEL (GW) Fine to coarse, silty, some fine to coarse sand, well graded, angular to subrounded, greyish brown. [GLACIOFLUVIAL]		Dry	05/03/2014 11:31	
983	3								
982	4				SILT (ML) Some fine sand, trace to some gravel, low plasticity, uniformly graded, brown with grey clasts, clasts are angular. [TILL]		Dry	05/03/2014 11:35	
981	5				Below 4.57 m - sandy, fine.		Dry to moist	05/03/2014 11:39	Welding time 11:40 to 12:04.
980	6				Below 6.10 m - decrease in gravel, light greyish brown with grey and brown clasts.		Dry to moist	05/03/2014 12:06	
979	7								
978	8						Dry to moist	05/03/2014 12:10	
977	9						Dry to moist	05/03/2014 12:13	
976	10					9.75			

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BGC ENGINEERING INC.
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Client: KGHM Ajax Mining Inc.

Print Date: 5/28/2015

AJAX (HYDROGEO) AJAX_SOIL_HYDROGEO.GDL BGC.GDT 5/28/15

DRILL HOLE # BGC14-014S

Coordinates (m): 686672E - 5607810N
Ground Elevation (m): 986
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.89

Location: SMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 5.18

Start Date: 05 Mar 2014
Finish Date: 05 Mar 2014
Final Depth (m): 18.90
Depth to Top of Rock (m): N/A
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
975	10				Below 10.67 m - trace clay.		Dry to moist	05/03/2014 12:15	Welding time 12:16 to 12:40.
974	11								
	12					12.19	Dry to moist	05/03/2014 12:42	
973						12.8			
972	13						Dry to moist	05/03/2014 12:46	
971	14								
	15				Below 15.24 m - increase in gravel content, angular to subrounded.		Dry to moist	05/03/2014 12:50	
970	16								
969					Below 16.76 m - decrease in gravel content.		Dry to moist	05/03/2014 12:59	Welding time 13:00 to 13:20.
968	17								
	18								
967					Below 18.29 m - gravel is angular.		Dry to moist	05/03/2014 13:22	
	19				END OF HOLE AT 18.90 m				
966					NOTES: 1. 2" PVC standpipe peizometer installed with screen from 12.80 to 18.90 metres. 2. Filter sand placed from 12.19 to 18.90 metres. 3. Bentonite seal placed from 9.75 to 12.19 metres.				
	20								

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: KGHM Ajax Mining Inc.
Print Date: 5/28/2015

DRILL HOLE # BGC14-015D

Coordinates (m): 686773E - 5606920N
Ground Elevation (m): 977
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.94

Location: SMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 5.18

Start Date: 06 Mar 2014
Finish Date: 06 Mar 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 11.28
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
977	0				SILT (ML) Sandy, some gravel, trace clay, sand is fine, gravel is fine, well graded, low plasticity, dark brown with grey clasts. [TILL]	0	Moist	06/03/2014 07:50	Drill bit plugged with soil 7:51 to 8:43.
976	1								At 0.95 m - static water level, measured 5/7/2014 2:02.
975	2						Dry to moist	06/03/2014 08:45	
974	3	G	G1		Below 3.04 m - some fine sand, trace to some clay.		Dry to moist	06/03/2014 08:47	
973	4								
972	5	G	G2		SAND (SP) Fine, some fine gravel, trace silt, uniformly graded, brown with brown and grey clasts. [TILL]		Dry	06/03/2014 08:57	Welding time 8:58 to 9:20.
971	6	G	G3		Below 6.10 m - some silt, trace gravel, slight increase in moisture content.		Dry	06/03/2014 09:23	
970	7				At 7.01 m - boulder.			06/03/2014 09:25	Changing drill bit 9:25 to 9:33.
969	8	G	G4		Below 7.62 m - increase in silt, gravel no longer present.		Dry to moist	06/03/2014 00:00	
968	9				GRAVEL AND SAND (SP/GP) Gravel is fine to coarse, sand is medium to coarse, trace silt, uniformly graded, subrounded, dark grey. [GLACIOFLUVIAL]		Wet	06/03/2014 09:36	At 8.53 m - water encountered.
967	10	G	G5		Below 9.14 m - trace to some silt, subangular to subrounded.		Wet	06/03/2014 09:40	

(Continued on next page)

DRILL HOLE # BGC14-015D

Coordinates (m): 686773E - 5606920N
Ground Elevation (m): 977
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.94

Location: SMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 5.18

Start Date: 06 Mar 2014
Finish Date: 06 Mar 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 11.28
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
966	10				Below 10.67 - trace to some clay, driller described as cohesive drilling.		Wet	06/03/2014 09:47	Welding time and had to case through boulder 9:49 to 10:30. At 11.25 m - attempted to airlift, no water expelled.
965	11								
	12	G	G6		WEATHERED BEDROCK Drill cuttings: gravel and sand, gravel is coarse, sand is coarse, subangular, brownish grey, moderately to extremely weathered. [NICOLA VOLCANICS]		Wet	06/03/2014 10:30	
964	13								
963	14	G	G7		Below 13.72 m - fine sand, uniformly graded, brownish grey.			06/03/2014 10:45	
962	15				BEDROCK Drill cuttings: fine grained, angular, grey, fresh and unweathered. [NICOLA VOLCANICS]		Dry	06/03/2014 10:48	Hard drilling.
		G	G8				Dry	06/03/2014 10:50	Tripping out rods to switch drill bits 10:55 to 11:08.
961	16								
960	17				Below 16.76 m - average particle size is 4 mm.		Dry	06/03/2014 11:10	Welding time 11:15 to 11:40.
959	18								
		G	G9		Below 18.29 m - average particle size is 5 mm.		Dry	06/03/2014 11:54	
958	19								
957	20						Dry	06/03/2014 11:55	

(Continued on next page)

DRILL HOLE # BGC14-015D

Coordinates (m): 686773E - 5606920N
Ground Elevation (m): 977
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.94

Location: SMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 5.18

Start Date: 06 Mar 2014
Finish Date: 06 Mar 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 11.28
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
	20					20.12			
956									
	21								
		G	G10				Dry	06/03/2014 11:56	
955									
	22					22.25			
954									
	23							06/03/2014 11:57	
953						23.47			
	24								
		G	G11		Below 24.38 m - average clast size is 3 mm.		Dry	06/03/2014 11:58	
952									
	25								
951									
	26				Below 25.91 m - average particle size is 2 - 3 mm.		Dry	06/03/2014 11:59	
950									
	27								
		G	G12		Below 27.43 m - fine sand present in cuttings, increase in weathering.		Dry	06/03/2014 12:00	
949									
	28								
948									
	29	G	G13		At 28.96 m - average particle size is 4 mm.		Dry	06/03/2014 12:02	Driller described "break in dust". From 29.26 m to 29.56 m - moisture detected, not enough for airlift.
947					END OF HOLE AT 29.56 m				
	30								

(Continued on next page)

DRILL HOLE # BGC14-015D

Coordinates (m): 686773E - 5606920N
Ground Elevation (m): 977
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.94

Location: SMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 5.18

Start Date: 06 Mar 2014
Finish Date: 06 Mar 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 11.28
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
946	30				NOTES: 1. 2" PVC standpipe piezometer installed with screen from 23.47 to 29.56 metres. 2. Filter sand placed from 22.25 to 29.56 metres. 3. Bentonite seal placed from 20.17 to 22.25 metres.				
945	31								
944	32								
943	33								
942	34								
941	35								
940	36								
939	37								
938	38								
937	39								
	40								

DRILL HOLE # BGC14-015S

Coordinates (m): 686773E - 5606920N
Ground Elevation (m): 977
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.89

Location: SMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 2.13

Start Date: 06 Mar 2014
Finish Date: 06 Mar 2014
Final Depth (m): 11.28
Depth to Top of Rock (m): N/A
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
977	0				SILT (ML) Sandy, trace gravel, trace clay, sand is fine, well graded, low plasticity, brown with grey and brown clasts. [TILL]	0	Moist	06/03/2014 15:10	
976	1								At 0.88 m - static water level, measured 5/28/2014 10:27.
975	2						Dry to moist	06/03/2014 15:13	
974	3				Below 3.04 m - some sand increase in clay.		Dry to moist	06/03/2014 15:16	
973	4								
972	5				SAND (SW) Fine, gravelly, silty, gravel is fine to coarse, well graded, angular, dark grey with grey clasts. [TILL]	5.49	Dry	06/03/2014 15:19	Welding time 15:20 to 15:46.
971	6				Below 6.10 m - decrease in silt content.		Dry	06/03/2014 15:51	
970	7								
969	8				Below 7.62 m - increase in silt content, dark greyish brown.	7.62 8.23	Dry	06/03/2014 15:54	
968	9								
967	10				SAND (SP) Fine, trace silt, some gravel to gravelly, gravel is fine, uniformly graded, greyish brown. [GLACIOFLUVIAL]			06/03/2014 15:55	At 9.14 m - moisture encountered.

