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June 7, 2022

Via Email: iaac.compliance-conformite.aeic@canada.ca

Attention: Nicolas Courville, Compliance Promotion and Enforcement
Impact Assessment Agency of Canada
160 Elgin Street, 22nd Floor
Ottawa, Ontario K1A 0H3

Dear Mr. Courville,

Reference: Woodfibre LNG Project, Squamish, British Columbia
Request to Amend the Decision Statement Issued Under Section 54 of CEAA 2012

Introduction

Woodfibre LNG Limited (Woodfibre LNG) is proposing to construct and operate a liquefied natural gas (LNG) export facility on the former Woodfibre Pulp and Paper Mill site (the Project) in Nexwnnewu7ts atll'a7tsem (Howe Sound), approximately seven kilometres south of Skwxwu7mesh (Squamish). The Project is on the historical location of a Skwxwú7mesh Úxwumixw (Squamish Nation) village known as Swĺyat. The Project includes the development of a natural gas liquefaction facility and an LNG transfer facility to enable the export of LNG to global markets via marine vessels. A substituted environmental assessment process was conducted between 2013 and 2015. In 2016, the Minister of Environment and Climate Change Canada issued a Decision Statement for the Project under section 65 of the *Canadian Environmental Assessment Act, 2012* (CEAA 2012).

Woodfibre LNG is submitting this letter (the application) as a formal request to amend the Decision Statement issued under Section 54 of CEAA 2012.

Assessment History

The Project underwent a comprehensive environmental assessment process between 2013 and 2015, receiving an environmental assessment certificate (EAC) under the British Columbia *Environmental Assessment Act* (BCEAA; EAC #E15-02) in 2015, an environmental assessment approval from Sḵwx̱wú7mesh Úxwumixw (Squamish Nation) through the Squamish Nation Environmental Assessment Agreement (SNEAA) in 2015, and a positive federal Decision Statement under the *Canadian Environmental Assessment Act, 2012* (CEAA 2012) in 2016.

Two EAC amendments have been granted by the British Columbia Environmental Assessment Office (EAO), in 2017 (Amendment #1) and 2019 (Amendment #2), and the federal Decision Statement was

reissued on March 7, 2018 in response to changes to the Designated Project. In October 2020, Woodfibre LNG received an extension under Section 31 of BCEAA, extending the date by which the Project must be substantially started to October 26, 2025. The Provincial, Sḵwx̱wú7mesh Úxwumixw (Squamish Nation) and Federal environmental assessment processes have all yielded conditions of approval; the March 7, 2018 federal Decision Statement contains 13 conditions that must be complied with throughout the life of the Project.

Purpose of the Amendment Application

Woodfibre LNG is actively progressing Project engineering design and will be submitting applications to the appropriate regulators to facilitate construction. As part of construction planning, Woodfibre LNG has initiated development of several management plans that define how the company will maintain compliance with legislation, permits and environmental assessment conditions of approval. This work has identified two conditions in the Decision Statement that are not technically or economically feasible to implement: Condition 3.8 (regarding the protection of marine mammals) and Condition 6.4 (regarding water quality monitoring and mitigation).

The purpose of this application is to request amendment to the language of Condition 3.8 (the protection of marine mammals) and Condition 6.4 (water quality monitoring and mitigation) of the Decision Statement, pursuant to section 68(1) of the *Impact Assessment Act*. This application provides a summary of the rationale and the requested revision(s) for each condition. Woodfibre LNG is committed to working with the Impact Assessment Agency of Canada (IAAC) to incorporate these requested changes in a manner that maintains the intended outcomes of each condition.

Condition 3.8 Protection of Marine Mammals

Background

Potential project-specific and cumulative effects of underwater noise on marine mammals were considered in Section 5.19 of the January 2015 Application for an Environmental Assessment Certificate (the Application; Woodfibre LNG Limited 2015[1]) where marine mammals were assessed as a valued component. Behavioural disturbances or injuries to marine mammals were identified as a result of underwater noise produced by in-water activities, including pile driving.

The Application incorporated conservative assumptions, such as use of an impact hammer, which generates higher energy impulsive noise when compared to vibratory installation methods, and installation of piles with diameters that were 22% wider than the largest piles planned to be installed for the Project's marine terminal, which results in higher underwater noise levels. With these conservative considerations, noise modelling conducted in support of the Application predicted that *unmitigated* impact pile installation activities would generate noise levels that exceed the pinniped injury threshold of 190

[1] Woodfibre LNG Limited. January 2015. Woodfibre LNG Application for an Environmental Assessment Certificate.

decibels (dB) within 73 m of the noise source. The cetacean injury threshold of 180 dB was estimated at 340 m from the noise source. The 160 dB behavioural disturbance threshold for marine mammals was estimated to extend 7,322 m from impact pile installation activities.

To mitigate the potential effects of pile installation activities on marine mammals, Woodfibre LNG will develop and implement a Marine Mammal Monitoring and Management Plan in consultation with Fisheries and Oceans Canada, the Oil and Gas Commission and Aboriginal Groups. This Plan will be developed by a Qualified Professional and outline commitments to manage underwater noise associated with pile installation activities by using vibratory pile installation methods (where possible) and monitoring both underwater noise levels and marine mammal presence. Additionally, Woodfibre LNG will prepare and submit an Application for Authorization or Request for Review under the *Fisheries Act* for marine environment Project Components.

A significant effect, as defined in Section 5.19.3.1.1 of the Application, would be an effect causing a population within the defined Regional Assessment Area to be unable to sustain itself or unable to continue to be ecologically effective, or the loss of any individuals of a species listed as Endangered or Threatened on Schedule 1 of the *Species at Risk Act* (SARA). With the implementation of proposed mitigation measures, Woodfibre LNG concluded that residual effects in the form of injury to marine mammals due to underwater noise from pile driving was not likely. Residual effects in the form of marine mammal behavioural changes were considered likely; however, these effects were not considered significant, as the underwater noise was temporary, they would not result in the loss of an individual marine mammal (regardless of conservation status), and effects to marine mammal populations are likely to be negligible.

The Environmental Assessment Office's 2015 Assessment Report similarly concluded that the Project would not result in significant adverse residual effects on marine mammals after mitigation (EAO 2015[2]). Significant cumulative effects to marine mammals with consideration to past, present and future projects in the area were also considered unlikely.

Application Baseline Data

There are eleven species of marine mammal known to occur in Howe Sound, including eight cetacean species (killer whales [southern resident, northern resident, transient, and offshore], Pacific white-sided dolphin, false killer whale, Dall's porpoise, harbour porpoise, humpback whale, grey whale and minke whale) and three pinniped species (Steller sea lion, California sea lion, and harbour seal) (Golder 2014[3]).

[2] Environmental Assessment Office. August 19, 2015. Woodfibre LNG Project Assessment Report. With Respect to the Application by Woodfibre LNG Limited for an Environmental Assessment Certificate pursuant to the *Environmental Assessment Act,* S.B.C. 2012, c.43 and the *Canadian Environmental Assessment Act, 2012,* S.C. 2012 c. 19, as a substituted environmental assessment.

[3] Golder Associates. 2014. Woodfibre LNG Marine Resources Baseline Study. Appendix 5.10-1 of the Woodfibre LNG Application for an Environmental Assessment Certificate. Available on-line at:

Marine mammal sightings data from the British Columbia Cetacean Sightings Network (BCCSN) shows the use of habitats in Howe Sound by cetaceans to change seasonally, and the number of observations declines with distance from the Strait of Georgia.

In addition to Howe Sound, Pinnipeds are commonly observed within the Certified Project Area (CPA). Harbour seals are one of the most common marine mammal species observed in the CPA (based on opportunistic sightings during baseline field investigations in support of the Application) and are the only year-round pinniped resident. Steller sea lions are known to visit the area to forage throughout the year, but do not continually reside in Howe Sound as supported by the lack of known rookeries and haulouts in the area (EAO 2015[4]).

Steller sea lions are the only Schedule 1 SARA listed pinniped species observed in the CPA and Howe Sound (listed as 'Special Concern'). There are no known important migratory pathways or foraging/breeding grounds for any Schedule 1 SARA-listed marine mammal species in the CPA. There is also no marine mammal critical habitat in the CPA (EAO 2015[4]).

Data Collected Since the 2015 Application

To understand if the marine mammal use of Howe Sound has changed since development of the Application, Woodfibre LNG has acquired and reviewed additional baseline data as follows: i) updated cetacean sightings data for Howe Sound from the BCCSN[5,6]; ii) DFO Management Plans; and iii) Ocean Watch Howe Sound report[7]; iv) DFO's Strait of Georgia and Howe Sound harbour seal haulout location

https://projects.eao.gov.bc.ca/p/588511e1aaecd9001b8272e7/application?pageSize=164&currentPage=1. Accessed January 2022.

[4] Environmental Assessment Office. August 19, 2015. Woodfibre LNG Project Assessment Report. With Respect to the Application by Woodfibre LNG Limited for an Environmental Assessment Certificate pursuant to the *Environmental Assessment Act,* S.B.C. 2012, c.43 and the *Canadian Environmental Assessment Act, 2012,* S.C. 2012 c. 19, as a substituted environmental assessment.

[5] B.C. Cetacean Sightings Network (BCCSN). 2022. Howe Sound Sightings Dataset Howe Sound Sightings Data 1973-2021. Letter from Ocean Wise to Stantec Consulting Ltd., e-mail dated February 1, 2022.

[6] Data obtained from the BCCSN were collected opportunistically with limited knowledge of the temporal or spatial distribution of observer effort. As a result, absence of sightings at any location does not demonstrate absence of cetaceans.

[7] Nordstrom C, Majewski S, Miller A. 2020. Pinnipeds: population stable since the 1990s. In: Miller A, Chapman J, Deaden A, Ross P (Ed.). 2020. Ocean Watch Átl'ka7tsem/Txwnéwu7ts /Howe Sound Edition 2020. Ocean Wise Research Institute. Vancouver, B.C., Canada. 182–193 pg. Available online: OceanWatch-HoweSoundReport2020-SH-Pinnipeds.pdf

datasets[8,9] (does not include in-water sightings). This is summarized in a memorandum provided in Attachment A (Updated Marine Mammal Data for Howe Sound).

The BCCSN data, while not standardized for effort, shows a general increase in the number of cetacean sightings in Howe Sound since 2014. Although no formal collection of non-harbour seal pinniped population data has been captured (the BCCSN does not collect records for pinnipeds, and the DFO Howe Sound dataset only includes harbour seal haulout locations) pinniped populations are continuing to grow along the entire British Columbia coast (DFO 2018[10]). Harbour seal populations are stable and considered to be at or above historical levels, while Steller sea lion populations in British Columbia are increasing at an average rate of 3.8% per year (Nordstrom et al. 2020[11]; DFO 2018[10]; Olesiuk 2018[12]).

Marine mammal monitoring during a northern British Columbia marine infrastructure project (DFO File No. 15-HPAC-00585) showed an abundance of seal observations and a lack of seal and sea lion behavioural disturbance or displacement from habitat within the Project area during the construction period. Despite concurrent operation of vibratory and impact pile driving, harbour seals and Steller sea lions were still regularly observed in the project area by marine mammal observers. The lack of pinniped displacement during project activities was also observed at an adjacent marine infrastructure project (DFO File No. 17-HPAC-00076).

Condition as Issued and Economic and Technical Feasibility

The text of condition 3.8 of the CEAA 2016 Decision Statement is provided below:

> *3.8 The Proponent shall establish and maintain marine mammal underwater noise impact area for all construction activities where underwater noise levels are predicted to exceed 160 decibels at a*

[8] Fisheries and Oceans Canada (DFO). 2019. Harbour seal (Phoca vitulina) counts and haulout locations in the Strait of Georgia, British Columbia coast – Harbour seal counts and haulout locations [1973-2014] dataset. Available at: https://open.canada.ca/data/en/dataset/be5a4ba8-79dd-4787-bf8a-0d460d25954c/resource/b70da0ee-5fd4-46a1-a91e-5f8f214dcb57

[9] Fisheries and Oceans Canada (DFO). 2022. Harbour seal (Phoca vitulina) counts and haulout locations in Howe Sound, British Columbia coast 2019 dataset. Letter from Fisheries and Oceans Canada to Stantec Consulting Ltd., e-mail dated March 7, 2022.

[10] Fisheries and Oceans Canada (DFO). 2018. Report on the Progress of Management Plan Implementation for the Steller Sea Lion (*Eumetopias jubatus*) in Canada for the period of 2011-2015. Species at Risk Act Management Plan Report Series. Fisheries and Oceans Canada, Ottawa. vi + 37 pp. Available at: Pr-OtarieStellarSealion-v00-2018Dec-Eng.pdf (canada.ca)

[11] Nordstrom C, Majewski S, Miller A. 2020. Pinnipeds: population stable since the 1990s. In: Miller A, Chapman J, Deaden A, Ross P (Ed.). 2020. Ocean Watch Átl'ka7tsem/Txwnéwu7ts /Howe Sound Edition 2020. Ocean Wise Research Institute. Vancouver, B.C., Canada. 182–193 pg. Available online: OceanWatch-HoweSoundReport2020-SH-Pinnipeds.pdf

[12] Olesiuk, PF. 2018. Recent trends in Abundance of Steller Sea Lions (*Eumetopias jubatus*) in British Columbia. DFO Can. Sci. Advis. Sec. Res. Doc. 2018/006. V + 67 p. Available at: Recent trends in Abundance of Steller Sea Lions (Eumetopias jubatus) in British Columbia. (dfo-mpo.gc.ca)

reference pressure of one micropascal to avoid adverse behavioural change in or injury to marine mammals. In doing so, the Proponent shall:

3.8.1 identify each construction activity that generates underwater noise levels greater than 160 decibels and the periods of time when each activity occurs;

3.8.2 establish the boundary of the marine mammal underwater noise impact area for each construction activity identified in condition 3.8.1 at the distance from the activity at which the underwater noise level is predicted to reach 160 decibels;

3.8.3 employ a marine mammal observer, who is a qualified individual, and require that person to detect and report the presence of marine mammals in the marine mammal underwater noise impact area during construction activities identified in condition 3.8.1;

3.8.4 stop or not start the construction activities identified in condition 3.8.1 if a marine mammal is detected in the marine mammal underwater noise impact area, and only begin or continue the construction activities identified in condition 3.8.1 once the marine mammal has moved out of the marine mammal underwater noise impact area; and

3.8.5 implement mitigation measures, including sound dampening technology and soft-start procedures, to reduce construction noise levels in the marine mammal underwater noise impact area.

Condition 3.8 requires that Woodfibre LNG exclude marine mammals from any area around marine construction activities where underwater noise levels exceed a 160 dB threshold. Woodfibre LNG understands that the intent of Condition 3.8 is to reduce potential adverse effects from construction noise on marine mammals. However, the term “marine mammals” encompasses both cetaceans and pinnipeds, two groups with different behavioural and physical characteristics that should be accounted for in planning effective mitigation measures. With respect to pinnipeds, it is understood that the prohibitions set out in section 7 of the Marine Mammal Regulations under the *Fisheries Act* provide protection to all marine mammals.

Based on the known gregarious and curious behavior of pinnipeds (e.g., harbour seals and Steller sea lions) and their ubiquitous presence in Howe Sound, implementation of a 160 dB impact area for all marine mammals is expected to lead to regular and prolonged full Project shutdowns of pile installation associated with the construction of key marine Project components. The 160 dB behavioural impact area is estimated to extend 7,322 m from the (impact) pile installation sound source. Therefore, in order for Project impact pile installations to occur, seals and sea lions will have to both: (1) avoid entering the 7,322 m radius impact area (otherwise installation must stop), and/or (2) swim up to 7,322 m from the pile installation site to exit the impact area (before installation can commence/re-commence). The presence of one individual pinniped within the impact area will shut-down pile installation activities. Not only is this extensive impact area not technically feasible to monitor effectively for commonly occurring pinniped species, it is also highly unlikely that pinnipeds will not be present within this range from the CPA (piling activity) on a near continuous basis. Woodfibre LNG is aware that similar conditions have presented material problems, both from a technical and economic feasibility perspective, on other British Columbia-based marine terminal projects with in-water construction activities.

Based on the experience of other marine terminal construction projects in British Columbia, monitoring costs and construction delays associated with implementing the 160 dB exclusion zone for seals and sea lions are likely to be significant. Mitigation measures are required to be technically and economically feasible per section 22 of the *Impact Assessment Act* and it is Woodfibre LNG's position that neither of those aspects apply to condition 3.8 as currently written.

Requested Changes to Condition 3.8

To clarify the objectives of this condition and to establish a feasible scope of monitoring, Woodfibre LNG requests the language of condition 3.8 of the Decision Statement be amended, to replace 'marine mammal' with 'cetacean', delineate a pinniped-specific exclusion area, and focus the intent of the mitigation program on impulsive sound sources. It is Woodfibre LNG's opinion that these edits will add clarity of intent, will substantially increase the technical and economic feasibility of the mitigation measures, and will not change the conclusions of the environmental assessment or increase the extent of adverse effects indicated in the Assessment Report (EAO 2015[13]).

Proposed added text is bolded and underlined and proposed deleted text is struck through:

3.8 The Proponent shall establish and maintain ~~marine mammal~~ ***a cetacean*** *underwater noise impact area for all construction activities where underwater noise levels are predicted to exceed 160 decibels at a reference pressure of one micropascal to avoid adverse behavioural change in or injury to ~~marine mammals~~* ***cetaceans. The Proponent shall establish and maintain a separate pinniped-specific exclusion area at 125-m distance from underwater noise producing activities to avoid adverse behavioural change in injury to pinnipeds.*** *In doing so, the Proponent shall:*

3.8.1 identify each construction activity that generates underwater noise levels greater than 160 decibels and the periods of time when each activity occurs;

3.8.2 establish the boundary of the ~~marine mammal~~ ***cetacean*** *underwater noise impact area for each construction activity identified in condition 3.8.1 at the distance from the activity at which the underwater noise level is predicted to reach 160 decibels;*

3.8.3 employ a marine mammal observer, who is a qualified individual, and require that person to detect and report the presence of ~~marine mammals~~ ***cetaceans*** *in the ~~marine mammal~~* ***cetacean*** *underwater noise impact area* ***and pinnipeds in the pinniped exclusion area*** *during construction activities identified in condition 3.8.1;*

3.8.4 stop or not start the construction activities identified in condition 3.8.1 if a ~~marine mammal~~ ***cetacean*** *is detected in the ~~marine mammal~~* ***cetacean*** *underwater noise impact area****, or a pinniped is detected in the pinniped exclusion area****, and only begin or continue the construction activities*

[13] Environmental Assessment Office. August 19, 2015. Woodfibre LNG Project Assessment Report. With Respect to the Application by Woodfibre LNG Limited for an Environmental Assessment Certificate pursuant to the *Environmental Assessment Act,* S.B.C. 2012, c.43 and the *Canadian Environmental Assessment Act, 2012,* S.C. 2012 c. 19, as a substituted environmental assessment.

*identified in condition 3.8.1 once the ~~marine mammal~~ **cetacean or pinniped** has moved out of the**ir respective** ~~marine mammal underwater noise impact area~~ **monitoring areas**; and*

*3.8.5 implement mitigation measures, including sound dampening technology and soft-start procedures, to reduce construction noise levels in the ~~marine mammal~~ **cetacean** underwater noise impact area **and pinniped exclusion area**.*

Rationale for Proposed Changes

Pinniped-Specific Exclusion Area

Cetaceans and pinnipeds are two separate marine mammal taxon that are often grouped together for regulatory monitoring purposes; however, these two groups have distinct biological, distributional, and behavioural differences that merit separate monitoring boundary conditions.

Harbour seals are year-round residents in Howe Sound (EAO 2015[14]) and, as suggested in the DFO harbour seal haulout location data (DFO 2019[15], DFO 2022[16]), show site fidelity (Figure 2). Sea lions and cetaceans, in contrast, are known to visit Howe Sound on a more irregular or seasonal basis. Harbour seal populations remain stable in Howe Sound, and though opportunistic cetacean observations in Howe Sound have steadily increased since 2009, densities of these sightings decrease with distance from the Strait of Georgia (Nordstrom et. al 2020[17]; BCCSN 2022[18]), although this may be at least in part, a reflection of observer densities as well. Steller sea lion populations are stable and growing, respectively (DFO 2018[19]).

[14] Environmental Assessment Office. August 19, 2015. Woodfibre LNG Project Assessment Report. With Respect to the Application by Woodfibre LNG Limited for an Environmental Assessment Certificate pursuant to the *Environmental Assessment Act,* S.B.C. 2012, c.43 and the *Canadian Environmental Assessment Act, 2012,* S.C. 2012 c. 19, as a substituted environmental assessment.

[15] Fisheries and Oceans Canada (DFO). 2019. Harbour seal (Phoca vitulina) counts and haulout locations in the Strait of Georgia, British Columbia coast – Harbour seal counts and haulout locations [1973-2014] dataset. Available at: https://open.canada.ca/data/en/dataset/be5a4ba8-79dd-4787-bf8a-0d460d25954c/resource/b70da0ee-5fd4-46a1-a91e-5f8f214dcb57

[16] Fisheries and Oceans Canada (DFO). 2022. Harbour seal (Phoca vitulina) counts and haulout locations in Howe Sound, British Columbia coast 2019 dataset. Letter from Fisheries and Oceans Canada to Stantec Consulting Ltd., e-mail dated March 7, 2022.

[17] Nordstrom C, Majewski S, Miller A. 2020. Pinnipeds: population stable since the 1990s. In: Miller A, Chapman J, Deaden A, Ross P (Ed.).2020. Ocean Watch Átl'ka7tsem/Txwnéwu7ts /Howe Sound Edition 2020. Ocean Wise Research Institute. Vancouver, B.C., Canada. 182–193 pg. Available online: http://oceanwatch.ca

[18] B.C. Cetacean Sightings Network (BCCSN). 2022. Howe Sound Sightings Dataset Howe Sound Sightings Data 1973-2021. Letter from Ocean Wise to Stantec Consulting Ltd., e-mail dated February 1, 2022.

[19] Fisheries and Oceans Canada (DFO). 2018. Report on the Progress of Management Plan Implementation for the Steller Sea Lion (*Eumetopias jubatus*) in Canada for the period of 2011-2015. Species at Risk Act Management Plan Report Series. Fisheries and Oceans Canada, Ottawa. vi + 37 pp. Available at: Pr-OtarieStellarSealion-v00-2018Dec-Eng.pdf (canada.ca)

Behaviourally, pinnipeds tend to be curious and undisturbed by in-water construction activities as observed and documented during marine terminal infrastructure construction on two northern BC projects (DFO File numbers 17-HPAC-00076 and 15-HPAC-00585). Pinnipeds also have the ability to avoid acute underwater noise by raising their heads out of water for an extended period of time or exiting the water entirely. These abilities likely contribute to their apparent resiliency to underwater noise disturbances and to the DFO's Management Plan for the Steller Sea Lion (*Eumetopias jubatus*) in Canada [Final] conclusion that acoustic disturbance in aquatic habitat presents a low risk to British Columbia's Steller sea lion populations as compared to other potential threats they face (DFO 2011[15]).

In contrast to pinnipeds, cetacean species are not able to exit the water to avoid underwater noise, spend more time with their heads underwater, and are not known to show the same resilience to marine construction generated underwater noise as pinnipeds. As such, cetaceans are considered less likely to be observed within a project area during construction activities. The differences in distribution, abundance, and behaviour between pinnipeds and cetaceans merit separate monitoring areas for the two groups of marine mammals.

A pinniped-specific exclusion area that is smaller than the cetacean exclusion area is supported by the injury threshold boundaries modelled in the Application. Prior to mitigation and with conservative assumptions, the pinniped injury threshold boundary was estimated to be 73 m from impact source, while the cetacean injury threshold boundary was estimated to be 340 m. These distances are expected to be reduced further with the implementation of commonly-applied and effective underwater sound dampening measures in place (e.g., bubble-curtain placement around active impact pile driving).

As described above, Woodfibre LNG proposes that based on the understanding of behaviour, abundance, and injury threshold level differences between cetaceans and pinnipeds, and the technical and economic limitations with the condition as originally written, monitoring boundaries for these two marine mammal groups should have separate and group-specific standards. A pinniped-specific exclusion area with a 125-m boundary of impact pile driving would be technically and economically feasible to effectively monitor. The 125-m boundary is supported with the following assumptions:

1. Harbour seals and Steller sea lions present a high probability of frequenting the CPA throughout pile driving activities.

2. The 125-m pinniped-specific exclusion area boundary would fully mitigate potential injury to pinnipeds considering the EAC Application's noise modeling assessment and conservative assumptions.

3. Potential behavioural disturbances are unlikely and would not adversely affect populations if they were to occur.

Since the Decision Statement was issued in 2016 (and re-issued in 2018), several major projects that involve marine terminal infrastructure have advanced to construction in British Columbia. Separate exclusion areas for cetacean and pinnipeds have become common for such British Columbia marine

infrastructure projects, including those with pile installation activities similar to those proposed by Woodfibre LNG.

Frequent pinniped presence recently led to a Decision Statement amendment to permit construction of a project (DFO file number 15-HPAC-00585) to proceed effectively. The approved amendment allowed a pinniped-specific exclusion area separate from, and less extensive than, the cetacean exclusion area. Similarly, an amendment was required for a project (DFO File No. 19-HPAC-00753) allowing a separate harbour seal-specific exclusion area as their continuous presence in the project area caused frequent and prolonged shutdowns, which severely delayed project construction progress (**Error! Reference source not found.**).

Table 1 Examples of BC Projects with Pile Installation Activities and Distance-Based Pinniped-Specific Exclusion Areas

Year Approved	DFO File Number	Pinniped Exclusion Area Boundary Distance
2020	20-HPAC-00996	150 m
2020	19-HPAC-00753	150 m (harbour seal-specific)
2018	17-HPAC-00076	75 m
2020	19-HPAC-00663	75 m
2021	20-HPAC-01057	No exclusion area required for pinnipeds

DFO has approved pinniped-specific exclusion area boundaries that varied from 150 m down to 75 m from pile installation activities, and in one case even removed the requirement for a pinniped exclusion area (DFO file 20-HPC-01057; **Error! Reference source not found.**). Pinniped interactions such as those experienced on these projects are expected during Woodfibre LNG Project construction activities, and the current 160 dB exclusion area boundary would be unrealistic to apply to pinnipeds while still allowing Project construction to proceed in a timely and efficient manner.

Changes to Mitigation Measures

The proposed changes to condition 3.8 do not result in changes to any other conditions in the Decision Statement and do not result in required changes to the key mitigation measures as presented in the Assessment Report (2015). Woodfibre LNG notes that condition 9 of the Province of British Columbia's environmental assessment certificate for the Project (EAC #E15-02) requires the development of a Marine Mammal Management Plan for construction in consultation with Fisheries and Oceans Canada, the Oil and Gas Commission and Aboriginal Groups. This plan must be developed by a Qualified Professional and implementation of this plan must be supervised by a Qualified Professional to the satisfaction of the Environmental Assessment Office. In consideration of this provincial condition of approval, the CEAA 2012 condition of approval, and the statutory requirements of the *Fisheries Act* and

Marine Mammal Regulations, there is a comprehensive regulatory framework for the protection of marine mammals during the Project's construction phase.

Conclusion

It is Woodfibre LNG's opinion that the requested amendment to condition 3.8 is not likely to be detrimental or adverse to either the health of individual harbour seals or Steller sea lions or the viability of pinniped populations in British Columbia. In addition, it will not increase the extent to which the effects of the Project, as assessed during the environmental assessment, are adverse. The proposed changes will align the requirements of the Woodfibre LNG Project with other marine construction projects in British Columbia and will include appropriate economically and technically feasible mitigation measures to protect harbour seals and Steller sea lions during in-water construction work.

Condition 6.4 Water Quality Monitoring

Background

Potential effects on water quality were considered in two sections of the January 2015 Application; Section 5.8 assessed potential effects on surface water (freshwater) quality and Section 5.10 assessed potential effects on marine water quality. Both were assessed as intermediate components with significance conclusions made within the applicable biological valued component assessments, the current use of lands and resources for traditional purposes assessment and the public health assessment. Current Project components and activities that were identified as having the potential to interact with water quality included:

- Soil erosion and sediment transport by surface runoff during construction and commissioning resulting in increased turbidity in watercourses or Howe Sound
- Accidents or malfunctions during construction, operation, or decommissioning
- Construction of a new water intake within Woodfibre Creek (amendment #1) and Mill Creek resulting in increased turbidity or change in pH (if instream concrete works are necessary)
- Remobilization of legacy pulp mill contaminants such as dioxins, furans, and polychlorinated biphenyls due to disturbance of seafloor sediments
- Discharge of treated process water and stormwater that includes nutrients, metals, hydrocarbons, mercaptans, amines, and chemicals of potential concern (COPC)

Baseline data reported in the Application stated that freshwater quality testing found British Columbia Water Quality Guideline exceedances for chloride, total organic carbon, total and dissolved calcium, and dissolved aluminum (see Section 5.8.3) and marine water quality sampling found British Columbia Water Quality Guideline exceedances for copper, boron, and zinc (see Section 5.10.3.2.2).

Since issuance of the Decision Statement in 2015, Woodfibre LNG has continued to monitor ambient marine water quality in Howe Sound. This monitoring has consisted of monthly sampling between May 20, 2020 and December 14, 2021. Monthly sampling was supplemented with weekly sampling once per year (October 20 to November 18, 2020 and May 18 to June 15, 2021) to support the evaluation of long-term water quality guidelines (WQGs). Water quality sampling results are screened against the CMME Guidelines for the Protection of Marine Water Aquatic Life (MWAL) and the British Columbia Approved and Working Water Quality Guidelines for the Protection of Marine Water Aquatic Life. A total of 300 marine water samples, 35 field duplicates, 24 travel blanks and 19 field blanks were collected over 25 sampling events during the monitoring period, divided between the surface and deep waters (Lorax 2022[20]). Samples were analyzed for general and microbial parameters, total metals and methyl mercury, and organics.

For the period of May 2020 to December 2021, the CCME WQG for MWAL were exceeded for dissolved oxygen, pH, cadmium, chromium, and mercury. The BC WQGs were exceeded for pH, nitrate, benzo(a)pyrene, boron, cadmium, chromium, copper, lead, mercury, and zinc (Lorax 2022). Nitrate and mercury exceedances were primarily attributed to non-detect results with detection limits above the WQG. There were few exceedances noted for pH, cadmium, chromium, and mercury. Boron was elevated above the CCME and BC WQG in the deep marine water and many of the surface water samples, attributable to the influence of oceanic waters (Lorax 20220). Copper, lead, and benzo(a)pyrene were elevated in surface and deep waters, although with more frequency in the surface waters. Chromium and zinc exceedances were more common in deep waters, although elevated zinc concentrations were observed in surface waters (Lorax 2022). A summary of the 2020-2021 monitoring program and results is provided in Attachment B of this letter.

Condition as Issued and Technical Feasibility

The text of Condition 6.4 of the CEAA 2012 Decision Statement is provided below:

> *6.4 The Proponent shall monitor water quality and sediment, using as a benchmarks the Canadian Council of Ministers of the Environment's Water Quality Guidelines for the Protection of Aquatic Life and Interim Sediment Quality Guidelines for the Protection of Aquatic Life, and shall communicate any exceedance(s) of the Guidelines to relevant government authorities and Aboriginal groups, and implement additional mitigation measures to remedy those exceedances.*

It is Woodfibre LNG's opinion that condition 6.4, as written, decreases compliance certainty, thereby increasing Project and regulatory risk. This opinion is based on the lack of distinction in the condition between the Woodfibre LNG Project, other anthropogenic activities (e.g. Forestry), or naturally occurring processes that have the potential to effect water quality within the local and regional area(s). The condition language therefore inappropriately assigns responsibility to Woodfibre LNG for implementing

[20] Lorax Environmental. 2022. Summary of the 2020/2021 Marine Water Quality Monitoring Results – Draft

mitigation measures in response to activities and processes that are outside of the Project's control. It is important to note that section 6 of the Decision Statement addresses conditions of approval related to human health. As such, Woodfibre LNG understands that the intent of the water quality and sediment quality monitoring required by condition 6.4 is to evaluate (and mitigate) potential bioaccumulation of contaminants in aquatic receptors that are harvested and consumed by people.

Monitoring water quality and marine sediment quality using the Canadian Council of Ministers of the Environment's (CCME) Water Quality Guidelines for the Protection of Aquatic Life and Interim Sediment Quality Guidelines for the Protection of Aquatic Life is an activity that Woodfibre LNG has initiated in advance of construction. However, as noted in the discussion of baseline conditions above (and in the 2015 Application), there are pre-existing exceedances of guidelines for the protection of aquatic life. As currently written, the condition states that Woodfibre LNG is responsible for implementing "*additional mitigation measures to remedy those exceedances*". As discussed above, this language effectively makes Woodfibre LNG responsible for the water and sediment quality in watercourses that flow through the Certified Project Area and for the marine environment in Howe Sound. This is not technically or economically feasible considering the limited control that Woodfibre LNG has on the multitude of anthropogenic and naturally occurring sources that may influence water and sediment quality within these waterbodies.

Further, condition 6.4 does not consider existing guidelines or other regulatory processes that will be applicable to monitoring water and sediment quality for the Project. Some construction-phase guidelines that are directly applicable to this condition include:

- Land Development Guidelines for the Protection of Aquatic Habitat[21] which provide guidance on design of sediment and erosion control measures and stormwater runoff quality from development sites.
- Interim Code of Practice: Routine Maintenance Dredging[22] which outlines national best practices for routine maintenance dredging that involves the mechanical removal of accumulated sediment using clamshell buckets, draglines, backhoes or suction dredges.

Further, the Government of Canada has legislative requirements for protecting water and sediment through the *Fisheries Act* and *Canadian Environmental Protection Act, 1999* (including their respective regulations).

Woodfibre LNG notes that conditions 6.4 does not acknowledge the Province of British Columbia's strong regulatory framework for the management of discharges to the environment that are established through the *Environmental Management Act* and associated regulations. The British Columbia Oil and Gas Commission is the agency responsible for regulating discharges from oil and gas facilities in accordance with this legislation. Woodfibre LNG anticipates the need to obtain a Waste Discharge Permit for the

[21] Fisheries and Oceans Canada (DFO). 1992. Land Development Guidelines for the Protection of Aquatic Habitat.
[22] Fisheries and Oceans Canada (DFO). 2020. Interim Code of Practice: Routine Maintenance Dredging

discharge of stormwater and contact water during the construction and operation phase(s) of the Project. Additional permits may also be required. Woodfibre LNG expects that all discharge permits will establish thresholds for potential contaminants that are protective of the environment and provide regulatory certainty.

Requested Changes to Condition 6.4

To clarify the objectives of this condition, Woodfibre LNG requests amending the language of condition 6.4 of the Decision Statement as identified below. Proposed added text is bolded and underlined. No deletions are proposed.

> *6.4 The Proponent shall**, during construction and operation,** monitor water quality and sediment, using as a benchmark the Canadian Council of Ministers of the Environment's Water Quality Guidelines for the Protection of Aquatic Life and Interim Sediment Quality Guidelines for the Protection of Aquatic Life, and shall communicate any exceedance(s) of the Guidelines **attributable to the Project** to relevant government authorities and Aboriginal groups, and implement additional mitigation measures to remedy those exceedances **or reduce the associated risk to human health**.*

These proposed changes to condition 6.4 will:

- Provide clarity on the intent and scope of the condition which will result in compliance certainty for Woodfibre LNG
- Place the interpretation of monitoring results into a context that recognizes both ambient conditions (where there are natural and pre-existing exceedances of CCME Guidelines for the Protection of Aquatic Life) and environmental conditions that are attributable to the Project during the construction and operation phase(s)
- Recognize that there will be a robust framework of federal legislation and provincial permitting processes that will apply to the construction and operation phase(s) of the Project and therefore avoids duplication of regulatory oversight
- Incorporate consideration for human health, which is understood as the primary focus of this condition

Changes to Mitigation Measures

Table 22-1 in Section 22 of the Application summarizes the measures that will be used to mitigate potential effects of the Project on each valued component. Section 5.10 of Table 22-1 identifies the mitigation measures applicable to the protection of marine water quality. Mitigation 5.10-1 specifies the BC Water Quality Guidelines as the standard to be met for construction discharges. It is recommended that this mitigation measure be updated to read “BC Water Quality Guidelines, CCME Water Quality

Guidelines for the Protection of Aquatic Life, and CCME Interim Sediment Quality Guidelines for the Protection of Aquatic Life". This will align the mitigation measures with the Decision Statement. This change in the mitigation wording will also align the commitment with conditions 6 and 7 of the Environmental Assessment Certificate for the Project (EAC #E15-02) which address water quality monitoring from a provincial perspective.

Conclusion

In its Assessment Report, the EAO determined that residual effects to marine water quality were not considered likely, apart from localized changes in the immediate vicinity of the treated wastewater diffusers, and therefore were not carried forward in Woodfibre LNG's assessment of effects on marine benthic habitat or other marine valued components (EAO 2015). The EAO further concluded that sediment disturbance and the mobilization of legacy contaminants into the water column would be minimized with mitigation and would result in low magnitude effects to marine water quality (EAO 2015). The Assessment Report concluded that the Project would not have significant adverse effects on marine water quality (EAO 2015). The proposed change will not increase the extent of any adverse effects of the Project or alter the conclusions of the Assessment Report (EAO 2015[23]).

Indigenous and Stakeholder Engagement

Woodfibre LNG has engaged with potentially affected Indigenous Groups and provided notice of the proposed amendment to conditions 3.8 and 6.4. Written notice of the proposed amendment with details regarding the nature of the proposed change was sent to all potentially impacted Indigenous Groups, including Squamish Nation, Tsleil-Waututh Nation, Musqueam Indian Band, Snuneymuxw First Nation, Penelakut Tribe, Lyackson First Nation, Lake Cowichan First Nation, Stz'uminus First Nation, Metis Nation of British Columbia, Halalt First Nation, and Cowichan Tribes. This included providing each community with a draft copy of this letter.

In providing notice of the proposed amendment, Woodfibre LNG sought feedback and comments on the application. Written comments were received from Tsleil-Waututh Nation. Those comments, including Woodfibre LNG's responses, are included as Attachment C. Woodfibre LNG also discussed the draft application with the Squamish Nation through the Squamish Nation-Woodfibre Environmental Working Group (EWG). Feedback received from Squamish Nation through the EWG included concerns regarding underwater noise effects on marine mammals from impact pile driving, vibratory pile driving, and other in-water activities. In response to this feedback, Woodfibre LNG has made two changes to this amendment request. First, a request to focus underwater noise monitoring on impulsive underwater noise activities has been removed. All activities that directly generate underwater noise activities will be monitored to

[23] Environmental Assessment Office. August 19, 2015. Woodfibre LNG Project Assessment Report. With Respect to the Application by Woodfibre LNG Limited for an Environmental Assessment Certificate pursuant to the *Environmental Assessment Act,* S.B.C. 2012, c.43 and the *Canadian Environmental Assessment Act, 2012,* S.C. 2012 c. 19, as a substituted environmental assessment.

establish the underwater noise impact area for construction. Second, the proposed pinniped-specific exclusion zone in this request has been increased from 100-m to 125-m. Woodfibre LNG has not received additional comments or concerns from the other Indigenous Groups at the time of submission.

In addition to engaging with Indigenous Groups, Woodfibre LNG also discussed the proposed amendment to condition 3.8 with the British Columbia Oil and Gas Commission and DFO in May 2022. No substantive comments or concerned were raised by either party during these discussions. Further, Woodfibre LNG has not received any feedback following the discussions.

Rights of Indigenous Peoples

The Assessment Report assessed the potential impacts of the Project of Aboriginal Groups' Aboriginal Interests, including impact on hunting and trapping, and fishing and marine harvesting. The Assessment Report (EAO 2015) does not identify access restrictions for Aboriginal Groups related to the hunting of marine mammals, nor does it identify information on hunting sites used by any Aboriginal Groups in the Project area with respect to marine mammals. A change in the exclusion zone for pinnipeds is not expected to alter habitat availability or result in restrictions to Aboriginal Groups' access to marine mammal hunting areas. Based on the information provided above (Rationale for Proposed Changes), it is Woodfibre's opinion that the proposed changes to condition 3.8 would not result in an increased risk of adverse effects to pinniped (harbour seal and Steller sea lion) populations and would therefore not result in impacts to Aboriginal Groups' ability to carry out marine mammal hunting.

Requested revisions to the water quality monitoring program required by condition 6.4 does not increase the risk of potential bioaccumulation of contaminants in aquatic receptors that are harvested and consumed by people. The CCME Water Quality Guidelines for the Protection of Aquatic Life and the Interim Sediment Quality Guidelines for the Protection of Aquatic Life will still be referenced as benchmarks to evaluate the monitoring program findings. As a result, this change to the Decision Statement will not affect the ability of Aboriginal Groups to fish for or harvest marine resources in Howe Sound.

Closure

The intent of the requested changes to conditions 3.8 (Protection of Marine Mammals) and 6.4 (Water Quality Monitoring) is to ensure that the conditions in the Decision Statement are technically and economically feasible for Woodfibre LNG to implement. These changes will also foster alignment between Woodfibre LNG and IAAC with the goal of maintaining compliance with the federal Decision Statement. It is Woodfibre LNG's firm opinion that the requested changes do not increase the extent of any adverse effects of the Project or alter the conclusions of the Environmental Assessment Report prepared for the Project, and that the request changes are consistent with the intent of the objectives when the Decision Statement was issued.

With submission of this application, Woodfibre LNG requests the Decision Statement for the Woodfibre LNG Project (Canadian Impact Assessment Registry reference number 80060) is amended as described herein. It is understood that this may require further discussion and response from IAAC prior to finalizing the approach regarding this request. For your reference, Attachment D provides a comparison of Conditions 3.8 and 6.4 as presented in the Decision Statement with the proposed revised conditions as described in this application.

If you have any questions or would like to discuss any aspect of this request, please contact the undersigned by telephone at <personal information removed> or by email at <Email address removed> .

Respectfully,

Woodfibre LNG Limited

<Original signed by>

Darren Cowan, P.Biol, PMP
Permitting Manager

Copy to:

Impact Assessment Agency of Canada
210A-757 West Hastings Street,
Vancouver, BC V6C 3M2
Attention: Carys Burgess, Senior Advisor, Strategic and Regional Environmental Assessments

Environmental Assessment Office
PO Box 946 Stn Prov Govt,
Victoria, BC V8W 9V1
Attention: Fern Stockman, A/Executive Project Director

Squamish Nation
1380 Stawamus Road, Squamish BC V8B 0B5
Attention: Rachel Munger, Environmental Manager, Squamish Nation
Tyler Gray, PGL Environmental Consultants, OBO Squamish Nation

Attachment A – Updated Marine Mammal Data for Howe Sound

Stantec

Memo

To: Darren Cowan, P.Bio. PMP, Permitting Manager
Woodfibre LNG Limited
#900 - 1185 W. Georgia Street
Vancouver, BC V6E 4E6

From: Andrea Ahrens and Ward Prystay
Stantec Consulting Ltd.
500-4515 Centra Boulevard
Burnaby, BC V5H 0C6

File: 123221624

Date: May 27, 2022

Reference: Woodfibre LNG Project, Squamish, British Columbia Updated Marine Mammal Data for Howe Sound

INTRODUCTION

Woodfibre LNG Limited (Woodfibre LNG) is planning to start construction of its liquefied natural gas (LNG) export facility on the former Woodfibre Pulp and Paper Mill site (the Project) in Nexwnnewu7ts atll'a7tsem (Howe Sound), approximately seven kilometres south of Skwxwu7mesh (Squamish). The Project is on the historical location of a Skwxwú7mesh Úxwumixw (Squamish Nation) village known as Swíyat. The Project includes the development of a natural gas liquefaction facility and an LNG transfer facility to enable the export of LNG to global markets via marine vessels. A substituted environmental assessment process was conducted between 2013 and 2015. In 2016, the Minister of Environment and Climate Change Canada issued a Decision Statement for the Project under section 65 of the *Canadian Environmental Assessment Act, 2012* (CEAA 2012) and this Decision Statement was updated in 2018 to reflect the removal of seawater cooling from the scope of the Project.

BACKGROUND

Potential project-specific and cumulative effects of underwater noise on marine mammals were considered during the environmental review process. As an outcome of this assessment, the Decision Statement included a condition that requires Woodfibre LNG to establish and maintain a marine mammal underwater noise impact area for all construction activities that have predicted underwater noise levels above defined thresholds for adverse behavioural change or injury to marine mammals (condition 3.8). Woodfibre LNG is applying to amend this condition to recognize the different mitigation requirements needed to be protective of cetaceans and pinnipeds.

Woodfibre's January 2015 Application for an Environmental Assessment Certificate[1] (the Application; Woodfibre LNG 2015) provided data on marine mammal occurrences in Howe Sound. These data were from several sources including data provided by the British Columbia Cetacean Sightings Network (BCCSN) in March 2013. To understand if marine mammal use of Howe Sound has changed since development of the Application, Woodfibre LNG has acquired and reviewed additional baseline data as

[1] Woodfibre LNG. January 2015. Woodfibre LNG Application for an Environmental Assessment Certificate. Available online at: https://projects.eao.gov.bc.ca/p/588511e1aaecd9001b8272e7/application?pageSize=164&currentPage=1

follows: i) updated cetacean sightings data for Howe Sound from the BCCSN[2]; ii) Fisheries and Oceans Canada (DFO) Management Plans; iii) Ocean Watch Howe Sound report[3]; and iv) DFO Strait of Georgia and Howe Sound harbour seal haulout location datasets[4,5].

RESULTS

Data from the BCCSN and DFO shows that 12 species of marine mammal have been documented in Howe Sound, including eight cetacean species and three pinniped species. Over the 1973 to 2019 period, the BCCSN documented 1,260 cetacean sightings including:

- Grey whale (21)
- Humpback whale (250)
- Minke whale (5)
- Killer whale (630)
- Pacific white-sided dolphin (82)
- Dall's porpoise (17)
- Harbour porpoise (235)
- False killer whale (1)
- Hubbs' beaked whale (2)
- Unidentified cetacean (17)

Pinniped species known to use habitats in Howe Sound are:

- Steller sea lion
- California sea lion
- Harbour seal

Of these, Hubbs' beaked whale is the only species not documented in the 2015 Application (Golder 2014[6]) and their occurrence in this area is considered unusual.

---

[2] B.C. Cetacean Sightings Network (BCCSN). 2022. Howe Sound Sightings Dataset Howe Sound Sightings Data 1973-2021. Letter from Ocean Wise to Stantec Consulting Ltd., dated February 1, 2022. Data obtained from the B.C. Cetacean Sightings Network (2022) were collected opportunistically with limited knowledge of temporal or spatial distribution of observer effort. As a result, absence of sightings at any location does not demonstrate absence of cetaceans.

[3] Nordstrom C, Majewski S, Miller A. 2020. Pinnipeds: population stable since the 1990s. In: Miller A, Chapman J, Deaden A, Ross P (Ed.). 2020. Ocean Watch Átl'ka7tsem/Txwnéwu7ts /Howe Sound Edition 2020. Ocean Wise Research Institute. Vancouver, B.C., Canada. 182–193 pg. Available online: OceanWatch-HoweSoundReport2020-SH-Pinnipeds.pdf

[4] DFO. 2019. Harbour seal (*Phoca vitulina*) counts and haulout locations in the Strait of Georgia, British Columbia coast – Harbour seal counts and haulout locations [1973-2014] dataset. Available at: https://open.canada.ca/data/en/dataset/be5a4ba8-79dd-4787-bf8a-0d460d25954c/resource/b70da0ee-5fd4-46a1-a91e-5f8f214dcb57

[5] DFO. 2022. Harbour seal (*Phoca vitulina*) counts and haulout locations in Howe Sound, British Columbia coast 2019 dataset. Letter from Fisheries and Oceans Canada to Stantec Consulting Ltd., e-mail dated March 7, 2022.