(Continued on next page)

DRILL HOLE # BGC14-015S

Coordinates (m): 686773E - 5606920N
Ground Elevation (m): 977
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.89

Location: SMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 2.13

Start Date: 06 Mar 2014
Finish Date: 06 Mar 2014
Final Depth (m): 11.28
Depth to Top of Rock (m): N/A
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
966	10–11				Below 10.67 m - gravelly, fine to coarse.		Moist	06/03/2014 15:58	
965	12				END OF HOLE AT 11.28 m NOTES: 1. 2" PVC standpipe piezometer installed with screen from 8.23 to 11.28 metres. 2. Filter sand placed from 7.62 to 11.28 metres. 3. Bentonite seal placed from 5.49 to 7.62 metres.				
964	13								
963	14								
962	15								
961	16								
960	17								
959	18								
958	19								
957	20								

Project No.: 1125-007

Project: Ajax Project Environmental Assessment

DRILL HOLE # BGC14-016

Location: Ajax Project Site

Coordinates (m): 685348E - 5607041N
Ground Elevation (m): 1,039
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.89

Location: SMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 5.18

Start Date: 07 Mar 2014
Finish Date: 07 Mar 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 1.83
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
1039	0				SAND AND GRAVEL (SP/GP) Sand is fine, gravel is fine to coarse, gap graded, light brown with brown and grey clasts. [TOPSOIL]	0	Dry	07/03/2014 09:52	
1038	1	G	G1				Dry	07/03/2014 09:55	Cutting casing, switching drill bits 9:56 to 10:08.
1037	2				BEDROCK Drill cuttings: fine to medium grained, angular, light grey, slightly weathered, average clast size is 5 mm.				
1036	3	G	G2				Dry	07/03/2014 10:10	Hard drilling.
1035	4								
1034	5				Below 4.57 m - grey, average clast size is 4 mm, slight decrease in weathering grade.		Dry	07/03/2014 10:13	
1033	6								At 5.46 m - static water level, measured 3/21/2014 7:48.
1032	7	G	G3		Below 6.10 m - average clast size is 2 - 3 mm, fresh and unweathered.		Dry	07/03/2014 10:20	
1031	8				Below 7.62 m - darker grey.				
1030	9	G	G4		Below 9.14 m - average clast size is 3 mm.		Dry	07/03/2014 10:31	
1029	10								

(Continued on next page)

DRILL HOLE # BGC14-016

Coordinates (m): 685348E - 5607041N
Ground Elevation (m): 1,039
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.89

Location: SMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 5.18

Start Date: 07 Mar 2014
Finish Date: 07 Mar 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 1.83
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
	10								
1028	11						Dry	07/03/2014 10:37	
1027	12	G	G5		Below 12.19 m - subangular to angular, light grey to white, slightly weathered.				
1026	13								
1025	14				Below 13.72 m - slightly darker grey.		Dry	07/03/2014 10:47	Environmental inspection 10:48 to 11:09.
1024	15	G	G6		Below 15.24 m - angular to subrounded, grey, average clast size is 4 mm.		Dry	07/03/2014 11:13	
1023	16								
1022	17				Below 16.76 m - angular, dark grey.		Dry	07/03/2014 11:17	
1021	18	G	G7		Below 18.29 m - angular to subangular, grey, average clast size is 5 mm.		Dry	07/03/2014 11:26	
1020	19								
1019	20						Dry	07/03/2014 11:32	Very hard drilling.

(Continued on next page)

DRILL HOLE # BGC14-016

Coordinates (m): 685348E - 5607041N
Ground Elevation (m): 1,039
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.89

Location: SMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 5.18

Start Date: 07 Mar 2014
Finish Date: 07 Mar 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 1.83
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
	20					20.12			
1018	21	G	G8		Below 21.34 m - angular, average clast size is 2 - 3 mm.		Dry	07/03/2014 11:39	
1017	22					22.56			
1016	23						Dry	07/03/2014 11:44	
1015	24	G	G9			23.47	Dry	07/03/2014 11:49	
1014	25								
1013	26	G	G10		Below 25.91 m - subangular, whitish grey.		Dry	07/03/2014 11:56	
1012	27					▽		07/03/2014 11:57	At 26.82 m - water encountered.
1011	28	G	G11		Below 27.43 m - subrounded to subangular, dark grey, slightly weathered.		Wet	07/03/2014 12:03	Softer drilling.
1010	29	G	G12				Wet	07/03/2014 12:08	
1009	30				END OF HOLE AT 29.56 m			07/03/2014 12:08	AIRLIFT #1 0.2 US GPM (estimated from

(Continued on next page)

DRILL HOLE # BGC14-016

Coordinates (m): 685348E - 5607041N
Ground Elevation (m): 1,039
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.89

Location: SMRSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 5.18

Start Date: 07 Mar 2014
Finish Date: 07 Mar 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 1.83
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
	30				NOTES: 1. 2" PVC standpipe peizometer installed with screen from 23.47 to 29.56 metres. 2. Filter sand placed from 23.47 to 29.56 metres. 3. Bentonite seal placed from 20.12 to 22.56 metres.				buildup).
1008	31								
1007	32								
1006	33								
1005	34								
1004	35								
1003	36								
1002	37								
1001	38								
1000	39								
999	40								

DRILL HOLE # BGC14-017D

Coordinates (m): 685540E - 5605928N
Ground Elevation (m): 1,040
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.91

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 5.18

Start Date: 10 Mar 2014
Finish Date: 10 Mar 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 3.96
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
1040	0				SAND (SW) Fine, silty, some fine to coarse gravel, well graded, dark brown, trace organics (roots, 5 - 10 mm diameter). [TOPSOIL]	0	Moist	10/03/2014 10:41	Artesian, noted 5/13/2014 9:36:00.
1039	1	G	G1						
	2								
1038	3				SILT (ML) Sandy, trace to some fine to coarse gravel, trace clay, sand is fine, well graded, light brown, low plasticity, clasts are angular. [TILL]		Moist	10/03/2014 10:42	
1037		G	G2				Moist	10/03/2014 10:44	
1036	4				BEDROCK Drill cuttings: fine to medium grained, angular, grey, fresh and unweathered to slightly weathered.		Dry	10/03/2014 10:47	Changing drill bit 10:49 to 11:04.
1035	5								At 5.49 m - moisture encountered.
1034	6	G	G3		Below 6.10 m - fine, grey, slightly green, fresh and unweathered, average clast size is 7 mm.		Dry	10/03/2014 11:06	
1033	7								
1032	8				Below 7.62 m - bluish grey, average clast size is 4 mm.		Dry	10/03/2014 11:10	At 8.23 m - moisture encountered.
1031	9	G	G4				Dry	10/03/2014 11:14	
	10								

(Continued on next page)

DRILL HOLE # BGC14-017D

Coordinates (m): 685540E - 5605928N
Ground Elevation (m): 1,040
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.91

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 5.18

Start Date: 10 Mar 2014
Finish Date: 10 Mar 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 3.96
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
1030	10								
					Below 10.67 m - angular to subangular, average clast size is 3 mm.		Dry	10/03/2014 11:17	
1029	11								At 10.97 m - moisure encountered.
	12								
1028		G	G5				Dry	10/03/2014 11:21	
1027	13								
		G	G6		Below 13.72 m - greenish grey sand present in cuttings, slightly weathered.		Dry	10/03/2014 11:25	
1026	14								
1025	15	G	G7		Below 15.24 m - average clast size is 2 mm, slightly weathered.		Dry	10/03/2014 11:29	
1024	16								
	17						Dry	10/03/2014 11:32	
1023									
1022	18	G	G8		At 18.29 m - lumps of clayey silt present in cuttings with slight oxidation, gravel cuttings are subrounded, slightly purplish red to grey, modereately weathered.		Dry to slightly moist	10/03/2014 11:36	
1021	19								
	20	G			Below 19.81 m - grey clasts with some greenish grey sand present, angular to		Dry	10/03/2014 11:39	

(Continued on next page)

DRILL HOLE # BGC14-017D

Coordinates (m): 685540E - 5605928N
Ground Elevation (m): 1,040
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.91

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 5.18

Start Date: 10 Mar 2014
Finish Date: 10 Mar 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 3.96
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
1020	20	G	G9		subrounded.	20.12			
1019	21	G	G10		Below 21.34 m - purplish grey, mostly fine sand, moderately weathered.		Dry	10/03/2014 11:43	
1018	22					22.56			
1017	23	G	G11		Below 22.86 m - only some sand present, gravel cuttings are greyish green, angular, slightly weathered.		Dry	10/03/2014 11:48	
1016	24	G	G12			23.47	Dry to slightly moist	10/03/2014 11:54	At 23.47 m - moisture encountered.
1015	25								
1014	26	G	G13					10/03/2014 11:59	At 25.91 m - sand is dry to slightly moist.
1013	27								At 26.82 m - moisture encountered.
1012	28	G	G14		Below 27.43 m - moderately weathered, faint oxidation, moisture encountered.		Dry to slightly moist	10/03/2014 12:04	
1011	29	G	G15		Below 28.96 m - slightly weathered.		Dry	10/03/2014 12:09	AIRLIFT #1 0.2 US GPM
	30				END OF HOLE AT 29.56 m				

(Continued on next page)

DRILL HOLE # BGC14-017D

Coordinates (m): 685540E - 5605928N
Ground Elevation (m): 1,040
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.91

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 5.18

Start Date: 10 Mar 2014
Finish Date: 10 Mar 2014
Final Depth (m): 29.56
Depth to Top of Rock (m): 3.96
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
1010	30				NOTES: 1. 2" PVC standpipe piezometer installed with screen from 23.47 to 29.56 metres. 2. Filter sand placed from 22.56 to 29.56 metres. 3. Bentonite seal placed from 20.12 to 22.56 metres.				
1009	31								
1008	32								
1007	33								
1006	34								
1005	35								
1004	36								
1003	37								
1002	38								
1001	39								
	40								

DRILL HOLE # BGC14-017S

Project No.: 1125-007

Project: Ajax Project Environmental Assessment

Location: Ajax Project Site

Coordinates (m): 685540E - 5605928N
Ground Elevation (m): 1,040
Survey Method: Handheld GPS
Datum: NAD83 UTM ZONE 10U
Stick-up (m): 0.89

Location: TSF
Drilling Contractor: JR Drilling Central Ltd.
Drill Method: Dual Rotary
Diameter (m): 0.15
Fluid: Air
Cased To (m): 1.52

Start Date: 10 Mar 2014
Finish Date: 10 Mar 2014
Final Depth (m): 5.18
Depth to Top of Rock (m): 4.57
Logged By: SLP
Reviewed By: TWC

Elevation (m)	Depth (m)	Sample Type	Sample No.	Symbol	Lithologic Description	Instrument Details Depth (m)	Water Notes	Date + Time	Comments
1040	0				SAND (SW) Fine, silty, some fine to coarse gravel, well graded, dark brown, trace organics (rootlets). [TOPSOIL]	0	Moist	10/03/2014 13:42	
1039	1								At 0.9 m - static water level, measured 5/25/2014 3:40.
							Moist	10/03/2014 13:43	
1038	2								
						2.74			
1037	3				SILT (ML) Sandy, trace fine to coarse gravel, trace clay, well graded, low plasticity, light brown with brown and grey clasts, clasts are angular to subrounded. [TILL]	3.04	Moist	10/03/2014 13:44	
1036	4								
						4.57			
	5				BEDROCK Drill cuttings: fine to medium grained, angular, angular, fresh and unweathered to slightly weathered.		Dry	10/03/2014 13:45	
1035					END OF HOLE AT 5.18 m NOTES: 1. 2" PVC standpipe peizometer installed with screen from 3.04 to 4.57 metres. 2. Filter sand placed from 2.74 to 5.18 metres. 3. Bentonite seal placed from 0.00 to 2.74 metres.				
	6								
1034									
	7								
1033									
	8								
1032									
	9								
1031									
	10								

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: KGHM Ajax Mining Inc.