[6] Golder Associates. 2014. Woodfibre LNG Marine Resources Baseline Study. Appendix 5.10-1 of the Woodfibre LNG Application for an Environmental Assessment Certificate. Available on-line at: https://projects.eao.gov.bc.ca/p/588511e1aaecd9001b8272e7/application?pageSize=164&currentPage=1. Accessed January 2022.

Reference: Woodfibre LNG Project, Squamish, British Columbia Updated Marine Mammal Data for Howe Sound

There is no critical habitat and no known important migratory pathways or foraging/breeding grounds for any Schedule 1 SARA-listed marine mammal species in the Project area (EAO 20157).

The BCCSN data[2], while not standardized for effort, generally shows an increase in the number of cetacean sightings in Howe Sound and a seasonal change in occurrence. Opportunistic cetacean observations in Howe Sound have steadily increased since 2009, and densities of these sightings decrease with distance from the Strait of Georgia (Nordstrom et al. 2020[3]; BCCSN 2022[2]), although this may be at least in part, a reflection of observer densities as well. Attachment A, Figure 1 shows the BCCSN Cetacean Sightings from 2012-2021 in Howe Sound, along and in the vicinity of the Woodfibre LNG Certified Shipping Route.

No formal in-water pinniped occurrence data has been collected in British Columbia; the BCCSN does not collect records for pinnipeds, and the DFO Howe Sound dataset only includes harbour seal haulout locations, not in-water sightings. However, pinnipeds are commonly observed within the Project area and Howe Sound. Harbour seals are one of the most common marine mammal species observed in this area (based on opportunistic sightings during baseline field investigations in support of the Application), are the only year-round pinniped residents in Howe Sound (EAO 2015[7]) and, as suggested in the DFO harbour seal haulout location data (DFO 2019[4], DFO 2022[5]), show site fidelity (Attachment A, Figure 2).

Sea lions and cetaceans, in contrast, are known to visit Howe Sound on a more irregular or seasonal basis. Steller sea lions are known to visit the area to forage throughout the year, but do not continually reside in Howe Sound, as supported by the lack of known rookeries and haulouts in the area (EAO 2015[7]). Pinniped populations are continuing to grow along the entire British Columbia coast (DFO 2018[8]). Harbour seal populations are stable and considered to be at or above historical levels, while Steller sea lion populations in British Columbia are stable and growing, increasing at an average rate of 3.8% per year (Nordstrom et al. 2020[3]; DFO 2018[9]; Olesiuk 2018[10]).

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[7] Environmental Assessment Office. August 19, 2015. Woodfibre LNG Project Assessment Report. With Respect to the Application by Woodfibre LNG Limited for an Environmental Assessment Certificate pursuant to the *Environmental Assessment Act,* S.B.C. 2012, c.43 and the *Canadian Environmental Assessment Act, 2012,* S.C. 2012 c. 19, as a substituted environmental assessment.
[8] Fisheries and Oceans Canada (DFO). 2018. Report on the Progress of Management Plan Implementation for the Steller Sea Lion (*Eumetopias jubatus*) in Canada for the period of 2011-2015. Species at Risk Act Management Plan Report Series. Fisheries and Oceans Canada, Ottawa. vi + 37 pp. Available at: Pr-OtarieStellarSealion-v00-2018Dec-Eng.pdf (canada.ca)
[9] Fisheries and Oceans Canada (DFO). 2018. Report on the Progress of Management Plan Implementation for the Steller Sea Lion (*Eumetopias jubatus*) in Canada for the period of 2011-2015. Species at Risk Act Management Plan Report Series. Fisheries and Oceans Canada, Ottawa. vi + 37 pp. Available at: Pr-OtarieStellarSealion-v00-2018Dec-Eng.pdf (canada.ca)
[10] Olesiuk, PF. 2018. Recent trends in Abundance of Steller Sea Lions (*Eumetopias jubatus*) in British Columbia. DFO Can. Sci. Advis. Sec. Res. Doc. 2018/006. V + 67 p. Available at: Recent trends in Abundance of Steller Sea Lions (Eumetopias jubatus) in British Columbia. (dfo-mpo.gc.ca)

Reference: Woodfibre LNG Project, Squamish, British Columbia Updated Marine Mammal Data for Howe Sound

CLOSURE

The review of marine mammal information provided in the Environmental Assessment Certificate Application for the Woodfibre LNG Project in 2015 presented information up to 2013. Data up to 2021 is generally consistent with the Application but shows an increase in the number of cetacean observations per year and indicates an increase in pinniped populations. As such, there is not an increased risk to marine mammals from anthropogenic activities that has developed since the original CEAA 2012 Decision Statement was issued in 2016.

If you have any questions regarding the information provided in this memorandum, please contact Ward Prystay at the email address or phone number provided below.

Respectfully,

STANTEC CONSULTING LTD.

<Original signed by>

Andrea Ahrens M.Sc., R.P.Bio.
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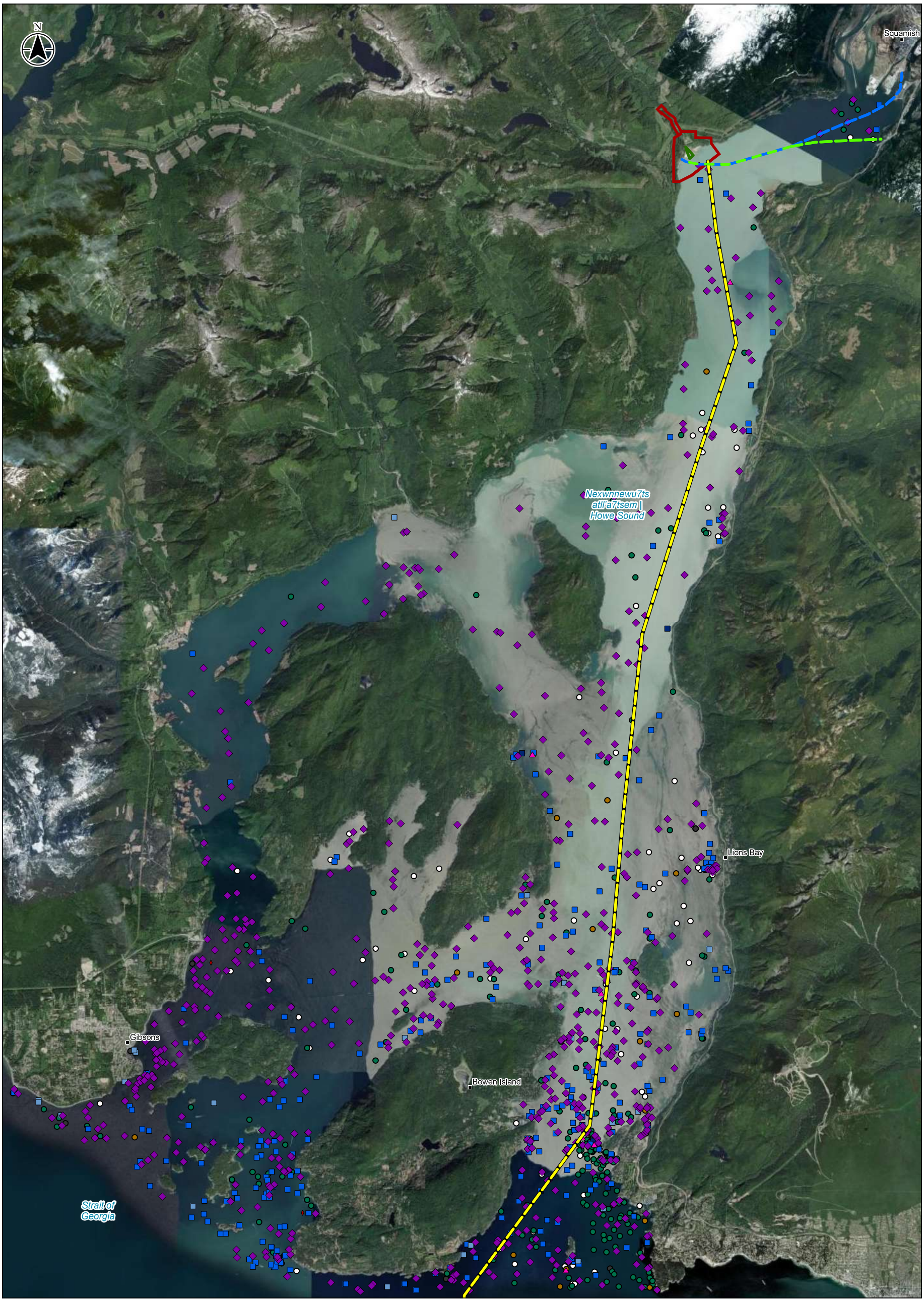

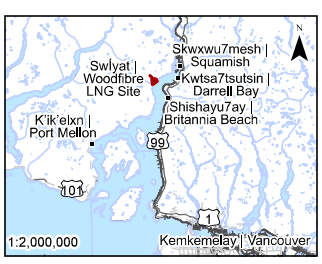

Notes
1. Coordinate System: NAD 1983 UTM Zone 10N
2. Data Sources: DataBC, Government of British Columbia; Natural Resources Canada; B.C. Cetacean Sightings Network; ESRI World Imagery
3. Sightings data supplied by the B.C. Cetacean Sightings Network. Sightings are opportunistic and not corrected for effort. Absence of sightings at any location does not demonstrate absence of cetaceans.

- Grey Whale (21)
- Humpback Whale (250)
- Minke Whale (5)
- Killer Whale (630)
- Pacific White-sided Dolphin (82)
- Unidentified Porpoise/Dolphin (10)
- Dall's Porpoise (17)
- Harbour Porpoise (235)
- False Killer Whale (1)
- Hubbs Beaked Whale (2)
- Unidentified Cetacean (7)

- Certified Project Area
- Green Zone
- Water Taxi Direct Route
- Worker Ferry Direct Route
- Certified Shipping Route

0 1 2 3 4 5 km
1:125,000 (at original document size of 11x17)

Stantec

Project Location
Swíyat

Project Number: 123221624
Prepared by LTRUDELL on 20220301
Requested by WPRYSTAY on 20220301

Client/Project/Report
Woodfibre LNG Limited
Woodfibre LNG Project
Updated Marine Mammal Data for Howe Sound

Figure No.
1

Title
Woodfibre LNG Certified Shipping Route
BCCSN Cetacean Sightings 2012 - 2021

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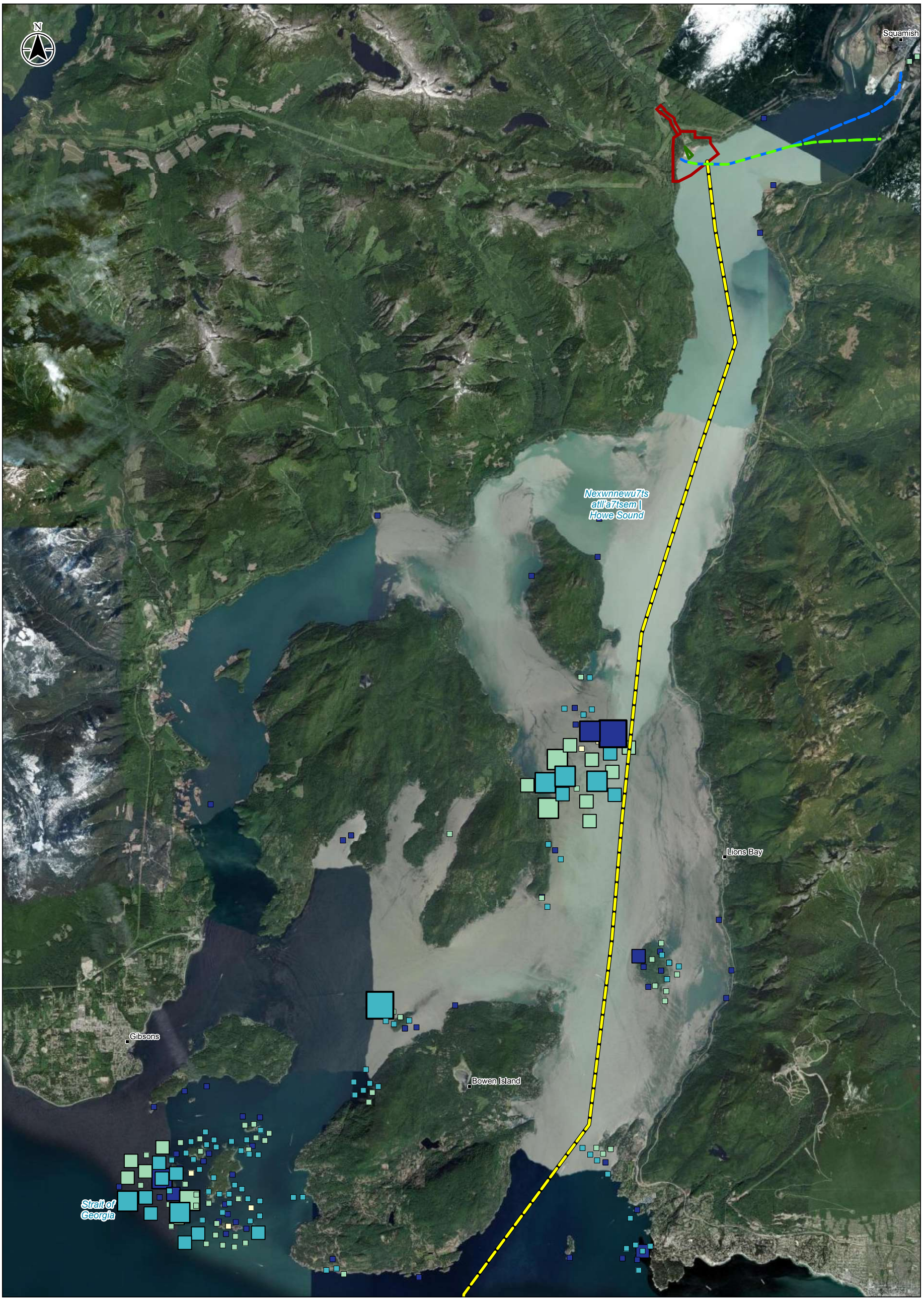


Notes
1. Coordinate System: NAD 1983 UTM Zone 10N
2. Data Sources: DataBC, Government of British Columbia; Natural Resources Canada
3. Imagery: ESRI World Imagery

Harbour Seal Haulout
Individuals Count
- 1 - 100
- 101 - 200
- 201 - 300
- > 300

Observation Years
- 1973 - 1979
- 1980 - 1989
- 1990 - 1999
- 2000 - 2009
- 2010 - 2019

- Certified Project Area
- Green Zone
- Water Taxi Direct Route
- Worker Ferry Direct Route
- Certified Shipping Route

0 1 2 3 4 5 km
1:125,000 (at original document size of 11x17)

Stantec

Project Location
Swíyat

Project Number: 123221624
Prepared by LTRUDELL on 20220301
Requested by WPRYSTAY on 20220301

Client/Project/Report
Woodfibre LNG Limited
Woodfibre LNG Project
Updated Marine Mammal Data for Howe Sound

Figure No.
2

Title
Woodfibre LNG Certified Shipping Route
Historic Harbour Seal Haulouts
1973 to 2019

Attachment B – Summary of the 2020-2021 Water Quality Monitoring Program

TECHNICAL MEMORANDUM

To:	**Darren Cowan and Ashleigh Crompton (Woodfibre LNG Ltd.)**	**Date:**	**March 16, 2022**
From:	**Lorax Environmental Services Ltd.**	**Project #:**	**A633-3**
Subject:	**Summary of the 2020/2021 Marine Water Quality Monitoring Results**		

1. Introduction

Woodfibre LNG Limited (WLNG) is proposing to build a liquefied natural gas (LNG) processing facility (the Project) at the former Woodfibre Pulp and Paper Mill, located approximately 7 km southwest of Squamish, BC. The Project area is industrially zoned, having experienced more than 100 years of industrial use and deep-water marine access. WLNG received a provincial Environmental Assessment Certificate (EAC) in 2015, a federal decision statement (FDS) from the Impact Assessment Agency of Canada in 2015, and a Squamish Nation Environmental Assessment Agreement in 2016. This technical memorandum, prepared by Lorax Environmental Services Ltd. (Lorax), summarizes the 2020 and 2021 marine water quality monitoring program and results for the Project.

The results of the monitoring program are screened against the Canadian Environmental Quality Guidelines for the Protection of Marine Water Aquatic Life (MWAL) published by the Canadian Council of Ministers of the Environment (CCME WQG), in accordance with FDS condition 6.4, and also against the British Columbia Approved and Working Water Quality Guidelines (BC WQG) for the Protection of MWAL. In the sections to follow, a description of the monitoring program is provided in Section 2 and the water quality results and guideline exceedances for monitoring and reference stations are summarized in Section 3. Tabulated water quality and screening results are provided in Appendix A.

2. Marine Water Quality Monitoring Program

The marine water quality monitoring program run by Keystone Environmental Limited (Keystone) is described in the marine water quality management plan (Keystone, 2021a) and the 2020 baseline report (Keystone, 2021b). Marine water quality monitoring was conducted from May 20, 2020, through December 14, 2021. The marine monitoring stations were accessed by boat, and the water column was sampled at four stations adjacent to the marine foreshore within the Project boundaries and at two reference sites located approximately 500 m northeast and south of Project area. The monitoring stations are summarized in Table 1 and the locations are shown in Figure 1, at the end of this section. Field measurements, sample collection and analytical testing were conducted in accordance with the British Columbia Field Sampling Manual (Clark, 2013) and the British

Columbia Environmental Laboratory Manual (BC ENV, 2020), by Keystone and Caro Analytical Services (Caro), respectively.

Monitoring was conducted monthly at all stations from May 2020 through December 2021. This was supplemented with weekly sampling once per year (October 20 to November 18, 2020 and May 18 to June 15, 2021) to support the evaluation of long-term WQGs. Water column sampling was conducted at approximately 2 m below the water surface and 2 m above the seafloor using a Van Dorn water sampler. A YSI multiparameter sonde was used to measure field parameters *in-situ* and at the same depths as the analytical samples. Field measurements included conductivity, depth, dissolved oxygen (DO), oxidation reduction potential (ORP), pH, salinity, temperature, total dissolved solids (TDS) and Turbidity. Lab supplied bottles and preservatives were used for sample collection and placed in a cooler on-ice for shipment to Caro for *ex-situ* analysis and sub-let testing for dioxins and furans. Two field duplicates, a field blank and trip blank were generally collected for each round of sampling.

A total of 300 marine water samples, 35 field duplicates, 24 travel blanks and 19 field blanks were collected over 25 sampling events during the monitoring period, divided between the surface and deep waters. Samples were tested for the parameters listed in Table 2. However, duplicate samples were typically only tested for hardness, total metals and total suspended solids (TSS). Field and travel blanks were generally tested for all parameters. Reported detection limits occasionally varied from typical values shown in Table 2.

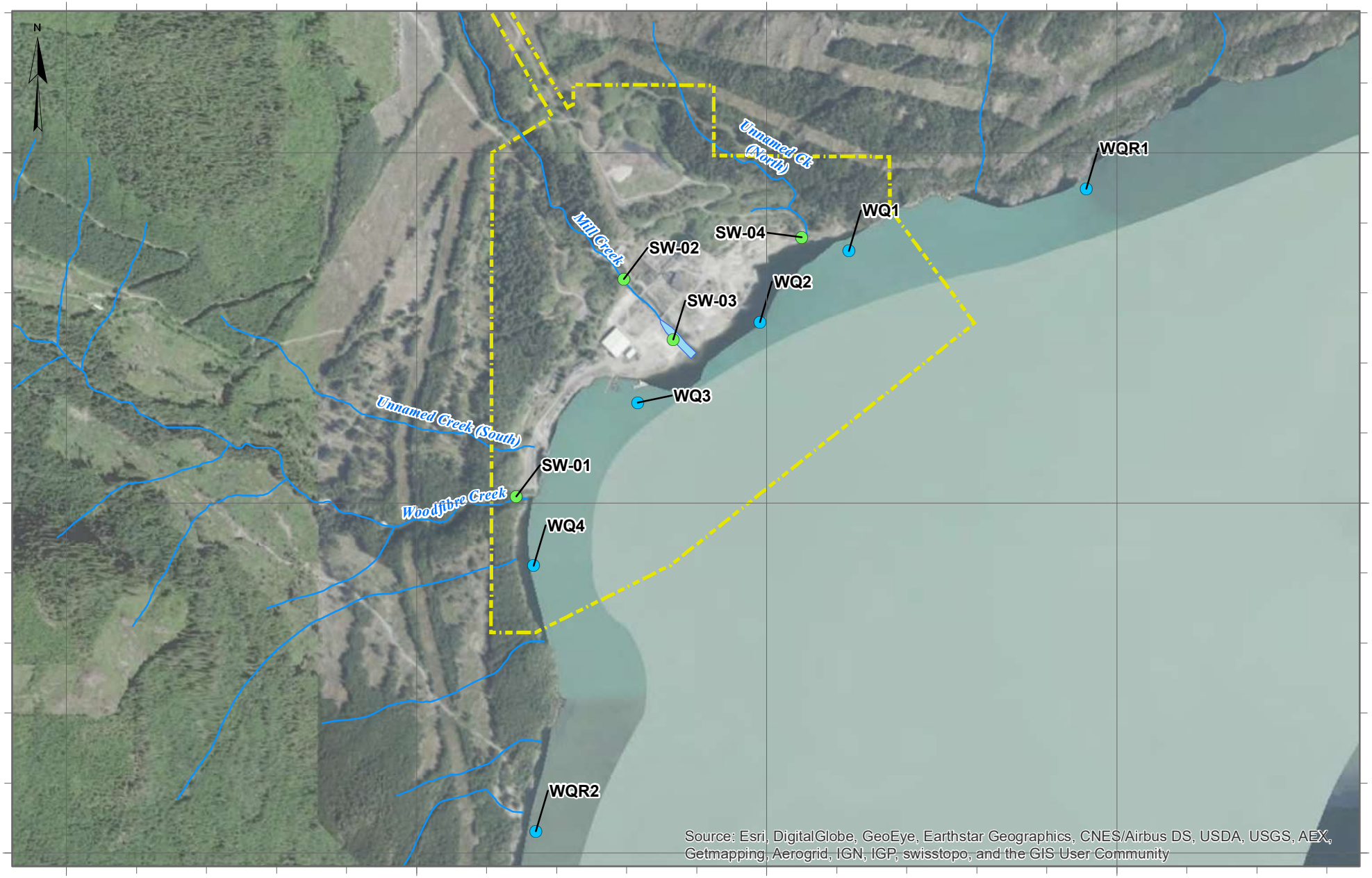
Table 1:
Marine Water Quality Monitoring Stations for the 2020/2021 Monitoring Program.

Station	Latitude	Longitude	Description
WQ1	49° 40.065'N	123° 14.772'W	Within the Project area east of Unnamed Creek (North) mouth and the historic chip unloading and barge berthing facilities, and at the northeastern edge of the future LNG floating storage and offloading (FSO) facilities.
WQ2	49° 39.955'N	123° 14.982'W	Northeast of Mill Creek mouth and the historic timber wharf that has been removed, and between the future FSO and material offloading facilities within the Project area.
WQ3	49° 39.830'N	123° 15.272'W	Southwest of Mill Creek mouth between the historic ferry and deep-sea berthing facilities, and northeast of the future ferry facility, located within the Project area.
WQ4	49° 39.578'N	123° 15.518'W	Within the Project area, southwest of Woodfibre Creek mouth at the site of the future floating hotel.
WQR1	49° 40.162'N	123° 14.208'W	Reference site located northeast of Unnamed Creek (North) mouth 500 m northeast of the Project boundary.
WQR2	49° 39.169'N	123° 15.511'W	Reference site located south of Woodfibre Creek mouth and 500 m south of the Project boundary.

Table 2:
Analytical Parameters Monitored During the 2020/2021 Monitoring Program.

Parameter	Units	Typical Analytical Detection Limit
General and Microbiological		
Dissolved Oxygen	mg/L	1
E.coli	MPN/100 mL	1
Nitrate as N (N-NO3)	mg/L	1
pH	pH units	-
Total Ammonia as N (N-NH3)	mg/L	0.05
Total Hardness	mg/L	0.5
Total Suspended Solids (TSS)	mg/L	2
Total Metals and Methyl Mercury		
Aluminum, total (T-Al)	mg/L	0.01
Antimony, total (T-Sb)	mg/L	0.0004
Arsenic, total (T-As)	mg/L	0.001
Barium, total (T-Ba)	mg/L	0.01
Beryllium, total (T-Be)	mg/L	0.0002
Bismuth, total (T-Bi)	mg/L	0.0002
Boron, total (T-B)	mg/L	0.1
Cadmium, total (T-Cd)	mg/L	0.00002
Calcium, total (T-Ca)	mg/L	0.4
Chromium, total (T-Cr)	mg/L	0.001
Cobalt, total (T-Co)	mg/L	0.0002
Copper, total (T-Cu)	mg/L	0.0008
Iron, total (T-Fe)	mg/L	0.02
Lead, total (T-Pb)	mg/L	0.0004
Lithium, total (T-Li)	mg/L	0.0002
Magnesium, total (T-Mg)	mg/L	0.02
Manganese, total (T-Mn)	mg/L	0.0004
Mercury, total (T-Hg)	mg/L	0.00001
Methyl Mercury	pg/L	0.023
Molybdenum, total (T-Mo)	mg/L	0.0002
Nickel, total (T-Ni)	mg/L	0.0008
Phosphorous, total (T-P)	mg/L	0.1
Potassium, total (T-K)	mg/L	0.2
Selenium, total (T-Se)	mg/L	0.001
Silicon, total (T-Si)	mg/L	2
Silver, total (T-Ag)	mg/L	0.0001
Sodium, total (T-Na)	mg/L	0.2
Strontium, total (T-Sr)	mg/L	0.002
Sulphur, total (T-S)	mg/L	6
Iron, total (T-Fe)	mg/L	0.001
Thallium, total (T-Tl)	mg/L	0.00004
Thorium, total (T-Th)	mg/L	0.0002
Tin, total (T-Sn)	mg/L	0.0004
Titanium, total (T-Ti)	mg/L	0.01
Tungsten, total (T-W)	mg/L	0.002
Uranium, total (T-U)	mg/L	0.00004
Vanadium, total (T-V)	mg/L	0.002
Zinc, total (T-Zn)	mg/L	0.008
Zirconium, total (T-Zr)	mg/L	0.0002
Organics		
Polycyclic Aromatic Hydrocarbons (PAH)	mg/L	0.00001 - 0.0002
Volatile Organic Compounds (VOC)	mg/L	0.0005 - 0.002
Dioxins and Furans	pg/L	1 - 4

Note: The detection limit ranges provided for PAH, VOC and dioxins and furans and represent the variation in detection limits between different parameters within the grouping.



LEGEND

- Freshwater Monitoring Station
- Marine Water Monitoring Station
- Certified Project Area
- Watercourse
- Waterbody

DATE SAVED:	Jan 14, 2022
DRAWN BY:	GM
REVIEWED:	PM
VERSION:	1

Coordinate System: NAD 1983 UTM Zone 10N
Projection: Transverse Mercator
Datum: North American 1983
Units: Meter

1:15,000

0 200 400 Meters

CLIENT:

LORAX ENVIRONMENTAL

PROJECT:

Woodfibre LNG

TITLE:

Water quality monitoring stations for freshwater and marine water.

PROJECT #: A633-2

FIGURE: 1

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3. Monitoring Results

3.1 Screening Approach

Monitoring data for each sample and field duplicate were screened against the short- and long-term BC and CCME WQGs for marine water aquatic life (MWAL). The WQGs for hexavalent chromium, Cr(VI), and trivalent antimony, Sb(III) are used to screen the corresponding total metal results. The total metal measurement includes all forms of a metal parameter present in a sample, including particle-bound and dissolved metal fractions. Therefore, if a total metal result meets a guideline for the corresponding metal species component, the guideline is considered to be met.

The monitoring data and screening results are tabulated in Appendix A for each monitoring station. The WQGs that apply to the parameters included in the monitoring program are listed in the screening tables. Field duplicates are included along side samples and separate tables are present the field and travel blank results.

3.2 Marine Water Quality

The marine water quality in Howe Sound is influenced by freshwater inputs, marine water circulation patterns and currents, and industrial effluents that have been discharged to the sound since the early 1900's. The Golder (2014) marine resources study noted that Howe Sound waters are generally stratified with a low salinity surface layer, that varies approximately 1 to 10 m in depth, and is overlying higher salinity marine water exhibiting a predominantly oceanic influence. The surface layer is controlled by freshwater inputs and higher turbidity waters are generally confined to the freshwater influenced surface layer. There is limited mixing between the stratified layers, and dissolved oxygen (DO) concentrations typically decrease with depth. Boron and zinc concentrations are attributed to the soluble component of these parameters, whereas elevated copper concentrations are generally due to particulate-bound influences.

Field measurements for the May 2020 to December 2021 monitoring program are summarized in Table 3. Similar trends were observed as in the Golder (2014) study. The lowest salinity and pH, and highest turbidity measurements were generally recorded in the surface samples consistent with seasonal freshwater influence on the surface layer. The pH ranged from 6.43 to 8.86, and 7.21 to 7.87, in the surface and deep waters, respectively. At depth the turbidity was low and DO periodically declined to 4.8 mg/L, whereas the salinity remained generally elevated (29.6 ppt, median value) above surface concentrations. The surface water DO measurements ranged from 7.24 to 14.1 mg/L.

The water quality at monitoring and reference stations during the 2020 May to 2021 December study period generally met the BC and CCME WQG for MWAL with some significant exceptions. The CCME WQGs were exceeded for DO, pH, cadmium, chromium and mercury. Exceedances

of the BC WQGs were observed for pH, nitrate, benzo(a)pyrene, boron, cadmium, chromium, copper, lead, mercury, and zinc. The parameters, number of exceedances and dataset concentration ranges, grouped as surface or deep water, are summarized in Table 4 . Spatial variation in water quality between the monitoring and reference sites was not evaluated.

Nitrate and mercury exceedances were primarily due to non-detect results with detection limits above the WQG. There were very few exceedances noted for pH, cadmium, chromium and mercury. Boron was elevated above the BC and CCME WQG in the deep marine water and many of the surface water samples due to the influence of oceanic waters. Copper, lead and benzo(a)pyrene were elevated in both surface and deep waters with a higher frequency of exceedances in the surface waters compared to depth. Chromium and zinc WQG exceedances were more prevalent in deep waters, although elevated concentrations of zinc were also observed in surface waters.

Table 3:
Summary of Field Measurements for the 2020/2021 Marine Water Quality Monitoring Program.

Field Parameter	Units	Water Column Location	n	Minimum	Median	95th Percentile	Maximum
Temperature	°C	Surface	132	1.2	9.8	15.1	16.5
		Deep	132	8.3	9.4	10.8	13.6
Dissolved Oxygen	mg/L	Surface	126	7.24	10.3	13.0	14.1
		Deep	126	4.76	6.24	7.85	205
Specific Conductivity (SPC)	µS/cm	Surface	78	1,494	15,508	35,870	136,539
		Deep	78	28,848	45,605	46,671	46,892
Salinity	ppt	Surface	114	0.76	9.21	23.4	26.7
		Deep	113	17.8	29.6	30.6	32.0
pH	pH units	Surface	127	6.43	7.81	8.57	8.86
		Deep	123	7.21	7.46	7.69	7.87
Oxidation Reduction Potential (ORP)	mV	Surface	95	6.8	158.3	228.7	904.1
		Deep	95	5.0	183.4	269.3	977.6
Turbidity	NTU	Surface	126	0.2	2.8	16.1	19.6
		Deep	125	-0.6	0.5	2.7	545.1
Depth	m	Surface	132	1.0	2.1	10.9	11.6
		Deep	132	21.2	28.5	36.9	39.1

Note: Sample count = n.

Table 4:
Summary of Exceedances for the 2020/2021 Marine Water Quality Monitoring Program.

Exceeding Parameter	Units	Water Column Location	Number of Water Quality Guideline Exceedances				Summary of Water Quality Results			Commentary
			BC		CCME		n	Min	Max	
			LT	ST	LT	ST				
Dissolved Oxygen (DO)	mg/L	surface	-	-	5	-	126	7.24	14.1	The maximum deep water value 205 mg/L (2021-05-26, WQ4-1) has a corresponding lab DO of 9.8 mg/L, the field measurement is a suspected data outlier.
		deep	-	-	121	-	126	4.76	205	
pH	pH units	surface	5	-	5	-	127	6.42	8.86	There were 2 upper and 3 lower limit exceedances in surface water. The lab pH exceeded the lower limit in two deep water samples: 2020-06-22 WQR1, 2021-05-18 WQ4.
		deep	2	-	2	-	123	7.21	7.87	
Nitrate (N-NO3)	mg/L	surface	7	-	0	0	156	0.01	14.8	Most exceedances were due to an elevated detection limit (5 or 10 mg/L). Measurements were reported at surface on 21-Apr-22 at WQ1 (14.8 mg/L) and at depth on 20-May-20 at WQ2 (6.3 mg/L).
		deep	12	-	0	0	156	0.01	10	
Total Boron (T-B)	mg/L	surface	78	-	-	-	168	0.0024	4.33	The surface water T-B concentration varies due to freshwater input whereas the concentrations remain relatively stable in the deeper waters. T-B is primarily present in soluble form (Golder, 2014).
		deep	166	-	-	-	167	0.256	8.38	
Total Cadmium (T-Cd)	mg/L	surface	2	-	2	-	168	0.000002	0.000399	Exceedances were recorded in the surface water samples from WQ1, and from deep water samples collected at WQR1 and WQR2.
		deep	3	-	3	-	167	0.00002	0.000173	
Total Chromium (T-Cr)	mg/L	surface	0	-	0	-	168	0.00013	0.0012	T-Cr was slightly elevated in deep water relative to surface water. The deep water exceedances occurred in samples from WQ1, WQ4 and WQR2.
		deep	4	-	4	-	167	0.00027	0.00226	
Total Copper (T-Cu)	mg/L	surface	41	13	-	-	168	0.0002	0.00974	Total copper is primarily particulate bound and is associated with total suspended solids (TSS) in the freshwater influenced surface layer (Golder, 2014).
		deep	16	7	-	-	167	0.0004	0.00504	
Total Lead (T-Pb)	mg/L	surface	13	0	-	-	168	0.00005	0.014	Exceedances are observed throughout the water column with T-Pb generally slightly elevated in surface waters relative to the deep waters
		deep	7	0	-	-	167	0.00005	0.00845	
Total Mercury (T-Hg)	mg/L	surface	0	-	0	-	168	0.000005	0.00001	The exceedance measured 21-Aug-25 at WQ2 is due to an elevated detection limit (<0.0001 mg/L). A result of 0.000029 mg/L was reported for the 20-Aug-24 sample from WQ4.
		deep	2	-	2	-	167	0.000005	0.0001	
Total Zinc (T-Zn)	mg/L	surface	11	1	-	-	168	0.001	0.0784	Zinc is present primarily as soluble species and is periodically elevated throughout the water column (Golder, 2014)
		deep	23	2	-	-	167	0.003	0.126	
Benzo(a)pyrene	mg/L	surface	10	-	-	-	150	0.00001	0.000066	Exceedances were observed at WQ1, WQ3, WQ4 and WQR2 (surface only). Benzo(a)pyrene was also detected in the 2021-03-25 travel blank (0.000019 mg/L) and the 2021-05-26 field blank (0.000025 mg/L).
		deep	6	-	-	-	150	0.00001	0.000065	

Notes:
Sample count = n.
BC = British Columbia Approved and Working Water Quality Guidelines for Aquatic Life, British Columbia Ministry of Environment & Climate Change Strategy Water Protection & Sustainability Branch.
CCME = Canadian Environmental Quality Guidelines for the Protection of Aquatic Life, Canadian Council of Ministers of the Environment.
ST = short-term freshwater aquatic life guideline.
LT = long-term freshwater aquatic life guideline.

4. Closure

This quarterly report is a desktop review by Lorax of the Woodfibre LNG monitoring information provided by Caro Analytical Services (Caro) laboratory test reports and monitoring program information provided by Keystone Environmental (Keystone). We trust that the information provided herein is sufficient for your present needs. Should you require anything further, please contact the undersigned.

Yours sincerely,
Lorax Environmental Services Ltd.

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Engineers and Geoscientists British Columbia Permit to Practice Number: 1001840

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Appendix A: Marine Water Quality Results

Table A-1: Water Quality Results for Marine Water Monitoring Station WQ1 - 2m Below Surface May 2020 to March 2021

Sample Date		**2020-05-20**	**2020-06-22**	**2020-07-21**	**2020-08-24**	**2020-09-28**	**2020-10-20**	**2020-10-27**	**2020-11-03**	**2020-11-10**	**2020-11-18**	**2020-12-14**	**2021-01-27**	**2021-02-25**	**2021-03-25**	**Marine Water Aquatic Life Water Quality Guidelines**			
Laboratory ID		**0051710-02**	**0062209-02**	**0071996-02**	**0082292-02**	**0093017-02**	**20J1961-02**	**20J2778-02**	**20K0360-02**	**20K1261-02**	**20K2100-02**	**20L1589-02**	**21A2590-02**	**21B2778-02**	**21C3505-02**	**BC**	**BC**	**CCME**	**CCME**
Station Name		**WQ 1-2**	**WQ1-2**	**WQ 1-2**	**WQ 1-2**	**WQ1-2**	**WQ 1-2**	**WQ 1-2**	**WQ1-2**	**WQ 1-2**	**WQ 1-2**	**WQ1-2**	**WQ1-2**	**WQ1-2**	**WQ1-2**	**Long Term**	**Short Term**	**Long Term**	**Short Term**
Field Parameters																			
Temperature	°C	10.5	11.1	13.6	15.0	12.1	10.2	7.4	9.0	5.1	-	5.9	7.6	-	8.0	Narrative [1]	-	Narrative [1]	-
Dissolved Oxygen (%)-field	%	-	-	-	-	-	-	87.1	88.3	87.9	-	85.9	-	-	122.3	-	-	-	-
Dissolved Oxygen (mg/L)-field	mg/L	10.03	10.22	10.00	8.82	10.37	9.98	9.48	9.00	10.5	-	9.60	8.35	-	12.71	-	-	>8	-
SPC	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	32274	-	-	-	-
Conductivity	µS/cm	2510	8804	3574	21193	8669	12262	16676	22812	10509	-	17838	27952	-	32274	-	-	-	-
Salinity	ppt	1.8	6.9	1.9	16.1	-	10.1	15.2	20.4	9.9	-	17.1	26.6	-	-	Narrative [1]	-	Narrative [1]	-
TDS-field	mg/L	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-
pH-field	pH units	8.58	7.81	**8.86**	7.80	7.81	7.86	7.90	7.74	7.83	-	7.60	7.71	-	8.33	7.0 - 8.7	7.0 - 8.7	7.0 - 8.7	-
ORP	mV	52.7	133.9	-	-	-	-	106.9	117.9	150.5	-	89.5	-	-	189.8	-	-	-	-
Turbidity	NTU	2.07	11.24	12.90	1.07	11.06	2.27	11.06	1.10	2.1	-	0.30	0.24	-	0.71	Narrative [1]	Narrative [1]	Narrative [1]	-
Depth	m	2.5	2.1	1.1	1.9	1.0	1.0	11.4	-	10.9	-	-	2.2	-	2.1	-	-	-	-
General Parameters																			
Dissolved Oxygen-lab	mg/L	10.7	8.9	10.3	9.2	9.4	9.6	10.3	9.6	9.9	9.9	10.6	9.7	10.6	11.1	-	-	>8	-
pH-lab	pH units	7.6	7.01	7.18	7.92	7.38	7.56	7.58	7.65	7.32	7.18	7.64	7.53	7.63	7.86	7.0 - 8.7	-	7.0 - 8.7	-
TSS	mg/L	4.8	14	11	2.2	12.4	2.6	2	3	3.8	9.8	<2	3	<2	<2	Narrative [1]	Narrative [1]	Narrative [1]	-
Total Hardness	mg/L	417	278	356	3220	1120	1790	2500	2290	1680	1230	3130	5070	4600	<0.1	-	-	-	-
N-NH3	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-
N-NO3	mg/L	<1	<0.01	<0.01	<1	<1	**<10**	<1	<1	<1	<1	<1	<1	<1	<1	3.7	-	45	339
Total Metals																			
T-Al	mg/L	0.298	1.09	0.858	0.0845	0.582	0.158	0.0493	0.158	0.136	0.396	0.0459	0.0181	0.0224	<0.002	-	-	-	-
T-Sb	mg/L	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	0.000062	-	0.27 [Sb(III)]	-	-
T-As	mg/L	<0.001	<0.001	<0.001	0.00128	<0.001	<0.001	<0.001	<0.001	<0.001	0.00119	0.00153	0.00175	0.0015	<0.00005	-	0.0125	0.0125	-
T-Ba	mg/L	0.0106	0.0247	0.0183	0.0294	0.0187	0.0134	0.013	0.0125	0.0145	0.0144	0.0134	0.0102	0.0123	<0.0001	-	-	-	-
T-Be	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	0.1	-	-	-
T-Bi	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	-	-	-	-
T-B	mg/L	0.432	0.247	0.366	**2.33**	0.847	**1.35**	**1.87**	**1.81**	**1.37**	0.845	**2.12**	**3.45**	**3.43**	0.0024	1.2	-	-	-
T-Cd	mg/L	<0.00002	<0.00002	<0.00002	0.000049	0.000036	0.000036	0.000051	0.000044	0.00003	<0.00002	0.000062	0.000078	**0.000399**	<0.000002	0.00012	-	0.00012	-
T-Ca	mg/L	33.8	21.4	20.4	216	75.9	120	179	164	128	88.6	219	326	316	<0.04	-	-	-	-
T-Cr	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00013	0.0015 [Cr(VI)]	-	0.0015 [Cr(VI)]	-
T-Co	mg/L	<0.0002	0.00053	0.00029	<0.0002	0.00034	<0.0002	<0.0002	<0.0002	<0.0002	0.00029	<0.0002	<0.0002	<0.0002	<0.000005	-	-	-	-
T-Cu	mg/L	**0.003**	**0.00338**	**0.0021**	0.00118	**0.00249**	0.00104	<0.0008	0.00127	0.00133	0.00131	<0.0008	<0.0008	<0.0008	<0.0002	0.002	0.003	-	-
T-Fe	mg/L	0.285	0.977	0.577	0.043	0.54	0.16	0.105	0.139	0.156	0.373	0.137	0.045	0.056	0.0076	-	-	-	-
T-Pb	mg/L	<0.0004	0.00076	0.00134	<0.0004	<0.0004	<0.0004	0.00086	**0.00284**	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.00005	0.002	0.14	-	-
T-Li	mg/L	0.0127	0.00894	0.0116	0.118	0.0343	0.0512	0.0698	0.0727	0.0556	0.0399	0.0851	0.133	0.158	<0.00005	-	-	-	-
T-Mg	mg/L	80.6	54.6	73.9	650	225	361	499	457	330	246	628	1030	925	<0.005	-	-	-	-
T-Mn	mg/L	0.0104	0.0321	0.0178	0.0101	0.0202	0.0108	0.0146	0.00898	0.0142	0.0262	0.0134	0.00454	0.00592	0.000069	-	-	-	-
T-Hg	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00002 [2]	-	0.000016	-
T-Mo	mg/L	0.001	0.0007	0.00092	0.00598	0.00253	0.0036	0.00521	0.00428	0.00336	0.00238	0.00668	0.00894	0.00931	0.000015	-	-	-	-
T-Ni	mg/L	0.00109	<0.0008	<0.0008	<0.0008	0.00094	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.003	0.0083	-	-	-
T-P	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.144	<0.1	0.011	-	-	-	-
T-K	mg/L	27.8	16.6	23.6	194	68.4	103	147	140	104	81.2	201	316	290	<0.01	-	-	-	-
T-Se	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	-	-	-	-
T-Si	mg/L	<2	2.1	3.3	<2	6.4	2.1	<2	2.6	2.2	3.3	2.6	3.1	2.2	0.23	-	-	-	-
T-Ag	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	0.0015	0.003	-	0.0075
T-Na	mg/L	672	449	612	5490	1850	3010	4310	3930	2800	2050	5000	8570	7430	0.038	-	-	-	-
T-Sr	mg/L	0.497	0.342	0.447	3.92	1.5	2.32	3.49	3.04	2.34	1.62	4.32	6.27	6.23	<0.0001	-	-	-	-
T-S	mg/L	63.1	39.7	64	512	189	307	426	381	280	208	563	785	757	<1	-	-	-	-
T-Te	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00005	-	-	-	-
T-Tl	mg/L	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.000004	-	-	-	-
T-Th	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	-	-	-	-
T-Sn	mg/L	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	0.00076	<0.0004	<0.0004	<0.00005	-	-	-	-
T-Ti	mg/L	0.0204	0.0695	0.0462	<0.01	0.036	0.0118	<0.01	0.0109	0.0102	0.0133	<0.01	<0.01	<0.01	<0.0002	-	-	-	-
T-W	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0002	-	-	-	-
T-U	mg/L	0.000263	0.000203	0.000214	0.00192	0.000661	0.000938	0.0014	0.00125	0.000969	0.000612	0.00158	0.00248	0.00239	<0.000001	-	-	-	-
T-V	mg/L	<0.002	0.0035	<0.002	0.0076	<0.002	0.006	<0.002	0.0027	<0.002	<0.002	<0.002	<0.002	0.0047	<0.0002	0.05	-	-	-
T-Zn	mg/L	<0.008	<0.008	0.0082	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	**0.0123**	<0.008	<0.008	<0.001	0.01	0.055	-	-
T-Zr	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	0.00021	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00002	-	-	-	-
Speciated Metals																			
Methyl Mercury	ng/L	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-	-
Polycyclic Aromatic Hydrocarbons (PAH)																			
Acenaphthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.006	-	-	-
Acenaphthylene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
Acridine	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000066	<0.00005	-	-	-	-
Anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	-	-	-
Benz(a)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	-	-	-
Benzo(a)pyrene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	-	-	-
Benzo(b+j)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Benzo(g-h-i)perylene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Benzo(k)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
2-Chloronaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-
Chrysene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0001	-	-	-
Dibenz(a-h)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	-	-	-
Fluoranthene	mg/L	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	-	-	-	-
Fluorene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.012	-	-	-
Indeno(1-2-3-cd)pyrene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
1-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.001	-	-	-
2-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.001	-	-	-
Naphthalene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.001	-	0.0014	-
Phenanthrene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-
Pyrene	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.000057	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	-	-	-	-
Quinoline	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Total PAHs	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
Volatile Organic Compounds (VOC)																			
Benzene	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.11	-	0.11	-
Ethylbenzene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.25	-	0.025	-
Methyl-tert-butyl-ether	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	0.44	5	-
Styrene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Toluene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	0.215	-
Total Xylenes	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	-	-	-
Total BTEX	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Dioxins and Furans																			
2-3-7-8-TCDD	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDD	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDD	pg/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
2-3-7-8-TCDF	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDF	pg/L	<2	3	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
1-2-3-4-7-8-9-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDF	pg/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
Total Furan TEQ	pg/L	0	0.3	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Total Dioxin Furan TEQ	pg/L	0	0.3	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Microbiological Parameters																			
E.coli	MPN/100 mL	7.8	2	6	1	21	2	4	72	5	14	1	3	<1.8	<1	-	-	-	-

Notes:
Results in **bold**: Exceedances of Long Term BC WQG
Results underlined: Exceedances of Short Term BC WQG
Results highlighted in grey: Exceedances of Long Term CCME guidelines
Results in red: Exceedances of Short Term CCME guidelines
[1] Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. These guidelines were not screened as there were no discharges to evaluate.
[2] The BC WQG for mercury is derived using the maximum methyl mercury concentration in the dataset (0.082 pg/L) and the total mercury detection limit of 0.00001 mg/L.

Table A-2: Water Quality Results for Marine Water Monitoring Station WQ1 - 2m Below Surface April to December 2021

Sample Date		2021-04-22	2021-05-18	2021-05-26	2021-05-26	2021-06-01	2021-06-08	2021-06-08	2021-06-15	2021-07-20	2021-08-25	2021-09-28	2021-10-26	2021-11-23	2021-12-14	Marine Water Aquatic Life Water Quality Guidelines			
Laboratory ID		21D2478-02	21E1990-02	21E2917-14	21E2917-02	21F0167-02	21F1056-14	21F1056-02	21F2014-02	21G2414-02	21H3040-02	21I3814-02	21J3514-02	21K3046-02	21L2125-02	BC	BC	CCME	CCME
Station Name		WQ1-2	WQ1-2	WQ1-2 Dup	WQ1-2	WQ1-2	Q1-2 Duplica	WQ1-2	WQ1-2	WQ1-2	WQ1-2	WQ1-2	WQ1-2	WQ1-2	WQ1-2	Long Term	Short Term	Long Term	Short Term
Field Parameters																			
Temperature	°C	8.4	8.3	-	10.0	11.2	-	10.2	9.1	12.9	16.4	12.2	7.8	8.0	7.7	Narrative [1]	-	Narrative [1]	-
Dissolved Oxygen (%)-field	%	113.9	101.6	-	104.0	104.7	-	103.7	101.1	80.1	121.5	97.1	96.4	-	94.3	-	-	-	-
Dissolved Oxygen (mg/L)-field	mg/L	12.81	11.86	-	11.64	10.67	-	11.55	11.35	7.56	-	9.69	11.24	8.84	9.66	-	-	>8	-
SPC	µS/cm	11429	2001	-	2446	20046	-	2722	7302	28398	35341	14509	5474	34127	37289	-	-	-	-
Conductivity	µS/cm	7810	1365	-	1747	14741	-	1961	5089	21846	-	-	3680	23076	24971	-	-	-	-
Salinity	ppt	6.5	1.0	-	1.3	12.0	-	1.4	4.0	17.5	-	11.4	3.0	21.3	23.4	Narrative [1]	-	Narrative [1]	-
TDS-field	mg/L	7428	1301	-	1590	13030	-	1778	4746	-	-	-	-	22183	24243	-	-	-	-
pH-field	pH units	8.22	7.27	-	7.53	8.04	-	7.32	7.37	7.61	8.26	-	7.40	7.66	7.63	7.0 - 8.7	7.0 - 8.7	7.0 - 8.7	-
ORP	mV	195.5	170.6	-	205.4	164.2	-	188.2	165.0	110.0	-	904.1	7.2	139.6	171.6	-	-	-	-
Turbidity	NTU	1.94	11.75	-	4.34	1.69	-	12.26	16.29	3.80	-	6.37	7.94	0.89	0.51	Narrative [1]	Narrative [1]	Narrative [1]	-
Depth	m	1.8	2.5	-	2.3	2.5	-	2.0	2.1	2.5	2.2	2.1	2.1	2.2	2.3	-	-	-	-
General Parameters																			
Dissolved Oxygen-lab	mg/L	11.3	10.8	-	9.9	10.5	-	10.6	10.1	9.8	10.1	10.7	10.2	9.8	10.5	-	-	>8	-
pH-lab	pH units	7.89	**6.99**	-	7.04	7.27	-	**6.88**	7.09	7.36	7.93	7.61	7.11	7.5	7.37	7.0 - 8.7	-	7.0 - 8.7	-
TSS	mg/L	4.6	13	4.3	4.7	3.6	5.4	8	21.4	5.6	4	7.2	9.2	3.8	<2	Narrative [1]	Narrative [1]	Narrative [1]	-
Total Hardness	mg/L	1320	157	271	246	1040	227	218	754	533	2200	1960	568	4480	2810	-	-	-	-
N-NH3	mg/L	<0.05	<0.05	-	<0.05	0.092	-	0.069	0.078	<0.05	0.092	0.064	<0.05	<0.05	<0.05	-	-	-	-
N-NO3	mg/L	**14.8**	<1	-	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	3.7	-	45	339
Total Metals																			
T-Al	mg/L	0.174	0.699	0.281	0.322	0.228	0.733	0.822	1.14	0.31	0.152	0.347	0.536	0.0425	<0.01	-	-	-	-
T-Sb	mg/L	0.000087	<0.0002	<0.00005	<0.00005	0.000134	0.000156	<0.00005	0.000053	<0.0005	<0.0005	<0.0005	<0.0002	<0.0004	<0.0004	-	0.27 [Sb(III)]	-	-
T-As	mg/L	0.000449	<0.0005	0.000173	0.000184	0.000318	0.000288	0.000237	0.000415	<0.0005	0.000666	0.000524	<0.0005	0.00137	<0.001	-	0.0125	0.0125	-
T-Ba	mg/L	0.0103	0.0143	0.00987	0.00986	0.00992	0.0185	0.0189	0.024	0.0126	0.0168	0.0203	0.0118	0.0135	0.0125	-	-	-	-
T-Be	mg/L	<0.00001	<0.0001	<0.00001	<0.00001	<0.00001	0.000012	0.00001	0.000015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	0.1	-	-	-
T-Bi	mg/L	<0.00001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	-	-	-	-
T-B	mg/L	1.01	0.102	0.232	0.213	0.89	0.169	0.15	0.509	0.449	**1.62**	**1.38**	0.473	**2.88**	**2.26**	1.2	-	-	-
T-Cd	mg/L	0.0000156	0.000014	0.0000091	0.0000077	0.0000136	0.0000084	0.000008	0.000018	<0.00002	0.0000261	0.0000383	0.000018	0.000068	**0.000171**	0.00012	-	0.00012	-
T-Ca	mg/L	98.3	12.3	20.9	21	75.5	18.9	16.3	50.1	35.2	157	129	37.7	270	171	-	-	-	-
T-Cr	mg/L	0.00038	0.00057	0.00041	0.00037	0.00033	0.00062	0.00055	0.00073	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	0.0015 [Cr(VI)]	-	0.0015 [Cr(VI)]	-
T-Co	mg/L	0.000131	0.00033	0.00015	0.000164	0.000123	0.000356	0.000348	0.000488	0.000166	0.000109	0.000196	0.00021	<0.0002	<0.0002	-	-	-	-
T-Cu	mg/L	0.00125	**0.00425**	0.00138	0.00121	0.00103	0.00177	0.00167	**0.00265**	<0.001	**0.00633**	0.00158	0.00119	0.00119	0.00124	0.002	0.003	-	-
T-Fe	mg/L	0.189	0.633	0.23	0.255	0.163	0.684	0.69	0.853	0.293	0.14	0.278	0.468	0.087	0.146	-	-	-	-
T-Pb	mg/L	0.000066	<0.0002	0.000416	0.000069	<0.00005	0.000131	0.000141	0.000187	0.00176	**0.00278**	<0.0005	0.00023	<0.0004	**0.00342**	0.002	0.14	-	-
T-Li	mg/L	0.0402	0.00537	0.00941	0.00899	0.0367	0.0071	0.00663	0.0215	0.0162	0.0659	0.0555	0.0171	0.13	0.0848	-	-	-	-
T-Mg	mg/L	261	30.6	48.9	47.1	206	43.6	43.1	153	108	440	399	115	925	579	-	-	-	-
T-Mn	mg/L	0.00866	0.0194	0.00961	0.01	0.00768	0.0213	0.0209	0.0277	0.0123	0.0105	0.0136	0.02	0.00805	0.013	-	-	-	-
T-Hg	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000005	<0.000005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00002 [2]	-	0.000016	-
T-Mo	mg/L	0.00304	0.00068	0.000861	0.000835	0.00225	0.000774	0.0008	0.00285	0.00125	0.00417	0.00406	0.00127	0.00823	0.00518	-	-	-	-
T-Ni	mg/L	0.000403	<0.0004	0.000226	0.000291	0.000307	0.000506	0.000592	0.000589	0.000587	0.000393	0.000572	<0.0004	<0.0008	<0.0008	0.0083	-	-	-
T-P	mg/L	0.018	<0.05	0.017	0.015	0.016	0.026	0.025	0.037	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	-	-	-	-
T-K	mg/L	81.6	10	15	14.4	59.7	14.2	13.5	45.2	35.7	136	123	33.4	271	175	-	-	-	-
T-Se	mg/L	<0.0001	<0.0005	0.00048	0.00013	0.00053	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	-	-	-	-
T-Si	mg/L	2.85	2.4	3.3	3.21	2.58	3.46	4.06	4.15	0.52	7.09	2.26	3.4	2.9	3.9	-	-	-	-
T-Ag	mg/L	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0001	<0.0001	<0.0001	<0.00005	<0.0001	<0.0001	0.0015	0.003	-	0.0075
T-Na	mg/L	2120	277	405	391	1460	360	310	1210	876	3840	3150	918	6950	4840	-	-	-	-
T-Sr	mg/L	1.77	0.201	0.334	0.329	1.34	0.285	0.262	0.923	0.65	2.7	2.33	0.641	5.28	3.47	-	-	-	-
T-S	mg/L	197	24	37.7	36.1	153	30.9	31.9	113	83.6	341	294	<0.6	672	424	-	-	-	-
T-Te	mg/L	<0.00005	<0.0005	<0.00005	<0.00005	<0.00005	0.000082	<0.00005	<0.00005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	-	-	-	-
T-Tl	mg/L	0.0000062	<0.00002	<0.000004	0.0000047	0.0000049	0.0000093	0.0000092	0.0000122	<0.00004	<0.00004	<0.00004	<0.00002	<0.00004	<0.00004	-	-	-	-
T-Th	mg/L	<0.00001	<0.0001	0.000013	0.000017	0.000014	0.00004	0.000043	0.000047	<0.0001	<0.0001	<0.0001	<0.00002	<0.0002	<0.0002	-	-	-	-
T-Sn	mg/L	0.00009	<0.0002	0.000108	0.000106	<0.00005	<0.00005	<0.00005	0.000057	<0.0005	<0.0005	<0.0005	<0.00004	<0.0004	<0.0004	-	-	-	-
T-Ti	mg/L	0.0109	0.0356	0.0198	0.0201	0.0137	0.0524	0.0555	0.0636	0.0233	0.011	0.0228	0.0191	<0.01	<0.01	-	-	-	-
T-W	mg/L	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0002	<0.002	<0.002	-	-	-	-
T-U	mg/L	0.000702	0.000137	0.000163	0.000166	0.000553	0.000191	0.000177	0.000447	0.000303	0.0011	0.00103	0.000336	0.00212	0.00138	-	-	-	-
T-V	mg/L	0.00122	<0.001	0.00044	0.00069	0.00049	0.00197	0.00225	0.00286	<0.002	0.00254	<0.002	0.0014	<0.002	<0.002	0.05	-	-	-
T-Zn	mg/L	0.0026	0.0041	0.0031	0.0022	0.0016	0.0033	0.0028	0.004	<0.01	<0.01	**0.0174**	<0.004	<0.008	**0.0131**	0.01	0.055	-	-
T-Zr	mg/L	0.000045	<0.0001	0.000104	0.000055	0.00006	0.000118	0.000254	0.000172	<0.0002	<0.0002	<0.0002	<0.0001	<0.0002	<0.0002	-	-	-	-
Speciated Metals																			
Methyl Mercury	ng/L	-	-	-	<0.024	<0.024	-	<0.023	<0.023	<0.025	<0.050	0.03	<0.050	0.048	-	-	-	-	-
Polycyclic Aromatic Hydrocarbons (PAH)																			
Acenaphthene	mg/L	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	0.006	-	-	-
Acenaphthylene	mg/L	<0.0002	<0.0002	-	<0.0002	<0.0002	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	-	-	-	-
Acridine	mg/L	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Anthracene	mg/L	<0.00001	<0.00001	-	<0.00001	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	-	-	-	-
Benz(a)anthracene	mg/L	<0.00001	<0.00001	-	<0.00001	<0.00001	-	<0.00001	<0.00001	0.000046	<0.00001	<0.00001	-	<0.00001	<0.00001	-	-	-	-
Benzo(a)pyrene	mg/L	<0.00001	<0.00001	-	<0.00001	<0.00001	-	<0.00001	<0.00001	**0.000066**	<0.00001	<0.00001	-	<0.00001	<0.00001	0.00001	-	-	-
Benzo(b+j)fluoranthene	mg/L	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	0.000156	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Benzo(g-h-i)perylene	mg/L	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	0.000106	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Benzo(k)fluoranthene	mg/L	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	0.000071	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
2-Chloronaphthalene	mg/L	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	-	-	-	-
Chrysene	mg/L	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	0.000056	<0.00005	<0.00005	-	<0.00005	<0.00005	0.0001	-	-	-
Dibenz(a-h)anthracene	mg/L	<0.000015	<0.00001	-	<0.00001	<0.00001	-	<0.00001	<0.00001	0.000094	<0.00001	<0.00001	-	<0.00001	<0.00001	-	-	-	-
Fluoranthene	mg/L	<0.00003	<0.00003	-	<0.00003	<0.00003	-	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	-	<0.00003	<0.00003	-	-	-	-
Fluorene	mg/L	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	0.012	-	-	-
Indeno(1-2-3-cd)pyrene	mg/L	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	0.000094	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
1-methylnaphthalene	mg/L	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	0.001	-	-	-
2-methylnaphthalene	mg/L	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	0.001	-	-	-
Naphthalene	mg/L	<0.0002	<0.0002	-	<0.0002	<0.0002	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	0.001	-	0.0014	-
Phenanthrene	mg/L	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	-	-	-	-
Pyrene	mg/L	<0.00013	<0.00002	-	<0.00002	<0.00002	-	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	-	<0.00002	<0.00002	-	-	-	-
Quinoline	mg/L	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Total PAHs	mg/L	<0.0002	<0.0002	-	<0.0002	<0.0002	-	<0.0002	<0.0002	0.0006	<0.0002	<0.0002	-	<0.0002	<0.0002	-	-	-	-
Volatile Organic Compounds (VOC)																			
Benzene	mg/L	<0.0005	<0.0005	-	<0.0005	<0.0005	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.11	-	0.11	-
Ethylbenzene	mg/L	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.25	-	0.025	-
Methyl-tert-butyl-ether	mg/L	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	0.44	5	-
Styrene	mg/L	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Toluene	mg/L	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	-	0.215	-
Total Xylenes	mg/L	<0.002	<0.002	-	<0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	-	-	-
Total BTEX	mg/L	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Dioxins and Furans																			
2-3-7-8-TCDD	pg/L	<1	<1	-	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDD	pg/L	<2	<2	-	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDD	pg/L	<2	<2	-	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDD	pg/L	<2	<2	-	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDD	pg/L	<2	<2	-	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDD	pg/L	<3	<3	-	<3	<3	-	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDD	pg/L	<4	<4	-	<4	<4	-	<4	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
2-3-7-8-TCDF	pg/L	<1	<1	-	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDF	pg/L	<2	<2	-	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-7-8-PeCDF	pg/L	<2	<2	-	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDF	pg/L	<2	<2	-	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDF	pg/L	<2	<2	-	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDF	pg/L	<2	<2	-	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-6-7-8-HxCDF	pg/L	<2	<2	-	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDF	pg/L	<3	<3	-	<3	<3	-	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
1-2-3-4-7-8-9-HpCDF	pg/L	<3	<3	-	<3	<3	-	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDF	pg/L	<4	<4	-	<4	<4	-	<4	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
Total Furan TEQ	pg/L	0	0	-	0	0	-	0	0	0	0	0	0	0	0	-	-	-	-
Total Dioxin Furan TEQ	pg/L	0	0	-	0	0	-	0	0	0	0	0	0	0	0	-	-	-	-
Microbiological Parameters																			
E.coli	MPN/100 mL	<1	17	-	12	3	-	4	14	58	2	2	613	5	6	-	-	-	-

Notes:
Results in **bold**: Exceedances of Long Term BC WQG
Results underlined: Exceedances of Short Term BC WQG
Results highlighted in grey: Exceedances of Long Term CCME guidelines
Results in red: Exceedances of Short Term CCME guidelines
[1] Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. These guidelines were not screened as there were no discharges to evaluate.
[2] The BC WQG for mercury is derived using the maximum methyl mercury concentration in the dataset (0.082 pg/L) and the total mercury detection limit of 0.00001 mg/L.

Table A-3: Water Quality Results for Marine Water Monitoring Station WQ1 - 2m Above Seafloor May 2020 to March 2021

Sample Date		**2020-05-20**	**2020-06-22**	**2020-07-21**	**2020-08-24**	**2020-09-28**	**2020-10-20**	**2020-10-27**	**2020-11-03**	**2020-11-10**	**2020-11-18**	**2020-12-14**	**2021-01-27**	**2021-02-25**	**2021-03-25**	**Marine Water Aquatic Life Water Quality Guidelines**			
Laboratory ID		**0051710-01**	**0062209-01**	**0071996-01**	**0082292-01**	**0093017-01**	**20J1961-01**	**20J2778-01**	**20K0360-01**	**20K1261-01**	**20K2100-01**	**20L1589-01**	**21A2590-01**	**21B2778-01**	**21C3505-01**	**BC**	**BC**	**CCME**	**CCME**
Station Name		**WQ 1-1**	**WQ1-1**	**WQ 1-1**	**WQ 1-1**	**WQ1-1**	**WQ 1-1**	**WQ 1-1**	**WQ1-1**	**WQ 1-1**	**WQ 1-1**	**WQ1-1**	**WQ1-1**	**WQ1-1**	**WQ1-1**	**Long Term**	**Short Term**	**Long Term**	**Short Term**
Field Parameters																			
Temperature	°C	8.6	8.8	9.5	9.6	10.0	9.8	9.8	9.6	9.6	-	9.7	8.8	-	8.3	Narrative [1]	-	Narrative [1]	-
Dissolved Oxygen (%)-field	%	-	-	-	-	-	-	61.1	54.0	51.2	-	47.0	-	-	74.4	-	-	-	-
Dissolved Oxygen (mg/L)-field	mg/L	5.80	5.95	6.57	5.77	6.96	5.04	5.77	5.09	4.8	-	4.42	7.12	-	7.24	-	-	>8	-
SPC	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	45598	-	-	-	-
Conductivity	µS/cm	31840	32111	45569	32941	31303	32191	31848	32434	32922	-	32599	31248	-	45598	-	-	-	-
Salinity	ppt	29.9	29.9	29.3	30.1	-	29.2	28.9	29.6	30.1	-	29.7	29.0	-	-	Narrative [1]	-	Narrative [1]	-
TDS-field	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH-field	pH units	7.41	7.38	7.75	7.51	7.32	7.32	7.63	7.52	7.38	-	7.33	7.60	-	7.68	7.0 - 8.7	7.0 - 8.7	7.0 - 8.7	-
ORP	mV	109.4	180.8	-	-	-	-	133.2	198.5	174.6	-	101.3	-	-	197.7	-	-	-	-
Turbidity	NTU	0.32	0.60	0.66	0.49	0.77	0.51	0.37	0.47	0.1	-	-0.04	0.24	-	0.38	Narrative [1]	Narrative [1]	Narrative [1]	-
Depth	m	35.1	30.6	28.4	29.8	30.0	30.0	37.3	-	35.9	-	-	31.3	-	27.2	-	-	-	-
General Parameters																			
Dissolved Oxygen-lab	mg/L	9.4	8.6	9.4	8.9	8.8	9.4	10	9.8	8	9.3	8.9	9.4	10.6	9.4	-	-	>8	-
pH-lab	pH units	7.51	7.67	7.62	7.64	7.49	7.49	7.52	7.61	7.46	7.38	7.49	7.47	7.43	7.46	7.0 - 8.7	-	7.0 - 8.7	-
TSS	mg/L	<2	<2	3.4	3.4	2.6	3.4	<2	2.6	3.2	3.8	5	3	3.4	2.4	Narrative [1]	Narrative [1]	Narrative [1]	-
Total Hardness	mg/L	5330	5910	5360	5730	5020	6060	5440	5020	5730	5930	6300	5540	6020	5810	-	-	-	-
N-NH3	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-
N-NO3	mg/L	**<5**	<1	<1	<1	<1	**<10**	<1	<1	<1	<1	<1	<1	<1	<1	3.7	-	45	339
Total Metals																			
T-Al	mg/L	0.0115	0.0269	0.0368	0.0533	1.1	0.0637	0.0194	0.0403	0.0259	0.0235	0.0447	0.0187	0.016	0.0201	-	-	-	-
T-Sb	mg/L	<0.0004	0.00046	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	0.00045	0.000554	-	0.27 [Sb(III)]	-	-
T-As	mg/L	0.00155	0.0019	0.00285	0.00203	0.00174	0.00188	0.00183	0.00163	0.00215	0.00257	0.0025	0.00171	0.0017	0.00171	-	0.0125	0.0125	-
T-Ba	mg/L	0.0102	0.0106	0.0118	0.011	0.0115	0.0127	0.012	0.0118	0.0132	0.0128	0.0128	<0.01	0.0114	0.0122	-	-	-	-
T-Be	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	0.1	-	-	-
T-Bi	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00024	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	-	-	-	-
T-B	mg/L	**3.47**	**4.42**	**4.08**	**3.87**	**4.25**	**4.18**	**3.76**	**3.82**	**4.1**	**3.71**	**3.9**	**3.72**	**4.29**	**4.58**	1.2	-	-	-
T-Cd	mg/L	0.000086	0.000091	0.000079	0.000079	0.000066	0.000075	0.000083	0.000103	0.000074	0.000051	0.000083	0.000081	0.000062	0.0000995	0.00012	-	0.00012	-
T-Ca	mg/L	392	405	289	364	392	371	375	340	438	398	423	371	406	370	-	-	-	-
T-Cr	mg/L	<0.001	<0.001	<0.001	<0.001	**0.00226**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0015 [Cr(VI)]	-	0.0015 [Cr(VI)]	-
T-Co	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00005	-	-	-	-
T-Cu	mg/L	0.00171	0.00159	<0.0008	0.00091	<0.0008	0.0015	<0.0008	**0.00425**	0.00088	<0.0008	0.00083	**0.00504**	<0.0008	<0.001	0.002	0.003	-	-
T-Fe	mg/L	0.021	0.039	0.028	0.056	0.049	0.042	0.022	0.036	0.026	<0.02	0.054	0.021	0.021	0.0278	-	-	-	-
T-Pb	mg/L	**0.00203**	0.00074	<0.0004	<0.0004	<0.0004	<0.0004	0.00043	**0.00322**	<0.0004	<0.0004	<0.0004	0.00087	<0.0004	<0.0005	0.002	0.14	-	-
T-Li	mg/L	0.16	0.173	0.157	0.158	0.155	0.169	0.142	0.15	0.181	0.172	0.158	0.147	0.204	0.197	-	-	-	-
T-Mg	mg/L	1060	1190	1130	1170	981	1250	1090	1010	1120	1200	1270	1120	1220	1190	-	-	-	-
T-Mn	mg/L	0.00234	0.00314	0.00396	0.00489	0.0109	0.0118	0.00704	0.0131	0.01	0.00774	0.00687	0.00297	0.00264	0.00271	-	-	-	-
T-Hg	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00002 [2]	-	0.000016	-
T-Mo	mg/L	0.0101	0.0103	0.00968	0.0103	0.0103	0.0108	0.0107	0.00947	0.0111	0.00948	0.0118	0.0106	0.0109	0.0105	-	-	-	-
T-Ni	mg/L	0.00136	<0.0008	<0.0008	<0.0008	0.00164	<0.0008	<0.0008	0.0012	<0.0008	0.0008	<0.0008	<0.0008	<0.0008	<0.003	0.0083	-	-	-
T-P	mg/L	<0.1	<0.1	<0.1	0.108	0.133	0.144	0.125	0.126	0.125	0.111	0.177	0.126	0.207	<0.1	-	-	-	-
T-K	mg/L	360	348	315	348	318	353	317	312	354	352	397	347	391	353	-	-	-	-
T-Se	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
T-Si	mg/L	<2	<2	2	<2	<2	<2	<2	<2	<2	2.2	<2	2.9	3	4.26	-	-	-	-
T-Ag	mg/L	<0.0001	0.000114	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0015	0.003	-	0.0075
T-Na	mg/L	8780	9110	9180	10300	8680	8450	8600	8530	7270	9630	10200	9420	9870	9510	-	-	-	-
T-Sr	mg/L	7.16	7.3	7.09	7.25	6.96	7.61	7.25	6.63	7.74	7.6	8.31	7.21	7.87	7.76	-	-	-	-
T-S	mg/L	859	899	873	914	845	1060	915	882	960	985	1150	871	1020	944	-	-	-	-
T-Te	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	-	-	-	-
T-Tl	mg/L	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	-	-	-	-
T-Th	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	-	-	-	-
T-Sn	mg/L	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0005	-	-	-	-
T-Ti	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.002	-	-	-	-
T-W	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0005	-	-	-	-
T-U	mg/L	0.00274	0.00293	0.00269	0.00303	0.00287	0.00276	0.0029	0.00253	0.00301	0.00285	0.00302	0.00287	0.00292	0.00284	-	-	-	-
T-V	mg/L	0.0024	0.0049	<0.002	0.0088	<0.002	0.006	0.0022	0.0035	<0.002	0.0023	<0.002	<0.002	0.0043	<0.002	0.05	-	-	-
T-Zn	mg/L	<0.008	<0.008	<0.008	<0.008	**0.0215**	**0.126**	<0.008	**0.0292**	<0.008	<0.008	<0.008	<0.008	<0.008	<0.01	0.01	0.055	-	-
T-Zr	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00022	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
Speciated Metals																			
Methyl Mercury	ng/L	-	-	-	-	-	-	-	-	0	-	-	-	-	<0.050	-	-	-	-
Polycyclic Aromatic Hydrocarbons (PAH)																			
Acenaphthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.006	-	-	-
Acenaphthylene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
Acridine	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	-	-	-
Benz(a)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000017	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	-	-	-
Benzo(a)pyrene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	**0.000018**	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	-	-	-
Benzo(b+j)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Benzo(g-h-i)perylene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Benzo(k)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
2-Chloronaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-
Chrysene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0001	-	-	-
Dibenz(a-h)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000037	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	-	-	-
Fluoranthene	mg/L	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	-	-	-	-
Fluorene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.012	-	-	-
Indeno(1-2-3-cd)pyrene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
1-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.001	-	-	-
2-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.001	-	-	-
Naphthalene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.001	-	0.0014	-
Phenanthrene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-
Pyrene	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	-	-	-	-
Quinoline	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Total PAHs	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
Volatile Organic Compounds (VOC)																			
Benzene	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.11	-	0.11	-
Ethylbenzene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.25	-	0.025	-
Methyl-tert-butyl-ether	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	0.44	5	-
Styrene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Toluene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	0.215	-
Total Xylenes	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	-	-	-
Total BTEX	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Dioxins and Furans																			
2-3-7-8-TCDD	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDD	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDD	pg/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
2-3-7-8-TCDF	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
1-2-3-4-7-8-9-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDF	pg/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
Total Furan TEQ	pg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Total Dioxin Furan TEQ	pg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Microbiological Parameters																			
E.coli	MPN/100 mL	<1.8	1	<1	5	11	<1.8	<1	44	<1	<1.8	2	4	<1.8	<1	-	-	-	-

Notes:
Results in **bold**: Exceedances of Long Term BC WQG
Results underlined: Exceedances of Short Term BC WQG
Results highlighted in grey: Exceedances of Long Term CCME guidelines
Results in red: Exceedances of Short Term CCME guidelines
[1] Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. These guidelines were not screened as there were no discharges to evaluate.
[2] The BC WQG for mercury is derived using the maximum methyl mercury concentration in the dataset (0.082 pg/L) and the total mercury detection limit of 0.00001 mg/L.

Table A-4: Water Quality Results for Marine Water Monitoring Station WQ1 - 2m Above Seafloor April to December 2021

Sample Date		**2021-04-22**	**2021-05-18**	**2021-05-25**	**2021-06-08**	**2021-06-08**	**2021-05-26**	**2021-06-01**	**2021-06-15**	**2021-07-20**	**2021-08-25**	**2021-09-28**	**2021-10-26**	**2021-11-23**	**2021-12-14**	**Marine Water Aquatic Life Water Quality Guidelines**			
Laboratory ID		**21D2478-01**	**21E1990-01**	**21E2917-13**	**21F1056-13**	**21F1056-01**	**21E2917-01**	**21F0167-01**	**21F2014-01**	**21G2414-01**	**21H3040-01**	**21I3814-01**	**21J3514-01**	**21K3046-01**	**21L2125-01**	**BC**	**BC**	**CCME**	**CCME**
Station Name		**WQ1-1**	**WQ1-1**	**WQ1-1 Dup**	**Q1-1 Duplica**	**WQ1-1**	**WQ1-1**	**WQ1-1**	**WQ1-1**	**WQ1-1**	**WQ1-1**	**WQ1-1**	**WQ1-1**	**WQ1-1**	**WQ1-1**	**Long Term**	**Short Term**	**Long Term**	**Short Term**
Field Parameters																			
Temperature	°C	8.5	8.6	-	-	8.5	8.6	8.5	8.5	10.5	9.8	9.1	10.6	9.8	9.7	Narrative [1]	-	Narrative [1]	-
Dissolved Oxygen (%)-field	%	66.5	65.3	-	-	53.5	63.5	57.6	59.7	77.4	57.9	55.8	52.5	-	79.5	-	-	-	-
Dissolved Oxygen (mg/L)-field	mg/L	6.43	6.30	-	-	5.15	6.12	5.54	5.76	7.26	-	5.25	4.89	6.74	7.50	-	-	>8	-
SPC	µS/cm	45755	45948	-	-	46814	45993	46558	46266	42454	45596	33976	43939	43861	45556	-	-	-	-
Conductivity	µS/cm	31293	31522	-	-	32086	31588	31923	31697	30730	-	-	31837	31161	32208	-	-	-	-
Salinity	ppt	29.4	29.5	-	-	30.1	29.6	30.0	29.7	27.2	-	32.0	28.2	28.1	29.3	Narrative [1]	-	Narrative [1]	-
TDS-field	mg/L	29739	29866	-	-	30429	29895	30260	30073	-	-	-	-	28510	29612	-	-	-	-
pH-field	pH units	7.46	7.32	-	-	7.37	7.43	7.53	7.43	7.50	7.60	-	7.29	7.54	7.57	7.0 - 8.7	7.0 - 8.7	7.0 - 8.7	-
ORP	mV	228.5	248.2	-	-	199.9	229.1	176.0	179.4	120.6	-	977.6	5.6	147.4	185.6	-	-	-	-
Turbidity	NTU	0.11	0.23	-	-	0.89	0.17	0.53	1.89	0.96	-	0.58	-0.46	0.73	0.29	Narrative [1]	Narrative [1]	Narrative [1]	-
Depth	m	27.0	27.0	-	-	27.1	26.6	27.0	27.5	22.5	29.1	29.6	26.4	25.3	23.7	-	-	-	-
General Parameters																			
Dissolved Oxygen-lab	mg/L	9.5	9.1	-	-	10	9.3	9.4	9.5	9.3	8.9	9.2	8.2	9.4	10.1	-	-	>8	-
pH-lab	pH units	7.39	7.69	-	-	7.34	7.55	7.56	7.35	7.51	7.65	7.56	7.49	7.44	7.31	7.0 - 8.7	-	7.0 - 8.7	-
TSS	mg/L	2.8	8.4	5.3	6.2	3.4	7	6.7	2.6	2.4	2.6	<2	2	3.2	<2	Narrative [1]	Narrative [1]	Narrative [1]	-
Total Hardness	mg/L	6410	6020	4830	5640	6770	4860	3660	5700	5590	5520	5390	5470	5710	2520	-	-	-	-
N-NH3	mg/L	<0.05	<0.05	-	-	0.094	<0.05	0.165	<0.05	<0.05	<0.05	0.055	<0.05	<0.05	<0.05	-	-	-	-
N-NO3	mg/L	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	3.7	-	45	339
Total Metals																			
T-Al	mg/L	0.0173	<0.01	0.0454	0.0145	0.0342	0.0444	0.0728	0.0285	0.0393	0.0299	0.0463	0.0422	<0.01	<0.01	-	-	-	-
T-Sb	mg/L	<0.0005	<0.0004	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00025	<0.0004	<0.0004	-	0.27 [Sb(III)]	-	-
T-As	mg/L	0.00188	0.00177	0.00134	0.00187	0.00191	0.0014	0.000873	0.00196	0.00171	0.00151	0.00146	0.00131	0.00146	<0.001	-	0.0125	0.0125	-
T-Ba	mg/L	0.0115	0.0104	0.0117	0.0104	0.0163	0.00881	0.0104	0.00991	0.0114	0.0105	0.0114	0.0118	0.0104	0.0118	-	-	-	-
T-Be	mg/L	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	0.1	-	-	-
T-Bi	mg/L	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	-	-	-	-
T-B	mg/L	**4.48**	**5.41**	**3.34**	**3.69**	**4.85**	**3.22**	**2.48**	**4.01**	**3.84**	**4**	**3.32**	**3.72**	**3.5**	**1.99**	1.2	-	-	-
T-Cd	mg/L	0.000101	0.000066	0.0000732	0.0000986	0.0000828	0.0000643	0.0000421	0.0000845	0.000086	0.0000722	0.0000918	0.000088	0.000087	0.000043	0.00012	-	0.00012	-
T-Ca	mg/L	402	406	330	377	418	315	229	362	337	395	327	329	340	155	-	-	-	-
T-Cr	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	0.0015 [Cr(VI)]	-	0.0015 [Cr(VI)]	-
T-Co	mg/L	<0.00005	<0.0002	0.0000607	<0.00005	<0.00005	0.0000606	0.0000555	<0.00005	0.0000528	<0.00005	0.0000641	<0.00005	<0.0002	<0.0002	-	-	-	-
T-Cu	mg/L	<0.001	<0.0008	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	**0.00255**	<0.001	<0.0004	0.00082	0.00101	0.002	0.003	-	-
T-Fe	mg/L	0.0203	<0.02	0.0409	<0.02	0.0244	0.0507	0.0555	0.0333	0.0394	0.0293	0.0308	0.028	0.02	0.144	-	-	-	-
T-Pb	mg/L	<0.0005	<0.0004	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	**0.00845**	**0.00569**	<0.0005	<0.0002	<0.0004	<0.0004	0.002	0.14	-	-
T-Li	mg/L	0.185	0.221	0.135	0.164	0.221	0.14	0.102	0.161	0.159	0.162	0.146	0.143	0.161	0.0757	-	-	-	-
T-Mg	mg/L	1310	1210	972	1140	1390	989	749	1160	1150	1100	1110	1130	1180	519	-	-	-	-
T-Mn	mg/L	0.00201	0.00203	0.00349	0.00269	0.00314	0.00374	0.00371	0.00345	0.00408	0.00368	0.00638	0.00698	0.00506	0.0136	-	-	-	-
T-Hg	mg/L	<0.00001	<0.00001	<0.00001	<0.000005	<0.000005	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00002 [2]	-	0.000016	-
T-Mo	mg/L	0.012	0.0111	0.009	0.0111	0.011	0.00847	0.00724	0.0107	0.0113	0.0102	0.0106	0.00913	0.0105	0.00469	-	-	-	-
T-Ni	mg/L	0.000667	<0.0008	0.000493	0.000522	0.000916	0.000935	0.000606	0.000444	0.000558	0.000216	0.000494	<0.0004	<0.0008	0.0011	0.0083	-	-	-
T-P	mg/L	0.13	<0.1	<0.1	0.104	0.135	0.128	<0.1	0.114	<0.1	<0.1	0.102	0.08	0.112	<0.1	-	-	-	-
T-K	mg/L	419	382	297	342	395	303	232	347	335	341	333	277	347	156	-	-	-	-
T-Se	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00143	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	-	-	-	-
T-Si	mg/L	2.58	<2	1.48	2	2.67	1.65	2.03	1.47	<0.5	9.9	1.66	1.5	2.1	4.1	-	-	-	-
T-Ag	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	<0.0001	<0.0001	0.0015	0.003	-	0.0075
T-Na	mg/L	10200	10700	7580	7880	9640	7630	6000	9360	9210	9540	8530	8840	8630	4300	-	-	-	-
T-Sr	mg/L	7.53	7.38	5.49	7	7.26	5.68	4.34	6.92	6.6	6.96	6.29	5.38	6.52	3.16	-	-	-	-
T-S	mg/L	1040	920	688	818	956	706	510	894	838	875	812	0.7	847	383	-	-	-	-
T-Te	mg/L	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	0.00055	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	-	-	-	-
T-Tl	mg/L	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	0.0000961	<0.00004	<0.00004	<0.00004	<0.00002	<0.00004	<0.00004	-	-	-	-
T-Th	mg/L	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00002	<0.0002	<0.0002	-	-	-	-
T-Sn	mg/L	<0.0005	<0.0004	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00006	<0.0004	<0.0004	-	-	-	-
T-Ti	mg/L	<0.002	<0.01	0.00348	<0.002	0.00226	0.00297	0.00484	0.00224	0.00266	<0.002	0.00216	<0.005	<0.01	<0.01	-	-	-	-
T-W	mg/L	<0.0005	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.002	<0.002	-	-	-	-
T-U	mg/L	0.00321	0.00302	0.00239	0.00287	0.00307	0.00231	0.00183	0.00277	0.00266	0.00267	0.00251	0.00247	0.00271	0.00123	-	-	-	-
T-V	mg/L	<0.002	0.0023	0.0037	0.00223	0.00427	0.00258	<0.002	0.0021	<0.002	0.00345	<0.002	0.0024	<0.002	<0.002	0.05	-	-	-
T-Zn	mg/L	<0.01	<0.008	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.004	<0.008	**0.0154**	0.01	0.055	-	-
T-Zr	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0002	<0.0002	-	-	-	-
Speciated Metals																			
Methyl Mercury	ng/L	-	-	-	-	<0.023	<0.024	<0.024	<0.023	<0.025	<0.050	<0.024	0.063	0.033	-	-	-	-	-
Polycyclic Aromatic Hydrocarbons (PAH)																			
Acenaphthene	mg/L	<0.00005	<0.00005	-	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	0.006	-	-	-
Acenaphthylene	mg/L	<0.0002	<0.0002	-	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	-	-	-	-
Acridine	mg/L	<0.00005	<0.00005	-	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Anthracene	mg/L	<0.00001	<0.00001	-	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	0.000027	-	-	-	-
Benz(a)anthracene	mg/L	<0.00001	<0.00001	-	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	-	-	-	-
Benzo(a)pyrene	mg/L	<0.00001	<0.00001	-	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	**0.000012**	0.00001	-	-	-
Benzo(b+j)fluoranthene	mg/L	<0.00005	<0.00005	-	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Benzo(g-h-i)perylene	mg/L	<0.00005	<0.00005	-	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Benzo(k)fluoranthene	mg/L	<0.00005	<0.00005	-	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
2-Chloronaphthalene	mg/L	<0.0001	<0.0001	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	-	-	-	-
Chrysene	mg/L	<0.00005	<0.00005	-	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	0.0001	-	-	-
Dibenz(a-h)anthracene	mg/L	<0.00001	<0.00001	-	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	-	-	-	-
Fluoranthene	mg/L	<0.00003	<0.00003	-	-	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	-	<0.00003	<0.00003	-	-	-	-
Fluorene	mg/L	<0.00005	<0.00005	-	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	0.012	-	-	-
Indeno(1-2-3-cd)pyrene	mg/L	<0.00005	<0.00005	-	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
1-methylnaphthalene	mg/L	<0.0001	<0.0001	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	0.001	-	-	-
2-methylnaphthalene	mg/L	<0.0001	<0.0001	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	0.001	-	-	-
Naphthalene	mg/L	<0.0002	<0.0002	-	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	0.001	-	0.0014	-
Phenanthrene	mg/L	<0.0001	<0.0001	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	-	-	-	-
Pyrene	mg/L	<0.00002	<0.00002	-	-	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	-	<0.00002	<0.00002	-	-	-	-
Quinoline	mg/L	<0.00005	<0.00005	-	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Total PAHs	mg/L	<0.0002	<0.0002	-	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	-	-	-	-
Volatile Organic Compounds (VOC)																			
Benzene	mg/L	<0.0005	<0.0005	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.11	-	0.11	-
Ethylbenzene	mg/L	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.25	-	0.025	-
Methyl-tert-butyl-ether	mg/L	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	0.44	5	-
Styrene	mg/L	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Toluene	mg/L	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	-	0.215	-
Total Xylenes	mg/L	<0.002	<0.002	-	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	-	-	-
Total BTEX	mg/L	<0.001	<0.001	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Dioxins and Furans																			
2-3-7-8-TCDD	pg/L	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDD	pg/L	<2	<2	-	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDD	pg/L	<2	<2	-	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDD	pg/L	<2	<2	-	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDD	pg/L	<2	<2	-	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDD	pg/L	<3	<3	-	-	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDD	pg/L	<4	<4	-	-	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
2-3-7-8-TCDF	pg/L	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDF	pg/L	<2	<2	-	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-7-8-PeCDF	pg/L	<2	<2	-	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDF	pg/L	<2	<2	-	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDF	pg/L	<2	<2	-	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDF	pg/L	<2	<2	-	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-6-7-8-HxCDF	pg/L	<2	<2	-	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDF	pg/L	<3	<3	-	-	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
1-2-3-4-7-8-9-HpCDF	pg/L	<3	<3	-	-	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDF	pg/L	<4	<4	-	-	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
Total Furan TEQ	pg/L	0	0	-	-	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Total Dioxin Furan TEQ	pg/L	0	0	-	-	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Microbiological Parameters																			
E.coli	MPN/100 mL	<1	1	-	-	<1	1	10	<1	2	1	4	<1	2	6	-	-	-	-

Notes:
Results in **bold**: Exceedances of Long Term BC WQG
Results underlined: Exceedances of Short Term BC WQG
Results highlighted in grey: Exceedances of Long Term CCME guidelines
Results in red: Exceedances of Short Term CCME guidelines
[1] Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. These guidelines were not screened as there were no discharges to evaluate.
[2] The BC WQG for mercury is derived using the maximum methyl mercury concentration in the dataset (0.082 pg/L) and the total mercury detection limit of 0.00001 mg/L.

Table A-5: Water Quality Results for Marine Water Monitoring Station WQ2 - 2m Below Surface May 2020 to March 2021

Sample Date		2020-05-20	2020-06-22	2020-07-21	2020-08-24	2020-09-28	2020-10-20	2020-10-27	2020-11-03	2020-11-10	2020-11-18	2020-12-14	2021-01-27	2021-02-25	2021-03-25	Marine Water Aquatic Life Water Quality Guidelines			
Laboratory ID		**0051710-04**	**0062209-04**	**0071996-04**	**0082292-04**	**0093017-04**	**20J1961-04**	**20J2778-04**	**20K0360-04**	**20K1261-04**	**20K2100-04**	**20L1589-04**	**21A2590-04**	**21B2778-04**	**21C3505-04**	**BC**	**BC**	**CCME**	**CCME**
Station Name		**WQ 2-2**	**WQ2-2**	**WQ 2-2**	**WQ 2-2**	**WQ2-2**	**WQ 2-2**	**WQ 2-2**	**WQ2-2**	**WQ 2-2**	**WQ 2-2**	**WQ2-2**	**WQ2-2**	**WQ2-2**	**WQ2-2**	**Long Term**	**Short Term**	**Long Term**	**Short Term**
Field Parameters																			
Temperature	°C	9.1	11.1	13.2	15.0	12.2	10.0	7.4	8.3	5.6	-	5.7	7.7	-	7.8	Narrative [1]	-	Narrative [1]	-
Dissolved Oxygen (%)-field	%	-	-	-	-	-	-	90.3	97.8	77.2	-	89.9	-	-	119.6	-	-	-	-
Dissolved Oxygen (mg/L)-field	mg/L	9.58	10.58	10.16	8.90	10.23	10.09	9.81	10.18	10.3	-	10.21	8.27	-	13.05	-	-	>8	-
SPC	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	22345	-	-	-	-
Conductivity	µS/cm	2320	6903	4358	23395	10618	11029	16888	20942	12254	-	15627	28150	-	22345	-	-	-	-
Salinity	ppt	1.8	5.3	2.3	17.9	-	9.0	15.4	19.0	11.5	-	14.9	26.7	-	-	Narrative [1]	-	Narrative [1]	-
TDS-field	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH-field	pH units	8.57	7.85	8.55	7.86	7.70	7.91	7.92	7.63	7.74	-	7.53	7.71	-	8.58	7.0 - 8.7	7.0 - 8.7	7.0 - 8.7	-
ORP	mV	135.2	76.0	-	-	-	-	101.5	150.0	134.1	-	77.9	-	-	177.2	-	-	-	-
Turbidity	NTU	1.29	12.25	12.28	0.66	7.70	2.34	11.11	2.10	2.5	-	0.39	0.21	-	0.82	Narrative [1]	Narrative [1]	Narrative [1]	-
Depth	m	2.5	2.1	1.2	2.1	1.0	1.0	11.4	-	11.0	-	-	2.2	-	1.8	-	-	-	-
General Parameters																			
Dissolved Oxygen-lab	mg/L	10.9	9.8	10.3	9.4	9.3	9.5	10.8	10.1	10.2	9.7	10.5	9.7	10.6	11.1	-	-	>8	-
pH-lab	pH units	7.34	7.03	7.23	7.58	7.52	7.6	7.61	7.45	7.26	7.25	7.65	7.59	7.65	8.05	7.0 - 8.7	-	7.0 - 8.7	-
TSS	mg/L	4	18.2	8.6	3.2	11.6	2.6	<2	3.6	4.4	9.4	<2	<2	<2	<2	Narrative [1]	Narrative [1]	Narrative [1]	-
Total Hardness	mg/L	202	277	351	2540	1400	1810	2440	1870	1940	1120	3090	5180	4860	2130	-	-	-	-
N-NH3	mg/L	<0.05	0.092	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-
N-NO3	mg/L	<1	<0.01	<0.01	<1	<1	**<10**	<1	<1	<1	<1	<1	<1	<1	<1	3.7	-	45	339
Total Metals																			
T-Al	mg/L	0.336	0.934	0.638	0.209	0.386	0.15	0.0557	0.192	0.147	0.419	0.045	0.0216	0.0215	0.0397	-	-	-	-
T-Sb	mg/L	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0005	-	0.27 [Sb(III)]	-	-
T-As	mg/L	<0.001	<0.001	<0.001	0.00109	<0.001	<0.001	<0.001	<0.001	<0.001	0.0012	0.00127	0.00161	0.00161	0.000657	-	0.0125	0.0125	-
T-Ba	mg/L	<0.01	0.023	0.0167	0.0319	0.0161	0.0134	0.013	0.0123	0.0146	0.0148	0.014	<0.01	0.01	0.00959	-	-	-	-
T-Be	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	0.1	-	-	-
T-Bi	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	-	-	-	-
T-B	mg/L	0.258	0.249	0.371	**1.92**	1.2	**1.41**	**1.84**	**1.48**	**1.54**	0.78	**2.11**	**3.8**	**3.6**	**1.85**	1.2	-	-	-
T-Cd	mg/L	<0.00002	<0.00002	<0.00002	0.000052	0.000024	0.000032	0.000049	0.000038	0.000034	<0.00002	0.000058	0.000083	0.000057	0.0000434	0.00012	-	0.00012	-
T-Ca	mg/L	17.7	22.4	20.4	169	110	126	175	131	144	81.1	220	357	330	144	-	-	-	-
T-Cr	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0015 [Cr(VI)]	-	0.0015 [Cr(VI)]	-
T-Co	mg/L	<0.0002	0.0005	0.00028	<0.0002	0.00022	<0.0002	<0.0002	<0.0002	<0.0002	0.00027	<0.0002	<0.0002	<0.0002	0.0000698	-	-	-	-
T-Cu	mg/L	**0.00316**	**0.00342**	0.0016	0.00184	<0.0008	0.0008	0.00125	**0.00222**	0.00124	0.00097	0.00084	<0.0008	<0.0008	0.00148	0.002	0.003	-	-
T-Fe	mg/L	0.316	0.862	0.521	0.146	0.363	0.14	0.108	0.158	0.188	0.378	0.142	0.034	0.039	0.147	-	-	-	-
T-Pb	mg/L	0.00167	0.00103	0.00052	<0.0004	<0.0004	<0.0004	**0.00571**	0.00156	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0005	0.002	0.14	-	-
T-Li	mg/L	0.00654	0.00845	0.0116	0.0931	0.0441	0.053	0.0679	0.0598	0.0631	0.0374	0.0838	0.144	0.166	0.0786	-	-	-	-
T-Mg	mg/L	38.4	53.8	72.8	514	274	364	486	374	385	224	618	1040	979	431	-	-	-	-
T-Mn	mg/L	0.011	0.0292	0.0175	0.014	0.0195	0.0109	0.0162	0.0105	0.0152	0.0259	0.0138	0.00375	0.00485	0.0112	-	-	-	-
T-Hg	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00002 [2]	-	0.000016	-
T-Mo	mg/L	0.00065	0.00064	0.00084	0.00453	0.00783	0.00381	0.00532	0.00375	0.00373	0.00221	0.00617	0.0098	0.00895	0.00416	-	-	-	-
T-Ni	mg/L	0.00143	0.00081	<0.0008	<0.0008	0.00098	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.003	0.0083	-	-	-
T-P	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.123	0.14	<0.1	-	-	-	-
T-K	mg/L	14.3	16.4	23.1	153	98.4	105	144	117	120	74.8	197	324	307	143	-	-	-	-
T-Se	mg/L	<0.001	<0.001	<0.001	0.0018	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
T-Si	mg/L	<2	<2	3.2	<2	2.6	2.2	<2	2.5	2.4	3.4	2.6	<2	2.7	5.23	-	-	-	-
T-Ag	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0015	0.003	-	0.0075
T-Na	mg/L	320	440	603	4240	2340	3100	4200	3210	3240	1880	4870	8710	7830	3420	-	-	-	-
T-Sr	mg/L	0.242	0.327	0.443	3.08	1.94	2.41	3.38	2.47	2.6	1.5	4.29	6.54	6.47	2.82	-	-	-	-
T-S	mg/L	30.2	40	62.6	399	229	313	418	329	324	189	563	815	799	345	-	-	-	-
T-Te	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	-	-	-	-
T-Tl	mg/L	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	-	-	-	-
T-Th	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	-	-	-	-
T-Sn	mg/L	<0.0004	<0.0004	<0.0004	0.00045	<0.0004	<0.0004	0.00044	<0.0004	<0.0004	<0.0004	<0.0004	0.00054	<0.0004	<0.0005	-	-	-	-
T-Ti	mg/L	0.0217	0.0627	0.0394	<0.01	0.0201	0.0119	<0.01	0.0142	0.0101	0.0125	<0.01	<0.01	<0.01	<0.002	-	-	-	-
T-W	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0005	-	-	-	-
T-U	mg/L	0.000173	0.00021	0.000209	0.00152	0.000877	0.000993	0.00136	0.00103	0.00106	0.000574	0.00152	0.0027	0.00253	0.0011	-	-	-	-
T-V	mg/L	<0.002	0.0022	<0.002	0.0083	<0.002	0.0063	0.0027	0.0026	<0.002	<0.002	<0.002	0.0021	0.004	<0.002	0.05	-	-	-
T-Zn	mg/L	<0.008	<0.008	<0.008	<0.008	0.0082	<0.008	<0.008	**0.0108**	<0.008	<0.008	<0.008	<0.008	<0.008	<0.01	0.01	0.055	-	-
T-Zr	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
Speciated Metals																			
Methyl Mercury	ng/L	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-	-
Polycyclic Aromatic Hydrocarbons (PAH)																			
Acenaphthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.006	-	-	-
Acenaphthylene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
Acridine	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	-	-	-
Benz(a)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	-	-	-
Benzo(a)pyrene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	-	-	-
Benzo(b+j)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Benzo(g-h-i)perylene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Benzo(k)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
2-Chloronaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-
Chrysene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0001	-	-	-
Dibenz(a-h)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	-	-	-
Fluoranthene	mg/L	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00004	-	-	-	-
Fluorene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.012	-	-	-
Indeno(1-2-3-cd)pyrene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
1-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.001	-	-	-
2-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.001	-	-	-
Naphthalene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.001	-	0.0014	-
Phenanthrene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-
Pyrene	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.000047	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	0.000024	-	-	-	-
Quinoline	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000054	-	-	-	-
Total PAHs	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
Volatile Organic Compounds (VOC)																			
Benzene	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.11	-	0.11	-
Ethylbenzene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.25	-	0.025	-
Methyl-tert-butyl-ether	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	0.44	5	-
Styrene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Toluene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	0.215	-
Total Xylenes	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	-	-	-
Total BTEX	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Dioxins and Furans																			
2-3-7-8-TCDD	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDD	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDD	pg/L	<4	<4	<4	<4	<4	<4	16	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
2-3-7-8-TCDF	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
1-2-3-4-7-8-9-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDF	pg/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
Total Furan TEQ	pg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Total Dioxin Furan TEQ	pg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Microbiological Parameters																			
E.coli	MPN/100 mL	2	6	6	2	12	<1.8	4	20	7	7.8	<1	2	<1.8	<1	-	-	-	-

Notes:
Results in **bold**: Exceedances of Long Term BC WQG
Results underlined: Exceedances of Short Term BC WQG
Results highlighted in grey: Exceedances of Long Term CCME guidelines
Results in red: Exceedances of Short Term CCME guidelines
[1] Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. These guidelines were not screened as there were no discharges to evaluate.
[2] The BC WQG for mercury is derived using the maximum methyl mercury concentration in the dataset (0.082 pg/L) and the total mercury detection limit of 0.00001 mg/L.