Print Date: 5/28/2015

AJAX (HYDROGEO) AJAX_SOIL_HYDROGEO.GDL BGC.GDT 5/28/15

APPENDIX F5

KAX-14 SERIES WELLS

(Pages F5-1 to F5-23)

OVERBURDEN DRILLHOLE LOG KAX-14-107

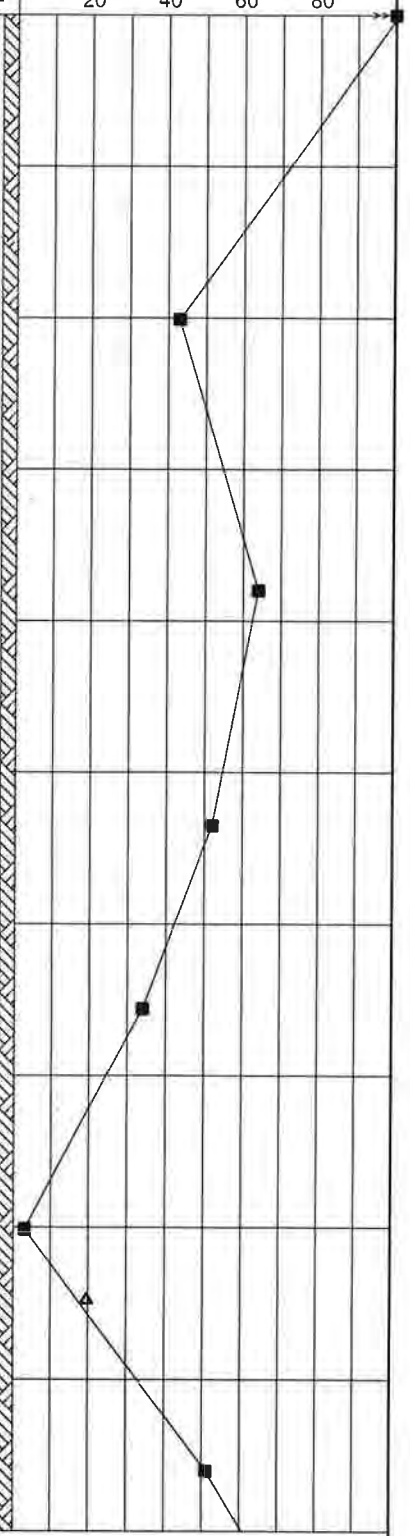
STARTED: Feb 28, 2014 **FINISHED:** April 18, 2014
DRILL METHOD: PQ3 Coring
GROUND ELEV. (m): 896.2
COORDINATES (m): N 5609202 E 683223

DEPTH (m)	SPT BLOWS PER 0.15m	SAMPLE TYPE AND NO.	SAMPLE RECOVERY	SYMBOL	DESCRIPTION OF MATERIALS
	14 37 25/4"	SPT-KCB13 -05-0 0	75%		0.1 / 896.1 ORGANIC SILT (OL), low plasticity, some sand, hard (frozen), brown, organic odour, moist, some wood and rootlets, (TOPSOIL)
1		Run 1	19%		SAND AND GRAVEL (SM), fine to coarse grained, some silt, well graded, dense, angular, grey to brown, dry, homogeneous, trace organics, (GLACIAL TILL)
					1.6 m: Boulder
2	8 20 23/4"	SPT-KCB13 -05-2 01	68%		2.0 m: Sand with some gravel, some silt to silty, brown
					SPT test stopped short because of a mechanical problem with the SPT hammer.
		Run 2	36%		
3					
4	22 27 37	SPT-KCB13 -05-3 8	33%		3.8 m: Gravelly
		Run 3	18%		
5					5.35 m: Trace gravel
	6 20 32	SPT-KCB13 -05-5 35	147%		5.8 / 890.4 No recovery
6		Run 4	13%		
					6.6 / 889.6 SAND (SM), fine to coarse grained, silty, trace gravel, well graded, compact to dense, brown, moist, slow dilatancy, homogeneous, (GLACIAL TILL)
	7 19 15	SPT-KCB13 -05-6 56	67%		
7		Run 5	80%		
8					8.0 / 888.1 SAND (SC), fine to coarse grained, clayey, some gravel, well graded, compact, subangular, max. size 50 mm, brown, moist, pocket penetrometer readings 1.0 kg/cm^2 to 2.5 kg/cm^2, homogeneous, (GLACIAL TILL)
	1 0 3	SPT-KCB13 -05-8 01	60%		
		Run 6	47%		
9					9.6 / 886.6 CLAY (CL), sandy, some gravel, low plasticity, very stiff, brown, moisture below plastic limit
10	5 25 26	SPT-KCB13 -05-9 60	56%		

Continued Next Page

INSTRUMENT DETAILS

Su - kPa
25 75 125 175 225
◆ UC/2 ▲ P.PEN/2
WATER1 ▽ WATER2 ▼ WATER3 ▼
★ % FINES ■ SPT N ◘ LPT N
W_P% W% W_L%
20 40 60 80



Klohn Crippen Berger

PROJECT NO.: M09871A01
PROJECT: Ajax Mine Groundwater Study
LOCATION: Ajax Mine, Kamloops, BC
LOGGED BY: MC/DW **CHECKED BY:** MAB
SHEET 1 **OF** 15 **HOLE NO.:** KAX-14-107

KCBL_OVERBURDEN_DRILLLOGS-SI 140624 AJAX OVERBURDEN_ES.GPJ KC_DATA.GDT 3/20/15

OVERBURDEN DRILLHOLE LOG KAX-14-107

STARTED: Feb 28, 2014 **FINISHED:** April 18, 2014
DRILL METHOD: PQ3 Coring
GROUND ELEV. (m): 896.2
COORDINATES (m): N 5609202 E 683223

DEPTH (m)	SPT BLOWS PER 0.15m	SAMPLE TYPE AND NO.	SAMPLE RECOVERY	SYMBOL	DESCRIPTION OF MATERIALS
					886.1 homogeneous, (GLACIAL TILL)
11		Run 7	35%		SAND (SC), fine to coarse grained, clayey, some gravel, well graded, compact, subangular, max. size 50 mm, brown, moist, pocket penetrometer readings 1.0 kg/cm^2 to 2.5 kg/cm^2, homogeneous, (GLACIAL TILL)
					11.2 885.0
	15 47 40	SPT-KCB13 -05-11.10	89%		CLAY (CL), sandy, low plasticity, very stiff, brown, moisture below plastic limit, homogeneous, (GLACIAL TILL)
			0%		11.4 884.8
12		Run 8			SAND (SC), fine grained, some clay, poorly graded, compact, brown, moist, homogeneous, (GLACIAL TILL)
					12.5 883.7
			22%		SAND (SW), fine to coarse grained, some silt, trace gravel, dense, sub-angular, brown, moist, homogeneous, (GLACIAL TILL)
	12 21 26	SPT-KCB13 -05-12.5			
13			14%		
		Run 9			
					14.0 882.2
14			56%		CLAY (CI), silty, some sand, trace gravel, medium plasticity, stiff to very stiff, brown, moist, varved 1 to 5 cm, no dilatancy, (GLACIAL LACUSTRINE TILL) pocket penetrometer readings 1.0 kg/cm^2 to 2.5 kg/cm^2,
	11 11 12	SPT-KCB13 -05-14.0			
15		Run 10	100%		
	6 10 9	SPT-KCB13 -05-15.5	89%		
16			24%		
		Run 11			
17	1 5 9	SPT-KCB13 -05-17.0	100%		
		Run 12	24%		
18					
			22%		18.6 877.6 Gravel in bottom of split spoon
	11 35 22/2"	SPT-KCB13 -05-18.5			No recovery
19			0%		
		Run 13			
20					20.0

Continued Next Page

INSTRUMENT DETAILS

Su - kPa
25 75 125 175 225
◆ UC/2 ▲ P.PEN/2
WATER1 ▽ WATER2 ▼ WATER3 ▼
★ % FINES ■ SPT N □ LPT N
W_P% W% W_L%
20 40 60 80

Klohn Crippen Berger

PROJECT NO.: M09871A01
PROJECT: Ajax Mine Groundwater Study
LOCATION: Ajax Mine, Kamloops, BC
LOGGED BY: MC/DW **CHECKED BY:** MAB
SHEET 2 **OF** 15 **HOLE NO.:** KAX-14-107

KCB_OVERBURDEN_DRILLLOGS-SI 140624 AJAX OVERBURDEN_ES.GPJ KC_DATA.GDT 3/20/15

OVERBURDEN DRILLHOLE LOG KAX-14-107

STARTED: Feb 28, 2014 **FINISHED:** April 18, 2014
DRILL METHOD: PQ3 Coring
GROUND ELEV. (m): 896.2
COORDINATES (m): N 5609202 E 683223

Su - kPa: 25 75 125 175 225 ◆ UC/2 ▲ P.PEN/2
WATER1 ▽ WATER2 ▼ WATER3 ▼
★ % FINES ■ SPT N □ LPT N
W_P% W% W_L%
20 40 60 80

DEPTH (m)	SPT BLOWS PER 0.15m	SAMPLE TYPE AND NO.	SAMPLE RECOVERY	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
			22%		896.2 Gravel in bottom of split spoon	
	17, 28/1"	SPT-KCB13 -05-20 0			876.1 Washed cobbles in core barrel	
21		Run 14	67%			
					21.5 874.7 SILT (ML), some sand, non-plastic, rapid dilatancy, stiff to very stiff, medium sensitivity, brown to grey, moist, fissured	
22		Run 15	100%			
		Core-KCB13 -05-24 0	100%			
23		Run 16	100%			
24						
	25 75/5"	SPT-KCB13 -05-24 5	78%			
25		Run 17	74%			
26	27 50/5"	SPT-KCB13 -05-26 0	100%		26.0 m: Becomes stratified with fine grained sand, layers up to 10 mm thick	
			0%		26.3 869.9 No recovery	
27		Run 18				
					27.5 868.7 27.5 m: 100 mm zone of SAND (SW), fine to coarse grained, trace silt, well graded, loose, subangular, brown to grey, moist, homogeneous (SLOUGH)	
	21 45 50/5"	SPT-KCB13 -05-27.5	88%			
28			0%		27.9 868.2 SAND (SM), fine grained, silty, poorly graded, dense to very dense, subangular, brown to grey, moist, homogeneous	
		Run 19			No recovery - Driller noted that the sample was either washed away during drilling or fell out of the sample tube. - Driller noted that it felt like the material was "locking" the rods which could indicate a sandy material.	
29			0%		No SPT sample recovered.	
	14 14 10	SPT-KCB13 -05-29 0				
			0%			
30						

Continued Next Page

Klohn Crippen Berger

PROJECT NO.: M09871A01
PROJECT: Ajax Mine Groundwater Study
LOCATION: Ajax Mine, Kamloops, BC
LOGGED BY: MC/DW **CHECKED BY:** MAB
SHEET 3 **OF** 15 **HOLE NO.:** KAX-14-107

KCBL_OVERBURDEN_DRILLLOGS-SI 140624 AJAX OVERBURDEN_ES.GPJ KC_DATA.GDT 3/20/15

OVERBURDEN DRILLHOLE LOG KAX-14-107

STARTED: Feb 28, 2014 **FINISHED:** April 18, 2014
DRILL METHOD: PQ3 Coring
GROUND ELEV. (m): 896.2
COORDINATES (m): N 5609202 E 683223

Su - kPa: 25 75 125 175 225 ◆ UC/2 ▲ P.PEN/2
WATER1 ▽ WATER2 ▼ WATER3 ▼
★ % FINES ■ SPT N □ LPT N
W_P% W% W_L%
20 40 60 80

DEPTH (m)	SPT BLOWS PER 0.15m	SAMPLE TYPE AND NO.	SAMPLE RECOVERY	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT	DETAILS
		Run 20					
					30.5 / 865.7 SILT (ML), some gravel, some sand, low plasticity, stiff, interbedded with fine gravel, brown, moist (GLACIAL TILL)		
	40 50 40	SPT-KCB13 -05-30 5	78%				
31		Run 21	38%				
32	9 13/3"	SPT-KCB13 -05-32 0	33%		32.0 / 864.2 31.9 m: 20 mm varved clay layer(GLACIAL LACUSTRINE TILL) SAND (SW), fine to coarse grained, trace silt, trace gravel, well graded, compact, max. size 30 mm, subangular, brown to grey, moist		
		Run 22	29%		32.5 / 863.7 Washed cobbles		
33			0%		33.5 / 862.7 No recovery.		
34		Run 23					
35	12 40 57	SPT-KCB13 -05-35 0	89%		35.0 / 861.2 SAND (SW), fine to coarse grained, gravelly, some silt, well graded, very dense, max. size 40 mm, subangular, brown to moist, gravel pockets		
			0%		35.5 / 860.7 No recovery.		
36		Run 24					
	3	SPT-KCB13 -05-36 3	67%		36.3 / 859.9 36.3 m: Driller noted the bit was not advancing past 36.3 m and suspected bedrock contact. Circulation was normal. Washed gravel and cobbles, subrounded to rounded		
37		Run 25	43%				
38		Run 26	57%		38.8 / 857.4 Fractured Rock - Diorite (IMH or SLD), R4, fresh to slightly weathered, clay filled fractures up to 2 cm thick, clay is CLAY (CI) medium plastic, stiff, brown, moist		
39					39.4 / 856.7 Rock - Diorite (IMH or SLD) R4, dark grey, fresh to slightly weathered. More details on Rock Log.		
40					End of Overburden Drill Log at 38.8 m. See Rock Log. Continued Next Page		

Klohn Crippen Berger

PROJECT NO.: M09871A01
PROJECT: Ajax Mine Groundwater Study
LOCATION: Ajax Mine, Kamloops, BC
LOGGED BY: MC/DW **CHECKED BY:** MAB
SHEET 4 **OF** 15 **HOLE NO.:** KAX-14-107

KCBL_OVERBURDEN_DRILLLOGS-SI 140624 AJAX OVERBURDEN_ES.GPJ KC_DATA.GDT 3/20/15

OVERBURDEN DRILLHOLE LOG KAX-14-107

STARTED: Feb 28, 2014 **FINISHED:** April 18, 2014
DRILL METHOD: PQ3 Coring
GROUND ELEV. (m): 896.2
COORDINATES (m): N 5609202 E 683223

DEPTH (m)	SPT BLOWS PER 0.15m	SAMPLE TYPE AND NO.	SAMPLE RECOVERY	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
41					Shallow Monitoring Well: 50.8 mm (2") Schedule 80 PVC Standpipe with slotted screen. Screen 29.9 to 38.0 mbgl Filter pack 27.0 to 38.5 mbgl Deep Monitoring Well: 50.8 mm (2") Schedule 80 PVC Standpipe with slotted screen. Screen 56.7 to 75 mbgl Filter pack 56 to76 mbgl Deep monitoring well installed in an offset hole. Negligible changes in lithology over the short offset distance were recorded.	
42						
43						
44						
45						
46						
47						
48						
49						
50						

Su - kPa
25 75 125 175 225
◆ UC/2 ▲ P.PEN/2
WATER1 ▽ WATER2 ▼ WATER3 ▼
★ % FINES ■ SPT N □ LPT N
W_P% W% W_L%
20 40 60 80

Klohn Crippen Berger

PROJECT NO.: M09871A01
PROJECT: Ajax Mine Groundwater Study
LOCATION: Ajax Mine, Kamloops, BC
LOGGED BY: MC/DW **CHECKED BY:** MAB
SHEET 5 **OF** 15 **HOLE NO.:** KAX-14-107

KCBL_OVERBURDEN_DRILLLOGS-SI 140624 AJAX OVERBURDEN_ES.GPJ KC_DATA.GDT 3/20/15

OVERBURDEN DRILLHOLE LOG KAX-14-108

STARTED: Mar 11, 2014 **FINISHED:** Mar 26, 2014
DRILL METHOD: PQ3 Coring
GROUND ELEV. (m): 901.4
COORDINATES (m): N 5609428 E 683140

Su - kPa: 25 75 125 175 225 ◆UC/2 ▲P.PEN/2
WATER1 ▽ WATER2 ▼ WATER3 ▼
★ % FINES ■ SPT N □ LPT N
W_P% W% W_L%
× – – – – ▲ – – – – × 20 40 60 80

DEPTH (m)	SPT BLOWS PER 0.15m	SAMPLE TYPE AND NO.	SAMPLE RECOVERY	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
0			3%		0.1 / 901.3 ORGANIC SILT (OL), sandy, low plasticity, stiff (frozen), brown, moist, homogeneous, some rootlets, (Topsoil)	
1		Run 1			SAND (SM), fine to coarse grained, silty, some gravel, some cobbles, well graded, compact to dense, subrounded, max. size 500 mm, brown, moist to dry, homogeneous (GLACIAL TILL)	
2					2.1 / 899.4	
			15%		SILT (ML), sandy, some gravel, low plasticity, stiff, brown, moist, slow dilatancy, homogeneous (GLACIAL TILL)	
			8%			
3	6 13 15	SPT-KAX-14 -108-2 07				
					3.7 / 897.7	
			3%		SILT and GRAVEL (ML), some sand, low plasticity, stiff, brown, moist, homogeneous, gravel is coarse grained, well graded, subrounded (GLACIAL TILL)	
4		Run 2				
			15%			
5						
			6%			
	50/5"	SPT-KAX-14 -108-3 71	7%			
6		Run 3			6.7 / 894.7	
			1%		CLAY (CL), silty, sandy, some gravel, low plasticity, very stiff, grey, drier than plastic limit, homogeneous (GLACIAL TILL); Pocket Pen > 4.5 kg/cm2	
7			6%			
					8.2 / 893.2	
8	25 50 50	SPT-KAX-14 -108-5 21	2%		GRAVEL (GC), fine to coarse grained, clayey, some sand, well graded, compact to dense, max. particle size of 2 cm, angular to sub-angular, grey, moist to wet, homogeneous (GLACIAL TILL)	
		Run 4	5%			
9					9.5 / 891.9	
			4%		SAND (SM), fine to coarse grained, gravelly, some silt, well graded, compact to very dense, max. particle size of 3 cm, flat, subangular to subrounded grey	
10			0%		Continued Next Page	

Klohn Crippen Berger

PROJECT NO.: M09871A01
PROJECT: Ajax Mine Groundwater Study
LOCATION: Ajax Mine, Kamloops, BC
LOGGED BY: MC/MK **CHECKED BY:** MAB
SHEET 1 **OF** 18 **HOLE NO.:** KAX-14-108