Table A-6: Water Quality Results for Marine Water Monitoring Station WQ2 - 2m Below Surface April to December 2021

Sample Date		2021-04-22	2021-05-18	2021-05-26	2021-06-01	2021-06-08	2021-06-15	2021-06-15	2021-07-20	2021-08-25	2021-09-28	2021-10-26	2021-11-23	2021-12-14	Marine Water Aquatic Life Water Quality Guidelines			
Laboratory ID		21D2478-04	21E1990-04	21E2917-04	21F0167-04	21F1056-04	21F2014-18	21F2014-04	21G2414-04	21H3040-04	21I3814-04	21J3514-04	21K3046-04	21L2125-04	BC	BC	CCME	CCME
Station Name		WQ2-2	WQ2-2	WQ2-2	WQ2-2	WQ2-2	Q2-2 Duplica	WQ2-2	WQ2-2	WQ2-2	WQ2-2	WQ2-2	WQ2-2	WQ2-2	Long Term	Short Term	Long Term	Short Term
Field Parameters																		
Temperature	°C	9.8	8.2	9.7	11.5	10.2	-	9.2	12.5	15.8	12.4	7.8	8.2	5.6	Narrative [1]	-	Narrative [1]	-
Dissolved Oxygen (%)-field	%	133.8	103.1	102.7	104.3	104.0	-	101.4	77.1	110.4	95.0	96.5	-	84.9	-	-	-	-
Dissolved Oxygen (mg/L)-field	mg/L	14.13	12.08	11.59	10.32	11.56	-	11.34	7.24	-	9.43	11.25	8.57	9.68	-	-	>8	-
SPC	µS/cm	19336	1740	2092	25070	3164	-	8002	32138	35277	15108	5628	34785	24796	-	-	-	-
Conductivity	µS/cm	13713	1183	1482	18618	2271	-	5587	24371	-	-	3781	23597	15588	-	-	-	-
Salinity	ppt	11.5	0.9	1.1	15.3	1.7	-	4.4	20.1	-	11.9	3.1	21.7	14.9	Narrative [1]	-	Narrative [1]	-
TDS-field	mg/L	12568	1131	1360	16296	2057	-	5201	-	-	-	-	22611	16117	-	-	-	-
pH-field	pH units	8.55	7.40	7.62	8.03	7.80	-	7.52	7.72	8.18	-	7.39	7.65	7.64	7.0 - 8.7	7.0 - 8.7	7.0 - 8.7	-
ORP	mV	230.6	180.3	201.1	165.1	70.3	-	162.0	102.2	-	769.6	7.1	135.2	186.7	-	-	-	-
Turbidity	NTU	1.76	11.68	4.10	1.05	12.69	-	14.77	2.83	-	6.41	6.86	0.82	0.63	Narrative [1]	Narrative [1]	Narrative [1]	-
Depth	m	2.5	2.3	3.0	3.3	2.3	-	2.1	2.9	2.1	2.0	2.1	2.2	2.1	-	-	-	-
General Parameters																		
Dissolved Oxygen-lab	mg/L	11.5	10.8	10.2	10.7	11	-	10.6	9.9	10.2	8.6	10.3	10.4	11	-	-	>8	-
pH-lab	pH units	8.04	**6.87**	7.05	7.61	7.08	-	7.11	7.38	7.7	7.63	7.24	7.48	7.47	7.0 - 8.7	-	7.0 - 8.7	-
TSS	mg/L	4	13.2	4.3	4	4.2	11.2	11.5	5.6	5	4	10.2	<2	<2	Narrative [1]	Narrative [1]	Narrative [1]	-
Total Hardness	mg/L	1750	148	222	2270	206	649	698	522	1120	2700	615	4310	3150	-	-	-	-
N-NH3	mg/L	<0.05	<0.05	<0.05	0.13	0.119	-	<0.05	<0.05	<0.05	0.055	<0.05	<0.05	<0.05	-	-	-	-
N-NO3	mg/L	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	3.7	-	45	339
Total Metals																		
T-Al	mg/L	0.191	0.657	0.311	0.184	0.701	0.791	0.875	0.263	0.316	0.123	0.474	0.0227	<0.01	-	-	-	-
T-Sb	mg/L	0.0001	<0.0002	<0.00005	0.000111	0.000199	0.000075	0.000134	<0.0005	<0.0005	<0.0005	<0.0002	<0.0004	<0.0004	-	0.27 [Sb(III)]	-	-
T-As	mg/L	0.000497	<0.0005	0.000181	0.000599	0.000214	0.000316	0.000371	<0.0005	0.000553	0.00069	<0.0005	0.00114	0.00115	-	0.0125	0.0125	-
T-Ba	mg/L	0.0104	0.0135	0.00978	0.0116	0.0154	0.0189	0.0197	0.0122	0.0185	0.0186	0.012	0.0114	0.0123	-	-	-	-
T-Be	mg/L	<0.00001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	0.1	-	-	-
T-Bi	mg/L	0.000013	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	-	-	-	-
T-B	mg/L	**1.39**	0.0893	0.182	**1.69**	0.16	0.455	0.471	0.4	0.881	**1.85**	0.513	**2.82**	**2.7**	1.2	-	-	-
T-Cd	mg/L	0.0000237	<0.00001	0.0000082	0.0000224	0.0000084	0.0000147	0.0000192	<0.00002	<0.00002	0.0000405	0.00003	0.00006	0.000058	0.00012	-	0.00012	-
T-Ca	mg/L	131	11.2	18.1	146	15.4	44.1	46.4	33.3	80.9	175	42.6	256	193	-	-	-	-
T-Cr	mg/L	0.00031	<0.0005	0.00036	0.00038	0.00052	0.00061	0.0006	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	0.0015 [Cr(VI)]	-	0.0015 [Cr(VI)]	-
T-Co	mg/L	0.000139	0.0003	0.000167	0.000116	0.000292	0.000369	0.000377	0.000153	0.000168	0.0000915	0.00022	<0.0002	<0.0002	-	-	-	-
T-Cu	mg/L	0.00126	0.00173	0.00116	0.00097	0.00144	**0.00211**	**0.00213**	<0.001	0.0015	0.00131	0.00117	0.00124	0.00106	0.002	0.003	-	-
T-Fe	mg/L	0.2	0.578	0.251	0.137	0.526	0.612	0.643	0.276	0.253	0.0901	0.451	0.049	0.108	-	-	-	-
T-Pb	mg/L	0.000078	<0.0002	0.000106	<0.00005	0.000127	0.000161	0.000169	**0.014**	<0.0005	<0.0005	0.00025	<0.0004	<0.0004	0.002	0.14	-	-
T-Li	mg/L	0.0553	0.0048	0.00768	0.081	0.00718	0.0192	0.0199	0.0156	0.0334	0.0755	0.0194	0.126	0.0986	-	-	-	-
T-Mg	mg/L	345	29.1	40.2	463	40.6	131	141	107	222	550	124	892	648	-	-	-	-
T-Mn	mg/L	0.00923	0.0175	0.0101	0.00691	0.0176	0.0207	0.0219	0.0116	0.015	0.00804	0.0207	0.00684	0.0123	-	-	-	-
T-Hg	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.000005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00002 [2]	-	0.000016	-
T-Mo	mg/L	0.00392	0.0007	0.000832	0.00418	0.00111	0.00146	0.00155	0.00114	0.00671	0.00558	0.00133	0.00804	0.0058	-	-	-	-
T-Ni	mg/L	0.000335	0.00065	0.000239	0.000365	0.000508	0.000486	0.00049	0.000465	<0.0002	0.000646	<0.0004	0.00083	<0.0008	0.0083	-	-	-
T-P	mg/L	0.03	<0.05	0.015	0.022	0.021	0.015	0.035	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	-	-	-	-
T-K	mg/L	108	9.44	12.4	127	12.6	39.3	42	35.1	74.6	173	37	260	196	-	-	-	-
T-Se	mg/L	<0.0001	<0.0005	0.00017	0.00083	<0.0001	<0.0001	<0.0001	<0.001	<0.001	0.00464	<0.0005	<0.001	<0.001	-	-	-	-
T-Si	mg/L	2.91	2	3.27	2.47	3.54	3.36	3.35	0.78	6.51	2.01	3.2	2.8	3.7	-	-	-	-
T-Ag	mg/L	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0001	<0.0001	<0.0001	<0.00005	<0.0001	<0.0001	0.0015	0.003	-	0.0075
T-Na	mg/L	2460	260	331	3080	291	1030	1130	854	1960	4320	1010	6750	5390	-	-	-	-
T-Sr	mg/L	2.36	0.188	0.277	2.18	0.243	0.817	0.843	0.616	1.38	3.22	0.717	5.06	3.9	-	-	-	-
T-S	mg/L	265	18.2	31.2	325	29.7	99.7	107	85.3	173	414	<0.6	640	481	-	-	-	-
T-Te	mg/L	<0.00005	<0.0005	<0.00005	<0.00005	0.000072	<0.00005	<0.00005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	-	-	-	-
T-Tl	mg/L	0.0000067	<0.00002	0.000004	0.0000065	0.0000071	0.0000175	0.0000095	<0.00004	<0.00004	<0.00004	0.000044	<0.00004	<0.00004	-	-	-	-
T-Th	mg/L	0.000011	<0.0001	0.000015	0.000012	0.000038	0.000039	0.000042	<0.0001	<0.0001	<0.0001	<0.00002	<0.0002	<0.0002	-	-	-	-
T-Sn	mg/L	0.000086	<0.0002	0.000112	0.000053	0.000089	<0.00005	<0.00005	<0.0005	<0.0005	<0.0005	<0.00004	<0.0004	<0.0004	-	-	-	-
T-Ti	mg/L	0.0118	0.0342	0.0241	0.0102	0.0467	0.0467	0.0502	0.0213	0.0206	0.00556	0.0149	<0.01	<0.01	-	-	-	-
T-W	mg/L	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0002	<0.002	<0.002	-	-	-	-
T-U	mg/L	0.000872	0.000121	0.000186	0.00108	0.0002	0.000442	0.000455	0.000297	0.000567	0.00135	0.000354	0.00204	0.00151	-	-	-	-
T-V	mg/L	0.00141	0.0025	0.00048	0.00062	0.00228	0.00223	0.00224	<0.002	<0.002	<0.002	0.0012	<0.002	<0.002	0.05	-	-	-
T-Zn	mg/L	0.0017	<0.004	0.0019	0.001	0.0033	0.0029	0.0029	<0.01	<0.01	<0.01	<0.004	<0.008	<0.008	0.01	0.055	-	-
T-Zr	mg/L	0.000048	0.0001	0.000051	0.000056	0.000156	0.000166	0.00012	<0.0002	<0.0002	<0.0002	0.00013	<0.0002	<0.0002	-	-	-	-
Speciated Metals																		
Methyl Mercury	ng/L	-	-	<0.024	<0.024	<0.023	-	-	<0.025	<0.050	0.068	<0.050	<0.023	-	-	-	-	-
Polycyclic Aromatic Hydrocarbons (PAH)																		
Acenaphthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	0.006	-	-	-
Acenaphthylene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	-	-	-	-
Acridine	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	-	-	-	-
Benz(a)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	-	-	-	-
Benzo(a)pyrene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	0.00001	-	-	-
Benzo(b+j)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Benzo(g-h-i)perylene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Benzo(k)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
2-Chloronaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	-	-	-	-
Chrysene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	0.0001	-	-	-
Dibenz(a-h)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	-	-	-	-
Fluoranthene	mg/L	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	-	<0.00003	<0.00003	<0.00003	<0.00003	-	<0.00003	<0.00003	-	-	-	-
Fluorene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	0.012	-	-	-
Indeno(1-2-3-cd)pyrene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
1-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	0.001	-	-	-
2-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	0.001	-	-	-
Naphthalene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	0.001	-	0.0014	-
Phenanthrene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	-	-	-	-
Pyrene	mg/L	<0.00015	<0.00002	<0.00002	<0.00002	<0.00002	-	<0.00002	<0.00002	<0.00002	<0.00002	-	<0.00002	<0.00002	-	-	-	-
Quinoline	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Total PAHs	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	-	-	-	-
Volatile Organic Compounds (VOC)																		
Benzene	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.11	-	0.11	-
Ethylbenzene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.25	-	0.025	-
Methyl-tert-butyl-ether	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	0.44	5	-
Styrene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Toluene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	-	0.215	-
Total Xylenes	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	-	-	-
Total BTEX	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Dioxins and Furans																		
2-3-7-8-TCDD	pg/L	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDD	pg/L	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDD	pg/L	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDD	pg/L	<3	<3	<3	<3	<3	-	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDD	pg/L	<4	<4	<4	<4	<4	-	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
2-3-7-8-TCDF	pg/L	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDF	pg/L	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDF	pg/L	<3	<3	<3	<3	<3	-	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
1-2-3-4-7-8-9-HpCDF	pg/L	<3	<3	<3	<3	<3	-	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDF	pg/L	<4	<4	<4	<4	<4	-	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
Total Furan TEQ	pg/L	0	0	0	0	0	-	0	0	0	0	0	0	0	-	-	-	-
Total Dioxin Furan TEQ	pg/L	0	0	0	0	0	-	0	0	0	0	0	0	0	-	-	-	-
Microbiological Parameters																		
E.coli	MPN/100 mL	<1	39	10	<1	4	-	10	3	6	9.3	727	2	15	-	-	-	-

Notes:
Results in **bold**: Exceedances of Long Term BC WQG
Results underlined: Exceedances of Short Term BC WQG
Results highlighted in grey: Exceedances of Long Term CCME guidelines
Results in red: Exceedances of Short Term CCME guidelines
[1] Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. These guidelines were not screened as there were no discharges to evaluate.
[2] The BC WQG for mercury is derived using the maximum methyl mercury concentration in the dataset (0.082 pg/L) and the total mercury detection limit of 0.00001 mg/L.

Table A-7: Water Quality Results for Marine Water Monitoring Station WQ2 - 2m Above Seafloor May 2020 to March 2021

Sample Date		2020-05-20	2020-06-22	2020-07-21	2020-08-24	2020-09-28	2020-10-20	2020-10-27	2020-11-03	2020-11-10	2020-11-18	2020-12-14	2021-01-27	2021-02-25	2021-03-25	Marine Water Aquatic Life Water Quality Guidelines			
Laboratory ID		**0051710-03**	**0062209-03**	**0071996-03**	**0082292-03**	**0093017-03**	**20J1961-03**	**20J2778-03**	**20K0360-03**	**20K1261-03**	**20K2100-03**	**20L1589-03**	**21A2590-03**	**21B2778-03**	**21C3505-03**	**BC**	**BC**	**CCME**	**CCME**
Station Name		**WQ 2-1**	**WQ2-1**	**WQ 2-1**	**WQ 2-1**	**WQ2-1**	**WQ 2-1**	**WQ 2-1**	**WQ2-1**	**WQ 2-1**	**WQ 2-1**	**WQ2-1**	**WQ2-1**	**WQ2-1**	**WQ2-1**	**Long Term**	**Short Term**	**Long Term**	**Short Term**
Field Parameters																			
Temperature	°C	8.6	9.0	9.4	9.6	10.1	9.8	10.2	9.6	9.6	-	9.7	8.8	-	8.3	Narrative [1]	-	Narrative [1]	-
Dissolved Oxygen (%)-field	%	-	-	-	-	-	-	78.6	51.7	50.8	-	46.9	-	-	79.4	-	-	-	-
Dissolved Oxygen (mg/L)-field	mg/L	6.51	6.19	6.42	5.69	7.03	5.05	7.47	4.88	4.8	-	4.41	6.52	-	7.73	-	-	>8	-
SPC	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	45604	-	-	-	-
Conductivity	µS/cm	31862	32118	45788	32974	31957	32181	29684	32385	32865	-	32605	31219	-	45604	-	-	-	-
Salinity	ppt	29.9	29.8	29.5	30.1	-	29.2	26.4	29.6	30.1	-	29.7	29.0	-	-	Narrative [1]	-	Narrative [1]	-
TDS-field	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH-field	pH units	7.38	7.38	7.59	7.51	7.40	7.53	7.73	7.52	7.43	-	7.41	7.66	-	7.87	7.0 - 8.7	7.0 - 8.7	7.0 - 8.7	-
ORP	mV	197.9	132.0	-	-	-	-	132.9	122.5	151.2	-	98.1	-	-	193.3	-	-	-	-
Turbidity	NTU	0.40	1.15	0.60	0.64	0.83	0.66	545.13	0.39	0.2	-	-0.11	0.30	-	0.47	Narrative [1]	Narrative [1]	Narrative [1]	-
Depth	m	37.1	25.1	29.4	29.8	30.0	30.0	26.5	-	35.6	-	-	29.8	-	27.3	-	-	-	-
General Parameters																			
Dissolved Oxygen-lab	mg/L	9.9	9.3	9.6	9.1	9.6	9.6	10	9.8	9.8	9.3	8.6	9.6	10.1	9.5	-	-	>8	-
pH-lab	pH units	7.53	7.69	7.65	7.65	7.57	7.62	7.59	7.69	7.47	7.42	7.68	7.48	7.54	7.55	7.0 - 8.7	-	7.0 - 8.7	-
TSS	mg/L	2.2	<2	2.8	2.4	4.5	2.8	2.8	2.4	3	3.4	2.6	3.8	<2	<2	Narrative [1]	Narrative [1]	Narrative [1]	-
Total Hardness	mg/L	5870	5770	5300	6180	5110	6100	5570	5270	5600	5890	6240	5470	5970	6150	-	-	-	-
N-NH3	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.081	<0.05	<0.05	0.061	-	-	-	-
N-NO3	mg/L	**6.3**	<1	<1	<1	<1	**<10**	<1	<1	<1	<1	<1	<1	<1	<1	3.7	-	45	339
Total Metals																			
T-Al	mg/L	0.014	0.0253	0.0266	0.0516	0.0771	0.0546	0.0255	0.0298	0.0277	0.0297	0.0156	0.0222	0.0184	0.035	-	-	-	-
T-Sb	mg/L	<0.0004	0.00048	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	0.00041	<0.0004	<0.0004	<0.0004	<0.0004	0.000606	-	0.27 [Sb(III)]	-	-
T-As	mg/L	0.00174	0.00182	0.00268	0.00201	0.00184	0.00191	0.00183	0.00155	0.00154	0.00225	0.00213	0.00137	0.00177	0.00176	-	0.0125	0.0125	-
T-Ba	mg/L	0.0104	0.0104	0.0126	0.012	0.0143	0.0137	0.0125	0.0114	0.0133	0.0129	0.0114	0.0109	0.0117	0.011	-	-	-	-
T-Be	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	0.1	-	-	-
T-Bi	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	-	-	-	-
T-B	mg/L	**4.02**	**4.34**	**4.06**	**4.21**	**4.41**	**4.41**	**3.93**	**4.24**	**4.15**	**3.83**	**3.84**	**3.99**	**4.32**	**4.91**	1.2	-	-	-
T-Cd	mg/L	0.000078	0.000082	0.000072	0.000086	0.000092	0.000096	0.000087	0.000082	0.000084	0.000033	0.000089	0.000058	0.000091	0.000105	0.00012	-	0.00012	-
T-Ca	mg/L	432	399	285	384	396	406	382	383	439	406	430	376	409	398	-	-	-	-
T-Cr	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0015 [Cr(VI)]	-	0.0015 [Cr(VI)]	-
T-Co	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00005	-	-	-	-
T-Cu	mg/L	**<u>0.00335</u>**	0.00124	<0.0008	0.00144	0.00108	<0.0008	<0.0008	0.00149	<0.0008	<0.0008	<0.0008	<0.0008	0.0011	<0.001	0.002	0.003	-	-
T-Fe	mg/L	0.022	0.034	0.022	0.052	0.06	0.05	0.028	<0.02	0.027	<0.02	<0.02	0.022	0.027	0.0263	-	-	-	-
T-Pb	mg/L	**0.00663**	<0.0004	<0.0004	<0.0004	0.00074	0.00044	0.00051	0.00122	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0005	0.002	0.14	-	-
T-Li	mg/L	0.165	0.167	0.157	0.167	0.159	0.174	0.148	0.17	0.185	0.18	0.154	0.154	0.206	0.214	-	-	-	-
T-Mg	mg/L	1160	1160	1110	1270	1000	1230	1120	1050	1090	1180	1250	1100	1200	1250	-	-	-	-
T-Mn	mg/L	0.00249	0.003	0.0037	0.00466	0.0109	0.0119	0.0069	0.0085	0.0118	0.00857	0.00612	0.00271	0.00304	0.00272	-	-	-	-
T-Hg	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00002 [2]	-	0.000016	-
T-Mo	mg/L	0.0103	0.0104	0.00965	0.0109	0.0103	0.011	0.0108	0.0099	0.0115	0.00944	0.0118	0.0106	0.0117	0.0105	-	-	-	-
T-Ni	mg/L	0.00116	<0.0008	<0.0008	<0.0008	0.00304	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.003	0.0083	-	-	-
T-P	mg/L	<0.1	<0.1	0.118	0.123	0.111	<0.1	0.127	0.126	0.128	<0.1	<0.1	<0.1	0.155	0.211	-	-	-	-
T-K	mg/L	398	341	309	379	324	347	324	322	340	351	397	338	381	373	-	-	-	-
T-Se	mg/L	<0.001	<0.001	<0.001	0.00158	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
T-Si	mg/L	<2	<2	2	<2	<2	<2	<2	<2	<2	2.1	<2	2.6	2.2	4.15	-	-	-	-
T-Ag	mg/L	0.000119	0.000114	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.000119	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0015	0.003	-	0.0075
T-Na	mg/L	8790	9210	8770	10600	8760	9470	8460	8520	8140	10000	10000	9250	9700	10000	-	-	-	-
T-Sr	mg/L	7.57	7.27	6.92	7.78	6.9	7.56	7.36	6.94	7.91	7.65	8.25	7.23	8.02	8.05	-	-	-	-
T-S	mg/L	935	859	857	981	841	1020	942	902	924	970	1120	850	977	997	-	-	-	-
T-Te	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	-	-	-	-
T-Tl	mg/L	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	-	-	-	-
T-Th	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	-	-	-	-
T-Sn	mg/L	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0005	-	-	-	-
T-Ti	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.00234	-	-	-	-
T-W	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0005	-	-	-	-
T-U	mg/L	0.00282	0.00291	0.00266	0.00331	0.00295	0.00301	0.00293	0.00284	0.00307	0.00288	0.00301	0.00293	0.00317	0.00304	-	-	-	-
T-V	mg/L	0.0026	0.0028	<0.002	0.006	<0.002	0.0073	0.0026	0.0034	<0.002	0.002	0.0023	<0.002	0.0054	<0.002	0.05	-	-	-
T-Zn	mg/L	<0.008	<0.008	<0.008	<0.008	**0.0143**	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	**0.0119**	<0.01	0.01	0.055	-	-
T-Zr	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
Speciated Metals																			
Methyl Mercury	ng/L	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-	-
Polycyclic Aromatic Hydrocarbons (PAH)																			
Acenaphthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.006	-	-	-
Acenaphthylene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
Acridine	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00009	<0.00005	-	-	-	-
Anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	-	-	-
Benz(a)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	-	-	-
Benzo(a)pyrene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	-	-	-
Benzo(b+j)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Benzo(g-h-i)perylene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Benzo(k)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
2-Chloronaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-
Chrysene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0001	-	-	-
Dibenz(a-h)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	-	-	-
Fluoranthene	mg/L	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	-	-	-	-
Fluorene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.012	-	-	-
Indeno(1-2-3-cd)pyrene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
1-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.001	-	-	-
2-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.001	-	-	-
Naphthalene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.001	-	0.0014	-
Phenanthrene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-
Pyrene	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	-	-	-	-
Quinoline	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Total PAHs	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
Volatile Organic Compounds (VOC)																			
Benzene	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.11	-	0.11	-
Ethylbenzene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.25	-	0.025	-
Methyl-tert-butyl-ether	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	0.44	5	-
Styrene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Toluene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	0.215	-
Total Xylenes	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	-	-	-
Total BTEX	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Dioxins and Furans																			
2-3-7-8-TCDD	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDD	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDD	pg/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
2-3-7-8-TCDF	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
1-2-3-4-7-8-9-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDF	pg/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
Total Furan TEQ	pg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Total Dioxin Furan TEQ	pg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Microbiological Parameters																			
E.coli	MPN/100 mL	<1.8	<1	<1	4	1	<1.8	18	4	<1	<1.8	<1	2	2	<1	-	-	-	-

Notes:
Results in **bold**: Exceedances of Long Term BC WQG
Results <u>underlined</u>: Exceedances of Short Term BC WQG
Results highlighted in grey: Exceedances of Long Term CCME guidelines
Results in red: Exceedances of Short Term CCME guidelines
[1] Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. These guidelines were not screened as there were no discharges to evaluate.
[2] The BC WQG for mercury is derived using the maximum methyl mercury concentration in the dataset (0.082 pg/L) and the total mercury detection limit of 0.00001 mg/L.

Table A-8: Water Quality Results for Marine Water Monitoring Station WQ2 - 2m Above Seafloor April to December 2021

Sample Date		2021-04-22	2021-05-18	2021-05-26	2021-06-01	2021-06-08	2021-06-15	2021-06-15	2021-07-20	2021-08-25	2021-09-28	2021-10-26	2021-11-23	2021-12-14	Marine Water Aquatic Life Water Quality Guidelines			
Laboratory ID		21D2478-03	21E1990-03	21E2917-03	21F0167-03	21F1056-03	21F2014-17	21F2014-03	21G2414-03	21H3040-03	21I3814-03	21J3514-03	21K3046-03	21L2125-03	BC	BC	CCME	CCME
Station Name		WQ2-1	WQ2-1	WQ2-1	WQ2-1	WQ2-1	Q2-1 Duplica	WQ2-1	WQ2-1	WQ2-1	WQ2-1	WQ2-1	WQ2-1	WQ2-1	Long Term	Short Term	Long Term	Short Term
Field Parameters																		
Temperature	°C	8.3	8.5	8.6	8.6	8.5	-	8.5	10.9	9.8	9.2	10.8	9.9	9.7	Narrative [1]	-	Narrative [1]	-
Dissolved Oxygen (%)-field	%	68.5	65.5	68.1	55.4	59.9	-	60.4	75.7	58.7	60.2	57.0	-	78.6	-	-	-	-
Dissolved Oxygen (mg/L)-field	mg/L	6.65	6.32	6.56	5.33	5.77	-	5.82	7.08	-	5.66	5.28	6.40	7.41	-	-	>8	-
SPC	µS/cm	45670	46051	46279	46624	46638	-	46261	41254	45648	33980	43544	44487	45599	-	-	-	-
Conductivity	µS/cm	31144	31581	31756	31985	31924	-	31694	30161	-	-	31763	31627	32245	-	-	-	-
Salinity	ppt	29.3	29.6	29.8	30.0	30.0	-	29.7	26.3	-	31.5	28.0	28.6	29.4	Narrative [1]	-	Narrative [1]	-
TDS-field	mg/L	29685	29933	30082	30306	30315	-	30070	-	-	-	-	28917	29639	-	-	-	-
pH-field	pH units	7.48	7.33	7.40	7.38	7.43	-	7.44	7.59	7.60	-	7.27	7.51	7.56	7.0 - 8.7	7.0 - 8.7	7.0 - 8.7	-
ORP	mV	154.7	234.8	252.9	182.8	117.9	-	185.4	106.7	-	864.1	7.0	140.9	213.1	-	-	-	-
Turbidity	NTU	0.18	0.31	0.22	0.44	1.92	-	1.81	1.18	-	0.87	-0.58	0.70	0.28	Narrative [1]	Narrative [1]	Narrative [1]	-
Depth	m	26.8	27.6	28.2	28.5	27.3	-	27.4	26.6	29.3	28.0	24.4	29.4	28.2	-	-	-	-
General Parameters																		
Dissolved Oxygen-lab	mg/L	10.3	9.6	9.9	10.8	10.2	-	9.8	9.8	10.2	9.5	9.5	9.8	11.1	-	-	>8	-
pH-lab	pH units	7.41	7.69	7.49	7.38	7.38	-	7.36	7.47	7.68	7.5	7.56	7.46	7.47	7.0 - 8.7	-	7.0 - 8.7	-
TSS	mg/L	3.4		4	3.2	<2	2.2	3.8	<2	2.8	<2	<2	2.4	2	Narrative [1]	Narrative [1]	Narrative [1]	-
Total Hardness	mg/L	6020	6030	5420	5850	6210	5910	5760	5400	5690	5540	4890	5940	5710	-	-	-	-
N-NH3	mg/L	<0.05	<0.05	<0.05	0.065	0.114	-	0.158	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-
N-NO3	mg/L	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	3.7	-	45	339
Total Metals																		
T-Al	mg/L	0.021	0.0381	0.0561	0.0345	0.0174	0.0226	0.0178	0.0395	0.0169	0.0446	0.0397	0.0106	<0.01	-	-	-	-
T-Sb	mg/L	<0.0005	<0.0004	<0.0005	<0.0005	<0.0005	0.000398	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0004	<0.0004	-	0.27 [Sb(III)]	-	-
T-As	mg/L	0.00163	0.00182	0.00159	0.00144	0.00161	0.00173	0.00184	0.00155	0.00165	0.00145	0.00149	0.00159	0.00205	-	0.0125	0.0125	-
T-Ba	mg/L	0.0111	0.0127	0.0105	0.0114	0.0108	0.0116	0.0112	0.011	0.0104	0.0121	0.011	0.0129	0.0112	-	-	-	-
T-Be	mg/L	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	0.1	-	-	-
T-Bi	mg/L	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	-	-	-	-
T-B	mg/L	**4.42**	**5.37**	**3.67**	**3.94**	**4.6**	**4.36**	**4.1**	**3.89**	**4.16**	**3.58**	**3.35**	**3.64**	**4.7**	1.2	-	-	-
T-Cd	mg/L	0.0000885	0.000075	0.0000577	0.0000612	0.0000714	0.0000804	0.0000916	0.0000875	0.00007	0.0000798	0.000075	0.000078	0.00009	0.00012	-	0.00012	-
T-Ca	mg/L	381	408	358	356	397	424	372	337	407	353	301	351	340	-	-	-	-
T-Cr	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	0.00027	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	0.0015 [Cr(VI)]	-	0.0015 [Cr(VI)]	-
T-Co	mg/L	<0.00005	<0.0002	0.0000676	<0.00005	<0.00005	0.000037	<0.00005	0.0000621	<0.00005	0.0000744	<0.00005	<0.0002	<0.0002	-	-	-	-
T-Cu	mg/L	<0.001	**0.00218**	**0.00474**	<0.001	<0.001	0.00045	<0.001	<0.001	0.00155	<0.001	<0.0004	0.00122	0.001	0.002	0.003	-	-
T-Fe	mg/L	0.0258	<0.02	0.0553	0.0305	<0.02	0.0189	0.0247	0.0376	<0.02	0.0356	0.03	0.025	0.028	-	-	-	-
T-Pb	mg/L	<0.0005	<0.0004	<0.0005	<0.0005	<0.0005	<0.00005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0004	<0.0004	0.002	0.14	-	-
T-Li	mg/L	0.183	0.224	0.16	0.162	0.206	0.213	0.166	0.164	0.169	0.155	0.131	0.171	0.177	-	-	-	-
T-Mg	mg/L	1230	1220	1100	1200	1270	1180	1170	1110	1140	1130	1000	1230	1180	-	-	-	-
T-Mn	mg/L	0.00217	0.0031	0.00382	0.00317	0.00168	0.00306	0.00309	0.00551	0.00344	0.00666	0.0056	0.00617	0.00516	-	-	-	-
T-Hg	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.000005	<0.00001	<0.00001	<0.00001	**<0.0001**	<0.00001	<0.00001	<0.00001	<0.00001	0.00002 [2]	-	0.000016	-
T-Mo	mg/L	0.0116	0.0115	0.00975	0.0109	0.0109	0.0112	0.0108	0.0101	0.0102	0.0106	0.0084	0.0107	0.01	-	-	-	-
T-Ni	mg/L	0.000549	<0.0008	0.000635	0.000569	0.000757	0.000458	0.000988	0.000636	0.000351	0.000694	<0.0004	0.0008	<0.0008	0.0083	-	-	-
T-P	mg/L	0.167	<0.1	<0.1	0.143	<0.1	0.104	<0.1	<0.1	0.112	<0.1	0.072	<0.1	0.104	-	-	-	-
T-K	mg/L	394	379	333	362	363	375	348	321	347	347	251	357	357	-	-	-	-
T-Se	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	0.00147	<0.001	<0.001	0.00217	<0.0005	<0.001	<0.001	-	-	-	-
T-Si	mg/L	2.5	<2	1.93	2.52	1.68	2.38	2.33	<0.5	10.9	2.2	1.8	2.5	2.6	-	-	-	-
T-Ag	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	<0.0001	<0.0001	0.0015	0.003	-	0.0075
T-Na	mg/L	9540	10600	8490	9620	8840	9540	9470	8800	9790	8770	7850	9020	9830	-	-	-	-
T-Sr	mg/L	7.23	7.46	6.16	6.91	6.78	7.02	7.09	6.4	7.06	6.98	5.08	6.82	7.19	-	-	-	-
T-S	mg/L	980	906	767	788	864	999	906	801	903	821	0.7	862	881	-	-	-	-
T-Te	mg/L	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.00005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	-	-	-	-
T-Tl	mg/L	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	0.000012	0.0000812	<0.00004	<0.00004	<0.00004	<0.00002	<0.00004	<0.00004	-	-	-	-
T-Th	mg/L	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.00001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00002	<0.0002	<0.0002	-	-	-	-
T-Sn	mg/L	<0.0005	<0.0004	<0.0005	<0.0005	<0.0005	<0.00005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00004	<0.0004	<0.0004	-	-	-	-
T-Ti	mg/L	<0.002	<0.01	0.00982	0.00201	<0.002	0.00128	<0.002	0.00264	<0.002	0.00546	<0.005	<0.01	<0.01	-	-	-	-
T-W	mg/L	<0.0005	<0.002	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.002	<0.002	-	-	-	-
T-U	mg/L	0.00305	0.00309	0.00262	0.00293	0.00285	0.00301	0.0029	0.00261	0.00269	0.00273	0.00231	0.00267	0.00271	-	-	-	-
T-V	mg/L	<0.002	0.0025	0.00381	0.0024	0.00247	0.00285	<0.002	<0.002	0.0031	<0.002	0.0015	<0.002	<0.002	0.05	-	-	-
T-Zn	mg/L	<0.01	<0.008	<0.01	<0.01	<0.01	0.003	<0.01	<0.01	<0.01	<0.01	<0.004	<0.008	<0.008	0.01	0.055	-	-
T-Zr	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.000026	<0.0002	<0.0002	<0.0002	0.000203	<0.0001	<0.0002	<0.0002	-	-	-	-
Speciated Metals																		
Methyl Mercury	ng/L	-	-	<0.024	<0.024	<0.023	-	<0.023	<0.025	<0.050	<0.024	<0.050	0.037	-	-	-	-	-
Polycyclic Aromatic Hydrocarbons (PAH)																		
Acenaphthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	0.006	-	-	-
Acenaphthylene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	-	-	-	-
Acridine	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	-	-	-	-
Benz(a)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	-	-	-	-
Benzo(a)pyrene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	0.00001	-	-	-
Benzo(b+j)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Benzo(g-h-i)perylene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Benzo(k)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
2-Chloronaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	-	-	-	-
Chrysene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	0.0001	-	-	-
Dibenz(a-h)anthracene	mg/L	<0.000015	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	-	-	-	-
Fluoranthene	mg/L	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	-	<0.00003	<0.00003	<0.00003	<0.00003	-	<0.00003	<0.00003	-	-	-	-
Fluorene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	0.012	-	-	-
Indeno(1-2-3-cd)pyrene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
1-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	0.001	-	-	-
2-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	0.001	-	-	-
Naphthalene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	0.001	-	0.0014	-
Phenanthrene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	-	-	-	-
Pyrene	mg/L	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	-	<0.00002	<0.00002	<0.00002	<0.00002	-	<0.00002	<0.00002	-	-	-	-
Quinoline	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Total PAHs	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	-	-	-	-
Volatile Organic Compounds (VOC)																		
Benzene	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.11	-	0.11	-
Ethylbenzene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.25	-	0.025	-
Methyl-tert-butyl-ether	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	0.44	5	-
Styrene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Toluene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	-	0.215	-
Total Xylenes	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	-	-	-
Total BTEX	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Dioxins and Furans																		
2-3-7-8-TCDD	pg/L	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDD	pg/L	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDD	pg/L	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDD	pg/L	<3	<3	<3	<3	<3	-	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDD	pg/L	<4	<4	<4	<4	<4	-	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
2-3-7-8-TCDF	pg/L	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDF	pg/L	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDF	pg/L	<3	<3	<3	<3	<3	-	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
1-2-3-4-7-8-9-HpCDF	pg/L	<3	<3	<3	<3	<3	-	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDF	pg/L	<4	<4	<4	<4	<4	-	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
Total Furan TEQ	pg/L	0	0	0	0	0	-	0	0	0	0	0	0	0	-	-	-	-
Total Dioxin Furan TEQ	pg/L	0	0	0	0	0	-	0	0	0	0	0	0	0	-	-	-	-
Microbiological Parameters																		
E.coli	MPN/100 mL	<1	<1	6	2	<1	-	<1	<1	<1	2	68	2	<1	-	-	-	-

Notes:
Results in **bold**: Exceedances of Long Term BC WQG
Results underlined: Exceedances of Short Term BC WQG
Results highlighted in grey: Exceedances of Long Term CCME guidelines
Results in red: Exceedances of Short Term CCME guidelines
[1] Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. These guidelines were not screened as there were no discharges to evaluate.
[2] The BC WQG for mercury is derived using the maximum methyl mercury concentration in the dataset (0.082 pg/L) and the total mercury detection limit of 0.00001 mg/L.