KCBL_OVERBURDEN_DRILLLOGS-SI 140624 AJAX OVERBURDEN_ES.GPJ KC_DATA.GDT 3/20/15

OVERBURDEN DRILLHOLE LOG KAX-14-108

STARTED: Mar 11, 2014 **FINISHED:** Mar 26, 2014
DRILL METHOD: PQ3 Coring
GROUND ELEV. (m): 901.4
COORDINATES (m): N 5609428 E 683140

Su - kPa
25 75 125 175 225
◆ UC/2 ▲ P.PEN/2
WATER1 ▽ WATER2 ▼ WATER3 ▼
★ % FINES ■ SPT N □ LPT N
W_P% W% W_L%
20 40 60 80

DEPTH (m)	SPT BLOWS PER 0.15m	SAMPLE TYPE AND NO.	SAMPLE RECOVERY	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
		Run 7			moist to wet, homogeneous (GLACIAL TILL)	
	20 26 26	SPT-KAX-12 -SPT-6 71	0%			
		Run 8				
		Run 5			11.0	
11	13 50/1"	SPT-KAX-14 -108-11.00	56% 0%		890.4 GRAVEL (GW), fine to coarse grained, some sand, some cobbles, well graded, compact to very dense, max size of 30 mm, angular to subangular, grey, dry to moist, homogeneous	
		Run 9				
12					12.5	
	18 32 53	SPT-KAX-13 -8.21	51%		888.9 SILT (ML), sandy, some gravel, low plasticity, very stiff, moist, brown, homogeneous (GLACIAL TILL)	
	6 20 38	SPT-KAX-14 -108-12.50				
13		Run 6 Run 10	0%			
			27%			
		Run 11				
					14.0	
14	19 20/2"	SPT-KAX-14 -108-14.00	100%		887.4 SILT AND SAND (ML), some gravel, low plasticity, very stiff, drier than plastic limit, homogeneous, sand and gravel are well graded, subrounded, grey (GLACIAL TILL)	
	18 37 58/5"	SPT-KAX-14 -108-9.50	60%			
		Run 12				
15					At 15.50 m: Becomes gravelly	
	15 28 40	SPT-KAX-14 -108-15.50	91%			
16		Run 13	99%			
					17.0	
17	50/2"	SPT-KAX-14 -108-17.00	200%		884.4 SAND AND GRAVEL (GM), fine to medium grained, silty, some stratified 40 mm sand and 60 mm coarse gravel, well graded, very dense, max size of 30 mm, subangular, grey, moist to wet (GLACIAL TILL)	
			54%			
18		Run 14				
	50/4"	SPT-KAX-14 -108-18.50	0%			
			36%			
19		Run 15				
20					20.0	

Continued Next Page

Klohn Crippen Berger

PROJECT NO.: M09871A01
PROJECT: Ajax Mine Groundwater Study
LOCATION: Ajax Mine, Kamloops, BC
LOGGED BY: MC/MK **CHECKED BY:** MAB
SHEET 2 **OF** 18 **HOLE NO.:** KAX-14-108

KCBL_OVERBURDEN_DRILLLOGS-SI 140624 AJAX OVERBURDEN_ES.GPJ KC_DATA.GDT 3/20/15

OVERBURDEN DRILLHOLE LOG KAX-14-108

STARTED: Mar 11, 2014 **FINISHED:** Mar 26, 2014
DRILL METHOD: PQ3 Coring
GROUND ELEV. (m): 901.4
COORDINATES (m): N 5609428 E 683140

DEPTH (m)	SPT BLOWS PER 0.15m	SAMPLE TYPE AND NO.	SAMPLE RECOVERY	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
	50/4"	SPT-KAX-14 -108-20.00 Run 16	100% 0%		881.4 GRAVEL (GM), fine to coarse grained, sandy, trace silt, well graded, very dense, max size 25 mm, angular to subangular, greenish grey, moist, homogeneous (GLACIAL TILL)	
21		Run 17	0%			
	10 23 50/3"	SPT-KAX-14 -108-21.50	68%			
22		Run 18	51%			
		Run 19	21%			
23	8 50/3"	SPT-KAX-14 -108-23.00 Run 20	50% 82%			
24						
	16 33 56	SPT-KAX-14 -108-24.50	71%			
25		Run 21	0%			
26						
	21 54 50/5"	SPT-KAX-14 -108-26.00	72%			
27		Run 22	75%		27.2 874.2 SAND (SM), fine to coarse grained, gravelly, some silt, trace cobbles, max size 80 mm, subangular to rounded, grey, moist, stratified with 200 mm to 300 mm thick layers of fine grained poorly graded sand (GLACIAL TILL)	
	47 50/2"	SPT-KAX-14	140%			
28		Run 23	59%			
29	49 50/2"	SPT-KAX-14 -108-29.00	130%			
		Run 24	83%			
30						

Su - kPa
25 75 125 175 225
◆ UC/2 ▲ P.PEN/2
WATER1 ▽ WATER2 ▼ WATER3 ▼
★ % FINES ■ SPT N □ LPT N
W_P% W% W_L%
× – – – – ▲ – – – – ×
20 40 60 80

Continued Next Page

Klohn Crippen Berger

PROJECT NO.: M09871A01
PROJECT: Ajax Mine Groundwater Study
LOCATION: Ajax Mine, Kamloops, BC
LOGGED BY: MC/MK **CHECKED BY:** MAB
SHEET 3 **OF** 18 **HOLE NO.:** KAX-14-108

KCBL_OVERBURDEN_DRILLLOGS-SI 140624 AJAX OVERBURDEN_ES.GPJ KC_DATA.GDT 3/20/15

OVERBURDEN DRILLHOLE LOG KAX-14-108

STARTED: Mar 11, 2014 **FINISHED:** Mar 26, 2014
DRILL METHOD: PQ3 Coring
GROUND ELEV. (m): 901.4
COORDINATES (m): N 5609428 E 683140

DEPTH (m)	SPT BLOWS PER 0.15m	SAMPLE TYPE AND NO.	SAMPLE RECOVERY	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
31		Run 25	83%			
	49 50/2"	SPT-KAX-14 -108-30.50	170%		30.8 / 870.7 SAND AND GRAVEL (SW), fine to coarse grained, some silt, well graded, max size 30 mm, subangular to subrounded, grey, dry to moist, homogeneous (GLACIAL TILL).	
		Run 26	113%			
32	50/4"	SPT-KAX-14 -108-32.00	180%			
		Run 27	100%			
33						
	53/6"	SPT-KAX-14 -108-33.50	153%			
34		Run 28	96%			
35	20 50/3"	SPT-KAX-14 -108-35.00	126%			
		Run 29	118%			
36						
	50 50/2"	SPT-KAX-14 -108-36.50	110%			
37		Run 30	106%			
38					37.6 / 863.8	
39					End of Overburden Drill Log at 37.6 m. See Rock Log.	
40					Shallow Monitoring Well: 50.8 mm (2") Schedule 80 PVC Standpipe with slotted screen. Screen 31.4 to 36.0 mbgl Filter pack 32.3 to 35.4 mbgl	

Continued Next Page

Su - kPa
25 75 125 175 225
◆ UC/2 ▲ P.PEN/2
WATER1 ▽ WATER2 ▼ WATER3 ▼
★ % FINES ■ SPT N □ LPT N
W_P% W% W_L%
× – – – – ▲ – – – – ×
20 40 60 80

Klohn Crippen Berger

PROJECT NO.: M09871A01
PROJECT: Ajax Mine Groundwater Study
LOCATION: Ajax Mine, Kamloops, BC
LOGGED BY: MC/MK **CHECKED BY:** MAB
SHEET 4 **OF** 18 **HOLE NO.:** KAX-14-108

KCBL_OVERBURDEN_DRILLLOGS-SI 140624 AJAX OVERBURDEN_ES.GPJ KC_DATA.GDT 3/20/15

OVERBURDEN DRILLHOLE LOG KAX-14-108

STARTED: Mar 11, 2014 **FINISHED:** Mar 26, 2014
DRILL METHOD: PQ3 Coring
GROUND ELEV. (m): 901.4
COORDINATES (m): N 5609428 E 683140

DEPTH (m)	SPT BLOWS PER 0.15m	SAMPLE TYPE AND NO.	SAMPLE RECOVERY	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
41					Deep Monitoring Well: 50.8 mm (2") Schedule 80 PVC Standpipe with slotted screen. Screen 91.8 to 111.8 mbgl Filter pack 71.7 to 90 mbgl Shallow monitoring well installed in an offset hole. Negligible changes in lithology over the short offset distance were recorded.	
42						
43						
44						
45						
46						
47						
48						
49						
50						

Su - kPa
25 75 125 175 225
◆ UC/2 ▲ P.PEN/2
WATER1 ▽ WATER2 ▼ WATER3 ▼
★ % FINES ■ SPT N □ LPT N
W_P% W% W_L%
× – – – – ▲ – – – – ×
20 40 60 80

KCBL_OVERBURDEN_DRILLLOGS-SI 140624 AJAX OVERBURDEN_ES.GPJ KC_DATA.GDT 3/20/15

Klohn Crippen Berger

PROJECT NO.: M09871A01
PROJECT: Ajax Mine Groundwater Study
LOCATION: Ajax Mine, Kamloops, BC
LOGGED BY: MC/MK **CHECKED BY:** MAB
SHEET 5 **OF** 18 **HOLE NO.:** KAX-14-108

OVERBURDEN DRILLHOLE LOG KAX-14-114

STARTED: Mar 26, 2014 **FINISHED:** April 7, 2014
DRILL METHOD: HQ3 Coring
GROUND ELEV. (m): 895.5
COORDINATES (m): N 5609277 E 683210

DEPTH (m)	SPT BLOWS PER 0.15m	SAMPLE TYPE AND NO.	SAMPLE RECOVERY	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
0		Run 1	14%		0.1 / 895.4 ORGANIC SILT (OL), sandy, low plasticity, stiff (frozen), dark brown, dry to moist, homogeneous, some rootlets, (Topsoil)	
1					SAND (SM), fine to medium grained, some silt, some gravel, trace cobbles, well graded, loose, max. particle size 70 mm, subrounded, brown, dry, homogeneous (GLACIAL TILL)	
2	15 18 22	Run 2 / SPT-KAX-14-114-2.0 / Run 4 / Run 3	210% / 36% / 16% / 27%		2.0 / 893.5 SAND (SM), fine to coarse grained, gravely, some silt, well graded, compact, max. particle size of 30 mm, angular to subangular, brown, moist to wet, homogeneous (GLACIAL TILL)	
3					2.3 / 893.2 SAND (SM), fine to coarse grained, silty, some gravel, trace cobbles, well graded, compact, max particle size 75 mm, angular to subangular, brown, moist to wet, homogeneous (GLACIAL TILL)	
4	8 11 21	SPT-KAX-14-114-3.5 / Run 5	38% / 0%		3.5 / 892.0 SAND (SM), fine to coarse grained, silty, some gravel, well graded, compact, max. particle size 30 mm, angular to subangular, greyish brown, moist to wet, homogeneous (GLACIAL TILL)	
5	26 >50	SPT-KAX-14-114-5.0 / Run 6	54% / 23%		5.0 / 890.5 SAND AND GRAVEL (SW), fine to coarse grained, well graded, dense to very dense, max particle size 20 mm, angular, grey to dark grey, wet, homogeneous	
6		Run 7	200%		6.5 / 889.0 GRAVEL (GP), fine to coarse grained, some cobbles, poorly graded, max particle size 80 mm, subangular to subrounded, grey, wet, homogeneous	
7	16 19 18	SPT-KAX-14-114-6.62 / Run 8	0% / 0%			
8	6 21 44	SPT-KAX-14-114-8.0	10%		8.0 / 887.5 SAND (SW), medium to coarse grained, gravely (fine grained), well graded, loose to compact, max particle size 10 mm, subangular to subrounded, dark grey, wet homogeneous	
9		Run 9			8.5 / 887.1 SAND AND GRAVEL (SM), fine to coarse grained, some cobbles, well graded, loose to compact, max particle size 80 mm, subangular to subrounded, brown, moist to wet, homogeneous	
10	17 24 20	SPT-KAX-14-114	75%		9.5 / 886.0 CLAY (CH), sandy, some gravel, high plasticity, firm, grey, moist, homogeneous, no dilatancy (GLACIAL TILL)	

Continued Next Page

Su - kPa
25 75 125 175 225
◆ UC/2 ▲ P.PEN/2
WATER1 ▽ WATER2 ▼ WATER3 ▼
★ % FINES ■ SPT N □ LPT N
W_P% W% W_L%
20 40 60 80

Klohn Crippen Berger

PROJECT NO.: M09871A01
PROJECT: Ajax Mine Groundwater Study
LOCATION: Ajax Mine, Kamloops, BC
LOGGED BY: MK/LR/MC **CHECKED BY:** MAB
SHEET 1 **OF** 18 **HOLE NO.:** KAX-14-114

KCBL_OVERBURDEN_DRILLLOGS-SI 140624 AJAX OVERBURDEN_ES.GPJ KC_DATA.GDT 3/20/15

OVERBURDEN DRILLHOLE LOG KAX-14-114

STARTED: Mar 26, 2014 **FINISHED:** April 7, 2014
DRILL METHOD: HQ3 Coring
GROUND ELEV. (m): 895.5
COORDINATES (m): N 5609277 E 683210

Su - kPa: 25 75 125 175 225 ◆ UC/2 ▲ P.PEN/2
WATER1 ▽ WATER2 ▼ WATER3 ▼
★ % FINES ■ SPT N □ LPT N
W_P% W% W_L%
20 40 60 80

DEPTH (m)	SPT BLOWS PER 0.15m	SAMPLE TYPE AND NO.	SAMPLE RECOVERY	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
		Run 10	19%			
11	14 19 27	SPT-KAX-14 -114-11.0	83%		11.0 / 884.5 SAND (SM), fine to coarse grained, gravelly (fine grained), some silt, well graded, compact to dense, max particle size 5 mm, angular to subangular, grey, wet, homogeneous (GLACIAL TILL)	
12		Run 11	46%		12.5 / 883.0 CLAY (CH), some gravel, some sand, trace cobbles, medium plasticity, firm, grey, moist, homogeneous, slow dilatancy (GLACIAL TILL) pocket pen = 2.5 kg/cm2	
13	13 18 23	SPT-KAX-14 -114-12.5	48%			
		Run 12	65%			
14	21 13 16	SPT-KAX-14 -114-14.0	108%		14.0 / 881.5 CLAY (CH), sandy, trace gravel, high plasticity, firm, grey, moist, homogeneous, no dilatancy (GLACIAL TILL) pocket pen - 2.5 - 3.0 kg/cm2	
15		Run 13	0%			
	8 1	SPT-KAX-14 -114-15.50	35%		15.5 / 880.0 CLAY (CH), some sand, some gravel (fine grained), high plasticity, firm, grey, moist, homogeneous, none to slow dilatancy (GLACIAL TILL) pocket pen = 2.0 - 2.5 kg/cm2	
16		Run 14	0%			
17	8 7 14	SPT-KAX-14 -114-17.00 m	0%		17.0 / 878.5 CLAY (CH), gravelly, some sand, high plasticity, firm, grey, moist, homogeneous, none to slow dilatancy (GLACIAL TILL) pocket pen = 1.75 kg/cm2	
18		Run 15				
	14 3 5	SPT-KAX-14 -114-18.50 m	0%		18.5 / 877.0 CLAY (CH), some gravel (fine), some sand (fine to coarse), high plasticity, firm, grey, moist, homogeneous, none to slow dilatancy (GLACIAL TILL) pocket pen = 1.0 kg/cm2	
19		Run 16				
	44 50 50	SPT-KAX-14 -114-19.55 m	0%		19.6 / 876.0 SILT (ML), sandy, trace clay, low plasticity, firm to very stiff, brownish grey, dry to moist, varved (GLACIAL TILL) pocket pen = 0.75 - 3.25 kg/cm2	
20					Continued Next Page	

Klohn Crippen Berger

PROJECT NO.: M09871A01
PROJECT: Ajax Mine Groundwater Study
LOCATION: Ajax Mine, Kamloops, BC
LOGGED BY: MK/LR/MC **CHECKED BY:** MAB
SHEET 2 **OF** 18 **HOLE NO.:** KAX-14-114

KCBL_OVERBURDEN_DRILLLOGS-SI 140624 AJAX OVERBURDEN_ES.GPJ KC_DATA.GDT 3/20/15

OVERBURDEN DRILLHOLE LOG KAX-14-114

STARTED: Mar 26, 2014 **FINISHED:** April 7, 2014
DRILL METHOD: HQ3 Coring
GROUND ELEV. (m): 895.5
COORDINATES (m): N 5609277 E 683210

Su - kPa: 25 75 125 175 225 ◆ UC/2 ▲ P.PEN/2
WATER1 ▽ WATER2 ▼ WATER3 ▼
★ % FINES ■ SPT N □ LPT N
W_P% W% W_L%
20 40 60 80

DEPTH (m)	SPT BLOWS PER 0.15m	SAMPLE TYPE AND NO.	SAMPLE RECOVERY	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
21	28 50	SPT-KAX-14 -114-21.01 m	0%		21.0 / 874.5 SAND (SM), fine to coarse grained, gravelly, some silt, well graded, compact to very dense, max. particle size 10 mm, angular to subangular, brown, dry to moist, homogeneous (GLACIAL TILL)	
22		Run 18				
23	43 50	SPT-KAX-14 -114-22.64 m	0%		22.6 / 872.9 SAND (SC), fine to coarse grained, gravelly, some clay, trace silt, well graded, dense to very dense, max. particle size 5 mm, subangular to subrounded, grey, dry to moist, homogeneous (GLACIAL TILL)	
		Run 19				
24	15 50	SPT-KAX-14 -114-24.10 m	0%		24.1 / 871.4 SAND (SM), fine to coarse grained, gravelly, some silt, well graded, compact to very dense, max. particle size 20 mm, angular to subangular, brownish grey, moist, homogeneous (GLACIAL TILL)	
25		Run 20				
26	15 50	SPT-KAX-14 -114-25.57 m	0%		25.6 / 869.9 GRAVEL (GW), fine to coarse, trace sand, well graded, loose to compact, max. particle size 20 mm, subangular to subrounded, grey, dry, homogeneous	
		Run 21			SAND AND GRAVEL (SM), fine to coarse grained, some silt, well graded, max. particle size 20 mm, subangular to subrounded, grey, dry to moist, homogeneous (GLACIAL TILL)	
27	40 50	SPT-KAX-14 -114-27.18 m	85% 0%		27.2 / 868.4 SAND (SM), fine to coarse grained, gravelly, some silt, well graded, dense to very dense, max particle size 20 mm, angular to subangular, grey, moist, homogeneous (GLACIAL TILL)	
28		Run 22				
29	50/5"	SPT-KAX-14 -114-28.71	60% 0%		28.7 / 866.8 SAND AND GRAVEL (SM), fine to coarse grained, some silt, well graded, very dense, max particle size 10 mm, subangular to subrounded, grey, moist, homogeneous (GLACIAL TILL)	
30		Run 23				

Continued Next Page

Klohn Crippen Berger

PROJECT NO.: M09871A01
PROJECT: Ajax Mine Groundwater Study
LOCATION: Ajax Mine, Kamloops, BC
LOGGED BY: MK/LR/MC **CHECKED BY:** MAB
SHEET 3 **OF** 18 **HOLE NO.:** KAX-14-114

KCBL_OVERBURDEN_DRILLLOGS-SI 140624 AJAX OVERBURDEN_ES.GPJ KC_DATA.GDT 3/20/15

OVERBURDEN DRILLHOLE LOG KAX-14-114

STARTED: Mar 26, 2014 **FINISHED:** April 7, 2014
DRILL METHOD: HQ3 Coring
GROUND ELEV. (m): 895.5
COORDINATES (m): N 5609277 E 683210