Table A-9: Water Quality Results for Marine Water Monitoring Station WQ3 - 2m Below Surface May 2020 to February 2021

Sample Date		**2020-05-20**	**2020-06-22**	**2020-07-21**	**2020-08-24**	**2020-09-28**	**2020-10-20**	**2020-10-27**	**2020-11-03**	**2020-11-10**	**2020-11-18**	**2020-12-14**	**2021-01-27**	**2021-02-25**	**Marine Water Aquatic Life Water Quality Guidelines**			
Laboratory ID		**0051710-06**	**0062209-06**	**0071996-06**	**0082292-06**	**0093017-06**	**20J1961-06**	**20J2778-06**	**20K0360-06**	**20K1261-06**	**20K2100-06**	**20L1589-06**	**21A2590-06**	**21B2778-06**	**BC**	**BC**	**CCME**	**CCME**
Station Name		**WQ 3-2**	**WQ3-2**	**WQ 3-2**	**WQ 3-2**	**WQ3-2**	**WQ 3-2**	**WQ 3-2**	**WQ3-2**	**WQ 3-2**	**WQ 3-2**	**WQ3-2**	**WQ3-2**	**WQ3-2**	**Long Term**	**Short Term**	**Long Term**	**Short Term**
Field Parameters																		
Temperature	°C	10.7	10.1	13.2	15.3	11.9	10.2	7.0	8.1	5.4	-	6.0	6.4	-	Narrative [1]	-	Narrative [1]	-
Dissolved Oxygen (%)-field	%	-	-	-	-	-	-	88.6	98.3	91.3	-	85.9	-	-	-	-	-	-
Dissolved Oxygen (mg/L)-field	mg/L	9.22	11.20	10.14	9.15	10.48	10.15	9.85	10.90	10.7	-	9.60	9.54	-	-	-	>8	-
SPC	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Conductivity	µS/cm	2759	2054	5472	21300	8180	11045	14768	12108	11437	-	17695	26194	-	-	-	-	-
Salinity	ppt	2.0	1.5	2.0	16.0	-	9.0	13.5	10.5	10.7	-	16.9	23.3	-	Narrative [1]	-	Narrative [1]	-
TDS-field	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH-field	pH units	8.49	8.15	8.52	7.90	7.78	7.89	7.96	7.82	7.62	-	7.60	7.77	-	7.0 - 8.7	7.0 - 8.7	7.0 - 8.7	-
ORP	mV	119.8	86.5	-	-	-	-	140.1	157.1	152.5	-	86.1	-	-	-	-	-	-
Turbidity	NTU	1.17	18.95	11.92	1.79	9.18	2.26	1.11	2.32	2.3	-	0.30	0.29	-	Narrative [1]	Narrative [1]	Narrative [1]	-
Depth	m	2.1	2.3	1.0	1.9	1.0	1.0	10.9	-	10.8	-	-	2.0	-	-	-	-	-
General Parameters																		
Dissolved Oxygen-lab	mg/L	11	10.2	10.3	9.4	9.4	9.7	10.3	9.2	10.2	9.5	10.6	9.9	10.8	-	-	>8	-
pH-lab	pH units	7.4	**6.85**	7.12	7.93	7.46	7.6	7.65	7.4	7.43	7.25	7.59	7.56	7.69	7.0 - 8.7	-	7.0 - 8.7	-
TSS	mg/L	5.2	12.8	5.4	6.4	10	2.8	<2	2.4	<2	6.6	<2	2.4	2	Narrative [1]	Narrative [1]	Narrative [1]	-
Total Hardness	mg/L	481	250	425	3330	1060	1830	2370	1320	1780	1060	3460	4450	4930	-	-	-	-
N-NH3	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.053	<0.05	<0.05	<0.05	<0.05	-	-	-	-
N-NO3	mg/L	<1	<0.01	<0.01	<1	<1	**<10**	<1	<1	<1	<1	<1	<1	<1	3.7	-	45	339
Total Metals																		
T-Al	mg/L	0.301	0.897	0.644	0.232	0.422	0.143	0.0538	0.221	0.174	0.329	0.0458	0.0215	0.0168	-	-	-	-
T-Sb	mg/L	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	-	0.27 [Sb(III)]	-	-
T-As	mg/L	<0.001	<0.001	<0.001	0.00135	<0.001	<0.001	0.00103	<0.001	<0.001	0.00107	0.0014	0.00144	0.00141	-	0.0125	0.0125	-
T-Ba	mg/L	<0.01	0.0205	0.0168	0.0315	0.0165	0.0137	0.0126	<0.01	0.0151	0.0108	0.0151	0.0106	0.0101	-	-	-	-
T-Be	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.1	-	-	-
T-Bi	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
T-B	mg/L	0.438	0.215	0.439	**2.34**	0.954	**1.41**	**1.8**	1.07	**1.46**	0.729	**2.34**	**3.43**	**3.58**	1.2	-	-	-
T-Cd	mg/L	0.000025	<0.00002	<0.00002	0.000051	0.000024	0.000035	0.000041	<0.00002	0.00003	<0.00002	0.000049	0.000049	0.000066	0.00012	-	0.00012	-
T-Ca	mg/L	37.2	18.9	24.5	210	84.6	124	173	93.8	136	75.6	246	320	333	-	-	-	-
T-Cr	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0015 [Cr(VI)]	-	0.0015 [Cr(VI)]	-
T-Co	mg/L	<0.0002	0.00046	0.00027	<0.0002	0.00022	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
T-Cu	mg/L	**0.00208**	**0.00275**	0.00152	**0.00249**	0.00111	0.00081	0.00119	<0.0008	**0.00204**	0.00098	0.0012	<0.0008	<0.0008	0.002	0.003	-	-
T-Fe	mg/L	0.279	0.812	0.503	0.167	0.384	0.127	0.108	0.143	0.178	0.241	0.148	0.066	0.039	-	-	-	-
T-Pb	mg/L	0.00165	0.00043	<0.0004	<0.0004	<0.0004	<0.0004	**0.00218**	0.00135	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	0.002	0.14	-	-
T-Li	mg/L	0.0152	0.00815	0.0138	0.112	0.0337	0.0527	0.0663	0.0428	0.0595	0.0347	0.0916	0.125	0.164	-	-	-	-
T-Mg	mg/L	94.3	49.2	88.4	681	207	369	471	264	348	211	691	885	996	-	-	-	-
T-Mn	mg/L	0.00997	0.0271	0.0165	0.014	0.0175	0.01	0.0145	0.00797	0.0147	0.0161	0.014	0.00675	0.00536	-	-	-	-
T-Hg	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00002 [2]	-	0.000016	-
T-Mo	mg/L	0.00118	0.0007	0.00105	0.00624	0.00312	0.00371	0.00504	0.00258	0.00371	0.00196	0.00688	0.00847	0.00929	-	-	-	-
T-Ni	mg/L	0.00102	<0.0008	<0.0008	<0.0008	0.00091	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	0.0083	-	-	-
T-P	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-
T-K	mg/L	32.2	15.7	28.1	204	73	107	139	89.2	109	70.9	221	277	314	-	-	-	-
T-Se	mg/L	<0.001	<0.001	<0.001	0.00631	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
T-Si	mg/L	<2	<2	2.8	<2	2.9	<2	<2	2.8	2.7	3.5	3.2	2.4	2.9	-	-	-	-
T-Ag	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0015	0.003	-	0.0075
T-Na	mg/L	794	407	736	5300	1760	3100	4070	2260	2940	1770	5480	7430	7930	-	-	-	-
T-Sr	mg/L	0.574	0.305	0.541	4	1.44	2.41	3.27	1.72	2.48	1.43	4.61	5.69	6.48	-	-	-	-
T-S	mg/L	75.4	35.6	75.1	530	171	314	399	227	297	179	626	701	824	-	-	-	-
T-Te	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
T-Tl	mg/L	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	-	-	-	-
T-Th	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
T-Sn	mg/L	<0.0004	0.0005	<0.0004	0.00076	<0.0004	<0.0004	0.00049	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	-	-	-	-
T-Ti	mg/L	0.0188	0.0645	0.0446	0.0112	0.0244	<0.01	<0.01	0.0136	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	-
T-W	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	-	-	-
T-U	mg/L	0.000315	0.000218	0.000269	0.00187	0.000678	0.000984	0.0013	0.000851	0.001	0.00063	0.00172	0.00236	0.00255	-	-	-	-
T-V	mg/L	<0.002	0.0023	<0.002	<0.002	<0.002	0.0065	0.004	<0.002	<0.002	<0.002	<0.002	<0.002	0.0036	0.05	-	-	-
T-Zn	mg/L	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	0.01	0.055	-	-
T-Zr	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
Speciated Metals																		
Methyl Mercury	ng/L	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-
Polycyclic Aromatic Hydrocarbons (PAH)																		
Acenaphthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.006	-	-	-
Acenaphthylene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
Acridine	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	-	-	-
Benz(a)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	-	-	-
Benzo(a)pyrene	mg/L	<0.00001	**0.000023**	<0.00001	<0.00001	<0.00001	**0.00002**	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	-	-	-
Benzo(b+j)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Benzo(g-h-i)perylene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Benzo(k)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
2-Chloronaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-
Chrysene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0001	-	-	-
Dibenz(a-h)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000036	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	-	-	-
Fluoranthene	mg/L	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	-	-	-	-
Fluorene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.012	-	-	-
Indeno(1-2-3-cd)pyrene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
1-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.001	-	-	-
2-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.001	-	-	-
Naphthalene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.001	-	0.0014	-
Phenanthrene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-
Pyrene	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	-	-	-	-
Quinoline	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Total PAHs	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
Volatile Organic Compounds (VOC)																		
Benzene	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.11	-	0.11	-
Ethylbenzene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.25	-	0.025	-
Methyl-tert-butyl-ether	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	0.44	5	-
Styrene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Toluene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	0.215	-
Total Xylenes	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	-	-	-
Total BTEX	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Dioxins and Furans																		
2-3-7-8-TCDD	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDD	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDD	pg/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
2-3-7-8-TCDF	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
1-2-3-4-7-8-9-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDF	pg/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
Total Furan TEQ	pg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Total Dioxin Furan TEQ	pg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Microbiological Parameters																		
E.coli	MPN/100 mL	2	10	10	1	24	<1.8	1	22	5	6.8	2	3	2	-	-	-	-

Notes:
Results in **bold**: Exceedances of Long Term BC WQG
Results underlined: Exceedances of Short Term BC WQG
Results highlighted in grey: Exceedances of Long Term CCME guidelines
Results in red: Exceedances of Short Term CCME guidelines
[1] Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. These guidelines were not screened as there were no discharges to evaluate.
[2] The BC WQG for mercury is derived using the maximum methyl mercury concentration in the dataset (0.082 pg/L) and the total mercury detection limit of 0.00001 mg/L.

Table A-10: Water Quality Results for Marine Water Monitoring Station WQ3 - 2m Below Surface March to December 2021

Sample Date		**2021-03-25**	**2021-04-22**	**2021-05-18**	**2021-05-26**	**2021-06-01**	**2021-06-08**	**2021-06-15**	**2021-07-20**	**2021-08-25**	**2021-09-28**	**2021-10-26**	**2021-11-23**	**2021-12-14**	**Marine Water Aquatic Life Water Quality Guidelines**			
Laboratory ID		**21C3505-06**	**21D2478-06**	**21E1990-06**	**21E2917-06**	**21F0167-06**	**21F1056-06**	**21F2014-06**	**21G2414-06**	**21H3040-06**	**21I3814-06**	**21J3514-06**	**21K3046-06**	**21L2125-06**	**BC**	**BC**	**CCME**	**CCME**
Station Name		**WQ3-2**	**WQ3-2**	**WQ3-2**	**WQ3-2**	**WQ3-2**	**WQ3-2**	**WQ3-2**	**WQ3-2**	**WQ3-2**	**WQ3-2**	**WQ3-2**	**WQ3-2**	**WQ3-2**	**Long Term**	**Short Term**	**Long Term**	**Short Term**
Field Parameters																		
Temperature	°C	8.3	9.3	8.4	9.5	11.3	10.2	9.2	12.5	16.2	12.7	7.9	8.0	5.2	Narrative [1]	-	Narrative [1]	-
Dissolved Oxygen (%)-field	%	126.1	123.3	102.7	104.4	103.2	103.7	101.3	78.9	118.6	97.3	95.9	87.7	87.5	-	-	-	-
Dissolved Oxygen (mg/L)-field	mg/L	12.97	13.31	11.96	11.84	10.35	11.55	11.34	7.38	-	9.50	11.31	9.04	10.11	-	-	>8	-
SPC	µS/cm	33386	16420	1920	2287	23075	2628	7574	33558	32809	16907	5518	34262	23740	-	-	-	-
Conductivity	µS/cm	33386	11494	1288	1609	17039	1885	5291	25545	-	-	3717	23135	14777	-	-	-	-
Salinity	ppt	-	9.6	1.0	1.2	14.0	1.4	4.2	21.0	-	13.3	3.0	21.4	14.2	Narrative [1]	-	Narrative [1]	-
TDS-field	mg/L	-	10673	1225	1487	14999	1708	4923	-	-	-	-	22270	15431	-	-	-	-
pH-field	pH units	8.48	8.50	7.29	7.65	8.04	8.16	7.70	7.78	8.28	-	7.58	7.64	7.63	7.0 - 8.7	7.0 - 8.7	7.0 - 8.7	-
ORP	mV	192.0	212.0	208.0	210.2	157.2	110.3	158.3	122.8	-	664.8	10.9	153.6	196.4	-	-	-	-
Turbidity	NTU	0.75	2.09	10.82	3.52	1.35	14.76	16.07	2.09	-	4.85	6.40	0.96	0.60	Narrative [1]	Narrative [1]	Narrative [1]	-
Depth	m	2.0	2.1	2.2	2.5	3.0	1.9	2.0	2.4	2.1	2.1	2.1	2.2	2.0	-	-	-	-
General Parameters																		
Dissolved Oxygen-lab	mg/L	11.6	11.7	10.9	10.2	10.3	10.6	10.6	9.9	10.4	8.2	10.6	9.9	11.2	-	-	>8	-
pH-lab	pH units	8.25	8.07	7.33	7.12	7.28	7.09	7.2	7.3	7.63	7.65	7.02	7.45	7.53	7.0 - 8.7	-	7.0 - 8.7	-
TSS	mg/L	3	4.6	10	3.7	3	6.6	20.5	6	3.4	6.6	10.6	2.6	2	Narrative [1]	Narrative [1]	Narrative [1]	-
Total Hardness	mg/L	3620	1630	205	239	886	265	740	384	1090	1750	529	4090	4230	-	-	-	-
N-NH3	mg/L	<0.05	<0.05	<0.05	<0.05	0.065	0.425	<0.05	<0.05	<0.05	0.051	<0.05	<0.05	<0.05	-	-	-	-
N-NO3	mg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	3.7	-	45	339
Total Metals																		
T-Al	mg/L	0.022	0.197	0.703	0.246	0.233	0.925	1.19	0.394	0.259	0.335	0.493	0.0396	<0.01	-	-	-	-
T-Sb	mg/L	<0.0005	0.000148	<0.0004	<0.00005	0.000056	0.000066	0.000081	<0.0005	<0.0005	<0.0005	<0.0002	<0.0004	<0.0004	-	0.27 [Sb(III)]	-	-
T-As	mg/L	0.000751	0.000522	<0.001	0.000164	0.000286	0.000259	0.000398	<0.0005	<0.0005	<0.0005	<0.0005	0.00118	0.00153	-	0.0125	0.0125	-
T-Ba	mg/L	0.0092	0.0104	0.014	0.00815	0.0105	0.021	0.0253	0.0135	0.0178	0.0161	0.012	0.0123	0.0119	-	-	-	-
T-Be	mg/L	<0.0001	<0.00001	<0.0002	<0.00001	<0.00001	0.000014	0.000016	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	0.1	-	-	-
T-Bi	mg/L	<0.0001	0.000026	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	-	-	-	-
T-B	mg/L	**3**	**1.47**	0.371	0.209	0.776	0.209	0.505	0.341	0.854	**1.33**	0.443	**2.73**	**3.62**	1.2	-	-	-
T-Cd	mg/L	0.000053	0.0000214	<0.00002	0.0000062	0.0000201	0.0000105	0.0000172	<0.00002	0.0000201	0.0000248	0.00002	0.000048	0.000057	0.00012	-	0.00012	-
T-Ca	mg/L	236	131	15.8	19.9	62.4	20.1	50	24.9	77.9	126	37.2	241	257	-	-	-	-
T-Cr	mg/L	<0.001	0.00031	<0.001	0.00029	0.00034	0.0006	0.00079	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	0.0015 [Cr(VI)]	-	0.0015 [Cr(VI)]	-
T-Co	mg/L	0.0000681	0.000128	0.00037	0.000129	0.000129	0.000392	0.00049	0.000212	0.000177	0.000189	0.00021	<0.0002	<0.0002	-	-	-	-
T-Cu	mg/L	0.00118	0.00119	**0.00264**	0.00109	0.0011	0.0018	**0.0028**	0.0014	0.00179	0.00127	**0.00257**	0.0015	0.00103	0.002	0.003	-	-
T-Fe	mg/L	0.0841	0.18	0.62	0.187	0.18	0.726	0.905	0.373	0.293	0.263	0.438	0.08	0.051	-	-	-	-
T-Pb	mg/L	<0.0005	0.000068	<0.0004	0.000071	0.00005	0.000143	0.000224	0.000505	**0.00215**	<0.0005	0.0002	<0.0004	<0.0004	0.002	0.14	-	-
T-Li	mg/L	0.129	0.0607	0.00777	0.00872	0.0318	0.00994	0.0216	0.0114	0.0322	0.0534	0.0167	0.122	0.131	-	-	-	-
T-Mg	mg/L	735	345	40.2	46.1	177	52.1	149	78.1	216	350	106	846	870	-	-	-	-
T-Mn	mg/L	0.00663	0.00894	0.0194	0.0081	0.00817	0.0235	0.0291	0.0137	0.0146	0.0124	0.0209	0.00831	0.00722	-	-	-	-
T-Hg	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00002 [2]	-	0.000016	-
T-Mo	mg/L	0.00646	0.00359	0.0008	0.00111	0.00196	0.000795	0.00347	0.000884	0.00228	0.0034	0.00115	0.00782	0.00771	-	-	-	-
T-Ni	mg/L	<0.003	0.000395	<0.0008	0.000255	0.00029	0.000546	0.000693	0.000765	<0.0002	0.000878	<0.0004	<0.0008	<0.0008	0.0083	-	-	-
T-P	mg/L	0.144	0.034	<0.1	0.015	0.019	0.022	0.041	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	-	-	-	-
T-K	mg/L	224	110	13	14.2	51.5	16	44.2	25.8	72	112	32.8	246	265	-	-	-	-
T-Se	mg/L	<0.001	<0.0001	<0.001	0.0002	0.00077	<0.0001	<0.0001	<0.001	<0.001	0.0048	<0.0005	<0.001	<0.001	-	-	-	-
T-Si	mg/L	3.69	3.17	3.3	2.89	2.74	4.19	3.94	0.55	3.37	2.52	2.9	3.1	3.1	-	-	-	-
T-Ag	mg/L	<0.0001	<0.00001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0001	<0.0001	<0.0001	<0.00005	<0.0001	<0.0001	0.0015	0.003	-	0.0075
T-Na	mg/L	5810	2580	325	384	1260	373	1180	622	1900	2750	890	6360	7210	-	-	-	-
T-Sr	mg/L	4.73	2.41	0.228	0.315	1.14	0.315	0.903	0.45	1.35	2.07	0.632	4.73	5.36	-	-	-	-
T-S	mg/L	575	282	29.4	36.6	134	38.9	113	62.9	166	263	<0.6	607	661	-	-	-	-
T-Te	mg/L	<0.0005	0.0001	<0.001	<0.00005	<0.00005	<0.00005	<0.00005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	-	-	-	-
T-Tl	mg/L	<0.00004	0.0000063	<0.00004	0.0000044	0.0000048	0.0000092	0.0000134	<0.00004	<0.00004	<0.00004	<0.00002	<0.00004	<0.00004	-	-	-	-
T-Th	mg/L	<0.0001	0.000011	<0.0002	0.000014	0.000014	0.000045	0.000052	<0.0001	<0.0001	<0.0001	<0.00002	<0.0002	<0.0002	-	-	-	-
T-Sn	mg/L	<0.0005	0.000068	<0.0004	0.000104	<0.00005	0.000056	0.000104	<0.0005	<0.0005	<0.0005	<0.00004	<0.0004	<0.0004	-	-	-	-
T-Ti	mg/L	<0.002	0.0109	0.0403	0.0417	0.0134	0.0787	0.0743	0.0281	0.0168	0.021	0.0145	<0.01	<0.01	-	-	-	-
T-W	mg/L	<0.0005	<0.0002	<002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0002	<0.002	<002	-	-	-	-
T-U	mg/L	0.0018	0.000871	0.000175	0.00019	0.000473	0.00019	0.000423	0.000227	0.000573	0.00101	0.000329	0.00188	0.00199	-	-	-	-
T-V	mg/L	<0.002	0.00125	0.0024	0.0003	0.00044	0.00271	0.00289	<0.002	0.00213	<0.002	0.001	<0.002	<0.002	0.05	-	-	-
T-Zn	mg/L	<0.01	0.0018	<0.008	0.002	0.0012	0.0034	0.0041	<0.01	<0.01	<0.01	<0.004	<0.008	<0.008	0.01	0.055	-	-
T-Zr	mg/L	<0.0002	0.000046	0.00146	0.000064	0.000057	0.000826	0.000252	<0.0002	<0.0002	<0.0002	<0.0001	<0.0002	<0.0002	-	-	-	-
Speciated Metals																		
Methyl Mercury	ng/L	<0.050	-	-	<0.024	<0.024	<0.023	<0.023	<0.025	<0.050	<0.024	<0.050	0.08	-	-	-	-	-
Polycyclic Aromatic Hydrocarbons (PAH)																		
Acenaphthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	0.006	-	-	-
Acenaphthylene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	-	-	-	-
Acridine	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	-	-	-	-
Benz(a)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000032	<0.00001	<0.00001	-	<0.00001	<0.00001	-	-	-	-
Benzo(a)pyrene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	**0.000059**	<0.00001	<0.00001	-	<0.00001	<0.00001	0.00001	-	-	-
Benzo(b+j)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000144	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Benzo(g-h-i)perylene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000095	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Benzo(k)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000061	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
2-Chloronaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	-	-	-	-
Chrysene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	0.0001	-	-	-
Dibenz(a-h)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000084	<0.00001	<0.00001	-	<0.00001	<0.00001	-	-	-	-
Fluoranthene	mg/L	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	-	<0.00003	<0.00003	-	-	-	-
Fluorene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	0.012	-	-	-
Indeno(1-2-3-cd)pyrene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000083	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
1-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	0.001	-	-	-
2-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	0.001	-	-	-
Naphthalene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	0.001	-	0.0014	-
Phenanthrene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	-	-	-	-
Pyrene	mg/L	<0.00002	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	-	<0.00002	<0.00002	-	-	-	-
Quinoline	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Total PAHs	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00044	<0.0002	<0.0002	-	<0.0002	<0.0002	-	-	-	-
Volatile Organic Compounds (VOC)																		
Benzene	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.11	-	0.11	-
Ethylbenzene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.25	-	0.025	-
Methyl-tert-butyl-ether	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	0.44	5	-
Styrene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Toluene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	-	0.215	-
Total Xylenes	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	-	-	-
Total BTEX	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Dioxins and Furans																		
2-3-7-8-TCDD	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDD	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDD	pg/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
2-3-7-8-TCDF	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
1-2-3-4-7-8-9-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDF	pg/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
Total Furan TEQ	pg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Total Dioxin Furan TEQ	pg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Microbiological Parameters																		
E.coli	MPN/100 mL	2	<1	16	5	3	3	18	1	4	11	411	2	6	-	-	-	-

Notes:
Results in **bold**: Exceedances of Long Term BC WQG
Results underlined: Exceedances of Short Term BC WQG
Results highlighted in grey: Exceedances of Long Term CCME guidelines
Results in red: Exceedances of Short Term CCME guidelines
[1] Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. These guidelines were not screened as there were no discharges to evaluate.
[2] The BC WQG for mercury is derived using the maximum methyl mercury concentration in the dataset (0.082 pg/L) and the total mercury detection limit of 0.00001 mg/L.

Table A-11: Water Quality Results for Marine Water Monitoring Station WQ3 - 2m Above Seafloor May 2020 to February 2021

Sample Date		2020-05-20	2020-06-22	2020-07-21	2020-08-24	2020-09-28	2020-10-20	2020-10-27	2020-11-03	2020-11-10	2020-11-18	2020-12-14	2021-01-27	2021-02-25	Marine Water Aquatic Life Water Quality Guidelines			
Laboratory ID		**0051710-05**	**0062209-05**	**0071996-05**	**0082292-05**	**0093017-05**	**20J1961-05**	**20J2778-05**	**20K0360-05**	**20K1261-05**	**20K2100-05**	**20L1589-05**	**21A2590-05**	**21B2778-05**	**BC**	**BC**	**CCME**	**CCME**
Station Name		**WQ 3-1**	**WQ3-1**	**WQ 3-1**	**WQ 3-1**	**WQ3-1**	**WQ 3-1**	**WQ 3-1**	**WQ3-1**	**WQ 3-1**	**WQ 3-1**	**WQ3-1**	**WQ3-1**	**WQ3-1**	**Long Term**	**Short Term**	**Long Term**	**Short Term**
Field Parameters																		
Temperature	°C	8.6	8.9	9.3	9.6	10.1	9.7	9.5	9.6	9.6	-	9.7	8.7	-	Narrative [1]	-	Narrative [1]	-
Dissolved Oxygen (%)-field	%	-	-	-	-	-	-	59.2	59.7	50.6	-	48.2	-	-	-	-	-	-
Dissolved Oxygen (mg/L)-field	mg/L	6.40	6.04	6.43	5.59	6.88	6.88	5.60	5.63	4.8	-	4.53	7.12	-	-	-	>8	-
SPC	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Conductivity	µS/cm	31902	32140	45977	32886	32121	32121	32031	32436	32888	-	32587	31225	-	-	-	-	-
Salinity	ppt	29.9	29.8	29.6	30.1	-	29.3	29.3	29.6	30.1	-	29.7	29.0	-	Narrative [1]	-	Narrative [1]	-
TDS-field	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH-field	pH units	7.43	7.39	7.49	7.43	7.46	7.46	7.64	7.53	7.46	-	7.47	7.63	-	7.0 - 8.7	7.0 - 8.7	7.0 - 8.7	-
ORP	mV	169.2	137.0	-	-	-	-	245.1	185.6	172.9	-	97.7	-	-	-	-	-	-
Turbidity	NTU	0.91	0.66	1.05	0.39	0.62	0.62	15.26	0.26	0.2	-	-0.04	1.60	-	Narrative [1]	Narrative [1]	Narrative [1]	-
Depth	m	35.9	26.1	29.9	30.2	30.0	30.0	38.1	-	36.1	-	-	30.0	-	-	-	-	-
General Parameters																		
Dissolved Oxygen-lab	mg/L	9.9	9.5	9.7	9	9.4	9.6	9.7	9.4	9.8	9.4	8.5	9.6	10	-	-	>8	-
pH-lab	pH units	7.46	7.65	7.62	7.62	7.56	7.64	7.6	7.63	7.47	7.47	7.57	7.5	7.54	7.0 - 8.7	-	7.0 - 8.7	-
TSS	mg/L	<2	3.6	2.4	15.8	3	3	2.2	2.4	2.2	4	<2	4	4	Narrative [1]	Narrative [1]	Narrative [1]	-
Total Hardness	mg/L	5560	5680	5450	6190	4820	6030	5600	5130	5810	5990	5890	5430	6130	-	-	-	-
N-NH3	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.073	<0.05	<0.05	-	-	-	-
N-NO3	mg/L	**<5**	<1	<1	<1	<1	**<10**	<1	<1	<1	<1	<1	<1	<1	3.7	-	45	339
Total Metals																		
T-Al	mg/L	0.0292	0.0184	0.0324	0.0353	0.0689	0.031	0.0337	0.0242	0.0242	0.0361	0.0132	0.0233	0.0125	-	-	-	-
T-Sb	mg/L	<0.0004	0.00043	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	-	0.27 [Sb(III)]	-	-
T-As	mg/L	0.00169	0.00178	0.00264	0.00193	0.00155	0.00183	0.00188	0.00183	0.00181	0.00217	0.00228	0.00189	0.00152	-	0.0125	0.0125	-
T-Ba	mg/L	<0.01	0.0103	0.0131	0.0119	0.0105	0.0124	0.013	0.0108	0.012	0.0119	0.0118	0.0105	0.0109	-	-	-	-
T-Be	mg/L	<0.0002	<0.0002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.1	-	-	-
T-Bi	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
T-B	mg/L	**3.96**	**4.29**	**4.13**	**4.26**	**4.21**	**4.31**	**3.99**	**4.09**	**4.19**	**3.91**	**3.71**	**3.9**	**4.33**	1.2	-	-	-
T-Cd	mg/L	0.000075	0.000078	0.000087	0.000107	0.000094	0.000079	0.000084	0.000075	0.000074	0.000038	0.000078	0.000064	0.000077	0.00012	-	0.00012	-
T-Ca	mg/L	413	401	292	384	374	401	397	369	444	414	419	370	415	-	-	-	-
T-Cr	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0015 [Cr(VI)]	-	0.0015 [Cr(VI)]	-
T-Co	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
T-Cu	mg/L	0.00153	0.00111	<0.0008	0.00182	<0.0008	<0.0008	0.00085	0.00126	0.00082	<0.0008	<0.0008	<0.0008	<0.0008	0.002	0.003	-	-
T-Fe	mg/L	0.03	0.023	0.038	0.035	0.037	0.024	0.03	<0.02	0.024	<0.02	<0.02	0.033	<0.02	-	-	-	-
T-Pb	mg/L	**0.00277**	0.00057	<0.0004	<0.0004	<0.0004	<0.0004	0.00076	0.00093	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	0.002	0.14	-	-
T-Li	mg/L	0.157	0.166	0.16	0.167	0.15	0.169	0.152	0.166	0.187	0.185	0.147	0.145	0.203	-	-	-	-
T-Mg	mg/L	1100	1140	1150	1270	944	1220	1120	1020	1140	1200	1180	1090	1240	-	-	-	-
T-Mn	mg/L	0.00274	0.00239	0.00447	0.00407	0.0103	0.0103	0.0086	0.00871	0.012	0.0071	0.00529	0.0028	0.00265	-	-	-	-
T-Hg	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00002 [2]	-	0.000016	-
T-Mo	mg/L	0.0101	0.0102	0.00979	0.0109	0.00993	0.0108	0.0111	0.00939	0.0113	0.0101	0.0108	0.0108	0.0118	-	-	-	-
T-Ni	mg/L	0.00136	<0.0008	<0.0008	<0.0008	0.00115	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	0.0083	-	-	-
T-P	mg/L	<0.1	<0.1	<0.1	0.101	0.115	<0.1	0.101	0.146	<0.1	0.214	0.122	0.162	0.128	-	-	-	-
T-K	mg/L	374	335	316	382	304	345	322	314	355	359	373	344	390	-	-	-	-
T-Se	mg/L	<0.001	<0.001	<0.001	0.00576	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
T-Si	mg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	2.4	-	-	-	-
T-Ag	mg/L	<0.0001	0.000102	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.000107	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0015	0.003	-	0.0075
T-Na	mg/L	8490	9240	9020	9860	8280	8740	8530	8780	7380	10000	9460	9230	9990	-	-	-	-
T-Sr	mg/L	7.06	7.17	7.03	7.77	6.59	7.58	7.51	6.86	8.16	7.94	7.84	7.1	8.01	-	-	-	-
T-S	mg/L	879	844	875	983	785	1030	931	888	980	1020	1060	859	1020	-	-	-	-
T-Te	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
T-Tl	mg/L	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	-	-	-	-
T-Th	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
T-Sn	mg/L	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	0.012	<0.0004	<0.0004	-	-	-	-
T-Ti	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	-
T-W	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	-	-	-
T-U	mg/L	0.00262	0.00292	0.00272	0.00323	0.0028	0.00303	0.00296	0.0027	0.00311	0.00292	0.0029	0.0027	0.0031	-	-	-	-
T-V	mg/L	0.0024	<0.002	<0.002	<0.002	<0.002	0.0067	0.0036	0.0035	<0.002	<0.002	<0.002	<0.002	0.0036	0.05	-	-	-
T-Zn	mg/L	<0.008	<0.008	<0.008	<0.008	**0.0138**	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	0.01	0.055	-	-
T-Zr	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
Speciated Metals																		
Methyl Mercury	ng/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Polycyclic Aromatic Hydrocarbons (PAH)																		
Acenaphthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.006	-	-	-
Acenaphthylene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
Acridine	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	-	-	-
Benz(a)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000016	<0.00001	<0.00001	<0.00001	<0.000018	<0.00001	<0.00001	-	-	-	-
Benzo(a)pyrene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	**0.000065**	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	-	-	-
Benzo(b+j)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000106	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Benzo(g-h-i)perylene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000113	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Benzo(k)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000053	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
2-Chloronaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-
Chrysene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0001	-	-	-
Dibenz(a-h)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000105	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	-	-	-
Fluoranthene	mg/L	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	-	-	-	-
Fluorene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.012	-	-	-
Indeno(1-2-3-cd)pyrene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000104	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
1-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.001	-	-	-
2-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.001	-	-	-
Naphthalene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.001	-	0.0014	-
Phenanthrene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-
Pyrene	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	-	-	-	-
Quinoline	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Total PAHs	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.000508	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
Volatile Organic Compounds (VOC)																		
Benzene	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.11	-	0.11	-
Ethylbenzene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.25	-	0.025	-
Methyl-tert-butyl-ether	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	0.44	5	-
Styrene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Toluene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	0.215	-
Total Xylenes	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	-	-	-
Total BTEX	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Dioxins and Furans																		
2-3-7-8-TCDD	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDD	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDD	pg/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
2-3-7-8-TCDF	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDF	pg/L	<2	2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
1-2-3-4-7-8-9-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDF	pg/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
Total Furan TEQ	pg/L	0	0.1	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Total Dioxin Furan TEQ	pg/L	0	0.1	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Microbiological Parameters																		
E.coli	MPN/100 mL	<1.8	<1	3	2	3	2	<1	<1	<1	<1.8	<1	2	<1.8	-	-	-	-

Notes:
Results in **bold**: Exceedances of Long Term BC WQG
Results underlined: Exceedances of Short Term BC WQG
Results highlighted in grey: Exceedances of Long Term CCME guidelines
Results in red: Exceedances of Short Term CCME guidelines
[1] Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. These guidelines were not screened as there were no discharges to evaluate.
[2] The BC WQG for mercury is derived using the maximum methyl mercury concentration in the dataset (0.082 pg/L) and the total mercury detection limit of 0.00001 mg/L.

Table A-12: Water Quality Results for Marine Water Monitoring Station WQ1 - 2m Above Seafloor March to December 2021

Sample Date		**2021-03-25**	**2021-04-22**	**2021-05-18**	**2021-05-26**	**2021-06-01**	**2021-06-08**	**2021-06-15**	**2021-07-20**	**2021-08-25**	**2021-09-28**	**2021-10-26**	**2021-11-23**	**2021-12-14**	**Marine Water Aquatic Life Water Quality Guidelines**			
Laboratory ID		**21C3505-05**	**21D2478-05**	**21E1990-05**	**21E2917-05**	**21F0167-05**	**21F1056-05**	**21F2014-05**	**21G2414-05**	**21H3040-05**	**21I3814-05**	**21J3514-05**	**21K3046-05**	**21L2125-05**	**BC**	**BC**	**CCME**	**CCME**
Station Name		**WQ3-1**	**WQ3-1**	**WQ3-1**	**WQ3-1**	**WQ3-1**	**WQ3-1**	**WQ3-1**	**WQ3-1**	**WQ3-1**	**WQ3-1**	**WQ3-1**	**WQ3-1**	**WQ3-1**	**Long Term**	**Short Term**	**Long Term**	**Short Term**
Field Parameters																		
Temperature	°C	8.3	8.3	8.6	8.6	8.5	8.5	8.5	11.9	9.8	9.2	10.8	9.9	9.7	Narrative [1]	-	Narrative [1]	-
Dissolved Oxygen (%)-field	%	74.9	71.8	64.6	61.9	56.7	57.3	60.1	88.7	58.6	58.9	55.4	67.9	85.5	-	-	-	-
Dissolved Oxygen (mg/L)-field	mg/L	7.29	6.98	6.24	5.96	5.45	5.52	5.80	8.45	-	5.54	5.14	6.41	8.06	-	-	>8	-
SPC	µS/cm	45544	45592	45929	46260	46596	46656	46180	34906	45559	33965	43635	44234	45512	-	-	-	-
Conductivity	µS/cm	45544	31071	31505	31733	31955	31941	31659	26195	-	-	31795	31437	32194	-	-	-	-
Salinity	ppt	-	29.3	29.5	29.7	30.0	30.0	29.7	21.9	-	31.5	28.0	28.4	29.3	Narrative [1]	-	Narrative [1]	-
TDS-field	mg/L	-	29635	29854	30103	30288	30326	30017	-	-	-	-	28752	29583	-	-	-	-
pH-field	pH units	7.76	7.56	7.40	7.37	7.42	7.48	7.46	7.60	7.60	-	7.28	7.51	7.56	7.0 - 8.7	7.0 - 8.7	7.0 - 8.7	-
ORP	mV	194.3	243.5	246.6	253.9	180.9	153.7	182.2	130.5	-	732.7	8.1	162.9	210.8	-	-	-	-
Turbidity	NTU	0.41	0.24	0.23	0.50	0.55	2.02	1.99	2.77	-	0.75	-0.29	0.72	0.37	Narrative [1]	Narrative [1]	Narrative [1]	-
Depth	m	27.1	26.8	23.3	28.2	28.6	26.9	27.7	29.1	28.3	27.2	25.3	27.2	26.7	-	-	-	-
General Parameters																		
Dissolved Oxygen-lab	mg/L	9.5	10.7	11	9.3	9.8	10.3	10	9.8	10.2	10.4	8.9	9.5	11.4	-	-	>8	-
pH-lab	pH units	7.53	7.48	7.68	7.44	7.4	7.39	7.38	7.69	7.67	7.45	7.5	7.55	7.5	7.0 - 8.7	-	7.0 - 8.7	-
TSS	mg/L	<2	7.2	6	4.3	2.4	15	<2	6.5	<2	<2	3.4	5	3	Narrative [1]	Narrative [1]	Narrative [1]	-
Total Hardness	mg/L	5910	6060	4620	6320	5760	6320	5840	5330	5650	5640	5620	5680	5190	-	-	-	-
N-NH3	mg/L	<0.05	<0.05	<0.05	<0.05	0.066	0.08	0.117	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-
N-NO3	mg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	3.7	-	45	339
Total Metals																		
T-Al	mg/L	0.0162	0.0132	0.0092	0.0197	0.0276	0.026	0.027	0.0235	0.018	0.115	0.043	<0.01	0.08	-	-	-	-
T-Sb	mg/L	<0.0005	<0.0005	0.00027	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0004	<0.0004	-	0.27 [Sb(III)]	-	-
T-As	mg/L	0.00158	0.00168	0.00245	0.00154	0.0013	0.00154	0.00204	0.00146	0.00154	0.00129	0.00153	0.0015	0.00191	-	0.0125	0.0125	-
T-Ba	mg/L	0.0102	0.0105	0.0103	0.0101	0.0102	0.0109	0.0108	0.0113	0.0107	0.0125	0.0118	0.0112	0.0109	-	-	-	-
T-Be	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	0.1	-	-	-
T-Bi	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	-	-	-	-
T-B	mg/L	**4.78**	**4.34**	**3.44**	**4.25**	**3.96**	**4.52**	**4.08**	**3.86**	**4.12**	**3.78**	**3.85**	**3.72**	**4.44**	1.2	-	-	-
T-Cd	mg/L	0.0000976	0.0000862	0.000075	0.0000781	0.0000837	0.0000915	0.0000851	0.0000734	0.0000676	0.0000903	0.000076	0.000063	0.000082	0.00012	-	0.00012	-
T-Ca	mg/L	388	374	312	427	355	408	367	330	407	365	352	347	317	-	-	-	-
T-Cr	mg/L	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	0.0015 [Cr(VI)]	-	0.0015 [Cr(VI)]	-
T-Co	mg/L	<0.00005	<0.00005	<0.0001	<0.00005	<0.00005	<0.00005	0.0000567	<0.00005	<0.00005	0.0000996	0.00006	<0.0002	<0.0002	-	-	-	-
T-Cu	mg/L	<0.001	<0.001	<0.0004	<0.001	<0.001	<0.001	<0.001	<0.001	0.00153	<0.001	<0.0004	0.00098	<0.0008	0.002	0.003	-	-
T-Fe	mg/L	0.0218	<0.02	0.017	0.0227	0.0316	0.0219	0.0279	<0.02	0.0319	0.32	0.05	0.021	0.036	-	-	-	-
T-Pb	mg/L	<0.0005	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	0.000583	<0.0005	<0.0005	<0.0002	<0.0004	<0.0004	0.002	0.14	-	-
T-Li	mg/L	0.21	0.182	0.13	0.185	0.161	0.203	0.166	0.161	0.168	0.159	0.151	0.173	0.164	-	-	-	-
T-Mg	mg/L	1200	1240	932	1280	1180	1290	1200	1100	1120	1150	1150	1170	1070	-	-	-	-
T-Mn	mg/L	0.00241	0.00153	0.0028	0.00263	0.00212	0.00198	0.00327	0.00409	0.00462	0.00718	0.00968	0.00489	0.0056	-	-	-	-
T-Hg	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00002 [2]	-	0.000016	-
T-Mo	mg/L	0.0105	0.0114	0.00926	0.0111	0.0106	0.0115	0.0107	0.00929	0.0104	0.0105	0.00976	0.0105	0.00933	-	-	-	-
T-Ni	mg/L	<0.003	0.000543	0.00053	0.000702	0.00113	0.000672	0.000303	0.000486	0.000303	0.000722	<0.0004	<0.0008	<0.0008	0.0083	-	-	-
T-P	mg/L	0.114	0.167	0.055	0.127	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.081	<0.1	<0.1	-	-	-	-
T-K	mg/L	359	395	324	389	359	371	353	317	344	359	294	341	326	-	-	-	-
T-Se	mg/L	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	0.00256	<0.001	<0.001	0.00566	<0.0005	<0.001	<0.001	-	-	-	-
T-Si	mg/L	4.45	2.09	1.6	2.13	2.59	2.21	1.93	<0.5	13.7	2.44	1.5	2.2	2.5	-	-	-	-
T-Ag	mg/L	<0.0001	<0.0001	<0.00005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	<0.0001	<0.0001	0.0015	0.003	-	0.0075
T-Na	mg/L	9630	9630	10500	9830	9620	8890	9510	8710	9760	8900	9070	8730	8910	-	-	-	-
T-Sr	mg/L	7.8	7.08	7.22	7.21	6.72	7	7.12	6.36	7.13	7.16	5.92	6.71	6.58	-	-	-	-
T-S	mg/L	917	948	796	892	783	884	900	804	883	828	0.8	825	813	-	-	-	-
T-Te	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.000671	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	-	-	-	-
T-Tl	mg/L	<0.00004	<0.00004	<0.00002	<0.00004	<0.00004	<0.00004	0.000059	<0.00004	<0.00004	<0.00004	0.00002	<0.00004	<0.00004	-	-	-	-
T-Th	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00002	<0.0002	<0.0002	-	-	-	-
T-Sn	mg/L	<0.0005	<0.0005	<0.0002	<0.0005	0.000589	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00004	<0.0004	<0.0004	-	-	-	-
T-Ti	mg/L	<0.002	<0.002	<0.005	<0.002	<0.002	0.00202	<0.002	<0.002	0.00217	0.00251	<0.005	<0.01	<0.01	-	-	-	-
T-W	mg/L	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.002	<0.002	-	-	-	-
T-U	mg/L	0.0029	0.00301	0.00255	0.00304	0.0029	0.00293	0.00289	0.0026	0.00268	0.00277	0.00279	0.00269	0.00244	-	-	-	-
T-V	mg/L	<0.002	<0.002	0.0028	0.00367	0.00259	<0.002	<0.002	0.00212	0.00355	<0.002	0.0015	<0.002	<0.002	0.05	-	-	-
T-Zn	mg/L	<0.01	<0.01	<0.004	<0.01	**0.0323**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.004	<0.008	**0.0165**	0.01	0.055	-	-
T-Zr	mg/L	<0.0002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0002	<0.0002	-	-	-	-
Speciated Metals																		
Methyl Mercury	ng/L	<0.050	-	-	<0.024	<0.024	<0.023	<0.023	<0.025	<0.050	<0.024	<0.050	0.037	-	-	-	-	-
Polycyclic Aromatic Hydrocarbons (PAH)																		
Acenaphthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	0.006	-	-	-
Acenaphthylene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	-	-	-	-
Acridine	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	-	-	-	-
Benz(a)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	-	-	-	-
Benzo(a)pyrene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	**0.000043**	<0.00001	<0.00001	-	<0.00001	<0.00001	0.00001	-	-	-
Benzo(b+j)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000073	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Benzo(g-h-i)perylene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Benzo(k)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
2-Chloronaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	-	-	-	-
Chrysene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	0.0001	-	-	-
Dibenz(a-h)anthracene	mg/L	<0.00001	<0.000015	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000143	<0.00001	<0.00001	-	<0.00001	<0.00001	-	-	-	-
Fluoranthene	mg/L	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	-	<0.00003	<0.00003	-	-	-	-
Fluorene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	0.012	-	-	-
Indeno(1-2-3-cd)pyrene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
1-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	0.001	-	-	-
2-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	0.001	-	-	-
Naphthalene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	0.001	-	0.0014	-
Phenanthrene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	-	-	-	-
Pyrene	mg/L	<0.00002	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	-	<0.00002	<0.00002	-	-	-	-
Quinoline	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Total PAHs	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	-	-	-	-
Volatile Organic Compounds (VOC)																		
Benzene	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.11	-	0.11	-
Ethylbenzene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.25	-	0.025	-
Methyl-tert-butyl-ether	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	0.44	5	-
Styrene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Toluene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	-	0.215	-
Total Xylenes	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	-	-	-
Total BTEX	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Dioxins and Furans																		
2-3-7-8-TCDD	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDD	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDD	pg/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
2-3-7-8-TCDF	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
1-2-3-4-7-8-9-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDF	pg/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
Total Furan TEQ	pg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Total Dioxin Furan TEQ	pg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Microbiological Parameters																		
E.coli	MPN/100 mL	<1	<1	3	<1	1	<1	1	<1	<1	<1.8	10	<1	1	-	-	-	-

Notes:
Results in **bold**: Exceedances of Long Term BC WQG
Results underlined: Exceedances of Short Term BC WQG
Results highlighted in grey: Exceedances of Long Term CCME guidelines
Results in red: Exceedances of Short Term CCME guidelines
[1] Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. These guidelines were not screened as there were no discharges to evaluate.
[2] The BC WQG for mercury is derived using the maximum methyl mercury concentration in the dataset (0.082 pg/L) and the total mercury detection limit of 0.00001 mg/L.