DEPTH (m)	SPT BLOWS PER 0.15m	SAMPLE TYPE AND NO.	SAMPLE RECOVERY	DESCRIPTION OF MATERIALS
	50/5"	SPT-KAX-14 -114-30.23	0% 0%	30.2 / 865.3 SAND (SM), fine to coarse grained, silty, some gravel, well graded max particle size 10 mm, angular to subangular, grey, homogeneous (GLACIAL TILL)
31		Run 24		
	50/4"	SPT-KAX-14 -114-31.70	0% 0%	31.7 / 863.8 SAND (SM), fine to coarse grained, gravelly, well graded, max particle size 15 mm, subangular to subrounded, grey, moist, homogeneous (GLACIAL TILL)
32		Run 25		
33	50/2.5"	SPT-KAX-14 -114-33.07	140% 0%	33.1 / 862.6 SAND (SM), fine to coarse grained, some silt, some gravel (fine), well graded, max particle size 20 mm, subrounded, grey, moist, homogeneous
				862.3 SILT (ML), trace sand, medium plasticity, stiff, grey, moist, homogeneous
34		Run 26		SAND AND GRAVEL (SM), fine to coarse grained, well graded, max particle size 20 mm, angular, grey, moist, homogeneous (WEATHERED BEDROCK)
	50	SPT-KAX-14 -114-34.60	0%	
35		Run 27		
36	>50	SPT-KAX-14 -114-36.06	0%	
37		Run 28		
	>50	SPT-KAX-14 -114-37.57		37.6 / 858.0
38				
39				End of Overburden Drill Log at 38.0 m. See Rock Log.
40				Shallow Monitoring Well: 50.8 mm (2") Schedule 80 PVC Standpipe with slotted screen.

Continued Next Page

INSTRUMENT DETAILS

Su - kPa
25 75 125 175 225
◆ UC/2 ▲ P.PEN/2
WATER1 ▽ WATER2 ▼ WATER3 ▼
★ % FINES ■ SPT.N □ LPT N
W_P% W% W_L%
20 40 60 80

Klohn Crippen Berger

PROJECT NO.: M09871A01
PROJECT: Ajax Mine Groundwater Study
LOCATION: Ajax Mine, Kamloops, BC
LOGGED BY: MK/LR/MC **CHECKED BY:** MAB
SHEET 4 **OF** 18 **HOLE NO.:** KAX-14-114

KCBL_OVERBURDEN_DRILLLOGS-SI 140624 AJAX OVERBURDEN_ES.GPJ KC_DATA.GDT 3/20/15

OVERBURDEN DRILLHOLE LOG KAX-14-114

STARTED: Mar 26, 2014 **FINISHED:** April 7, 2014
DRILL METHOD: HQ3 Coring
GROUND ELEV. (m): 895.5
COORDINATES (m): N 5609277 E 683210

DEPTH (m)	SPT BLOWS PER 0.15m	SAMPLE TYPE AND NO.	SAMPLE RECOVERY	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
41					Screen 19.8 to 32.9 mbgl Filter pack 22.0 to 31.1 mbgl Deep Monitoring Well: 50.8 mm (2") Schedule 80 PVC Standpipe with slotted screen. Screen 98.3 to 124 mbgl Filter pack 104.4 to 122.7 mbgl Deep monitoring well installed in an offset hole. Negligible changes in lithology over the short offset distance were recorded.	
42						
43						
44						
45						
46						
47						
48						
49						
50						

Su - kPa
25 75 125 175 225
◆ UC/2 ▲ P.PEN/2
WATER1 ▽ WATER2 ▼ WATER3 ▼
★ % FINES ■ SPT N □ LPT N
W_P% W% W_L%
20 40 60 80

Klohn Crippen Berger

PROJECT NO.: M09871A01
PROJECT: Ajax Mine Groundwater Study
LOCATION: Ajax Mine, Kamloops, BC
LOGGED BY: MK/LR/MC **CHECKED BY:** MAB
SHEET 5 **OF** 18 **HOLE NO.:** KAX-14-114

KCBL_OVERBURDEN_DRILLLOGS-SI 140624 AJAX OVERBURDEN_ES.GPJ KC_DATA.GDT 3/20/15

OVERBURDEN DRILLHOLE LOG KAX-14-121

STARTED: April 7, 2014 **FINISHED:** April 14, 2014
DRILL METHOD: A5
GROUND ELEV. (m): 909.3
COORDINATES (m): N 5609655 E 683236

Su - kPa: 25 75 125 175 225 | ◆ UC/2 ▲ P.PEN/2
WATER1 ▽ WATER2 ▼ WATER3 ▼
★ % FINES ■ SPT N □ LPT N
W_P% W% W_L%
× – – – ▲ – – – ×
20 40 60 80

DEPTH (m)	SPT BLOWS PER 0.15m	SAMPLE TYPE AND NO.	SAMPLE RECOVERY	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT	DETAILS
					COBBLES with clay		
2.4 / 906.9					Washed COBBLES		
3.9 / 905.4					SILT (MH), some sand, trace gravel, high plasticity, soft, grey, moist to wet, homogeneous (GLACIAL TILL)		
5.4 / 903.9					SILT (MH) and gravel, sandy, medium plasticity, stiff to very stiff, light brown, moist, homogeneous (GLACIAL TILL)		
6.9 / 902.4					SAND and GRAVEL (GW), fine to coarse, silty, some cobbles, well graded, maximum particle size 60 mm, subrounded, brown, moist to wet, homogeneous (GLACIAL TILL)		
8.4 / 900.9					SAND and GRAVEL (GW), fine to coarse, silty, some cobbles, well graded, maximum particle size 60 mm, subrounded, brown, moist to wet, homogeneous (GLACIAL TILL)		
9.4 / 899.9					GRAVEL (GP), coarse, poorly graded, maximum particle size 60 mm, subrounded to subangular, grey		
9.9					Continued Next Page		

Klohn Crippen Berger

PROJECT NO.: M09871A01
PROJECT: Ajax Mine Groundwater Study
LOCATION: Ajax Mine, Kamloops, BC
LOGGED BY: MC/LR **CHECKED BY:** MAB
SHEET 1 **OF** 17 **HOLE NO.:** KAX-14-121

KCBL_OVERBURDEN_DRILLLOGS-SI 140624 AJAX OVERBURDEN_ES.GPJ KC_DATA.GDT 3/20/15

OVERBURDEN DRILLHOLE LOG KAX-14-121

STARTED: April 7, 2014 **FINISHED:** April 14, 2014
DRILL METHOD: A5
GROUND ELEV. (m): 909.3
COORDINATES (m): N 5609655 E 683236

DEPTH (m)	SPT BLOWS PER 0.15m	SAMPLE TYPE AND NO.	SAMPLE RECOVERY	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT	DETAILS
0					909.4 GRAVEL (GP), coarse, poorly graded, maximum particle size 60 mm, subrounded to subangular, grey		
10.2					899.1		

End of Overburden Drill Log at 10.2 m. See Rock Log.

Monitoring Well Installation
50.8 mm (2") Schedule 80 PVC Standpipe with slotted screen.
Screen 141.9 to 150.9 mbgl
Filter pack 144.1 to 150.2 mbgl

SPT samples not collected with A5 rig.

Su - kPa
25 75 125 175 225
◆ UC/2 ▲ P.PEN/2
WATER1 ▽ WATER2 ▼ WATER3 ▼
★ % FINES ■ SPT N ◘ LPT N
W_P% W% W_L%
20 40 60 80

Klohn Crippen Berger

PROJECT NO.: M09871A01
PROJECT: Ajax Mine Groundwater Study
LOCATION: Ajax Mine, Kamloops, BC
LOGGED BY: MC/LR **CHECKED BY:** MAB
SHEET 2 **OF** 17 **HOLE NO.:** KAX-14-121

KCBL_OVERBURDEN_DRILLLOGS-SI 140624 AJAX OVERBURDEN_ES.GPJ KC_DATA.GDT 3/20/15

OVERBURDEN DRILLHOLE LOG KAX-14-124

STARTED: April 14, 2014 **FINISHED:** April 26, 2014
DRILL METHOD: A5
GROUND ELEV. (m): 903.7
COORDINATES (m): N 5609491 E 683316

DEPTH (m)	SPT BLOWS PER 0.15m	SAMPLE TYPE AND NO.	SAMPLE RECOVERY	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT	DETAILS
0					No Recovery		

Continued Next Page

Su - kPa
25 75 125 175 225
◆ UC/2 ▲ P.PEN/2
WATER1 ▽ WATER2 ▼ WATER3 ▼
★ % FINES ■ SPT N □ LPT N
W_P% W% W_L%
20 40 60 80

Klohn Crippen Berger

PROJECT NO.: M09871A01
PROJECT: Ajax Mine Groundwater Study
LOCATION: Ajax Mine, Kamloops, BC
LOGGED BY: MC/MS **CHECKED BY:** MAB
SHEET 1 **OF** 21 **HOLE NO.:** KAX-14-124

KCBL_OVERBURDEN_DRILLLOGS-SI 140624 AJAX OVERBURDEN_ES.GPJ KC_DATA.GDT 3/20/15

OVERBURDEN DRILLHOLE LOG KAX-14-124

STARTED: April 14, 2014 **FINISHED:** April 26, 2014
DRILL METHOD: A5
GROUND ELEV. (m): 903.7
COORDINATES (m): N 5609491 E 683316

DEPTH (m)	SPT BLOWS PER 0.15m	SAMPLE TYPE AND NO.	SAMPLE RECOVERY	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
16		Run 7	45%		16.0 / 887.7 Cobbles and gravel, subrounded	
17						
18		Run 8	7%			
19		Run 9	27%		19.0 / 884.7 Cobbles and gravel, subrounded	
20					Continued Next Page	

Su - kPa
25 75 125 175 225
◆ UC/2 ▲ P.PEN/2
WATER1 ▽ WATER2 ▼ WATER3 ▼
★ % FINES ■ SPT N □ LPT N
W_P% W% W_L%
20 40 60 80