Table A-13: Water Quality Results for Marine Water Monitoring Station WQ4 - 2m Below Surface May 2020 to May 2021

Sample Date		2020-05-20	2020-06-22	2020-07-21	2020-08-24	2020-09-28	2020-10-27	2020-10-20	2020-11-03	2020-11-10	2020-11-18	2020-12-14	2021-01-27	2021-02-25	2021-03-25	2021-04-22	2021-04-22	2021-05-18	Marine Water Aquatic Life Water Quality Guidelines			
Laboratory ID		0051710-08	0062209-08	0071996-08	0082292-08	0093017-08	20J2778-08	20J1961-08	20K0360-08	20K1261-08	20K2100-08	20L1589-08	21A2590-08	21B2778-08	21C3505-08	21D2478-20	21D2478-08	21E1990-14	BC	BC	CCME	CCME
Station Name		WQ 4-2	WQ4-2	WQ 4-2	WQ 4-2	WQ4-2	WQ 4-2	WQ 4-2	WQ4-2	WQ 4-2	WQ 4-2	WQ4-2	WQ4-2	WQ4-2	WQ4-2	Q4-2 Duplic	WQ4-2	Q4-2 Duplic	Long Term	Short Term	Long Term	Short Term
Field Parameters																						
Temperature	°C	9.4	10.5	1.2	15.2	12.7	8.0	9.3	9.1	6.2	-	5.7	7.7	-	8.2	-	9.9	-	Narrative [1]	-	Narrative [1]	-
Dissolved Oxygen (%)-field	%	-	-	-	-	-	97.7	-	91.9	85.6	-	92.0	-	-	126.5	-	133.8	-	-	-	-	-
Dissolved Oxygen (mg/L)-field	mg/L	10.27	10.72	9.70	8.13	10.08	10.31	10.02	9.22	9.8	-	10.54	8.33	-	13.04	-	14.03	-	-	-	>8	-
SPC	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	33095	-	20033	-	-	-	-	-
Conductivity	µS/cm	1645	3892	4367	24894	12515	19835	5926	24150	14890	-	14562	27754	-	33095	-	14261	-	-	-	-	-
Salinity	ppt	1.2	2.9	2.3	19.1	-	18.1	4.7	21.7	13.9	-	13.8	26.7	-	-	-	11.9	-	Narrative [1]	-	Narrative [1]	-
TDS-field	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13021	-	-	-	-	-
pH-field	pH units	**8.82**	8.02	8.42	7.72	7.82	7.86	8.04	7.67	7.69	-	7.14	7.74	-	8.49	-	8.57	-	7.0 - 8.7	7.0 - 8.7	7.0 - 8.7	-
ORP	mV	153.4	105.6	-	-	-	107.8	-	151.9	162.8	-	143.8	-	-	194.3	-	209.2	-	-	-	-	-
Turbidity	NTU	1.79	18.88	13.12	0.63	7.35	0.82	3.91	1.01	2.3	-	0.37	0.18	-	0.60	-	1.91	-	Narrative [1]	Narrative [1]	Narrative [1]	-
Depth	m	1.9	2.4	1.2	1.9	1.0	11.6	1.0	-	11.2	-	-	2.0	-	1.9	-	2.0	-	-	-	-	-
General Parameters																						
Dissolved Oxygen-lab	mg/L	11.1	9.8	10.2	9.4	9.4	10.3	10	9.9	10	9.7	10.5	9.8	10.7	11.5	-	11.8	-	-	-	>8	-
pH-lab	pH units	7.56	**6.92**	7.15	7.9	7.64	7.52	7.09	7.39	7.47	7.18	7.54	7.60	7.71	8.21	-	8.2	-	7.0 - 8.7	-	7.0 - 8.7	-
TSS	mg/L	4.4	28.6	11	7	8.4	<2	3.8	3	2.8	6	<2	2.6	<2	<2	8	8	6.2	Narrative [1]	Narrative [1]	Narrative [1]	-
Total Hardness	mg/L	387	280	456	3080	1690	2090	904	1180	2560	976	3250	4780	4990	3240	2610	2490	166	-	-	-	-
N-NH3	mg/L	<0.05	0.064	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	-	-	-	-	-
N-NO3	mg/L	<1	<0.01	<0.01	<1	<1	<1	**<10**	<1	1.14	<1	<1	<1	<1	<1	-	<1	-	3.7	-	45	339
Total Metals																						
T-Al	mg/L	0.261	1.21	0.647	0.189	0.322	0.0631	0.205	0.241	0.14	0.302	0.0488	0.0215	0.0173	0.0291	0.158	0.157	0.556	-	-	-	-
T-Sb	mg/L	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0005	0.000194	0.000168	<0.0002	-	0.27 [Sb(III)]	-	-
T-As	mg/L	<0.001	<0.001	<0.001	0.00131	<0.001	<0.001	<0.001	<0.001	0.00123	<0.001	0.00152	0.00141	0.00146	0.000882	0.000652	0.000659	<0.0005	-	0.0125	0.0125	-
T-Ba	mg/L	<0.01	0.0265	0.0191	0.0285	0.0173	0.012	0.0152	0.0105	0.0156	0.011	0.0141	0.0104	0.0107	0.00945	0.0101	0.0106	0.0134	-	-	-	-
T-Be	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.00001	<0.00001	<0.0001	0.1	-	-	-
T-Bi	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.00001	0.00003	<0.0001	-	-	-	-
T-B	mg/L	0.363	0.265	0.456	**2.3**	**1.49**	**1.61**	0.717	0.966	**2.02**	0.695	**2.22**	**3.48**	**3.64**	**2.74**	**2.05**	**2.1**	0.128	1.2	-	-	-
T-Cd	mg/L	<0.00002	<0.00002	<0.00002	0.000052	0.000031	0.00005	0.000043	0.000029	0.000033	<0.00002	0.00006	0.000064	0.000055	0.0000484	0.0000282	0.0000275	0.000019	0.00012	-	0.00012	-
T-Ca	mg/L	30	20.9	25.4	204	134	151	61.4	84.8	194	71.2	232	323	338	214	189	195	12.8	-	-	-	-
T-Cr	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00033	0.00038	<0.0005	0.0015 [Cr(VI)]	-	0.0015 [Cr(VI)]	-
T-Co	mg/L	<0.0002	0.00061	0.00026	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00021	<0.0002	<0.0002	<0.0002	0.00007	0.000122	0.000124	0.00025	-	-	-	-
T-Cu	mg/L	**0.00203**	**0.00395**	0.00174	**0.0022**	0.00095	0.00083	0.00105	<0.0008	0.00147	<0.0008	**0.00503**	<0.0008	<0.0008	<0.001	0.00115	0.00191	0.00183	0.002	0.003	-	-
T-Fe	mg/L	0.244	1.08	0.489	0.141	0.288	0.126	0.23	0.168	0.169	0.237	0.162	0.06	0.044	0.106	0.151	0.159	0.473	-	-	-	-
T-Pb	mg/L	0.00093	0.00099	<0.0004	<0.0004	<0.0004	0.0009	0.00046	0.0006	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0005	<0.00005	0.000082	<0.0002	0.002	0.14	-	-
T-Li	mg/L	0.0123	0.00908	0.0145	0.0988	0.0541	0.0592	0.0255	0.039	0.0848	0.0329	0.0875	0.127	0.165	0.118	0.0926	0.0897	0.00515	-	-	-	-
T-Mg	mg/L	75.9	55.4	95.4	624	329	416	182	236	502	194	650	965	1010	656	532	485	32.4	-	-	-	-
T-Mn	mg/L	0.00923	0.0345	0.0165	0.0125	0.0149	0.0137	0.0176	0.0104	0.0144	0.0167	0.014	0.00606	0.0046	0.00804	0.00767	0.00763	0.0146	-	-	-	-
T-Hg	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00002 [2]	-	0.000016	-
T-Mo	mg/L	0.00095	0.00079	0.00113	0.00558	0.00358	0.00439	0.00199	0.00249	0.00519	0.00194	0.0187	0.00889	0.00945	0.00629	0.00529	0.00542	0.00064	-	-	-	-
T-Ni	mg/L	0.00127	<0.0008	<0.0008	<0.0008	0.00137	0.00188	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.003	0.000434	0.000367	0.00057	0.0083	-	-	-
T-P	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.103	<0.1	0.046	0.028	<0.05	-	-	-	-
T-K	mg/L	26	17.2	30.1	186	117	123	51.3	79.3	157	65.2	208	302	320	208	158	164	10.8	-	-	-	-
T-Se	mg/L	<0.001	<0.001	<0.001	0.00591	<0.001	0.00153	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00064	<0.0001	<0.0005	-	-	-	-
T-Si	mg/L	<2	2.1	2.9	<2	<2	<2	2.4	3	2.4	3	2.5	3.2	2.5	4.09	2.34	2.51	2.6	-	-	-	-
T-Ag	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00005	0.0015	0.003	-	0.0075
T-Na	mg/L	633	459	793	5140	2790	3590	1510	2000	4260	1620	5190	8090	8180	5290	4200	3790	290	-	-	-	-
T-Sr	mg/L	0.464	0.353	0.585	3.67	2.39	2.9	1.16	1.57	3.54	1.33	4.45	6.19	6.54	4.24	2.99	2.83	0.216	-	-	-	-
T-S	mg/L	60.5	39.9	77.1	478	284	357	151	201	433	171	580	751	849	518	395	426	27.7	-	-	-	-
T-Te	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	0.000076	0.000215	<0.0005	-	-	-	-
T-Tl	mg/L	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	0.000149	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	0.0000069	0.000008	<0.00002	-	-	-	-
T-Th	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.00001	<0.00001	<0.0001	-	-	-	-
T-Sn	mg/L	<0.0004	0.00477	<0.0004	<0.0004	<0.0004	0.00056	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0005	0.000068	0.000111	<0.0002	-	-	-	-
T-Ti	mg/L	0.0152	0.0838	0.0416	0.0101	0.02	<0.01	0.0167	<0.01	0.016	<0.01	<0.01	<0.01	<0.01	<0.002	0.00895	0.00912	0.0284	-	-	-	-
T-W	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0005	<0.0002	<0.0002	<0.001	-	-	-	-
T-U	mg/L	0.000259	0.000206	0.000258	0.00183	0.00105	0.00124	0.000641	0.000764	0.00138	0.000589	0.00161	0.00235	0.00245	0.00158	0.0013	0.00131	0.000222	-	-	-	-
T-V	mg/L	<0.002	0.003	0.0035	<0.002	<0.002	0.0032	0.0073	0.0024	<0.002	<0.002	0.003	<0.002	0.0023	<0.002	0.00117	0.00133	0.003	0.05	-	-	-
T-Zn	mg/L	<0.008	<0.008	0.0091	<0.008	**0.0181**	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.01	0.0014	0.0017	0.0048	0.01	0.055	-	-
T-Zr	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	0.00028	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.000038	0.000035	0.00014	-	-	-	-
Speciated Metals																						
Methyl Mercury	ng/L	-	-	-	-	-	-	-	-	-	-	-	-	-	0.082	-	-	-	-	-	-	-
Polycyclic Aromatic Hydrocarbons (PAH)																						
Acenaphthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-	0.006	-	-	-
Acenaphthylene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	-	-	-	-	-
Acridine	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-	-	-	-	-
Anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	-	-	-	-	-
Benz(a)anthracene	mg/L	<0.00001	0.000036	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000019	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	-	-	-	-	-
Benzo(a)pyrene	mg/L	<0.00001	**0.000032**	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	**0.000016**	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	-	0.00001	-	-	-
Benzo(b+j)fluoranthene	mg/L	<0.00005	0.000064	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-	-	-	-	-
Benzo(g-h-i)perylene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-	-	-	-	-
Benzo(k)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-	-	-	-	-
2-Chloronaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	-	-	-	-	-
Chrysene	mg/L	<0.00005	0.000066	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-	0.0001	-	-	-
Dibenz(a-h)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000017	0.000018	<0.00001	<0.00001	<0.00001	-	<0.00001	-	-	-	-	-
Fluoranthene	mg/L	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	0.000031	<0.00003	<0.00003	<0.00003	<0.00003	-	<0.00003	-	-	-	-	-
Fluorene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-	0.012	-	-	-
Indeno(1-2-3-cd)pyrene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-	-	-	-	-
1-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	-	0.001	-	-	-
2-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	-	0.001	-	-	-
Naphthalene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	-	0.001	-	0.0014	-
Phenanthrene	mg/L	<0.0001	<0.0001	<0.0001	0.000384	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	-	-	-	-	-
Pyrene	mg/L	<0.00002	<0.00002	<0.00002	0.000437	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	0.000034	<0.00002	<0.00002	<0.00002	<0.00002	-	<0.00002	-	-	-	-	-
Quinoline	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-	-	-	-	-
Total PAHs	mg/L	<0.0002	<0.0002	<0.0002	0.000822	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	-	-	-	-	-
Volatile Organic Compounds (VOC)																						
Benzene	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	-	0.11	-	0.11	-
Ethylbenzene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	-	0.25	-	0.025	-
Methyl-tert-butyl-ether	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	-	-	0.44	5	-
Styrene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	-	-	-	-	-
Toluene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	-	-	-	0.215	-
Total Xylenes	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	<0.002	-	-	-	-	-
Total BTEX	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	-	-	-	-	-
Dioxins and Furans																						
2-3-7-8-TCDD	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-
1-2-3-7-8-PeCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	-	-	-	-	-
1-2-3-4-6-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	-	-	-	-	-
1-2-3-6-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	-	-	-	-	-
1-2-3-7-8-9-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	-	-	-	-	-
1-2-3-4-6-7-8-HpCDD	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	<3	-	-	-	-	-
OCDD	pg/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	<4	-	-	-	-	-
2-3-7-8-TCDF	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-
1-2-3-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	-	-	-	-	-
2-3-4-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	-	-	-	-	-
1-2-3-4-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	-	-	-	-	-
1-2-3-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	-	-	-	-	-
1-2-3-7-8-9-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	-	-	-	-	-
2-3-4-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	-	-	-	-	-
1-2-3-4-6-7-8-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	<3	-	-	-	-	-
1-2-3-4-7-8-9-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	<3	-	-	-	-	-
OCDF	pg/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	<4	-	-	-	-	-
Total Furan TEQ	pg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	-	-	-	-	-
Total Dioxin Furan TEQ	pg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	-	-	-	-	-
Microbiological Parameters																						
E.coli	MPN/100 mL	2	8	10	1	16	1	<1.8	49	5	11	<1	1	<1.8	<1	-	<1	-	-	-	-	-

Notes:
Results in **bold**: Exceedances of Long Term BC WQG
Results underlined: Exceedances of Short Term BC WQG
Results highlighted in grey: Exceedances of Long Term CCME guidelines
Results in red: Exceedances of Short Term CCME guidelines
[1] Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. These guidelines were not screened as there were no discharges to evaluate.
[2] The BC WQG for mercury is derived using the maximum methyl mercury concentration in the dataset (0.082 pg/L) and the total mercury detection limit of 0.00001 mg/L.

Table A-14: Water Quality Results for Marine Water Monitoring Station WQ4 - 2m Below Surface May to December 2021

Sample Date		2021-05-18	2021-05-26	2021-06-01	2021-06-01	2021-06-08	2021-06-15	2021-07-20	2021-08-25	2021-08-25	2021-09-28	2021-10-26	2021-10-26	2021-11-23	2021-11-23	2021-12-14	2021-12-14	Marine Water Aquatic Life Water Quality Guidelines			
Laboratory ID		21E1990-08	21E2917-08	21F0167-14	21F0167-08	21F1056-08	21F2014-08	21G2414-08	21H3040-18	21H3040-08	21I3814-08	21J3514-14	21J3514-08	21K3046-18	21K3046-08	21L2125-18	21L2125-08	BC	BC	CCME	CCME
Station Name		WQ4-2	WQ4-2	WQ4-2 Duplica	WQ4-2	WQ4-2	WQ4-2	WQ4-2	WQ4-2 Duplica	WQ4-2	WQ4-2	WQ4-2 Duplica	WQ4-2	WQ4-2 Duplica	WQ4-2	WQ4-2-Duplica	WQ4-2	Long Term	Short Term	Long Term	Short Term
Field Parameters																					
Temperature	°C	8.6	10.3	-	11.5	10.1	9.2	12.5	-	14.7	12.8	-	8.0	-	7.8	-	7.9	Narrative [1]	-	Narrative [1]	-
Dissolved Oxygen (%)-field	%	104.0	106.6	-	104.5	101.2	101.1	78.2	-	106.1	96.9	-	97.7	-	86.8	-	84.7	-	-	-	-
Dissolved Oxygen (mg/L)-field	mg/L	12.07	11.73	-	10.50	11.31	11.33	7.87	-	-	9.40	-	11.34	-	9.06	-	8.63	-	-	>8	-
SPC	µS/cm	1977	5954	-	21761	2194	7488	16004	-	10624	17763	-	5139	-	32336	-	37343	-	-	-	-
Conductivity	µS/cm	1356	4290	-	16137	1571	5223	12175	-	-	-	-	3473	-	21718	-	31835	-	-	-	-
Salinity	ppt	1.0	3.2	-	13.1	1.1	4.1	9.4	-	-	14.0	-	2.8	-	20.0	-	23.5	Narrative [1]	-	Narrative [1]	-
TDS-field	mg/L	1285	3870	-	14145	1426	4867	-	-	-	-	-	-	-	21018	-	24273	-	-	-	-
pH-field	pH units	7.35	7.62	-	8.05	8.35	7.71	7.74	-	8.25	-	-	7.50	-	7.62	-	7.66	7.0 - 8.7	7.0 - 8.7	7.0 - 8.7	-
ORP	mV	161.3	138.5	-	182.9	90.0	159.7	140.0	-	-	478.0	-	13.4	-	131.5	-	200.1	-	-	-	-
Turbidity	NTU	3.94	3.35	-	1.45	12.75	16.12	2.67	-	-	4.38	-	3.94	-	1.09	-	0.35	Narrative [1]	Narrative [1]	Narrative [1]	-
Depth	m	2.9	2.5	-	3.0	1.5	2.4	2.3	-	2.2	2.2	-	2.3	-	2.2	-	2.3	-	-	-	-
General Parameters																					
Dissolved Oxygen-lab	mg/L	10.8	10.6	-	10.7	10.6	10.4	9.9	-	10.4	9.1	-	10.2	-	10.5	-	11.3	-	-	>8	-
pH-lab	pH units	**6.98**	7.22	-	7.41	7.09	7.13	7.47	-	7.63	7.83	-	7.08	-	7.42	-	7.5	7.0 - 8.7	-	7.0 - 8.7	-
TSS	mg/L	8	<3.3	3	3.4	8.6	19.5	6.8	4.8	5.4	4.6	9	8.2	3.6	3.6	<2	3	Narrative [1]	Narrative [1]	Narrative [1]	-
Total Hardness	mg/L	159	540	1220	1250	341	506	561	1050	1030	2730	485	478	2170	2120	3150	2500	-	-	-	-
N-NH3	mg/L	<0.05	<0.05	-	0.297	0.086	<0.05	<0.05	-	<0.05	0.052	-	<0.05	-	<0.05	-	<0.05	-	-	-	-
N-NO3	mg/L	<1	<1	-	<1	<1	<1	<1	-	<1	<1	-	<1	-	<1	-	<1	3.7	-	45	339
Total Metals																					
T-Al	mg/L	0.577	0.282	0.222	0.243	0.851	1.21	0.288	0.232	0.289	0.171	0.385	0.391	0.051	0.0484	0.0741	<0.01	-	-	-	-
T-Sb	mg/L	<0.0002	0.000062	0.00008	0.000084	0.000053	0.000077	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0004	<0.0004	<0.0005	0.00333	-	0.27 [Sb(III)]	-	-
T-As	mg/L	<0.0005	0.000242	0.000339	0.00038	0.000281	0.000322	<0.0005	<0.0005	<0.0005	0.000725	<0.0005	<0.0005	<0.001	<0.001	0.00113	<0.001	-	0.0125	0.0125	-
T-Ba	mg/L	0.0116	0.00917	0.0104	0.0102	0.0187	0.0244	0.0127	0.0174	0.0182	0.0173	0.01	0.0093	0.011	0.0118	0.0158	0.0117	-	-	-	-
T-Be	mg/L	<0.0001	<0.00001	<0.00001	<0.00001	0.000014	0.000016	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0001	<0.0002	0.1	-	-	-
T-Bi	mg/L	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0001	<0.0002	-	-	-	-
T-B	mg/L	0.147	0.443	1.03	1.06	0.265	0.352	0.481	0.756	0.821	**1.95**	0.415	0.408	**1.6**	**1.64**	**2.78**	**2.17**	1.2	-	-	-
T-Cd	mg/L	0.000018	0.000012	0.0000148	0.0000149	0.000013	0.0000136	<0.00002	0.0000216	<0.00002	0.0000474	0.000016	0.000021	0.000041	0.000028	0.0000572	0.000034	0.00012	-	0.00012	-
T-Ca	mg/L	12.1	41	85	85.6	24.6	35.1	37.3	74.5	74.5	185	34.1	34.3	137	135	185	153	-	-	-	-
T-Cr	mg/L	<0.0005	0.00052	0.00033	0.00033	0.00057	0.0008	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.0015 [Cr(VI)]	-	0.0015 [Cr(VI)]	-
T-Co	mg/L	0.00023	0.000141	0.000123	0.000129	0.00034	0.000505	0.000177	0.000167	0.000166	0.000131	0.00019	0.00016	<0.0002	<0.0002	0.000177	<0.0002	-	-	-	-
T-Cu	mg/L	**0.00207**	**0.00367**	0.00107	0.00103	0.0017	**0.00284**	<0.001	<0.001	0.00103	0.00163	**0.0036**	0.00161	0.0017	**0.00304**	<0.001	<0.0008	0.002	0.003	-	-
T-Fe	mg/L	0.454	0.206	0.167	0.175	0.63	0.959	0.28	0.204	0.256	0.128	0.347	0.331	0.132	0.124	0.192	0.14	-	-	-	-
T-Pb	mg/L	0.00023	0.000776	<0.00005	<0.00005	0.000135	0.000213	0.000744	<0.0005	<0.0005	<0.0005	0.00022	<0.0002	<0.0004	<0.0004	<0.0005	<0.0004	0.002	0.14	-	-
T-Li	mg/L	0.00514	0.0184	0.0447	0.0458	0.0124	0.0149	0.0166	0.0302	0.0307	0.0807	0.0151	0.0151	0.0668	0.0684	0.0957	0.0769	-	-	-	-
T-Mg	mg/L	31.4	106	245	251	68	101	114	211	205	552	97.1	95.3	444	434	654	515	-	-	-	-
T-Mn	mg/L	0.0147	0.00861	0.00763	0.00783	0.0213	0.0297	0.0124	0.0144	0.0154	0.00918	0.0153	0.0156	0.0126	0.0115	0.0176	0.0129	-	-	-	-
T-Hg	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.000005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00002 [2]	-	0.000016	-
T-Mo	mg/L	0.00055	0.0014	0.00255	0.00261	0.00162	0.00119	0.00113	0.00228	0.00205	0.0055	0.00106	0.00108	0.00422	0.00414	0.00611	0.00445	-	-	-	-
T-Ni	mg/L	<0.0004	0.000378	0.000299	0.000335	0.000525	0.000685	0.000703	<0.0002	0.000508	0.000759	<0.0004	<0.0004	<0.0008	<0.0008	0.000573	<0.0008	0.0083	-	-	-
T-P	mg/L	<0.05	0.018	0.016	0.02	0.026	0.021	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.1	<0.1	0.225	<0.1	-	-	-	-
T-K	mg/L	10.4	31.6	70.7	72.1	20.5	30.6	37.5	71.2	69.2	175	30.5	29.6	136	130	187	157	-	-	-	-
T-Se	mg/L	<0.0005	0.00027	0.00075	0.00074	<0.0001	<0.0001	<0.001	<0.001	<0.001	0.00628	<0.0005	<0.0005	0.0034	<0.001	<0.001	<0.001	-	-	-	-
T-Si	mg/L	2.2	2.92	2.6	2.86	4.08	4.11	0.8	12.6	6.23	2.25	2.5	2.6	2.8	3	5.28	3.8	-	-	-	-
T-Ag	mg/L	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	<0.0001	<0.0001	<0.0001	<0.0001	0.0015	0.003	-	0.0075
T-Na	mg/L	277	747	1700	1740	481	803	916	1850	1810	4330	814	811	3570	3530	5410	4280	-	-	-	-
T-Sr	mg/L	0.213	0.682	1.55	1.6	0.389	0.623	0.677	1.32	1.29	3.23	0.582	0.569	2.55	2.5	4.11	3.19	-	-	-	-
T-S	mg/L	27	79.4	183	187	49.6	77.3	87.9	167	161	412	<0.6	<0.6	332	315	522	395	-	-	-	-
T-Te	mg/L	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	0.000055	0.000574	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.001	-	-	-	-
T-Tl	mg/L	<0.00002	0.0000042	0.0000053	0.000005	0.0000081	0.0000127	<0.00004	<0.00004	<0.00004	<0.00004	<0.00002	<0.00002	<0.00004	<0.00004	<0.00004	<0.00004	-	-	-	-
T-Th	mg/L	<0.0001	0.000016	0.000015	0.000018	0.000038	0.000052	<0.0001	<0.0001	<0.0001	<0.0001	<0.00002	<0.00002	<0.0002	<0.0002	<0.0001	<0.0002	-	-	-	-
T-Sn	mg/L	<0.0002	0.000121	<0.00005	<0.00005	0.000059	0.000059	<0.0005	<0.0005	<0.0005	<0.0005	<0.00004	<0.00004	<0.0004	<0.0004	<0.0005	<0.0004	-	-	-	-
T-Ti	mg/L	0.0293	0.014	0.0137	0.015	0.0582	0.0729	0.0254	0.0188	0.0217	0.0088	0.0141	0.0101	<0.01	<0.01	0.00268	<0.01	-	-	-	-
T-W	mg/L	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.002	<0.002	<0.0005	<0.002	-	-	-	-
T-U	mg/L	0.000209	0.000382	0.000647	0.000667	0.000229	0.000311	0.000385	0.000545	0.000531	0.00138	0.000359	0.000346	0.00107	0.00104	0.00147	0.00118	-	-	-	-
T-V	mg/L	0.0024	0.00045	0.00053	0.00055	0.00244	0.00359	<0.002	0.00277	0.0022	<0.002	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	0.05	-	-	-
T-Zn	mg/L	<0.004	0.0041	0.0016	0.0018	0.0033	0.0044	<0.01	<0.01	<0.01	<0.01	<0.004	<0.004	<0.008	<0.008	<0.01	<0.008	0.01	0.055	-	-
T-Zr	mg/L	<0.0001	0.000053	0.000055	0.00006	0.000203	0.000275	<0.0002	<0.0002	<0.0002	<0.0002	0.00011	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
Speciated Metals																					
Methyl Mercury	ng/L	-	<0.024	-	<0.024	0	<0.023	<0.025	<0.050	<0.050	<0.024	-	<0.050	<0.023	<0.023	-	-	-	-	-	-
Polycyclic Aromatic Hydrocarbons (PAH)																					
Acenaphthene	mg/L	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	<0.00005	-	<0.00005	0.006	-	-	-
Acenaphthylene	mg/L	<0.0002	<0.0002	-	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	-	-	-	<0.0002	-	<0.0002	-	-	-	-
Acridine	mg/L	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	<0.00005	-	<0.00005	-	-	-	-
Anthracene	mg/L	<0.00001	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	-	-	-	<0.00001	-	<0.00001	-	-	-	-
Benz(a)anthracene	mg/L	<0.00001	<0.00001	-	<0.00001	<0.00001	0.000015	<0.00001	-	<0.00001	<0.00001	-	-	-	<0.00001	-	<0.00001	-	-	-	-
Benzo(a)pyrene	mg/L	<0.00001	<0.00001	-	<0.00001	<0.00001	**0.000011**	<0.00001	-	<0.00001	<0.00001	-	-	-	<0.00001	-	<0.00001	0.00001	-	-	-
Benzo(b+j)fluoranthene	mg/L	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	<0.00005	-	<0.00005	-	-	-	-
Benzo(g-h-i)perylene	mg/L	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	<0.00005	-	<0.00005	-	-	-	-
Benzo(k)fluoranthene	mg/L	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	<0.00005	-	<0.00005	-	-	-	-
2-Chloronaphthalene	mg/L	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	-	-	-	<0.0001	-	<0.0001	-	-	-	-
Chrysene	mg/L	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	<0.00005	-	<0.00005	0.0001	-	-	-
Dibenz(a-h)anthracene	mg/L	<0.00001	<0.00001	-	<0.00001	<0.00001	0.000017	<0.00001	-	<0.00001	<0.00001	-	-	-	<0.00001	-	<0.00001	-	-	-	-
Fluoranthene	mg/L	<0.00003	<0.00003	-	<0.00003	<0.00003	<0.00003	<0.00003	-	<0.00003	<0.00003	-	-	-	<0.00003	-	<0.00003	-	-	-	-
Fluorene	mg/L	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	<0.00005	-	<0.00005	0.012	-	-	-
Indeno(1-2-3-cd)pyrene	mg/L	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	<0.00005	-	<0.00005	-	-	-	-
1-methylnaphthalene	mg/L	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	-	-	-	<0.0001	-	<0.0001	0.001	-	-	-
2-methylnaphthalene	mg/L	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	-	-	-	<0.0001	-	<0.0001	0.001	-	-	-
Naphthalene	mg/L	<0.0002	<0.0002	-	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	-	-	-	<0.0002	-	<0.0002	0.001	-	0.0014	-
Phenanthrene	mg/L	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	-	-	-	<0.0001	-	<0.0001	-	-	-	-
Pyrene	mg/L	<0.00002	<0.00002	-	<0.00002	<0.00002	<0.00002	<0.00002	-	<0.00002	<0.00002	-	-	-	<0.00002	-	<0.00002	-	-	-	-
Quinoline	mg/L	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	<0.00005	-	<0.00005	-	-	-	-
Total PAHs	mg/L	<0.0002	<0.0002	-	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	-	-	-	<0.0002	-	<0.0002	-	-	-	-
Volatile Organic Compounds (VOC)																					
Benzene	mg/L	<0.0005	<0.0005	-	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.0005	-	<0.0005	-	<0.0005	-	<0.0005	0.11	-	0.11	-
Ethylbenzene	mg/L	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	-	<0.001	-	<0.001	0.25	-	0.025	-
Methyl-tert-butyl-ether	mg/L	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	-	<0.001	-	<0.001	-	0.44	5	-
Styrene	mg/L	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	-	<0.001	-	<0.001	-	-	-	-
Toluene	mg/L	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.0005	<0.0005	-	<0.0005	-	<0.0005	-	<0.0005	-	-	0.215	-
Total Xylenes	mg/L	<0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	-	<0.002	-	<0.002	-	<0.002	-	-	-	-
Total BTEX	mg/L	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	-	<0.001	-	<0.001	-	-	-	-
Dioxins and Furans																					
2-3-7-8-TCDD	pg/L	<1	<1	-	<1	<1	<1	<1	-	<1	<1	-	<1	-	<1	-	<1	-	-	-	-
1-2-3-7-8-PeCDD	pg/L	<2	<2	-	<2	<2	<2	<2	-	<2	<2	-	<2	-	<2	-	<2	-	-	-	-
1-2-3-4-7-8-HxCDD	pg/L	<2	<2	-	<2	<2	<2	<2	-	<2	<2	-	<2	-	<2	-	<2	-	-	-	-
1-2-3-6-7-8-HxCDD	pg/L	<2	<2	-	<2	<2	<2	<2	-	<2	<2	-	<2	-	<2	-	<2	-	-	-	-
1-2-3-7-8-9-HxCDD	pg/L	<2	<2	-	<2	<2	<2	<2	-	<2	<2	-	<2	-	<2	-	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDD	pg/L	<3	<3	-	<3	<3	<3	<3	-	<3	<3	-	<3	-	<3	-	<3	-	-	-	-
OCDD	pg/L	<4	<4	-	<4	<4	<4	<4	-	<4	<4	-	<4	-	<4	-	<4	-	-	-	-
2-3-7-8-TCDF	pg/L	<1	<1	-	<1	<1	<1	<1	-	<1	<1	-	<1	-	<1	-	<1	-	-	-	-
1-2-3-7-8-PeCDF	pg/L	<2	<2	-	<2	<2	<2	<2	-	<2	<2	-	<2	-	<2	-	<2	-	-	-	-
2-3-4-7-8-PeCDF	pg/L	<2	<2	-	<2	<2	<2	<2	-	<2	<2	-	<2	-	<2	-	<2	-	-	-	-
1-2-3-4-7-8-HxCDF	pg/L	<2	<2	-	<2	<2	<2	<2	-	<2	<2	-	<2	-	<2	-	<2	-	-	-	-
1-2-3-6-7-8-HxCDF	pg/L	<2	<2	-	<2	<2	<2	<2	-	<2	<2	-	<2	-	<2	-	<2	-	-	-	-
1-2-3-7-8-9-HxCDF	pg/L	<2	<2	-	<2	<2	<2	<2	-	<2	<2	-	<2	-	<2	-	<2	-	-	-	-
2-3-4-6-7-8-HxCDF	pg/L	<2	<2	-	<2	<2	<2	<2	-	<2	<2	-	<2	-	<2	-	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDF	pg/L	<3	<3	-	<3	<3	<3	<3	-	<3	<3	-	<3	-	<3	-	<3	-	-	-	-
1-2-3-4-7-8-9-HpCDF	pg/L	<3	<3	-	<3	<3	<3	<3	-	<3	<3	-	<3	-	<3	-	<3	-	-	-	-
OCDF	pg/L	<4	<4	-	<4	<4	<4	<4	-	<4	<4	-	<4	-	<4	-	<4	-	-	-	-
Total Furan TEQ	pg/L	0	0	-	0	0	0	0	-	0	0	-	0	-	0	-	0	-	-	-	-
Total Dioxin Furan TEQ	pg/L	0	0	-	0	0	0	0	-	0	0	-	0	-	0	-	0	-	-	-	-
Microbiological Parameters																					
E.coli	MPN/100 mL	12	10	-	<1	8	12	1	-	<1	2	-	517	-	2	-	7	-	-	-	-

Notes:
Results in **bold**: Exceedances of Long Term BC WQG
Results underlined: Exceedances of Short Term BC WQG
Results highlighted in grey: Exceedances of Long Term CCME guidelines
Results in red: Exceedances of Short Term CCME guidelines
[1] Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. These guidelines were not screened as there were no discharges to evaluate.
[2] The BC WQG for mercury is derived using the maximum methyl mercury concentration in the dataset (0.082 pg/L) and the total mercury detection limit of 0.00001 mg/L.

Table A-15: Water Quality Results for Marine Water Monitoring Station WQ4 - 2m Above Seafloor May 2020 to May 2021

Sample Date		2020-05-20	2020-06-22	2020-07-21	2020-08-24	2020-09-28	2020-10-20	2020-10-27	2020-11-03	2020-11-10	2020-11-18	2020-12-14	2021-01-27	2021-02-25	2021-03-25	2021-04-22	2021-04-22	2021-05-18	Marine Water Aquatic Life Water Quality Guidelines			
Laboratory ID		0051710-07	0062209-07	0071996-07	0082292-07	0093017-07	20J1961-07	20J2778-07	20K0360-07	20K1261-07	20K2100-07	20L1589-07	21A2590-07	21B2778-07	21C3505-07	21D2478-19	21D2478-07	21E1990-13	BC	BC	CCME	CCME
Station Name		WQ 4-1	WQ4-1	WQ 4-1	WQ 4-1	WQ4-1	WQ 4-1	WQ 4-1	WQ4-1	WQ 4-1	WQ 4-1	WQ4-1	WQ4-1	WQ4-1	WQ4-1	Q4-1 Duplic	WQ 4-1	Q4-1 Duplic	Long Term	Short Term	Long Term	Short Term
Field Parameters																						
Temperature	°C	8.6	8.9	9.4	9.6	10.8	9.6	9.6	9.6	9.6	-	9.7	8.8	-	8.3	-	8.4	-	Narrative [1]	-	Narrative [1]	-
Dissolved Oxygen (%)-field	%	-	-	-	-	-	-	58.4	56.2	50.8	-	48.6	-	-	76.8	-	69.8	-	-	-	-	-
Dissolved Oxygen (mg/L)-field	mg/L	7.15	6.22	5.57	5.80	7.29	5.00	5.52	5.30	4.8	-	4.56	7.00	-	7.47	-	6.78	-	-	-	>8	-
SPC	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	45576	-	45631	-	-	-	-	-
Conductivity	µS/cm	31821	32175	15675	33025	31766	32283	32079	32442	32903	-	32621	31248	-	45576	-	31149	-	-	-	-	-
Salinity	ppt	29.8	29.9	29.4	30.2	-	29.4	29.2	29.6	30.1	-	29.7	29.1	-	-	-	29.3	-	Narrative [1]	-	Narrative [1]	-
TDS-field	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29660	-	-	-	-	-
pH-field	pH units	7.51	7.83	7.48	7.54	7.43	7.24	7.60	7.51	7.44	-	7.43	7.64	-	7.82	-	7.51	-	7.0 - 8.7	7.0 - 8.7	7.0 - 8.7	-
ORP	mV	214.0	149.3	-	-	-	-	139.8	150.9	183.4	-	108.4	-	-	211.1	-	244.8	-	-	-	-	-
Turbidity	NTU	1.41	0.31	0.52	0.65	0.68	-	0.36	0.37	0.1	-	0.02	0.34	-	0.59	-	0.39	-	Narrative [1]	Narrative [1]	Narrative [1]	-
Depth	m	26.5	30.8	30.0	29.9	30.0	30.0	39.0	-	36.0	-	-	30.0	-	27.3	-	26.9	-	-	-	-	-
General Parameters																						
Dissolved Oxygen-lab	mg/L	9.9	9.2	9.3	9.2	9.4	9.6	9.9	9.8	9.8	9.1	8.6	9.7	10.2	9.4	-	10.8	-	-	-	>8	-
pH-lab	pH units	7.6	7.67	7.65	7.69	7.6	7.56	7.61	7.71	7.51	7.49	7.64	7.55	7.54	7.5	-	7.45	-	7.0 - 8.7	-	7.0 - 8.7	-
TSS	mg/L	2.2	8	<2	4	3.6	<2	2.2	2.6	3	3.2	11.6	2.6	2.4	2.8	3.2	4.2	29	Narrative [1]	Narrative [1]	Narrative [1]	-
Total Hardness	mg/L	6100	5900	5340	5550	4640	5320	5480	5210	5780	5720	6240	5630	6040	6150	6020	6350	5910	-	-	-	-
N-NH3	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	-	-	-	-	-
N-NO3	mg/L	**<5**	<1	<1	<1	<1	**<10**	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	3.7	-	45	339
Total Metals																						
T-Al	mg/L	0.0262	0.0181	0.0255	0.0527	0.128	0.0482	0.027	0.0244	0.0216	0.0321	0.221	0.0201	0.0291	0.041	0.0426	0.04	<0.01	-	-	-	-
T-Sb	mg/L	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	0.00493	0.000549	<0.0005	<0.0005	<0.0004	-	0.27 [Sb(III)]	-	-
T-As	mg/L	0.00177	0.00181	0.00242	0.00159	0.00166	0.00156	0.00178	0.00175	0.00177	0.0023	0.00222	0.00169	0.00193	0.00134	0.00176	0.00168	0.00158	-	0.0125	0.0125	-
T-Ba	mg/L	0.0106	0.0103	0.012	0.0103	0.0126	0.0135	0.0119	0.0115	0.0125	0.0117	0.0158	<0.01	0.0141	0.0117	0.0111	0.0112	0.0129	-	-	-	-
T-Be	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0002	0.1	-	-	-
T-Bi	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0002	-	-	-	-
T-B	mg/L	**4.3**	**4.44**	**4.17**	**3.89**	**4.07**	**3.94**	**3.89**	**4.13**	**4.12**	**3.87**	**4.05**	**4.24**	**4.36**	**4.93**	**4.35**	**4.59**	**5.39**	1.2	-	-	-
T-Cd	mg/L	0.000076	0.00009	0.000076	0.000076	0.000083	0.000086	0.000082	0.000082	0.000064	0.000047	0.000097	0.000077	0.00011	0.000112	0.0000756	0.0000887	0.000067	0.00012	-	0.00012	-
T-Ca	mg/L	457	405	289	352	362	359	384	362	434	406	460	411	414	398	374	402	399	-	-	-	-
T-Cr	mg/L	<0.001	<0.001	<0.001	<0.001	0.0011	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	**0.00214**	0.00102	<0.001	<0.001	<0.001	0.0015 [Cr(VI)]	-	0.0015 [Cr(VI)]	-
T-Co	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00005	0.0000579	<0.00005	<0.0002	-	-	-	-
T-Cu	mg/L	0.00153	0.00117	0.00082	0.0013	<0.0008	**0.00462**	<0.0008	<0.0008	0.00101	<0.0008	0.00151	<0.0008	**0.00254**	<0.001	<0.001	<0.001	<0.0008	0.002	0.003	-	-
T-Fe	mg/L	0.031	0.025	0.023	0.049	0.041	0.037	0.026	<0.02	0.022	<0.02	0.261	<0.02	0.117	0.0302	0.0581	0.0509	0.02	-	-	-	-
T-Pb	mg/L	0.00072	0.00042	0.0006	<0.0004	<0.0004	0.00044	0.00041	0.0008	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0005	<0.0005	<0.0005	<0.0004	0.002	0.14	-	-
T-Li	mg/L	0.172	0.17	0.16	0.151	0.147	0.151	0.146	0.167	0.185	0.183	0.161	0.158	0.203	0.217	0.186	0.194	0.225	-	-	-	-
T-Mg	mg/L	1200	1190	1120	1130	908	1070	1100	1050	1140	1140	1240	1120	1220	1250	1240	1300	1190	-	-	-	-
T-Mn	mg/L	0.00268	0.00263	0.00538	0.00453	0.00908	0.00986	0.00861	0.00887	0.0109	0.00624	0.0119	0.00272	0.00355	0.00304	0.0027	0.00269	0.00343	-	-	-	-
T-Hg	mg/L	<0.00001	<0.00001	<0.00001	**0.000029**	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00002 [2]	-	0.000016	-
T-Mo	mg/L	0.0106	0.0108	0.0101	0.00981	0.00956	0.01	0.0105	0.00973	0.0108	0.00937	0.0121	0.0106	0.0129	0.0108	0.0111	0.012	0.0112	-	-	-	-
T-Ni	mg/L	0.00128	<0.0008	<0.0008	<0.0008	0.00136	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	0.00159	<0.003	0.00143	0.000587	<0.0008	0.0083	-	-	-
T-P	mg/L	<0.1	<0.1	<0.1	0.118	<0.1	0.101	0.127	0.149	0.11	0.13	0.121	0.111	0.107	0.209	0.145	0.175	<0.1	-	-	-	-
T-K	mg/L	409	352	309	339	292	307	317	325	355	343	395	349	387	369	386	411	375	-	-	-	-
T-Se	mg/L	<0.001	<0.001	0.00112	0.00609	<0.001	<0.001	<0.001	0.00119	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
T-Si	mg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	2.2	4.84	2.11	2.5	<2	-	-	-	-
T-Ag	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0015	0.003	-	0.0075
T-Na	mg/L	8700	9340	8990	9760	7880	7880	8590	8800	8380	9610	9870	9360	10000	10000	9640	10100	10500	-	-	-	-
T-Sr	mg/L	7.6	7.4	6.99	6.88	6.23	6.79	7.33	6.97	8.04	7.62	8.55	7.26	8.13	8.01	6.9	7.46	7.43	-	-	-	-
T-S	mg/L	950	878	856	877	762	905	918	906	965	963	1090	872	1020	951	930	1000	913	-	-	-	-
T-Te	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.001	-	-	-	-
T-Tl	mg/L	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	-	-	-	-
T-Th	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0002	-	-	-	-
T-Sn	mg/L	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	0.00121	<0.0005	0.000707	<0.0005	<0.0004	-	-	-	-
T-Ti	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0174	<0.01	<0.01	<0.002	0.00318	0.00208	<0.01	-	-	-	-
T-W	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0005	<0.0005	<0.0005	<0.002	-	-	-	-
T-U	mg/L	0.0029	0.00301	0.00268	0.00303	0.00268	0.00268	0.00287	0.00269	0.00296	0.00284	0.00319	0.00301	0.00302	0.00299	0.00299	0.00317	0.00306	-	-	-	-
T-V	mg/L	0.0027	0.002	<0.002	<0.002	<0.002	0.0067	0.0032	0.0031	<0.002	<0.002	0.0036	<0.002	0.0031	<0.002	<0.002	<0.002	0.0024	0.05	-	-	-
T-Zn	mg/L	<0.008	<0.008	<0.008	<0.008	**0.011**	<0.008	<0.008	0.0085	<0.008	<0.008	<0.008	<0.008	**0.0149**	<0.01	**0.0298**	<0.01	<0.008	0.01	0.055	-	-
T-Zr	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	0.0323	<0.0002	<0.0002	<0.0002	<0.0002	0.00045	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
Speciated Metals																						
Methyl Mercury	ng/L	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-	-	-	-	-
Polycyclic Aromatic Hydrocarbons (PAH)																						
Acenaphthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-	0.006	-	-	-
Acenaphthylene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	-	-	-	-	-
Acridine	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-	-	-	-	-
Anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	-	-	-	-	-
Benz(a)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	-	-	-	-	-
Benzo(a)pyrene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	**0.000017**	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	**0.000016**	-	<0.00001	-	0.00001	-	-	-
Benzo(b+j)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000055	-	<0.00005	-	-	-	-	-
Benzo(g-h-i)perylene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-	-	-	-	-
Benzo(k)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-	-	-	-	-
2-Chloronaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	-	-	-	-	-
Chrysene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-	0.0001	-	-	-
Dibenz(a-h)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000058	<0.00001	<0.00001	<0.00001	<0.00001	0.000017	<0.00001	<0.00001	0.000024	-	<0.00001	-	-	-	-	-
Fluoranthene	mg/L	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	-	<0.00003	-	-	-	-	-
Fluorene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-	0.012	-	-	-
Indeno(1-2-3-cd)pyrene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-	-	-	-	-
1-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	-	0.001	-	-	-
2-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	-	0.001	-	-	-
Naphthalene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	-	0.001	-	0.0014	-
Phenanthrene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	-	-	-	-	-
Pyrene	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	-	<0.00002	-	-	-	-	-
Quinoline	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-	-	-	-	-
Total PAHs	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	-	-	-	-	-
Volatile Organic Compounds (VOC)																						
Benzene	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	-	0.11	-	0.11	-
Ethylbenzene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	-	0.25	-	0.025	-
Methyl-tert-butyl-ether	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	-	-	0.44	5	-
Styrene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	-	-	-	-	-
Toluene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	-	-	-	0.215	-
Total Xylenes	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	<0.002	-	-	-	-	-
Total BTEX	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	-	-	-	-	-
Dioxins and Furans																						
2-3-7-8-TCDD	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-
1-2-3-7-8-PeCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	-	-	-	-	-
1-2-3-4-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	-	-	-	-	-
1-2-3-6-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	-	-	-	-	-
1-2-3-7-8-9-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	-	-	-	-	-
1-2-3-4-6-7-8-HpCDD	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	<3	-	-	-	-	-
OCDD	pg/L	<4	<4	<4	<4	<4	4	<4	<4	<4	<4	<4	<4	<4	<4	-	<4	-	-	-	-	-
2-3-7-8-TCDF	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-
1-2-3-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	-	-	-	-	-
2-3-4-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	-	-	-	-	-
1-2-3-4-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	-	-	-	-	-
1-2-3-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	-	-	-	-	-
1-2-3-7-8-9-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	-	-	-	-	-
2-3-4-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	-	-	-	-	-
1-2-3-4-6-7-8-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	<3	-	-	-	-	-
1-2-3-4-7-8-9-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	<3	-	-	-	-	-
OCDF	pg/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	<4	-	-	-	-	-
Total Furan TEQ	pg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	-	-	-	-	-
Total Dioxin Furan TEQ	pg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	-	-	-	-	-
Microbiological Parameters																						
E.coli	MPN/100 mL	<1.8	<1	<1	<1	5	<1.8	<1	1	<1	2	<1	3	<1.8	<1	-	<1	-	-	-	-	-

Notes:
Results in **bold**: Exceedances of Long Term BC WQG
Results underlined: Exceedances of Short Term BC WQG
Results highlighted in grey: Exceedances of Long Term CCME guidelines
Results in red: Exceedances of Short Term CCME guidelines
[1] Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. These guidelines were not screened as there were no discharges to evaluate.
[2] The BC WQG for mercury is derived using the maximum methyl mercury concentration in the dataset (0.082 pg/L) and the total mercury detection limit of 0.00001 mg/L.