KCBL_OVERBURDEN_DRILLLOGS-SI 140624 AJAX OVERBURDEN_ES.GPJ KC_DATA.GDT 3/20/15

Klohn Crippen Berger

PROJECT NO.: M09871A01
PROJECT: Ajax Mine Groundwater Study
LOCATION: Ajax Mine, Kamloops, BC
LOGGED BY: MC/MS **CHECKED BY:** MAB
SHEET 2 **OF** 21 **HOLE NO.:** KAX-14-124

OVERBURDEN DRILLHOLE LOG KAX-14-124

STARTED: April 14, 2014 **FINISHED:** April 26, 2014
DRILL METHOD: A5
GROUND ELEV. (m): 903.7
COORDINATES (m): N 5609491 E 683316

DEPTH (m)	SPT BLOWS PER 0.15m	SAMPLE TYPE AND NO.	SAMPLE RECOVERY	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
					20.5 / 883.2 Cobbles and gravel, subangular, transition to bedrock, iron oxidation staining present	
21		Run 10	26%			
22					22.0 / 881.7	
23					End of Overburden Drill Log at 22.0 m. See Rock Log.	
					Shallow Vibrating Wire Piezometer installed at 50.4 m; Deep Vibrating Wire Piezometer installed at 190.4 m.	
24					SPT samples not collected with A5 rig.	
25						
26						
27						
28						
29						
30						

Su - kPa
25 75 125 175 225
◆ UC/2 ▲ P.PEN/2
WATER1 ▽ WATER2 ▼ WATER3 ▼
★ % FINES ■ SPT N ◘ LPT N
W_P% W% W_L%
× – – – – ▲ – – – – ×
20 40 60 80

Klohn Crippen Berger

PROJECT NO.: M09871A01
PROJECT: Ajax Mine Groundwater Study
LOCATION: Ajax Mine, Kamloops, BC
LOGGED BY: MC/MS **CHECKED BY:** MAB
SHEET 3 **OF** 21 **HOLE NO.:** KAX-14-124

KCBL_OVERBURDEN_DRILLLOGS-SI 140624 AJAX OVERBURDEN_ES.GPJ KC_DATA.GDT 3/20/15

OVERBURDEN DRILLHOLE LOG KAX-14-128

STARTED: April 18, 2014 **FINISHED:** April 30, 2014
DRILL METHOD: ODEX
GROUND ELEV. (m): 904.3
COORDINATES (m): N 5609497 E 683325

DEPTH (m)	SPT BLOWS PER 0.15m	SAMPLE TYPE AND NO.	SAMPLE RECOVERY	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
0			-100%		SAND (SM), fine to coarse grained, fine gravel, trace silt, maximum 9.5 mm, subangular, trace flat, fines is non to low plasticity, rapid dilatancy, grey, dry to moist, loose	
1.5					902.8	
1	22 23 20	SPT-KAX-14 -126-1.52 m	87%		GRAVEL (GM), fine to coarse grained, silty, sandy, well graded, compact, dry, subangular, brown to grey, homogeneous (GLACIAL TILL) At 1.98 m: Slight increase in fine fraction	
3.0					901.2	
3	7 5 6	SPT-KAX-14 -128-3.04 m	39%		SAND (SM), silty, some fine gravel, trace coarse sand, some organics, fines are non plastic to low plasticity, dark brown, dry to moist	
4	4 5 11	SPT-KAX-14 -128-4.57 m				
6	30/6.5	SPT-KAX-14 -128-6.10 m	56%			
7.6					896.7	
7	14 26 45	SPT-KAX-14 -128-7.62 m	100%		SAND AND SILT (SM), fine grained, some clay, poorly graded, compact to dense, brown, moist, interbedded, silt is low plasticity and stiff (GLACIAL LACUSTRINE TILL)	
8.1					896.2	
8					SAND (SM), some fine gravel, coarse to fine sand and silt, low plasticity, very soft, low toughness, wet, light brown	
9.1					895.1	
9	8 16 18	SPT-KAX-14 -128-9.14 m	100%		9.14 m: Becomes clayey, laminated with 5 mm beds of clay (GLACIAL LACUSTRINE TILL).	
10						

Continued Next Page

Su - kPa
25 75 125 175 225
◆ UC/2 ▲ P.PEN/2
WATER1 ▽ WATER2 ▼ WATER3 ▼
★ % FINES ■ SPT N □ LPT N
W_P% W% W_L%
20 40 60 80

Klohn Crippen Berger

PROJECT NO.: M09871A01
PROJECT: Ajax Mine Groundwater Study
LOCATION: Ajax Mine, Kamloops, BC
LOGGED BY: LB/JC/BY **CHECKED BY:** MAB
SHEET 1 **OF** 24 **HOLE NO.:** KAX-14-128

KCBL_OVERBURDEN_DRILLLOGS-SI 140624 AJAX OVERBURDEN_ES.GPJ KC_DATA.GDT 3/20/15

OVERBURDEN DRILLHOLE LOG KAX-14-128

STARTED: April 18, 2014 **FINISHED:** April 30, 2014
DRILL METHOD: ODEX
GROUND ELEV. (m): 904.3
COORDINATES (m): N 5609497 E 683325

Su - kPa: 25 75 125 175 225 ◆UC/2 ▲P.PEN/2
WATER1 ▽ WATER2 ▼ WATER3 ▼
★ % FINES ■ SPT N □ LPT N
W_P% W% W_L%
20 40 60 80

DEPTH (m)	SPT BLOWS PER 0.15m	SAMPLE TYPE AND NO.	SAMPLE RECOVERY	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
11	5 15 30	SPT-KAX-14 -128-10.67 m	100%		SILT AND CLAY (ML), sandy; low plasticity, stiff, brown, moist, varved at 3 mm, no dilatancy (GLACIAL LACUSTRINE TILL)	
					11.1 / 893.2 SAND, fine grained, gravelly, coarse to fine sand, silty, low plasticity fines, light brown, wet, rapid dilatancy, soft, maximum 9.5 mm.	
12					12.2 / 892.1	
	19 37 38	SPT-KAX-14 -128-12.19 m	87%		12.4 / 891.9 SILT AND CLAY, sandy, low plasticity, stiff, brown, moist, varved at 3 mm, no dilatancy (GLACIAL LACUSTRINE TILL)	
					12.7 / 891.6 SILT AND CLAY, as above, red tinge, very stiff, trace gravel.	
13					SAND (SM), fine grained, gravelly, coarse to fine sand, some silt, maximum 9.5 mm, fines are low plasticity silt, soft, wet, light brown.	
					13.7 / 890.6	
14	15 64 12/1	SPT-KAX-14 -128-13.72 m	70%		SAND (SM), silty sand / sandy silt, trace fine gravel, maximum 9.5 mm, coarse to fine sand, silty, low plasticity, firm, light brown, moist, rapid dilatancy	
					14.4 / 889.9	
	38 50/4	SPT-KAX-14 -128-14.40 m	80%		SANDY SILT (ML), trace gravel, some sand, maximum 19 mm, low plasticity, firm, brown, moist, slow to rapid dilatancy	
15					15.2 / 889.0	
					GRAVEL (GP), fine gravel and sand, trace silt, subrounded to subangular, maximum 9.5 mm, dark brownish grey, moist	
16					16.8 / 887.5	
17	30/4.5 - -	SPT-KAX-14 -128-16.76 m			GRAVEL (SP), fine to coarse grained, maximum 25 mm, trace sand, trace fines.	
18					18.3 / 886.0	
19	23/ 1/2	SPT-KAX-14 -128-18.29 m			End of Overburden Drill Log at 18.3 m. See Rock Log.	
20					Shallow Monitoring Well	

Continued Next Page

Klohn Crippen Berger

PROJECT NO.: M09871A01
PROJECT: Ajax Mine Groundwater Study
LOCATION: Ajax Mine, Kamloops, BC
LOGGED BY: LB/JC/BY **CHECKED BY:** MAB
SHEET 2 **OF** 24 **HOLE NO.:** KAX-14-128

KCBL_OVERBURDEN_DRILLLOGS-SI 140624 AJAX OVERBURDEN_ES.GPJ KC_DATA.GDT 3/20/15

OVERBURDEN DRILLHOLE LOG KAX-14-128

STARTED: April 18, 2014 **FINISHED:** April 30, 2014
DRILL METHOD: ODEX
GROUND ELEV. (m): 904.3
COORDINATES (m): N 5609497 E 683325

DEPTH (m)	SPT BLOWS PER 0.15m	SAMPLE TYPE AND NO.	SAMPLE RECOVERY	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
21					50.8 mm (2") Schedule 80 PVC Standpipe with slotted screen. Screen 9.7 to 18.0 mbgl Filter pack 10.9 to 17.0 mbgl Deep Monitoring Well: 50.8 mm (2") Schedule 80 PVC Standpipe with slotted screen. Screen 70.1 to 90.5 mbgl Filter pack 71.7 to 90 mbgl Shallow monitoring well installed in an offset hole. Negligible changes in lithology over the short offset distance have been assumed. Van Ruth plug installed at 93.70 m.	
22						
23						
24						
25						
26						
27						
28						
29						
30						

Su - kPa
25 75 125 175 225
◆ UC/2 ▲ P.PEN/2
WATER1 ▽ WATER2 ▼ WATER3 ▼
★ % FINES ■ SPT N □ LPT N
W_P% W% W_L%
20 40 60 80

Klohn Crippen Berger

PROJECT NO.: M09871A01
PROJECT: Ajax Mine Groundwater Study
LOCATION: Ajax Mine, Kamloops, BC
LOGGED BY: LB/JC/BY **CHECKED BY:** MAB
SHEET 3 **OF** 24 **HOLE NO.:** KAX-14-128

KCBL_OVERBURDEN_DRILLLOGS-SI 140624 AJAX OVERBURDEN_ES.GPJ KC_DATA.GDT 3/20/15