Table A-16: Water Quality Results for Marine Water Monitoring Station WQ4 - 2m Above Seafloor May to December 2021

Sample Date		2021-05-18	2021-05-26	2021-06-01	2021-06-01	2021-06-08	2021-06-15	2021-07-20	2021-08-25	2021-09-28	2021-10-26	2021-10-26	2021-11-23	2021-11-23	2021-12-14	2021-12-14	Marine Water Aquatic Life Water Quality Guidelines			
Laboratory ID		21E1990-07	21E2917-07	21F0167-13	21F0167-07	21F1056-07	21F2014-07	21G2414-07	21H3040-07	21I3814-07	21J3514-13	21J3514-07	21K3046-17	21K3046-07	21L2125-17	21L2125-07	BC	BC	CCME	CCME
Station Name		WQ4-1	WQ4-1	Q4-1 Duplica	WQ4-1	WQ4-1	WQ4-1	WQ4-1	WQ4-1	WQ4-1	Q4-1 Duplica	WQ4-1	Q4-1 Duplica	WQ4-1	Q4-1-Duplica	WQ4-1	Long Term	Short Term	Long Term	Short Term
Field Parameters																				
Temperature	°C	8.5	8.6	-	8.6	8.5	8.6	12.8	9.7	9.1	-	10.2	-	9.9	-	9.7	Narrative [1]	-	Narrative [1]	-
Dissolved Oxygen (%)-field	%	62.7	43.8	-	59.7	61.4	61.7	85.9	57.6	57.8	-	54.6	-	71.5	-	79.6	-	-	-	-
Dissolved Oxygen (mg/L)-field	mg/L	6.05	204.68	-	5.74	5.91	5.95	7.94	-	5.43	-	5.11	-	6.75	-	7.52	-	-	>8	-
SPC	µS/cm	46125	46121	-	46536	46758	46144	34848	45651	34010	-	44390	-	44301	-	45609	-	-	-	-
Conductivity	µS/cm	31619	31673	-	31966	32042	31653	26701	-	-	-	31853	-	31487	-	32265	-	-	-	-
Salinity	ppt	29.6	29.7	-	29.9	30.1	29.7	21.9	-	31.6	-	28.5	-	28.5	-	29.4	Narrative [1]	-	Narrative [1]	-
TDS-field	mg/L	29981	29978	-	30248	30393	29996	-	-	-	-	-	-	28796	-	29646	-	-	-	-
pH-field	pH units	7.39	7.46	-	7.31	7.49	7.49	7.69	7.61	-	-	7.27	-	7.47	-	7.59	7.0 - 8.7	7.0 - 8.7	7.0 - 8.7	-
ORP	mV	229.4	256.3	-	197.6	139.5	186.9	140.2	-	710.4	-	11.1	-	137.1	-	209.1	-	-	-	-
Turbidity	NTU	0.30	0.47	-	47.71	2.26	1.98	2.12	-	0.83	-	-0.13	-	193.25	-	0.30	Narrative [1]	Narrative [1]	Narrative [1]	-
Depth	m	27.1	28.3	-	24.4	27.1	26.7	21.2	29.5	29.1	-	27.0	-	28.9	-	27.1	-	-	-	-
General Parameters																				
Dissolved Oxygen-lab	mg/L	9.9	9.8	-	10.6	10.5	9.9	9.8	10.3	10	-	8.4	-	9.7	-	11.2	-	-	>8	-
pH-lab	pH units	**6.85**	7.49	-	7.4	7.41	7.4	7.5	7.67	7.53	-	7.5	-	7.55	-	7.51	7.0 - 8.7	-	7.0 - 8.7	-
TSS	mg/L	8.4	4.7	2	2.4	3	4.4	<2	<2	2.2	3.2	2.4	3.8	3.2	<2	4	Narrative [1]	Narrative [1]	Narrative [1]	-
Total Hardness	mg/L	5730	5670	5820	5700	6140	5540	5540	5550	5490	5350	5530	5850	6110	6170	5480	-	-	-	-
N-NH3	mg/L	<0.05	<0.05	-	<0.05	0.062	<0.05	<0.05	<0.05	<0.05	-	<0.05	-	<0.05	-	<0.05	-	-	-	-
N-NO3	mg/L	<1	<1	-	<1	<1	<1	<1	<1	<1	-	<1	-	<1	-	<1	3.7	-	45	339
Total Metals																				
T-Al	mg/L	0.0218	0.052	0.0251	0.029	0.0206	0.0308	0.0221	0.0274	0.0516	0.0292	0.0226	0.0205	0.0141	0.0489	<0.01	-	-	-	-
T-Sb	mg/L	<0.0004	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0004	<0.0004	<0.0005	<0.0004	-	0.27 [Sb(III)]	-	-
T-As	mg/L	0.0016	0.00161	0.0015	0.00143	0.00168	0.00168	0.00157	0.0016	0.00123	0.00149	0.00163	0.00187	0.00161	0.00214	0.00205	-	0.0125	0.0125	-
T-Ba	mg/L	0.0117	0.011	0.0102	0.0109	0.0105	0.011	0.00972	0.0114	0.0114	0.0117	0.0113	0.0133	0.0129	0.0133	0.0108	-	-	-	-
T-Be	mg/L	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0001	<0.0002	0.1	-	-	-
T-Bi	mg/L	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0001	<0.0002	-	-	-	-
T-B	mg/L	**5.38**	**3.81**	**3.87**	**3.88**	**4.24**	**3.98**	**4**	**4.12**	**3.72**	**3.53**	**3.68**	**3.76**	**3.88**	**5.15**	**4.68**	1.2	-	-	-
T-Cd	mg/L	0.000054	0.0000749	0.0000882	0.0000774	0.0000884	0.0000972	0.0000827	0.0000972	0.0000739	0.000081	0.00008	0.000102	0.000064	0.0000848	0.000072	0.00012	-	0.00012	-
T-Ca	mg/L	391	386	358	354	401	359	335	400	365	337	351	339	349	342	328	-	-	-	-
T-Cr	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.0015 [Cr(VI)]	-	0.0015 [Cr(VI)]	-
T-Co	mg/L	<0.0002	0.000062	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0000545	0.0000819	0.00006	<0.00005	<0.0002	<0.0002	<0.00005	<0.0002	-	-	-	-
T-Cu	mg/L	0.0009	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00156	<0.001	0.00066	<0.0004	0.00183	0.00113	<0.001	<0.0008	0.002	0.003	-	-
T-Fe	mg/L	0.03	0.0555	<0.02	<0.02	0.0265	0.0305	0.028	0.0252	0.0403	0.022	0.018	0.03	0.044	0.0553	0.047	-	-	-	-
T-Pb	mg/L	<0.0004	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00181	<0.0005	<0.0005	<0.0002	0.00029	<0.0004	<0.0004	0.00155	<0.0004	0.002	0.14	-	-
T-Li	mg/L	0.222	0.161	0.156	0.158	0.19	0.162	0.163	0.164	0.158	0.142	0.144	0.176	0.183	0.182	0.171	-	-	-	-
T-Mg	mg/L	1150	1140	1200	1170	1250	1130	1140	1110	1110	1100	1130	1220	1270	1290	1130	-	-	-	-
T-Mn	mg/L	0.00346	0.00353	0.00241	0.00232	0.00168	0.00287	0.00395	0.00647	0.00644	0.00682	0.0087	0.00625	0.00628	0.0067	0.00552	-	-	-	-
T-Hg	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.000005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00002 [2]	-	0.000016	-
T-Mo	mg/L	0.0109	0.0102	0.0105	0.0107	0.0115	0.0104	0.00971	0.0102	0.0103	0.00932	0.00953	0.0107	0.0113	0.012	0.0096	-	-	-	-
T-Ni	mg/L	0.00092	0.000629	0.000481	0.000497	0.000608	0.000386	0.00063	0.000328	0.000629	<0.0004	<0.0004	0.00338	<0.0008	0.000566	<0.0008	0.0083	-	-	-
T-P	mg/L	<0.1	<0.1	0.104	<0.1	<0.1	<0.1	<0.1	0.133	<0.1	0.08	0.077	<0.1	0.123	0.336	<0.1	-	-	-	-
T-K	mg/L	362	350	360	355	364	336	329	339	346	284	292	354	369	381	351	-	-	-	-
T-Se	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	0.00362	<0.001	<0.001	0.00664	<0.0005	<0.0005	0.00139	<0.001	<0.001	<0.001	-	-	-	-
T-Si	mg/L	2.1	1.56	2.4	2.14	2.22	1.59	<0.5	11.9	2.42	1.3	1.5	2.2	2.4	2.87	2.5	-	-	-	-
T-Ag	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	<0.0001	<0.0001	<0.0001	<0.0001	0.0015	0.003	-	0.0075
T-Na	mg/L	10300	8860	9630	9420	8590	9040	9050	9620	8560	8610	8910	9190	9200	10900	9470	-	-	-	-
T-Sr	mg/L	7.11	6.52	6.89	6.79	6.91	6.93	6.43	6.94	6.88	5.8	5.91	7.06	6.95	8.15	7.1	-	-	-	-
T-S	mg/L	907	803	800	770	871	868	834	876	813	0.8	0.8	853	891	1050	872	-	-	-	-
T-Te	mg/L	<0.001	0.000523	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.001	-	-	-	-
T-Tl	mg/L	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	0.0000732	<0.00004	<0.00004	<0.00004	<0.00002	0.00002	<0.00004	<0.00004	<0.00004	<0.00004	-	-	-	-
T-Th	mg/L	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00002	<0.00002	<0.0002	<0.0002	<0.0001	<0.0002	-	-	-	-
T-Sn	mg/L	0.00065	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00004	<0.00004	<0.0004	<0.0004	<0.0005	<0.0004	-	-	-	-
T-Ti	mg/L	<0.01	0.00453	<0.002	<0.002	0.00206	0.00275	<0.002	<0.002	0.00582	<0.005	<0.005	<0.01	<0.01	0.00329	<0.01	-	-	-	-
T-W	mg/L	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.002	<0.002	<0.0005	<0.002	-	-	-	-
T-U	mg/L	0.00295	0.00278	0.00283	0.00279	0.00293	0.00279	0.00266	0.0027	0.00282	0.00266	0.00269	0.00268	0.00278	0.00278	0.0026	-	-	-	-
T-V	mg/L	0.0024	0.00396	0.00236	0.00222	<0.002	<0.002	<0.002	0.0026	<0.002	0.0012	0.0012	<0.002	<0.002	<0.002	<0.002	0.05	-	-	-
T-Zn	mg/L	**0.0105**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.0104**	<0.01	<0.004	<0.004	<0.008	<0.008	<0.01	<0.008	0.01	0.055	-	-
T-Zr	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
Speciated Metals																				
Methyl Mercury	ng/L	-	<0.024	-	<0.024	<0.023	<0.023	<0.025	<0.050	<0.024	-	<0.050	0.034	0.028	-	-	-	-	-	-
Polycyclic Aromatic Hydrocarbons (PAH)																				
Acenaphthene	mg/L	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	<0.00005	-	<0.00005	0.006	-	-	-
Acenaphthylene	mg/L	<0.0002	<0.0002	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	<0.0002	-	<0.0002	-	-	-	-
Acridine	mg/L	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	<0.00005	-	<0.00005	-	-	-	-
Anthracene	mg/L	<0.00001	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	-	-	<0.00001	-	<0.00001	-	-	-	-
Benz(a)anthracene	mg/L	<0.00001	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	-	-	<0.00001	-	<0.00001	-	-	-	-
Benzo(a)pyrene	mg/L	<0.00001	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	-	-	<0.00001	-	<0.00001	0.00001	-	-	-
Benzo(b+j)fluoranthene	mg/L	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	<0.00005	-	<0.00005	-	-	-	-
Benzo(g-h-i)perylene	mg/L	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	<0.00005	-	<0.00005	-	-	-	-
Benzo(k)fluoranthene	mg/L	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	<0.00005	-	<0.00005	-	-	-	-
2-Chloronaphthalene	mg/L	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	<0.0001	-	<0.0001	-	-	-	-
Chrysene	mg/L	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	<0.00005	-	<0.00005	0.0001	-	-	-
Dibenz(a-h)anthracene	mg/L	<0.00001	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	-	-	<0.00001	-	<0.00001	-	-	-	-
Fluoranthene	mg/L	<0.00003	<0.00003	-	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	-	-	-	<0.00003	-	<0.00003	-	-	-	-
Fluorene	mg/L	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	<0.00005	-	<0.00005	0.012	-	-	-
Indeno(1-2-3-cd)pyrene	mg/L	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	<0.00005	-	<0.00005	-	-	-	-
1-methylnaphthalene	mg/L	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	<0.0001	-	<0.0001	0.001	-	-	-
2-methylnaphthalene	mg/L	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	<0.0001	-	<0.0001	0.001	-	-	-
Naphthalene	mg/L	<0.0002	<0.0002	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	<0.0002	-	<0.0002	0.001	-	0.0014	-
Phenanthrene	mg/L	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	<0.0001	-	<0.0001	-	-	-	-
Pyrene	mg/L	<0.00002	<0.00002	-	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	-	-	-	<0.00002	-	<0.00002	-	-	-	-
Quinoline	mg/L	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	<0.00005	-	<0.00005	-	-	-	-
Total PAHs	mg/L	<0.0002	<0.0002	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	<0.0002	-	<0.0002	-	-	-	-
Volatile Organic Compounds (VOC)																				
Benzene	mg/L	<0.0005	<0.0005	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	-	<0.0005	-	<0.0005	0.11	-	0.11	-
Ethylbenzene	mg/L	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	-	<0.001	-	<0.001	0.25	-	0.025	-
Methyl-tert-butyl-ether	mg/L	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	-	<0.001	-	<0.001	-	0.44	5	-
Styrene	mg/L	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	-	<0.001	-	<0.001	-	-	-	-
Toluene	mg/L	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	-	<0.0005	-	<0.0005	-	<0.0005	-	-	0.215	-
Total Xylenes	mg/L	<0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	<0.002	-	<0.002	-	<0.002	-	-	-	-
Total BTEX	mg/L	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	-	<0.001	-	<0.001	-	-	-	-
Dioxins and Furans																				
2-3-7-8-TCDD	pg/L	<1	<1	-	<1	<1	<1	<1	<1	<1	-	<1	-	<1	-	<1	-	-	-	-
1-2-3-7-8-PeCDD	pg/L	<2	<2	-	<2	<2	<2	<2	<2	<2	-	<2	-	<2	-	<2	-	-	-	-
1-2-3-4-7-8-HxCDD	pg/L	<2	<2	-	<2	<2	<2	<2	<2	<2	-	<2	-	<2	-	<2	-	-	-	-
1-2-3-6-7-8-HxCDD	pg/L	<2	<2	-	<2	<2	<2	<2	<2	<2	-	<2	-	<2	-	<2	-	-	-	-
1-2-3-7-8-9-HxCDD	pg/L	<2	<2	-	<2	<2	<2	<2	<2	<2	-	<2	-	<2	-	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDD	pg/L	<3	<3	-	<3	<3	<3	<3	<3	<3	-	<3	-	<3	-	<3	-	-	-	-
OCDD	pg/L	<4	<4	-	<4	<4	<4	<4	<4	<4	-	<4	-	<4	-	<4	-	-	-	-
2-3-7-8-TCDF	pg/L	<1	<1	-	<1	<1	<1	<1	<1	<1	-	<1	-	<1	-	<1	-	-	-	-
1-2-3-7-8-PeCDF	pg/L	<2	<2	-	<2	<2	<2	<2	<2	<2	-	<2	-	<2	-	<2	-	-	-	-
2-3-4-7-8-PeCDF	pg/L	<2	<2	-	<2	<2	<2	<2	<2	<2	-	<2	-	<2	-	<2	-	-	-	-
1-2-3-4-7-8-HxCDF	pg/L	<2	<2	-	<2	<2	<2	<2	<2	<2	-	<2	-	<2	-	<2	-	-	-	-
1-2-3-6-7-8-HxCDF	pg/L	<2	<2	-	<2	<2	<2	<2	<2	<2	-	<2	-	<2	-	<2	-	-	-	-
1-2-3-7-8-9-HxCDF	pg/L	<2	<2	-	<2	<2	<2	<2	<2	<2	-	<2	-	<2	-	<2	-	-	-	-
2-3-4-6-7-8-HxCDF	pg/L	<2	<2	-	<2	<2	<2	<2	<2	<2	-	<2	-	<2	-	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDF	pg/L	<3	<3	-	<3	<3	<3	<3	<3	<3	-	<3	-	<3	-	<3	-	-	-	-
1-2-3-4-7-8-9-HpCDF	pg/L	<3	<3	-	<3	<3	<3	<3	<3	<3	-	<3	-	<3	-	<3	-	-	-	-
OCDF	pg/L	<4	<4	-	<4	<4	<4	<4	<4	<4	-	<4	-	<4	-	<4	-	-	-	-
Total Furan TEQ	pg/L	0	0	-	0	0	0	0	0	0	-	0	-	0	-	0	-	-	-	-
Total Dioxin Furan TEQ	pg/L	0	0	-	0	0	0	0	0	0	-	0	-	0	-	0	-	-	-	-
Microbiological Parameters																				
E.coli	MPN/100 mL	3	2	-	<1	<1	<1	1	2	2	-	9	-	1	-	4	-	-	-	-

Notes:
Results in **bold**: Exceedances of Long Term BC WQG
Results underlined: Exceedances of Short Term BC WQG
Results highlighted in grey: Exceedances of Long Term CCME guidelines
Results in red: Exceedances of Short Term CCME guidelines
[1] Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. These guidelines were not screened as there were no discharges to evaluate.
[2] The BC WQG for mercury is derived using the maximum methyl mercury concentration in the dataset (0.082 pg/L) and the total mercury detection limit of 0.00001 mg/L.

Table A-17: Water Quality Results for Marine Water Monitoring Station WQR1 - 2m Below Surface May 2020 to February 2021

Sample Date		**2020-05-20**	**2020-06-22**	**2020-07-21**	**2020-08-24**	**2020-09-28**	**2020-10-20**	**2020-10-27**	**2020-11-03**	**2020-11-10**	**2020-11-18**	**2020-12-14**	**2021-01-27**	**2021-02-25**	**Marine Water Aquatic Life Water Quality Guidelines**			
Laboratory ID		**0051710-10**	**0062209-10**	**0071996-10**	**0082292-10**	**0093017-10**	**20J1961-10**	**20J2778-10**	**20K0360-10**	**20K1261-10**	**20K2100-10**	**20L1589-10**	**21A2590-10**	**21B2778-10**	**BC**	**BC**	**CCME**	**CCME**
Station Name		**WQ R1-2**	**WQR1-2**	**WQ R 1-2**	**WQ R1-2**	**WQR1-2**	**WQR 1-2**	**WQR1-2**	**WQR1-2**	**WQR1-2**	**WQR1-2**	**WQR1-2**	**WQR1-2**	**WQR1-2**	**Long Term**	**Short Term**	**Long Term**	**Short Term**
Field Parameters																		
Temperature	°C	10.2	11.0	13.6	14.6	11.4	9.8	7.4	8.4	5.5	-	6.0	7.5	-	Narrative [1]	-	Narrative [1]	-
Dissolved Oxygen (%)-field	%	-	-	-	-	-	-	87.4	96.7	89.5	-	89.5	-	-	-	-	-	-
Dissolved Oxygen (mg/L)-field	mg/L	9.35	10.49	9.54	9.31	10.75	10.34	9.47	10.25	10.4	-	9.95	8.86	-	-	-	>8	-
SPC	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Conductivity	µS/cm	4594	5317	4654	17731	5643	9639	17278	17818	12647	-	17996	26910	-	-	-	-	-
Salinity	ppt	3.5	4.0	2.5	13.4	-	7.9	15.8	15.9	11.9	-	17.2	26.1	-	Narrative [1]	-	Narrative [1]	-
TDS-field	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH-field	pH units	8.35	7.86	8.22	7.90	7.48	**6.43**	7.78	7.68	7.64	-	6.32	7.64	-	7.0 - 8.7	7.0 - 8.7	7.0 - 8.7	-
ORP	mV	175.2	166.0	-	-	-	-	108.2	178.5	140.7	-	196.2	-	-	-	-	-	-
Turbidity	NTU	1.41	12.78	11.52	4.27	10.44	2.79	4.43	2.87	2.5	-	0.32	0.25	-	Narrative [1]	Narrative [1]	Narrative [1]	-
Depth	m	2.0	1.8	1.0	1.8	1.0	1.0	10.8	-	11.2	-	-	2.2	-	-	-	-	-
General Parameters																		
Dissolved Oxygen-lab	mg/L	10.7	9	10	9.3	9.3	9.2	10.1	9.3	10	9.4	10.4	10.1	10.9	-	-	>8	-
pH-lab	pH units	7.32	7.66	7.15	7.89	7.16	7.6	7.64	7.58	7.46	7.29	7.65	7.58	7.71	7.0 - 8.7	-	7.0 - 8.7	-
TSS	mg/L	6.2	12.8	11.6	5.2	12.2	3.4	<2	4.2	4.2	13	2.8	<2	2.6	Narrative [1]	Narrative [1]	Narrative [1]	-
Total Hardness	mg/L	515	5820	1.72	2700	750	2070	3010	1580	2030	1400	3290	4630	4780	-	-	-	-
N-NH3	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-
N-NO3	mg/L	<1	<1	<0.01	<1	<1	**<10**	<1	<1	<1	<1	<1	<1	<1	3.7	-	45	339
Total Metals																		
T-Al	mg/L	0.298	0.0551	<0.01	0.197	0.375	0.159	0.0493	0.234	0.165	0.398	0.0327	0.0219	0.0187	-	-	-	-
T-Sb	mg/L	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	-	0.27 [Sb(III)]	-	-
T-As	mg/L	<0.001	0.00177	<0.001	0.00132	<0.001	<0.001	0.00115	<0.001	<0.001	0.00106	0.00148	0.00146	0.00166	-	0.0125	0.0125	-
T-Ba	mg/L	0.0105	0.0104	<0.01	0.0289	0.0182	0.0149	0.0145	0.0123	0.0184	0.0148	0.0138	0.0108	0.0103	-	-	-	-
T-Be	mg/L	<0.0002	<0.0002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.1	-	-	-
T-Bi	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
T-B	mg/L	0.443	**4.33**	0.14	**1.94**	0.693	**1.66**	**2.21**	**1.29**	**1.63**	0.987	**2.32**	**3.45**	**3.48**	1.2	-	-	-
T-Cd	mg/L	<0.00002	0.000089	<0.00002	0.000045	<0.00002	0.000042	0.000051	0.000021	0.000049	<0.00002	0.000051	0.000067	0.000061	0.00012	-	0.00012	-
T-Ca	mg/L	39.4	405	0.65	171	59.6	151	210	112	152	101	239	328	329	-	-	-	-
T-Cr	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0015 [Cr(VI)]	-	0.0015 [Cr(VI)]	-
T-Co	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	0.00022	<0.0002	<0.0002	<0.0002	<0.0002	0.00026	<0.0002	<0.0002	<0.0002	-	-	-	-
T-Cu	mg/L	**0.00232**	0.0016	<0.0008	0.00171	0.0014	0.00128	0.00102	0.00096	0.00172	0.00109	0.0017	<0.0008	<0.0008	0.002	0.003	-	-
T-Fe	mg/L	0.295	0.041	<0.02	0.153	0.35	0.155	0.106	0.2	0.199	0.365	0.12	0.055	0.043	-	-	-	-
T-Pb	mg/L	0.00059	**0.00217**	<0.0004	<0.0004	<0.0004	0.00058	0.00104	0.00044	<0.0004	<0.0004	<0.0004	<0.0004	0.00047	0.002	0.14	-	-
T-Li	mg/L	0.0162	0.168	<0.0002	0.099	0.0236	0.0625	0.0832	0.0521	0.0674	0.0471	0.0914	0.124	0.159	-	-	-	-
T-Mg	mg/L	101	1170	0.025	552	146	411	603	316	400	279	654	925	962	-	-	-	-
T-Mn	mg/L	0.0107	0.00326	<0.0004	0.013	0.0176	0.0117	0.015	0.0115	0.0161	0.0266	0.0127	0.0059	0.0055	-	-	-	-
T-Hg	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00002 [2]	-	0.000016	-
T-Mo	mg/L	0.00119	0.0105	<0.0002	0.00508	0.00153	0.0041	0.00626	0.00314	0.00422	0.00257	0.00647	0.00866	0.00941	-	-	-	-
T-Ni	mg/L	0.00122	<0.0008	<0.0008	<0.0008	0.00113	<0.0008	0.00095	<0.0008	<0.0008	0.00091	<0.0008	<0.0008	<0.0008	0.0083	-	-	-
T-P	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-
T-K	mg/L	34.3	348	0.51	165	51.8	120	178	105	125	93.7	208	288	307	-	-	-	-
T-Se	mg/L	<0.001	<0.001	<0.001	0.0028	0.00106	<0.001	0.00414	<0.001	<0.001	<0.001	<0.001	0.00104	<0.001	-	-	-	-
T-Si	mg/L	<2	<2	<2	<2	2.1	<2	<2	3.1	2.7	4.7	2.4	3	2.4	-	-	-	-
T-Ag	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.000351	<0.0001	<0.0001	<0.0001	<0.0001	0.0015	0.003	-	0.0075
T-Na	mg/L	854	9580	4.54	4570	1220	3520	4930	2680	3360	2340	5220	7650	7770	-	-	-	-
T-Sr	mg/L	0.619	7.4	<0.002	3.33	1.03	2.73	4.14	2.05	2.82	1.9	4.53	5.89	6.37	-	-	-	-
T-S	mg/L	81.3	852	14.8	432	124	354	519	265	346	238	593	717	802	-	-	-	-
T-Te	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
T-Tl	mg/L	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	-	-	-	-
T-Th	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
T-Sn	mg/L	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	-	-	-	-
T-Ti	mg/L	0.0199	<0.01	<0.01	<0.01	0.0171	0.01	<0.01	0.0191	0.0124	0.0128	<0.01	<0.01	<0.01	-	-	-	-
T-W	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	-	-	-
T-U	mg/L	0.000292	0.003	<0.00004	0.00151	0.000506	0.00113	0.00161	0.000861	0.00112	0.000714	0.00172	0.00242	0.00245	-	-	-	-
T-V	mg/L	<0.002	0.0024	0.0054	0.0035	<0.002	0.008	0.0027	0.0024	<0.002	<0.002	0.0021	<0.002	0.004	0.05	-	-	-
T-Zn	mg/L	<0.008	<0.008	<0.008	<0.008	**0.0117**	0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	0.01	0.055	-	-
T-Zr	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
Speciated Metals																		
Methyl Mercury	ng/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Polycyclic Aromatic Hydrocarbons (PAH)																		
Acenaphthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.006	-	-	-
Acenaphthylene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
Acridine	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	-	-	-
Benz(a)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	-	-	-
Benzo(a)pyrene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	-	-	-
Benzo(b+j)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Benzo(g-h-i)perylene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Benzo(k)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
2-Chloronaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-
Chrysene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0001	-	-	-
Dibenz(a-h)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	-	-	-
Fluoranthene	mg/L	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	-	-	-	-
Fluorene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.012	-	-	-
Indeno(1-2-3-cd)pyrene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
1-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.001	-	-	-
2-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.001	-	-	-
Naphthalene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.001	-	0.0014	-
Phenanthrene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-
Pyrene	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	-	-	-	-
Quinoline	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Total PAHs	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
Volatile Organic Compounds (VOC)																		
Benzene	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.11	-	0.11	-
Ethylbenzene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.25	-	0.025	-
Methyl-tert-butyl-ether	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	0.44	5	-
Styrene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Toluene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	0.215	-
Total Xylenes	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	-	-	-
Total BTEX	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Dioxins and Furans																		
2-3-7-8-TCDD	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDD	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDD	pg/L	<4	7	<4	<4	<4	13	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
2-3-7-8-TCDF	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
1-2-3-4-7-8-9-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDF	pg/L	<4	6	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
Total Furan TEQ	pg/L	0	0.01	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Total Dioxin Furan TEQ	pg/L	0	0.01	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Microbiological Parameters																		
E.coli	MPN/100 mL	2	<1	4	<1	36	-	1	20	12	6.8	4	2	<1.8	-	-	-	-

Notes:
Results in **bold**: Exceedances of Long Term BC WQG
Results underlined: Exceedances of Short Term BC WQG
Results highlighted in grey: Exceedances of Long Term CCME guidelines
Results in red: Exceedances of Short Term CCME guidelines
[1] Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. These guidelines were not screened as there were no discharges to evaluate.
[2] The BC WQG for mercury is derived using the maximum methyl mercury concentration in the dataset (0.082 pg/L) and the total mercury detection limit of 0.00001 mg/L.

Table A-18: Water Quality Results for Marine Water Monitoring Station WQR1 - 2m Below Surface March to December 2021

Sample Date		2021-03-25	2021-04-22	2021-05-18	2021-05-26	2021-06-01	2021-06-08	2021-06-15	2021-07-20	2021-08-25	2021-09-28	2021-10-26	2021-11-23	2021-12-14	Marine Water Aquatic Life Water Quality Guidelines			
Laboratory ID		21C3505-11	21D2478-10	21E1990-10	21E2917-10	21F0167-10	21F1056-10	21F2014-10	21G2414-10	21H3040-10	21I3814-10	21J3514-10	21K3046-10	21L2125-10	BC	BC	CCME	CCME
Station Name		WQR1-2	WQR1-2	WQR1-2	WQR1-2	WQR1-2	WQR1-2	WQR1-2	WQR1-2	WQR1-2	WQR1-2	WQR1-2	WQR1-2	WQR1-2	Long Term	Short Term	Long Term	Short Term
Field Parameters																		
Temperature	°C	8.2	8.8	8.1	9.8	11.1	9.5	9.0	12.5	16.5	11.9	7.9	8.1	7.2	Narrative [1]	-	Narrative [1]	-
Dissolved Oxygen (%)-field	%	131.0	116.5	101.9	102.5	104.0	99.1	98.7	77.2	122.8	93.1	95.6	-	84.3	-	-	-	-
Dissolved Oxygen (mg/L)-field	mg/L	13.42	12.87	11.97	11.55	10.56	11.27	11.15	7.29	-	9.43	11.11	8.93	9.19	-	-	>8	-
SPC	µS/cm	34711	13676	1616	1987	20855	1494	6340	31113	35651	13333	6349	136539	26032	-	-	-	-
Conductivity	µS/cm	34711	9435	1096	1410	15328	1051	4406	23775	-	-	4270	23161	17156	-	-	-	-
Salinity	ppt	-	7.9	0.8	1.0	12.5	0.8	3.5	19.4	-	10.5	3.5	21.3	15.8	Narrative [1]	-	Narrative [1]	-
TDS-field	mg/L	-	8889	1050	1291	13556	971	4121	-	-	-	-	22234	16920	-	-	-	-
pH-field	pH units	8.39	8.29	7.31	7.59	8.05	8.50	**6.63**	7.56	8.23	7.64	7.40	7.64	7.64	7.0 - 8.7	7.0 - 8.7	7.0 - 8.7	-
ORP	mV	183.8	163.6	153.5	154.1	89.1	122.9	160.0	80.9	-	198.3	6.8	112.5	136.3	-	-	-	-
Turbidity	NTU	0.56	1.98	12.90	4.44	1.78	12.95	18.66	2.66	-	7.54	6.35	0.81	0.35	Narrative [1]	Narrative [1]	Narrative [1]	-
Depth	m	1.9	1.8	2.1	2.0	2.8	2.0	1.5	2.6	2.2	2.0	2.0	2.0	2.0	-	-	-	-
General Parameters																		
Dissolved Oxygen-lab	mg/L	11.1	11.7	11.1	9.8	11	10.7	10.5	10	10.4	9.2	10.2	9.6	11.3	-	-	>8	-
pH-lab	pH units	8.03	8.16	**6.86**	7.1	7.46	**6.93**	7.07	7.48	7.81	7.8	7.21	7.55	7.32	7.0 - 8.7	-	7.0 - 8.7	-
TSS	mg/L	<2	3.8	20	<3.3	2.8	8.6	17.8	8.2	3.8	8.4	11.6	5	<2	Narrative [1]	Narrative [1]	Narrative [1]	-
Total Hardness	mg/L	2060	1820	153	218	1470	150	604	685	1620	1250	740	4380	2550	-	-	-	-
N-NH3	mg/L	<0.05	<0.05	0.143	<0.05	0.099	0.157	0.057	<0.05	0.089	0.055	<0.05	<0.05	<0.05	-	-	-	-
N-NO3	mg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	3.7	-	45	339
Total Metals																		
T-Al	mg/L	0.0418	0.206	0.829	0.301	0.219	0.876	1	0.278	0.225	0.421	0.472	0.0151	<0.01	-	-	-	-
T-Sb	mg/L	<0.0005	0.000122	<0.0002	<0.00005	0.000089	<0.00005	0.000055	<0.0005	<0.0005	<0.0005	<0.0002	<0.0004	<0.0004	-	0.27 [Sb(III)]	-	-
T-As	mg/L	<0.0005	0.000547	<0.0005	0.000191	0.000409	0.000227	0.000347	<0.0005	0.000639	<0.0005	<0.0005	0.00137	0.00104	-	0.0125	0.0125	-
T-Ba	mg/L	0.00833	0.0102	0.0157	0.00983	0.0107	0.019	0.0214	0.0125	0.0167	0.0222	0.013	0.0116	0.0113	-	-	-	-
T-Be	mg/L	<0.0001	<0.00001	<0.0001	<0.00001	<0.00001	0.00001	<0.00001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	0.1	-	-	-
T-Bi	mg/L	<0.0001	0.000011	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	-	-	-	-
T-B	mg/L	**1.83**	**1.72**	0.126	0.184	1.18	0.114	0.41	0.574	**1.23**	0.952	0.596	**3**	**2.31**	1.2	-	-	-
T-Cd	mg/L	0.0000239	0.0000231	0.000021	0.0000055	0.0000205	0.0000081	0.0000145	<0.00002	<0.00002	0.0000241	0.000022	0.000067	0.000046	0.00012	-	0.00012	-
T-Ca	mg/L	136	145	12.1	17.5	97	12.5	40.9	44.9	116	86.9	53.9	262	161	-	-	-	-
T-Cr	mg/L	<0.001	0.00039	0.0012	0.00031	0.00035	0.00059	0.00076	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	0.0015 [Cr(VI)]	-	0.0015 [Cr(VI)]	-
T-Co	mg/L	0.0000936	0.000127	0.00033	0.000152	0.000121	0.000361	0.00043	0.000164	0.000159	0.000262	0.00022	<0.0002	<0.0002	-	-	-	-
T-Cu	mg/L	0.00188	0.00133	**0.00245**	**0.00265**	0.00117	0.00172	**0.00241**	<0.001	0.00115	**0.00234**	**0.00313**	0.00095	<0.0008	0.002	0.003	-	-
T-Fe	mg/L	0.145	0.168	0.685	0.248	0.162	0.704	0.762	0.262	0.203	0.325	0.436	0.044	0.132	-	-	-	-
T-Pb	mg/L	<0.0005	0.000052	0.00021	0.000134	0.000061	0.000143	0.000174	<0.0005	<0.0005	<0.0005	0.00131	0.00058	<0.0004	0.002	0.14	-	-
T-Li	mg/L	0.077	0.0752	0.00516	0.00761	0.0532	0.00565	0.0172	0.0201	0.0488	0.0378	0.0231	0.135	0.0813	-	-	-	-
T-Mg	mg/L	417	397	29.7	39.3	299	28.9	122	139	322	250	147	905	522	-	-	-	-
T-Mn	mg/L	0.0108	0.00839	0.0208	0.00992	0.00753	0.0223	0.025	0.0111	0.0124	0.0158	0.0192	0.00643	0.0126	-	-	-	-
T-Hg	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00002 [2]	-	0.000016	-
T-Mo	mg/L	0.0041	0.00398	0.00062	0.000748	0.0029	0.000666	0.00194	0.00147	0.00325	0.00259	0.0016	0.00799	0.00461	-	-	-	-
T-Ni	mg/L	<0.008	0.000481	0.00076	0.000243	0.000312	0.000525	0.000546	0.000338	<0.0002	0.000542	<0.0004	<0.0008	<0.0008	0.0083	-	-	-
T-P	mg/L	0.102	0.023	<0.05	0.013	0.019	0.023	0.038	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	-	-	-	-
T-K	mg/L	138	125	10	12.2	84.7	9.41	36.5	46.6	108	81.5	45.4	266	161	-	-	-	-
T-Se	mg/L	<0.001	0.00108	<0.0005	0.00032	0.00079	<0.0001	<0.0001	<0.001	<0.001	0.00729	<0.0005	0.001	<0.001	-	-	-	-
T-Si	mg/L	6.16	2.78	3.4	3.28	2.82	4.43	3.57	0.63	7.63	2.42	3.2	2.5	3.8	-	-	-	-
T-Ag	mg/L	<0.0001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.0001	<0.0001	<0.0001	<0.00005	<0.0001	<0.0001	0.0015	0.003	-	0.0075
T-Na	mg/L	3260	2880	266	325	1970	207	968	1130	2830	1970	1230	6990	4370	-	-	-	-
T-Sr	mg/L	2.64	2.17	0.204	0.27	1.81	0.18	0.725	0.799	2.02	1.48	0.895	5.18	3.24	-	-	-	-
T-S	mg/L	323	318	22.2	31.1	221	21.6	92.8	105	247	187	<0.6	654	402	-	-	-	-
T-Te	mg/L	<0.0005	0.000121	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	0.000825	<0.0005	<0.0005	<0.0005	<0.001	<0.001	-	-	-	-
T-Tl	mg/L	<0.00004	0.0000067	<0.00002	0.0000044	0.000005	0.0000083	0.0000109	<0.00004	<0.00004	<0.00004	<0.00002	<0.00004	<0.00004	-	-	-	-
T-Th	mg/L	<0.0001	<0.00001	<0.0001	0.000015	0.000013	0.000038	0.000043	<0.0001	<0.0001	<0.0001	<0.00002	<0.0002	<0.0002	-	-	-	-
T-Sn	mg/L	0.0058	0.000075	<0.0002	0.000082	<0.00005	0.000172	<0.00005	<0.0005	<0.0005	<0.0005	<0.00004	0.0024	<0.0004	-	-	-	-
T-Ti	mg/L	<0.002	0.0107	0.0421	0.0179	0.0114	0.0602	0.0555	0.0177	0.0151	0.026	0.0174	<0.01	<0.01	-	-	-	-
T-W	mg/L	<0.0005	<0.0002	<.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0002	<0.002	<0.002	-	-	-	-
T-U	mg/L	0.00101	0.000983	0.000135	0.000144	0.000714	0.00013	0.000369	0.000384	0.000797	0.00069	0.000417	0.00202	0.00127	-	-	-	-
T-V	mg/L	<0.002	0.00117	0.0021	0.00052	0.00052	0.00232	0.00265	<0.002	<0.002	<0.002	0.0011	<0.002	<0.002	0.05	-	-	-
T-Zn	mg/L	**0.0167**	0.0015	0.0045	0.0024	0.0032	0.0034	0.0032	<0.01	<0.01	<0.01	<0.004	<0.008	**0.0108**	0.01	0.055	-	-
T-Zr	mg/L	<0.0002	0.000047	0.00017	0.000049	0.000056	0.000189	0.000138	<0.0002	<0.0002	<0.0002	0.00013	<0.0002	<0.0002	-	-	-	-
Speciated Metals																		
Methyl Mercury	ng/L	<0.050	-	-	<0.024	<0.024	<0.023	<0.023	<0.025	<0.050	0.034	<0.050	0.034	-	-	-	-	-
Polycyclic Aromatic Hydrocarbons (PAH)																		
Acenaphthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	0.006	-	-	-
Acenaphthylene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	-	-	-	-
Acridine	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	-	-	-	-
Benz(a)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	-	-	-	-
Benzo(a)pyrene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	0.00001	-	-	-
Benzo(b+j)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Benzo(g-h-i)perylene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Benzo(k)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
2-Chloronaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	-	-	-	-
Chrysene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	0.0001	-	-	-
Dibenz(a-h)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	-	-	-	-
Fluoranthene	mg/L	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	-	<0.00003	<0.00003	-	-	-	-
Fluorene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	0.012	-	-	-
Indeno(1-2-3-cd)pyrene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
1-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	0.001	-	-	-
2-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	0.001	-	-	-
Naphthalene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	0.001	-	0.0014	-
Phenanthrene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	-	-	-	-
Pyrene	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	-	<0.00002	<0.00002	-	-	-	-
Quinoline	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Total PAHs	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	-	-	-	-
Volatile Organic Compounds (VOC)																		
Benzene	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.11	-	0.11	-
Ethylbenzene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.25	-	0.025	-
Methyl-tert-butyl-ether	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	0.44	5	-
Styrene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Toluene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	0.0007	-	-	0.215	-
Total Xylenes	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	-	-	-
Total BTEX	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Dioxins and Furans																		
2-3-7-8-TCDD	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDD	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDD	pg/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
2-3-7-8-TCDF	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
1-2-3-4-7-8-9-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDF	pg/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
Total Furan TEQ	pg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Total Dioxin Furan TEQ	pg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Microbiological Parameters																		
E.coli	MPN/100 mL	<1	3	23	8	1	3	17	1	3	7.8	461	9	7	-	-	-	-

Notes:
Results in **bold**: Exceedances of Long Term BC WQG
Results underlined: Exceedances of Short Term BC WQG
Results highlighted in grey: Exceedances of Long Term CCME guidelines
Results in red: Exceedances of Short Term CCME guidelines
[1] Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. These guidelines were not screened as there were no discharges to evaluate.
[2] The BC WQG for mercury is derived using the maximum methyl mercury concentration in the dataset (0.082 pg/L) and the total mercury detection limit of 0.00001 mg/L.

Table A-19: Water Quality Results for Marine Water Monitoring Station WQR1 - 2m Above Seafloor May 2020 to February 2021

Sample Date		**2020-05-20**	**2020-06-22**	**2020-07-21**	**2020-08-24**	**2020-09-28**	**2020-10-20**	**2020-10-27**	**2020-11-03**	**2020-11-10**	**2020-11-18**	**2020-12-14**	**2021-01-27**	**2021-02-25**	**Marine Water Aquatic Life Water Quality Guidelines**			
Laboratory ID		**0051710-09**	**0062209-09**	**0071996-09**	**0082292-09**	**0093017-09**	**20J1961-09**	**20J2778-09**	**20K0360-09**	**20K1261-09**	**20K2100-09**	**20L1589-09**	**21A2590-09**	**21B2778-09**	**BC**	**BC**	**CCME**	**CCME**
Station Name		**WQR1-1**	**WQR1-1**	**WQR 1-1**	**WQ R1-1**	**WQR1-1**	**WQR1-1**	**WQR1-1**	**WQR1-1**	**WQR1-1**	**WQR1-1**	**WQR1-1**	**WQR1-1**	**WQR1-1**	**Long Term**	**Short Term**	**Long Term**	**Short Term**
Field Parameters																		
Temperature	°C	8.6	8.9	9.5	9.6	9.9	9.7	9.6	9.6	9.5	9.7	9.7	8.8	-	Narrative [1]	-	Narrative [1]	-
Dissolved Oxygen (%)-field	%	-	-	-	-	-	-	55.1	49.4	48.2	46.2	46.2	-	-	-	-	-	-
Dissolved Oxygen (mg/L)-field	mg/L	7.06	6.37	6.69	5.79	6.59	5.01	5.21	4.66	18.1	4.34	4.34	6.30	-	-	-	>8	-
SPC	µS/cm	-	-	-	-	-	-	-					-	-	-			
Conductivity	µS/cm	31954	32158	45595	32859	31810	32242	32122	32523	32958	32570	32570	31190	-	-			
Salinity	ppt	30.0	29.9	29.3	30.1	-	29.3	29.3	29.7	30.2	29.7	29.7	29.0	-	Narrative [1]	-	Narrative [1]	-
TDS-field	mg/L	-	-	-	-	-	-	-					-	-	-			
pH-field	pH units	7.48	7.38	-	-	-	-	7.29	7.40	7.30	7.32	7.32	7.35	-	7.0 - 8.7	7.0 - 8.7	7.0 - 8.7	-
ORP	mV	214.4	200.9	-	-	-	-	135.2	149.0	215.7	126.9	126.9	-	-	-			
Turbidity	NTU	0.27	0.30	0.80	0.40	0.77	0.50	0.31	0.25	0.1	-0.01	-0.01	0.18	-	Narrative [1]	Narrative [1]	Narrative [1]	-
Depth	m	38.0	31.6	30.1	29.7	30.0	30.0	39.0	-	36.7	-	-	29.5	-	-			
General Parameters																		
Dissolved Oxygen-lab	mg/L	10	10	9.5	9.1	9.2	9	9.2	10	9.6	9.1	8.6	9.9	10.2	-	-	>8	-
pH-lab	pH units	7.62	**6.95**	7.64	7.67	7.46	7.55	7.45	7.62	7.49	7.52	7.65	7.56	7.59	7.0 - 8.7	-	7.0 - 8.7	-
TSS	mg/L	<2	17.4	4	3.2	3.8	3.6	3	2.6	2.4	3.8	3.4	3.2	4.2	Narrative [1]	Narrative [1]	Narrative [1]	-
Total Hardness	mg/L	6010	305	5320	5540	5080	6180	5520	5210	5710	5850	6820	5500	5950	-	-	-	-
N-NH3	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-
N-NO3	mg/L	**<5**	<0.01	<1	<1	<1	**<10**	<1	<1	1.04	<1	<1	<1	<1	3.7	-	45	339
Total Metals																		
T-Al	mg/L	0.0115	1.17	0.0525	0.0361	0.0635	0.0602	0.0227	0.0281	0.0246	0.0301	0.0189	0.0148	0.0111	-	-	-	-
T-Sb	mg/L	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	-	0.27 [Sb(III)]	-	-
T-As	mg/L	0.00173	<0.001	0.00238	0.00197	0.00146	0.00183	0.00171	0.00164	0.00185	0.00236	0.00232	0.00165	0.00162	-	0.0125	0.0125	-
T-Ba	mg/L	<0.01	0.0253	0.0122	0.011	0.0123	0.0126	0.0121	0.0109	0.0139	0.0141	0.0128	<0.01	0.0112	-	-	-	-
T-Be	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.1	-	-	-
T-Bi	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
T-B	mg/L	**4.36**	0.256	**4.08**	**3.85**	**4.41**	**4.35**	**3.91**	**4.2**	**4.21**	**3.94**	**4.13**	**4.07**	**4.36**	1.2	-	-	-
T-Cd	mg/L	0.000078	<0.00002	0.000063	0.000088	0.000103	**0.000126**	**0.000139**	0.000075	0.000077	0.000048	0.000101	0.000078	0.000089	0.00012	-	0.00012	-
T-Ca	mg/L	451	21.8	284	350	390	405	381	365	433	411	472	388	414	-	-	-	-
T-Cr	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0015 [Cr(VI)]	-	0.0015 [Cr(VI)]	-
T-Co	mg/L	<0.0002	0.00058	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
T-Cu	mg/L	0.00115	**0.00346**	0.00181	0.00156	0.00083	0.00157	**0.00442**	**0.00274**	0.00198	<0.0008	0.0014	<0.0008	<0.0008	0.002	0.003	-	-
T-Fe	mg/L	0.024	1.07	0.052	0.037	0.043	0.053	0.027	0.037	0.031	<0.02	0.022	<0.02	<0.02	-	-	-	-
T-Pb	mg/L	0.00108	0.00094	0.00078	<0.0004	0.00041	0.00166	0.00178	0.00126	0.00119	<0.0004	<0.0004	<0.0004	<0.0004	0.002	0.14	-	-
T-Li	mg/L	0.172	0.00995	0.155	0.152	0.158	0.171	0.148	0.171	0.187	0.187	0.166	0.151	0.2	-	-	-	-
T-Mg	mg/L	1190	61	1120	1130	998	1250	1110	1040	1120	1170	1370	1100	1190	-	-	-	-
T-Mn	mg/L	0.00278	0.0342	0.00526	0.00464	0.0116	0.0121	0.00701	0.00883	0.0124	0.00829	0.00659	0.00257	0.00274	-	-	-	-
T-Hg	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00002 [2]	-	0.000016	-
T-Mo	mg/L	0.0102	0.00076	0.00947	0.00997	0.0104	0.011	0.0105	0.00972	0.0109	0.00984	0.0125	0.011	0.0115	-	-	-	-
T-Ni	mg/L	0.00117	<0.0008	0.00463	<0.0008	0.00152	0.00107	0.00106	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	0.0083	-	-	-
T-P	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.121	0.148	0.11	<0.1	0.137	0.135	0.152	-	-	-	-
T-K	mg/L	401	18.8	309	339	322	348	318	322	353	354	433	345	383	-	-	-	-
T-Se	mg/L	<0.001	<0.001	<0.001	0.00307	<0.001	<0.001	0.00225	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
T-Si	mg/L	<2	2.1	2	<2	<2	<2	<2	<2	<2	<2	<2	2	2.4	-	-	-	-
T-Ag	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0015	0.003	-	0.0075
T-Na	mg/L	8690	506	9380	9780	8930	9260	8690	8780	7570	9670	10900	9330	9830	-	-	-	-
T-Sr	mg/L	7.38	0.379	6.87	7.05	6.94	7.63	7.21	6.94	7.97	8	9.06	7.34	7.99	-	-	-	-
T-S	mg/L	932	45.4	866	882	837	1030	929	909	967	985	1220	873	979	-	-	-	-
T-Te	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
T-Tl	mg/L	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	-	-	-	-
T-Th	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
T-Sn	mg/L	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	0.00041	<0.0004	<0.0004	<0.0004	0.00112	<0.0004	<0.0004	-	-	-	-
T-Ti	mg/L	<0.01	0.0823	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	-
T-W	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	-	-	-
T-U	mg/L	0.00283	0.000208	0.00273	0.00302	0.00295	0.00307	0.0029	0.00271	0.00306	0.0029	0.00324	0.00284	0.00309	-	-	-	-
T-V	mg/L	0.0026	0.0033	<0.002	0.0028	<0.002	0.0074	0.0029	0.0032	<0.002	<0.002	0.0028	<0.002	0.0026	0.05	-	-	-
T-Zn	mg/L	<0.008	<0.008	<0.008	<0.008	**0.0175**	**0.0157**	<0.008	**0.0153**	<0.008	<0.008	<0.008	<0.008	<0.008	0.01	0.055	-	-
T-Zr	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
Speciated Metals																		
Methyl Mercury	ng/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Polycyclic Aromatic Hydrocarbons (PAH)																		
Acenaphthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.006	-	-	-
Acenaphthylene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
Acridine	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	-	-	-
Benz(a)anthracene	mg/L	<0.00001	<0.00001	0.000015	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	-	-	-
Benzo(a)pyrene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	-	-	-
Benzo(b+j)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Benzo(g-h-i)perylene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Benzo(k)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
2-Chloronaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-
Chrysene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0001	-	-	-
Dibenz(a-h)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	-	-	-
Fluoranthene	mg/L	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	-	-	-	-
Fluorene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.012	-	-	-
Indeno(1-2-3-cd)pyrene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
1-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.001	-	-	-
2-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.001	-	-	-
Naphthalene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.001	-	0.0014	-
Phenanthrene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-
Pyrene	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	-	-	-	-
Quinoline	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000057	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Total PAHs	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
Volatile Organic Compounds (VOC)																		
Benzene	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.11	-	0.11	-
Ethylbenzene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.25	-	0.025	-
Methyl-tert-butyl-ether	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	0.44	5	-
Styrene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Toluene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	0.215	-
Total Xylenes	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	-	-	-
Total BTEX	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Dioxins and Furans																		
2-3-7-8-TCDD	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDD	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDD	pg/L	<4	<4	<4	<4	<4	9	<4	<4	<4	5	<4	<4	<4	-	-	-	-
2-3-7-8-TCDF	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-6-7-8-HxCDF	pg/L	<2	4	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
1-2-3-4-7-8-9-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDF	pg/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
Total Furan TEQ	pg/L	0	0.4	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Total Dioxin Furan TEQ	pg/L	0	0.4	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Microbiological Parameters																		
E.coli	MPN/100 mL	<1.8	10	<1	9	1	<1.8	<1	<1	<1	<1.8	<1	4	<1.8	-	-	-	-

Notes:
Results in **bold**: Exceedances of Long Term BC WQG
Results underlined: Exceedances of Short Term BC WQG
Results highlighted in grey: Exceedances of Long Term CCME guidelines
Results in red: Exceedances of Short Term CCME guidelines
[1] Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. These guidelines were not screened as there were no discharges to evaluate.
[2] The BC WQG for mercury is derived using the maximum methyl mercury concentration in the dataset (0.082 pg/L) and the total mercury detection limit of 0.00001 mg/L.

Table A-20: Water Quality Results for Marine Water Monitoring Station WQR1 - 2m Above Seafloor March to December 2021

Sample Date		**2021-03-25**	**2021-04-22**	**2021-05-18**	**2021-05-26**	**2021-06-01**	**2021-06-08**	**2021-06-15**	**2021-07-20**	**2021-08-25**	**2021-09-28**	**2021-10-26**	**2021-11-23**	**2021-12-14**	**Marine Water Aquatic Life Water Quality Guidelines**			
Laboratory ID		**21C3505-10**	**21D2478-09**	**21E1990-09**	**21E2917-09**	**21F0167-09**	**21F1056-09**	**21F2014-09**	**21G2414-09**	**21H3040-09**	**21I3814-09**	**21J3514-09**	**21K3046-09**	**21L2125-09**	**BC**	**BC**	**CCME**	**CCME**
Station Name		**WQR1-1**	**WQR1-1**	**WQR1-1**	**WQR1-1**	**WQR1-1**	**WQR1-1**	**WQR1-1**	**WQR1-1**	**WQR1-1**	**WQR1-1**	**WQR1-1**	**WQR1-1**	**WQR1-1**	**Long Term**	**Short Term**	**Long Term**	**Short Term**
Field Parameters																		
Temperature	°C	8.3	8.4	8.5	8.7	8.5	8.6	8.5	13.6	10.1	9.1	10.2	9.9	9.7	Narrative [1]	-	Narrative [1]	-
Dissolved Oxygen (%)-field	%	70.2	61.2	61.5	65.2	57.0	53.4	58.5	93.1	58.9	54.7	51.5	-	66.5	-	-	-	-
Dissolved Oxygen (mg/L)-field	mg/L	6.82	5.93	5.93	6.28	5.49	5.13	5.64	8.66	-	5.14	4.82	6.54	6.27	-	-	>8	-
SPC	µS/cm	45634	45920	46173	45739	46561	46892	46114	28848	45603	33974	44375	44273	45452	-	-	-	-
Conductivity	µS/cm	45634	31401	31648	31480	31926	32181	31601	22585	-	-	31844	31471	32163	-	-	-	-
Salinity	ppt	-	29.5	29.7	29.4	30.0	30.2	29.6	17.8	-	31.6	-	28.4	29.3	Narrative [1]	-	Narrative [1]	-
TDS-field	mg/L	-	29848	30012	29731	30264	30480	29974	-	-	-	-	28777	29543	-	-	-	-
pH-field	pH units	7.22	7.34	7.21	7.43	7.33	7.37	7.34	7.45	7.58	7.30	7.23	7.47	7.52	7.0 - 8.7	7.0 - 8.7	7.0 - 8.7	-
ORP	mV	199.1	188.2	162.1	156.4	167.3	192.2	176.1	81.0	-	223.6	5.0	121.7	185.0	-	-	-	-
Turbidity	NTU	0.56	0.21	0.12	0.20	0.31	0.79	2.21	3.07	-	0.66	-0.60	0.67	0.31	Narrative [1]	Narrative [1]	Narrative [1]	-
Depth	m	26.7	26.5	27.6	26.0	27.1	27.5	26.8	30.4	29.3	29.1	27.7	28.9	24.5	-	-	-	-
General Parameters																		
Dissolved Oxygen-lab	mg/L	9.5	10.3	10.9	9.2	11.2	10.2	10.1	10	10.3	10.1	9.1	9.6	11.5	-	-	>8	-
pH-lab	pH units	7.61	7.41	7.69	7.47	7.4	7.37	7.38	7.47	7.69	7.52	7.49	7.4	7.53	7.0 - 8.7	-	7.0 - 8.7	-
TSS	mg/L	2.2	2.2	<2	8	5.2	3.6	2.4	2.4	<2	<2	3.8	3.4	<2	Narrative [1]	Narrative [1]	Narrative [1]	-
Total Hardness	mg/L	6170	5880	6030	6060	5880	5760	5750	5360	5450	5550	5440	5710	5600	-	-	-	-
N-NH3	mg/L	0.094	<0.05	<0.05	<0.05	0.081	0.095	<0.05	<0.05	0.051	<0.05	<0.05	<0.05	<0.05	-	-	-	-
N-NO3	mg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	3.7	-	45	339
Total Metals																		
T-Al	mg/L	0.0214	0.0182	<0.01	0.0152	0.029	0.0223	0.0377	0.0338	0.0148	0.0478	0.0263	1.1	<0.01	-	-	-	-
T-Sb	mg/L	<0.0005	<0.0005	0.00056	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0004	<0.0004	-	0.27 [Sb(III)]	-	-
T-As	mg/L	0.00184	0.00162	0.00168	0.00146	0.00156	0.00152	0.0015	0.00149	0.00161	0.00146	0.00157	0.00137	0.00204	-	0.0125	0.0125	-
T-Ba	mg/L	0.0127	0.011	0.0114	0.00967	0.0159	0.012	0.0104	0.0113	0.0102	0.0112	0.0117	0.0314	0.0113	-	-	-	-
T-Be	mg/L	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	0.1	-	-	-
T-Bi	mg/L	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	-	-	-	-
T-B	mg/L	**4.88**	**4.44**	**5.65**	**4.09**	**3.91**	**3.95**	**4.02**	**3.82**	**4.01**	**3.74**	**3.74**	**3.81**	**4.75**	1.2	-	-	-
T-Cd	mg/L	0.0000979	0.0000757	0.00009	0.0000895	0.0000886	0.0000724	0.0001	0.000072	0.0000851	0.0000757	0.000082	0.00008	0.000072	0.00012	-	0.00012	-
T-Ca	mg/L	397	384	406	413	366	386	362	323	393	350	328	343	336	-	-	-	-
T-Cr	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	0.0013	<0.001	0.0015 [Cr(VI)]	-	0.0015 [Cr(VI)]	-
T-Co	mg/L	<0.00005	<0.00005	<0.0002	0.0000543	0.0000525	<0.00005	0.0000629	<0.00005	<0.00005	0.0000793	0.00005	<0.0002	<0.0002	-	-	-	-
T-Cu	mg/L	<0.001	0.00101	<0.0008	**0.00225**	<0.001	<0.001	<0.001	<0.001	**0.003**	0.00108	0.00101	0.00151	<0.0008	0.002	0.003	-	-
T-Fe	mg/L	<0.02	0.0209	<0.02	0.0235	0.0211	<0.02	0.05	0.0275	<0.02	0.0309	0.021	0.043	0.033	-	-	-	-
T-Pb	mg/L	<0.0005	<0.0005	<0.0004	0.000583	0.0017	<0.0005	<0.0005	0.000702	**0.00375**	<0.0005	<0.0002	<0.0004	<0.0004	0.002	0.14	-	-
T-Li	mg/L	0.216	0.182	0.23	0.171	0.159	0.177	0.164	0.16	0.159	0.158	0.147	0.178	0.174	-	-	-	-
T-Mg	mg/L	1260	1200	1220	1220	1210	1170	1180	1110	1080	1130	1120	1180	1160	-	-	-	-
T-Mn	mg/L	0.0027	0.00234	0.00229	0.0028	0.00286	0.00287	0.00513	0.00416	0.00334	0.0081	0.0106	0.0174	0.00504	-	-	-	-
T-Hg	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00002 [2]	-	0.000016	-
T-Mo	mg/L	0.0113	0.0109	0.0112	0.0112	0.0114	0.0114	0.0105	0.00949	0.0101	0.011	0.00965	0.0106	0.0101	-	-	-	-
T-Ni	mg/L	<0.003	0.000706	<0.0008	0.000549	0.000708	0.000638	0.00231	0.000534	0.000237	0.000622	<0.0004	0.00131	<0.0008	0.0083	-	-	-
T-P	mg/L	0.242	0.155	<0.1	<0.1	<0.1	0.137	<0.1	<0.1	<0.1	<0.1	0.077	<0.1	<0.1	-	-	-	-
T-K	mg/L	373	382	376	374	367	345	351	319	336	355	288	341	361	-	-	-	-
T-Se	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00421	<0.001	<0.001	0.00696	<0.0005	<0.001	<0.001	-	-	-	-
T-Si	mg/L	4.1	2.21	<2	1.36	2.44	1.99	2.43	<0.5	10.3	2.24	1.3	<2	2.4	-	-	-	-
T-Ag	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	<0.0001	<0.0001	0.0015	0.003	-	0.0075
T-Na	mg/L	10000	9270	10700	9450	9780	8090	9560	8730	9380	8780	8860	8840	9690	-	-	-	-
T-Sr	mg/L	8.02	6.99	7.42	7	7.03	6.88	6.97	6.3	6.92	7.1	5.94	6.69	7.38	-	-	-	-
T-S	mg/L	978	946	934	842	805	818	925	809	842	818	0.8	835	902	-	-	-	-
T-Te	mg/L	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	-	-	-	-
T-Tl	mg/L	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	0.000055	<0.00004	<0.00004	<0.00004	<0.00002	<0.00004	<0.00004	-	-	-	-
T-Th	mg/L	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00002	<0.0002	<0.0002	-	-	-	-
T-Sn	mg/L	<0.0005	<0.0005	<0.0004	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00004	<0.0004	<0.0004	-	-	-	-
T-Ti	mg/L	0.00318	<0.002	<0.01	<0.002	<0.002	<0.002	0.00486	<0.002	<0.002	0.00278	<0.005	<0.01	<0.01	-	-	-	-
T-W	mg/L	<0.0005	<0.0005	<002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.002	<002	-	-	-	-
T-U	mg/L	0.003	0.00303	0.00309	0.00292	0.00293	0.00285	0.00282	0.00259	0.00259	0.00273	0.00274	0.00274	0.00266	-	-	-	-
T-V	mg/L	<0.002	<0.002	0.0026	0.00365	<0.002	<0.002	<0.002	0.00203	0.00248	<0.002	0.0013	<0.002	<0.002	0.05	-	-	-
T-Zn	mg/L	<0.01	<0.01	<0.008	<0.01	<0.01	**0.0134**	**0.0111**	<0.01	<0.01	<0.01	<0.004	<0.008	<0.008	0.01	0.055	-	-
T-Zr	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0002	<0.0002	-	-	-	-
Speciated Metals																		
Methyl Mercury	ng/L	<0.050	-	-	<0.024	<0.024	<0.023	<0.023	0.028	<0.050	<0.047	<0.050	0.031	-	-	-	-	-
Polycyclic Aromatic Hydrocarbons (PAH)																		
Acenaphthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	0.006	-	-	-
Acenaphthylene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	-	-	-	-
Acridine	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	-	-	-	-
Benz(a)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	-	-	-	-
Benzo(a)pyrene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	0.00001	-	-	-
Benzo(b+j)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Benzo(g-h-i)perylene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Benzo(k)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
2-Chloronaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	-	-	-	-
Chrysene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	0.0001	-	-	-
Dibenz(a-h)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	-	-	-	-
Fluoranthene	mg/L	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	-	<0.00003	<0.00003	-	-	-	-
Fluorene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	0.012	-	-	-
Indeno(1-2-3-cd)pyrene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
1-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	0.001	-	-	-
2-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	0.001	-	-	-
Naphthalene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	0.001	-	0.0014	-
Phenanthrene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	-	-	-	-
Pyrene	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	-	<0.00002	<0.00002	-	-	-	-
Quinoline	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Total PAHs	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	-	-	-	-
Volatile Organic Compounds (VOC)																		
Benzene	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.11	-	0.11	-
Ethylbenzene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.25	-	0.025	-
Methyl-tert-butyl-ether	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	0.44	5	-
Styrene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Toluene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	-	0.215	-
Total Xylenes	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	-	-	-
Total BTEX	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Dioxins and Furans																		
2-3-7-8-TCDD	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDD	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDD	pg/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
2-3-7-8-TCDF	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
1-2-3-4-7-8-9-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDF	pg/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
Total Furan TEQ	pg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Total Dioxin Furan TEQ	pg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Microbiological Parameters																		
E.coli	MPN/100 mL	<1	<1	1	1	<1	<1	<1	<1	2	<1.8	10	2	1	-	-	-	-

Notes:
Results in **bold**: Exceedances of Long Term BC WQG
Results underlined: Exceedances of Short Term BC WQG
Results highlighted in grey: Exceedances of Long Term CCME guidelines
Results in red: Exceedances of Short Term CCME guidelines
[1] Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. These guidelines were not screened as there were no discharges to evaluate.
[2] The BC WQG for mercury is derived using the maximum methyl mercury concentration in the dataset (0.082 pg/L) and the total mercury detection limit of 0.00001 mg/L.

Table A-21: Water Quality Results for Marine Water Monitoring Station WQR2 - 2m Below Surface May 2020 to February 2021

Sample Date		2020-05-20	2020-06-22	2020-07-21	2020-08-24	2020-09-28	2020-10-20	2020-10-20	2020-10-27	2020-11-03	2020-11-10	2020-11-18	2020-12-14	2021-01-27	2021-02-25	Marine Water Aquatic Life Water Quality Guidelines			
Laboratory ID		**0051710-12**	**0062209-11**	**0071996-12**	**0082292-12**	**0093017-12**	**20J1961-12**	**20J1961-14**	**20J2778-12**	**20K0360-12**	**20K1261-12**	**20K2100-12**	**20L1589-12**	**21A2590-12**	**21B2778-12**	**BC**	**BC**	**CCME**	**CCME**
Station Name		**WQ R2-2**	**WQR2-2**	**WQ R 2-2**	**WQ R2-2**	**WQR2-2**	**WQR 2-2**	**QR2-2 Duplic**	**WQR2-2**	**WQR2-2**	**WQR2-2**	**WQR2-2**	**WQR2-2**	**WQR2-2**	**WQR2-2**	**Long Term**	**Short Term**	**Long Term**	**Short Term**
Field Parameters																			
Temperature	°C	10.1	11.1	13.6	14.5	12.3	9.8	-	7.9	8.1	6.2	-	6.7	7.0	-	Narrative [1]	-	Narrative [1]	-
Dissolved Oxygen (%)-field	%	-	-	-	-	-	-	-	91.1	97.7	85.5	-	86.1	-	-	-	-	-	-
Dissolved Oxygen (mg/L)-field	mg/L	9.25	10.28	9.48	8.47	10.62	10.94	-	9.65	10.63	9.6	-	9.20	8.97	-	-	-	>8	-
SPC	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Conductivity	µS/cm	5435	9504	4495	25267	5725	5872	-	19340	14322	15247	-	21438	26325	-	-	-	-	-
Salinity	ppt	4.2	7.5	2.4	19.7	-	4.6	-	17.6	12.6	14.3	-	20.4	25.3	-	Narrative [1]	-	Narrative [1]	-
TDS-field	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH-field	pH units	8.18	7.75	8.40	7.75	7.89	7.91	-	7.89	7.67	7.70	-	7.57	7.76	-	7.0 - 8.7	7.0 - 8.7	7.0 - 8.7	-
ORP	mV	183.3	178.6	-	-	-	-	-	111.4	126.2	167.1	-	125.9	-	-	-	-	-	-
Turbidity	NTU	0.65	13.40	14.45	0.65	11.27	2.56	-	0.79	2.66	2.2	-	0.21	0.26	-	Narrative [1]	Narrative [1]	Narrative [1]	-
Depth	m	2.1	2.1	1.1	2.1	1.0	1.0	-	10.8	-	11.0	-	-	2.0	-	-	-	-	-
General Parameters																			
Dissolved Oxygen-lab	mg/L	10.8	9.3	10	9.7	9.5	9.7	-	10.4	9.8	10	9.7	10.7	9.9	10.7	-	-	>8	-
pH-lab	pH units	7.88	7.06	7.15	7.9	7.39	7.35	-	7.68	7.5	7.53	7.57	7.70	7.56	7.59	7.0 - 8.7	-	7.0 - 8.7	-
TSS	mg/L	4.2	14.6	13.8	4.6	8	<2	2	<2	2.6	3.2	11	2.2	4	3.8	Narrative [1]	Narrative [1]	Narrative [1]	-
Total Hardness	mg/L	1780	569	407	2990	710	923	934	2850	1330	3060	1320	3300	4930	4590	-	-	-	-
N-NH3	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-
N-NO3	mg/L	2.54	<0.01	<0.01	<1	<1	**<10**	-	<1	<1	<1	<1	<1	<1	<1	3.7	-	45	339
Total Metals																			
T-Al	mg/L	0.219	0.903	0.727	0.181	0.509	0.159	0.151	0.049	0.207	0.139	0.374	0.0374	0.0177	0.0243	-	-	-	-
T-Sb	mg/L	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	-	0.27 [Sb(III)]	-	-
T-As	mg/L	<0.001	<0.001	<0.001	0.00147	<0.001	<0.001	<0.001	0.00107	<0.001	0.00118	<0.001	0.00152	0.00127	0.00122	-	0.0125	0.0125	-
T-Ba	mg/L	0.0112	0.0226	0.019	0.0307	0.0183	0.0127	0.0128	0.0137	0.0103	0.0153	0.0155	0.0126	0.0104	0.0108	-	-	-	-
T-Be	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.1	-	-	-
T-Bi	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
T-B	mg/L	**1.41**	0.502	0.403	**2.11**	0.667	0.75	0.763	**2.14**	1.13	**2.4**	0.953	**2.3**	**3.83**	**3.46**	1.2	-	-	-
T-Cd	mg/L	0.000028	<0.00002	<0.00002	0.000061	0.000026	0.000027	0.000026	0.000048	0.00003	0.000049	<0.00002	0.000052	0.000078	0.000071	0.00012	-	0.00012	-
T-Ca	mg/L	133	40.2	23.2	185	57.6	64	65.5	196	96.6	233	97.4	232	357	314	-	-	-	-
T-Cr	mg/L	<0.001	<0.001	<0.001	<0.001	0.0012	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0015 [Cr(VI)]	-	0.0015 [Cr(VI)]	-
T-Co	mg/L	<0.0002	0.00047	0.00032	<0.0002	0.00027	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00025	<0.0002	<0.0002	<0.0002	-	-	-	-
T-Cu	mg/L	0.00186	**0.00275**	0.00165	**0.00209**	**0.00339**	0.00093	<0.0008	0.00136	<0.0008	0.00157	0.00099	0.00123	0.00199	<0.0008	0.002	0.003	-	-
T-Fe	mg/L	0.214	0.826	0.58	0.129	0.476	0.18	0.15	0.099	0.144	0.153	0.356	0.108	0.041	0.058	-	-	-	-
T-Pb	mg/L	**0.00252**	<0.0004	0.00079	<0.0004	<0.0004	0.00042	<0.0004	**0.0123**	**0.005**	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	0.002	0.14	-	-
T-Li	mg/L	0.053	0.0173	0.0132	0.0784	0.0228	0.0266	0.027	0.0804	0.0463	0.101	0.0453	0.0904	0.139	0.154	-	-	-	-
T-Mg	mg/L	351	114	84.9	614	137	185	187	574	265	602	260	661	980	925	-	-	-	-
T-Mn	mg/L	0.00869	0.0278	0.0187	0.0131	0.0201	0.0121	0.0119	0.0142	0.00976	0.0144	0.0241	0.0106	0.00555	0.00624	-	-	-	-
T-Hg	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00002 [2]	-	0.000016	-
T-Mo	mg/L	0.00335	0.00128	0.00087	0.00541	0.00163	0.00202	0.00201	0.00573	0.00258	0.0059	0.00255	0.00664	0.00932	0.00872	-	-	-	-
T-Ni	mg/L	0.00159	<0.0008	<0.0008	<0.0008	0.00115	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	0.0083	-	-	-
T-P	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.144	0.101	-	-	-	-
T-K	mg/L	119	34.4	25.4	183	49.2	51.8	52.8	169	88.5	189	88.9	214	305	292	-	-	-	-
T-Se	mg/L	<0.001	<0.001	<0.001	0.00583	0.0014	<0.001	<0.001	0.0061	<0.001	<0.001	<0.001	<0.001	0.00307	<0.001	-	-	-	-
T-Si	mg/L	<2	<2	2.8	<2	2.8	<2	<2	<2	2.3	2.1	4.2	<2	2.8	3.1	-	-	-	-
T-Ag	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.000422	<0.0001	<0.0001	<0.0001	<0.0001	0.0015	0.003	-	0.0075
T-Na	mg/L	2960	954	705	5050	1160	1520	1550	4930	2250	4260	2190	5270	8230	7510	-	-	-	-
T-Sr	mg/L	2.14	0.706	0.527	3.66	0.979	1.17	1.2	3.88	1.77	4.39	1.83	4.54	6.41	6.08	-	-	-	-
T-S	mg/L	278	84.3	67.7	477	116	151	157	493	235	523	232	592	771	774	-	-	-	-
T-Te	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
T-Tl	mg/L	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	-	-	-	-
T-Th	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
T-Sn	mg/L	<0.0004	0.00127	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	0.00409	0.00053	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	-	-	-	-
T-Ti	mg/L	0.0181	0.0631	0.0418	<0.01	0.0275	0.01	0.0103	<0.01	0.0132	<0.01	0.0147	<0.01	<0.01	<0.01	-	-	-	-
T-W	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	-	-	-
T-U	mg/L	0.00087	0.000358	0.000239	0.00162	0.000464	0.000537	0.000559	0.00157	0.000737	0.0017	0.000694	0.00163	0.00266	0.00227	-	-	-	-
T-V	mg/L	<0.002	0.0028	<0.002	0.0031	<0.002	0.0077	0.0073	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.0024	0.05	-	-	-
T-Zn	mg/L	<0.008	<0.008	<0.008	<0.008	**0.0106**	**0.0364**	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	0.01	0.055	-	-
T-Zr	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
Speciated Metals																			
Methyl Mercury	ng/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Polycyclic Aromatic Hydrocarbons (PAH)																			
Acenaphthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.006	-	-	-
Acenaphthylene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
Acridine	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000069	<0.00005	-	-	-	-
Anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	-	-	-
Benz(a)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	0.000014	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	-	-	-
Benzo(a)pyrene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	**0.00005**	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	**0.000013**	<0.00001	0.00001	-	-	-
Benzo(b+j)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	0.000157	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Benzo(g-h-i)perylene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	0.000123	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Benzo(k)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	0.00009	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
2-Chloronaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-
Chrysene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0001	-	-	-
Dibenz(a-h)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	0.000082	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000035	<0.00001	-	-	-	-
Fluoranthene	mg/L	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	-	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	-	-	-	-
Fluorene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.012	-	-	-
Indeno(1-2-3-cd)pyrene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	0.000084	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
1-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.001	-	-	-
2-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.001	-	-	-
Naphthalene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.001	-	0.0014	-
Phenanthrene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-
Pyrene	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	-	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	-	-	-	-
Quinoline	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Total PAHs	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	0.000505	<0.0002	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
Volatile Organic Compounds (VOC)																			
Benzene	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.11	-	0.11	-
Ethylbenzene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.25	-	0.025	-
Methyl-tert-butyl-ether	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	0.44	5	-
Styrene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Toluene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	0.215	-
Total Xylenes	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	-	-	-
Total BTEX	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Dioxins and Furans																			
2-3-7-8-TCDD	pg/L	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDD	pg/L	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDD	pg/L	<3	<3	<3	<3	<3	<3	-	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDD	pg/L	<4	<4	<4	<4	<4	<4	-	22	<4	<4	<4	5	<4	<4	-	-	-	-
2-3-7-8-TCDF	pg/L	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	-	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
1-2-3-4-7-8-9-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	-	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDF	pg/L	<4	<4	<4	<4	<4	<4	-	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
Total Furan TEQ	pg/L	0	0	0	0	0	0	-	0	0	0	0	0	0	0	-	-	-	-
Total Dioxin Furan TEQ	pg/L	0	0	0	0	0	0	-	0	0	0	0	0	0	0	-	-	-	-
Microbiological Parameters																			
E.coli	MPN/100 mL	<1.8	6	9	<1	20	4	-	3	6	2	13	<1	1	<1.8	-	-	-	-

Notes:
Results in **bold**: Exceedances of Long Term BC WQG
Results underlined: Exceedances of Short Term BC WQG
Results highlighted in grey: Exceedances of Long Term CCME guidelines
Results in red: Exceedances of Short Term CCME guidelines
[1] Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. These guidelines were not screened as there were no discharges to evaluate.
[2] The BC WQG for mercury is derived using the maximum methyl mercury concentration in the dataset (0.082 pg/L) and the total mercury detection limit of 0.00001 mg/L.

Table A-22: Water Quality Results for Marine Water Monitoring Station WQR2 - 2m Below Surface March to December 2021

Sample Date		2021-03-25	2021-04-22	2021-05-18	2021-05-26	2021-06-01	2021-06-08	2021-06-15	2021-07-20	2021-08-25	2021-09-28	2021-09-28	2021-10-26	2021-11-23	2021-12-14	Marine Water Aquatic Life Water Quality Guidelines			
Laboratory ID		**21C3505-13**	**21D2478-12**	**21E1990-12**	**21E2917-12**	**21F0167-12**	**21F1056-12**	**21F2014-12**	**21G2414-12**	**21H3040-12**	**21I3814-18**	**21I3814-12**	**21J3514-12**	**21K3046-12**	**21L2125-12**	**BC**	**BC**	**CCME**	**CCME**
Station Name		**WQR2-2**	**WQR2-2**	**WQR2-2**	**WQR2-2**	**WQR2-2**	**WQR2-2**	**WQR2-2**	**WQR2-2**	**WQR2-2**	**QR2-2 Duplic**	**WQR2-2**	**WQR2-2**	**WQR2-2**	**WQR2-2**	**Long Term**	**Short Term**	**Long Term**	**Short Term**
Field Parameters																			
Temperature	°C	8.3	9.0	9.1	10.9	10.8	9.9	9.1	15.4	14.8	-	12.3	8.3	7.5	7.5	Narrative [1]	-	Narrative [1]	-
Dissolved Oxygen (%)-field	%	128.3	124.4	103.9	106.8	101.8	103.2	100.9	89.6	107.1	-	93.8	94.2	90.0	83.2	-	-	-	-
Dissolved Oxygen (mg/L)-field	mg/L	13.27	13.76	11.88	8.19	10.53	11.58	11.48	8.72	-	-	9.27	10.46	9.62	8.57	-	-	>8	-
SPC	µS/cm	31828	11954	2895	6825	18116	1805	3766	8187	10844	-	15908	11826	28928	37114	-	-	-	-
Conductivity	µS/cm	31828	8309	2014	4993	13214	1282	2623	6679	-	-	-	8063	19246	24711	-	-	-	-
Salinity	ppt	-	6.8	1.5	3.8	10.7	0.9	2.0	4.6	-	-	12.6	6.7	17.7	23.3	Narrative [1]	-	Narrative [1]	-
TDS-field	mg/L	-	7769	1882	4437	11775	1173	2448	-	-	-	-	-	18803	24316	-	-	-	-
pH-field	pH units	8.56	8.57	7.31	7.94	8.03	**6.43**	8.20	7.96	8.26	-	-	7.35	7.62	7.71	7.0 - 8.7	7.0 - 8.7	7.0 - 8.7	-
ORP	mV	186.7	212.1	191.0	202.5	193.4	125.9	137.7	114.0	-	-	-	16.5	161.7	227.9	-	-	-	-
Turbidity	NTU	0.76	2.80	8.86	3.77	2.37	19.63	19.40	5.69	-	-	8.38	4.77	1.22	0.32	Narrative [1]	Narrative [1]	Narrative [1]	-
Depth	m	2.0	2.0	2.4	2.1	2.9	2.1	1.8	2.5	2.1	-	2.1	2.1	2.1	2.0	-	-	-	-
General Parameters																			
Dissolved Oxygen-lab	mg/L	11.4	11.3	10.9	9.9	10.9	10.6	10.4	9.8	10.3	-	9.5	9.8	9.6	11.3	-	-	>8	-
pH-lab	pH units	8.27	7.75	7.34	7.5	7.32	7.08	7.1	7.33	7.56	-	7.7	7.37	7.44	7.52	7.0 - 8.7	-	7.0 - 8.7	-
TSS	mg/L	2.6	4.2	10.8	5.3	4.2	4.6	21.5	7.8	6.4	10.6	10.4	9.2	4	2	Narrative [1]	Narrative [1]	Narrative [1]	-
Total Hardness	mg/L	3700	1120	225	724	975	294	392	446	1080	1690	1630	1440	2470	4250	-	-	-	-
N-NH3	mg/L	<0.05	<0.05	<0.05	<0.05	0.117	0.095	0.09	<0.05	<0.05	-	0.051	<0.05	<0.05	<0.05	-	-	-	-
N-NO3	mg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	3.7	-	45	339
Total Metals																			
T-Al	mg/L	0.0435	0.256	0.646	0.294	0.238	0.748	1.35	0.275	0.368	0.455	0.468	0.303	0.0531	0.141	-	-	-	-
T-Sb	mg/L	<0.0005	0.000214	<0.0002	0.000063	0.000067	0.000061	0.000065	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0004	<0.0004	-	0.27 [Sb(III)]	-	-
T-As	mg/L	0.00118	0.000371	0.00054	0.000292	0.000353	0.000241	0.000329	<0.0005	<0.0005	<0.0005	0.000502	0.00056	<0.001	0.00154	-	0.0125	0.0125	-
T-Ba	mg/L	0.0089	0.0101	0.016	0.011	0.011	0.0174	0.0258	0.0126	0.0178	0.022	0.0274	0.0112	0.0121	0.0122	-	-	-	-
T-Be	mg/L	<0.0001	<0.00001	<0.0001	<0.00001	<0.00001	0.000011	0.000015	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	0.1	-	-	-
T-Bi	mg/L	<0.0001	<0.00001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	-	-	-	-
T-B	mg/L	**3.07**	1.09	0.179	0.607	0.678	0.228	0.277	0.395	0.842	**1.24**	1.2	1.06	**1.83**	**3.68**	1.2	-	-	-
T-Cd	mg/L	0.0000539	0.0000193	0.000012	0.0000115	0.0000144	0.0000081	0.0000161	<0.00002	<0.00002	0.0000266	0.0000205	0.000024	0.000039	0.000072	0.00012	-	0.00012	-
T-Ca	mg/L	246	85.5	17.4	53.9	69.2	21.7	27.5	29.6	77.6	114	107	97.4	153	256	-	-	-	-
T-Cr	mg/L	<0.001	0.00043	<0.0005	0.00036	0.00035	0.00054	0.0009	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	0.0015 [Cr(VI)]	-	0.0015 [Cr(VI)]	-
T-Co	mg/L	0.0000576	0.000139	0.00032	0.000159	0.000147	0.000323	0.000578	0.000151	0.000202	0.000274	0.000278	0.00017	<0.0002	<0.0002	-	-	-	-
T-Cu	mg/L	0.00106	0.00187	**0.00974**	0.00114	0.00112	0.00155	**0.00292**	<0.001	0.00125	0.00181	**0.00205**	0.0018	**0.00204**	<0.0008	0.002	0.003	-	-
T-Fe	mg/L	0.0837	0.183	0.557	0.224	0.211	0.59	1.08	0.259	0.305	0.404	0.389	0.306	0.107	0.04	-	-	-	-
T-Pb	mg/L	<0.0005	0.00009	<0.0002	0.000054	<0.00005	0.000121	0.00024	**0.00813**	**0.00386**	<0.0005	<0.0005	<0.0002	<0.0004	<0.0004	0.002	0.14	-	-
T-Li	mg/L	0.133	0.0448	0.00722	0.0249	0.0359	0.0102	0.0118	0.0133	0.031	0.0502	0.048	0.0428	0.0774	0.133	-	-	-	-
T-Mg	mg/L	749	220	44.1	143	195	58.1	78.4	90.4	214	340	331	290	507	877	-	-	-	-
T-Mn	mg/L	0.00694	0.00981	0.0173	0.0101	0.00911	0.0197	0.0329	0.0114	0.0162	0.0169	0.0159	0.0144	0.0104	0.00621	-	-	-	-
T-Hg	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00002 [2]	-	0.000016	-
T-Mo	mg/L	0.00671	0.0223	0.00071	0.00169	0.00209	0.000901	0.000969	0.00301	0.00214	0.00358	0.0033	0.00267	0.00511	0.00765	-	-	-	-
T-Ni	mg/L	<0.003	0.00047	0.00079	0.000326	0.0003	0.000437	0.000754	0.000471	<0.0002	0.000684	0.00057	<0.0004	<0.0008	<0.0008	0.0083	-	-	-
T-P	mg/L	<0.1	0.038	<0.05	0.017	0.021	0.021	0.03	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	-	-	-	-
T-K	mg/L	232	71.7	14.7	41.7	56.7	17.7	24	30.4	72.7	111	106	88.6	153	272	-	-	-	-
T-Se	mg/L	<0.001	0.00129	<0.0005	0.00035	0.00072	<0.0001	<0.0001	<0.001	<0.001	0.00745	0.00734	<0.0005	0.00198	<0.001	-	-	-	-
T-Si	mg/L	4.12	3.22	2.6	3.22	3.11	3.89	4.53	0.69	8.39	2.71	2.86	2.6	3.3	2.7	-	-	-	-
T-Ag	mg/L	<0.0001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	<0.0001	<0.0001	0.0015	0.003	-	0.0075
T-Na	mg/L	5930	1760	398	1060	1370	414	623	727	1910	2680	2590	2400	4080	7330	-	-	-	-
T-Sr	mg/L	4.89	1.62	0.298	0.923	0.955	0.342	0.486	0.509	1.31	2.02	1.95	1.73	2.95	5.54	-	-	-	-
T-S	mg/L	568	184	35.1	107	148	41.6	60.7	75.5	159	255	245	<0.6	377	668	-	-	-	-
T-Te	mg/L	<0.0005	<0.00005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	-	-	-	-
T-Tl	mg/L	<0.00004	0.0000064	<0.00002	0.000005	0.0000046	0.0000074	0.000014	<0.00004	<0.00004	<0.00004	<0.00004	<0.00002	<0.00004	<0.00004	-	-	-	-
T-Th	mg/L	<0.0001	0.000011	<0.0001	0.000016	0.000015	0.000038	0.000054	<0.0001	<0.0001	<0.0001	<0.0001	<0.00002	<0.0002	<0.0002	-	-	-	-
T-Sn	mg/L	<0.0005	0.00016	0.00022	0.000109	0.00009	0.000066	<0.00005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00004	<0.0004	<0.0004	-	-	-	-
T-Ti	mg/L	0.00201	0.0111	0.0317	0.019	0.0168	0.052	0.0823	0.0199	0.0297	0.0317	0.0328	0.0118	<0.01	<0.01	-	-	-	-
T-W	mg/L	<0.0005	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.002	<0.002	-	-	-	-
T-U	mg/L	0.00179	0.000618	0.000191	0.000394	0.000493	0.000208	0.000265	0.000239	0.000531	0.000879	0.000814	0.000754	0.00121	0.002	-	-	-	-
T-V	mg/L	<0.002	0.00085	0.0027	0.0006	0.00066	0.00249	0.00332	<0.002	<0.002	<0.002	<0.002	<0.001	<0.002	<0.002	0.05	-	-	-
T-Zn	mg/L	<0.01	0.0027	0.0085	0.0017	0.0015	0.0026	0.0049	<0.01	<0.01	**0.0784**	<0.01	<0.004	<0.008	<0.008	0.01	0.055	-	-
T-Zr	mg/L	<0.0002	0.000167	0.00012	0.000069	0.000065	0.000192	0.000409	0.000583	<0.0002	<0.0002	<0.0002	0.00011	<0.0002	<0.0002	-	-	-	-
Speciated Metals																			
Methyl Mercury	ng/L	<0.050	-	-	0.033	<0.024	<0.023	<0.023	<0.025	<0.050	0.026	0.031	<0.050	0.034	-	-	-	-	-
Polycyclic Aromatic Hydrocarbons (PAH)																			
Acenaphthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-	<0.00005	<0.00005	0.006	-	-	-
Acenaphthylene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	-	<0.0002	<0.0002	-	-	-	-
Acridine	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00005	<0.00005	<0.00005	-	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Anthracene	mg/L	<0.00001	0.000038	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	-	<0.00001	<0.00001	-	-	-	-
Benz(a)anthracene	mg/L	<0.00001	0.00004	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	-	<0.00001	<0.00001	-	-	-	-
Benzo(a)pyrene	mg/L	<0.00001	**0.00002**	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	-	<0.00001	<0.00001	0.00001	-	-	-
Benzo(b+j)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Benzo(g-h-i)perylene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Benzo(k)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-	<0.00005	<0.00005	-	-	-	-
2-Chloronaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	-	<0.0001	<0.0001	-	-	-	-
Chrysene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-	<0.00005	<0.00005	0.0001	-	-	-
Dibenz(a-h)anthracene	mg/L	<0.00001	<0.000017	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	-	<0.00001	<0.00001	-	-	-	-
Fluoranthene	mg/L	<0.00003	0.000063	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	-	<0.00003	-	<0.00003	<0.00003	-	-	-	-
Fluorene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-	<0.00005	<0.00005	0.012	-	-	-
Indeno(1-2-3-cd)pyrene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-	<0.00005	<0.00005	-	-	-	-
1-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	-	<0.0001	<0.0001	0.001	-	-	-
2-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	-	<0.0001	<0.0001	0.001	-	-	-
Naphthalene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	-	<0.0002	<0.0002	0.001	-	0.0014	-
Phenanthrene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	-	<0.0001	<0.0001	-	-	-	-
Pyrene	mg/L	<0.00002	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	-	<0.00002	-	<0.00002	<0.00002	-	-	-	-
Quinoline	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Total PAHs	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	-	<0.0002	<0.0002	-	-	-	-
Volatile Organic Compounds (VOC)																			
Benzene	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.0005	<0.0005	<0.0005	0.11	-	0.11	-
Ethylbenzene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	0.25	-	0.025	-
Methyl-tert-butyl-ether	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	0.44	5	-
Styrene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Toluene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	0.215	-
Total Xylenes	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	-	-	-	-
Total BTEX	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Dioxins and Furans																			
2-3-7-8-TCDD	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDD	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	<3	<3	<3	<3	-	-	-	-
OCDD	pg/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	<4	<4	<4	<4	-	-	-	-
2-3-7-8-TCDF	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	-	-	-	-
2-3-4-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	-	-	-	-
2-3-4-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	<3	<3	<3	<3	-	-	-	-
1-2-3-4-7-8-9-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	<3	<3	<3	<3	-	-	-	-
OCDF	pg/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	<4	<4	<4	<4	-	-	-	-
Total Furan TEQ	pg/L	0	0	0	0	0	0	0	0	0	-	0	0	0	0	-	-	-	-
Total Dioxin Furan TEQ	pg/L	0	0	0	0	0	0	0	0	0	-	0	0	0	0	-	-	-	-
Microbiological Parameters																			
E.coli	MPN/100 mL	3	3	22	10	2	5	13	3	4	-	17	272	3	2	-	-	-	-

Notes:
Results in **bold**: Exceedances of Long Term BC WQG
Results underlined: Exceedances of Short Term BC WQG
Results highlighted in grey: Exceedances of Long Term CCME guidelines
Results in red: Exceedances of Short Term CCME guidelines
[1] Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. These guidelines were not screened as there were no discharges to evaluate.
[2] The BC WQG for mercury is derived using the maximum methyl mercury concentration in the dataset (0.082 pg/L) and the total mercury detection limit of 0.00001 mg/L.

Table A-23: Water Quality Results for Marine Water Monitoring Station WQR2 - 2m Above Seafloor May 2020 to February 2021

Sample Date		2020-05-20	2020-06-22	2020-07-21	2020-08-24	2020-09-28	2020-10-20	2020-10-20	2020-10-27	2020-11-03	2020-11-10	2020-11-18	2020-12-14	2021-01-27	2021-02-25	Marine Water Aquatic Life Water Quality Guidelines			
Laboratory ID		**0051710-11**	**0062209-12**	**0071996-11**	**0082292-11**	**0093017-11**	**20J1961-13**	**20J1961-11**	**20J2778-11**	**20K0360-11**	**20K1261-11**	**20K2100-11**	**20L1589-11**	**21A2590-11**	**21B2778-11**	**BC**	**BC**	**CCME**	**CCME**
Station Name		**WQR2-1**	**WQR2-1**	**WQR2-1**	**WQR2-1**	**WQR2-1**	**QR2-1 Duplic**	**WQR2-1**	**WQR2-1**	**WQR2-1**	**WQR2-1**	**WQ R2-1**	**WQR2-1**	**WQR2-1**	**WQR2-1**	**Long Term**	**Short Term**	**Long Term**	**Short Term**
Field Parameters																			
Temperature	°C	8.6	8.9	9.4	9.7	10.1	9.8	-	9.5	9.6	9.6	-	9.7	8.8	-	Narrative [1]	-	Narrative [1]	-
Dissolved Oxygen (%)-field	%	-	-	-	-	-	-	-	63	53.7	52.0	-	51.8	-	-	-	-	-	-
Dissolved Oxygen (mg/L)-field	mg/L	6.69	6.47	6.62	6.06	7.05	5.21	-	5.95	5.06	4.9	-	4.88	6.65	-	-	-	>8	-
SPC	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Conductivity	µS/cm	31883	32174	45807	33071	31970	32202	-	32154	32393	32742	-	32406	31223	-	-	-	-	-
Salinity	ppt	29.9	29.9	29.5	30.2	-	29.2	-	29.4	29.5	30.0	-	29.5	29.1	-	Narrative [1]	-	Narrative [1]	-
TDS-field	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH-field	pH units	7.48	7.38	7.42	7.56	7.46	7.50	-	7.63	7.5	7.5	-	7.4	7.68	-	7.0 - 8.7	7.0 - 8.7	7.0 - 8.7	-
ORP	mV	209.8	210.6	-	-	-	-	-	120.7	109.9	185.0	-	148.6	-	-	-	-	-	-
Turbidity	NTU	0.64	0.41	0.87	0.44	0.47	0.37	-	0.41	0.31	0.8	-	-0.01	0.20	-	Narrative [1]	Narrative [1]	Narrative [1]	-
Depth	m	33.3	31.2	29.1	29.6	30.0	30.0	-	39.1	-	36.4	-	-	30.4	-	-	-	-	-
General Parameters																			
Dissolved Oxygen-lab	mg/L	9.8	9	10	9.4	9.3	-	9.6	9.8	9.6	9.9	9	8.5	9.9	10.2	-	-	>8	-
pH-lab	pH units	7.68	7.64	7.61	7.64	7.58	-	7.64	7.60	7.65	7.50	7.52	7.56	7.55	7.57	7.0 - 8.7	-	7.0 - 8.7	-
TSS	mg/L	2.4	<2	2.4	<2	4	2.6	2.4	2	2.6	4.8	2.2	2	3.2	4	Narrative [1]	Narrative [1]	Narrative [1]	-
Total Hardness	mg/L	6130	5760	5680	5600	5080	5980	6030	5560	10200	5600	5860	6060	5470	5360	-	-	-	-
N-NH3	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-
N-NO3	mg/L	**<5**	<1	<1	<1	<1	-	**<10**	<1	<1	<1	<1	<1	<1	<1	3.7	-	45	339
Total Metals																			
T-Al	mg/L	0.0161	0.0187	0.612	0.0302	0.0503	0.0345	0.0503	0.0229	0.0361	0.0386	0.0257	0.0133	0.0131	0.0177	-	-	-	-
T-Sb	mg/L	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	0.00044	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	-	0.27 [Sb(III)]	-	-
T-As	mg/L	0.00176	0.00175	0.00298	0.00209	0.00157	0.00183	0.00188	0.00183	0.00293	0.00174	0.00244	0.0023	0.00123	0.00164	-	0.0125	0.0125	-
T-Ba	mg/L	<0.01	<0.01	0.0336	0.0101	0.0113	0.0129	0.0128	0.0123	0.0224	0.0124	0.0118	0.0122	<0.01	<0.01	-	-	-	-
T-Be	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.1	-	-	-
T-Bi	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
T-B	mg/L	**4.34**	**4.37**	**4.34**	**3.94**	**4.45**	**4.23**	**4.28**	**3.96**	**8.38**	**4.16**	**3.92**	**3.87**	**4.04**	**3.94**	1.2	-	-	-
T-Cd	mg/L	0.000068	0.000074	0.000096	0.000073	0.000068	0.000086	0.000083	0.000088	**0.000173**	0.00008	0.00005	0.000084	0.000066	0.000075	0.00012	-	0.00012	-
T-Ca	mg/L	454	402	310	357	393	404	402	374	712	439	410	431	377	378	-	-	-	-
T-Cr	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	**0.0019**	**0.00152**	<0.001	<0.001	<0.001	<0.001	<0.001	0.0015 [Cr(VI)]	-	0.0015 [Cr(VI)]	-
T-Co	mg/L	<0.0002	<0.0002	0.00033	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
T-Cu	mg/L	0.001	0.0011	**0.00208**	**0.00269**	<0.0008	<0.0008	<0.0008	0.00098	0.00094	0.0013	<0.0008	0.00101	0.00132	<0.0008	0.002	0.003	-	-
T-Fe	mg/L	0.022	0.033	0.487	0.031	0.029	0.025	0.024	0.025	0.028	0.03	<0.02	<0.02	<0.02	0.021	-	-	-	-
T-Pb	mg/L	0.00055	<0.0004	0.00184	<0.0004	<0.0004	<0.0004	<0.0004	0.00063	0.00161	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	0.002	0.14	-	-
T-Li	mg/L	0.182	0.169	0.166	0.154	0.159	0.164	0.167	0.151	0.338	0.185	0.188	0.156	0.149	0.181	-	-	-	-
T-Mg	mg/L	1210	1160	1190	1140	995	1210	1220	1120	2040	1090	1170	1210	1100	1070	-	-	-	-
T-Mn	mg/L	0.00223	0.00258	0.0205	0.00305	0.00962	0.0109	0.0109	0.00912	0.0149	0.0129	0.00695	0.00526	0.00257	0.00242	-	-	-	-
T-Hg	mg/L	<0.00001	<0.00001	<0.00001	0.000014	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00002 [2]	-	0.000016	-
T-Mo	mg/L	0.0107	0.0105	0.0108	0.0102	0.0102	0.0107	0.0108	0.0109	0.0198	0.0112	0.00984	0.0113	0.00994	0.0102	-	-	-	-
T-Ni	mg/L	0.00159	<0.0008	0.00115	<0.0008	0.00129	<0.0008	<0.0008	0.00383	0.00109	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	0.0083	-	-	-
T-P	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.101	0.121	0.18	<0.1	<0.1	0.154	<0.1	0.164	-	-	-	-
T-K	mg/L	409	339	327	340	320	340	343	320	632	342	352	387	341	345	-	-	-	-
T-Se	mg/L	<0.001	<0.001	<0.001	0.00249	0.00126	<0.001	<0.001	0.00485	0.00123	<0.001	<0.001	<0.001	0.00128	<0.001	-	-	-	-
T-Si	mg/L	<2	<2	4.2	<2	<2	<2	<2	<2	3.3	<2	<2	<2	<2	2.2	-	-	-	-
T-Ag	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.000548	<0.0001	<0.0001	<0.0001	<0.0001	0.0015	0.003	-	0.0075
T-Na	mg/L	8510	9560	9360	9820	8730	9150	9410	8680	8470	7670	9830	9720	9250	8690	-	-	-	-
T-Sr	mg/L	7.52	7.26	7.4	7.14	7.25	7.4	7.4	7.41	14.4	7.96	7.96	8.27	6.95	7	-	-	-	-
T-S	mg/L	957	846	926	891	832	1000	1010	939	1790	941	996	1090	854	890	-	-	-	-
T-Te	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
T-Tl	mg/L	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	-	-	-	-
T-Th	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
T-Sn	mg/L	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	-	-	-	-
T-Ti	mg/L	<0.01	<0.01	0.0386	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	-
T-W	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	-	-	-
T-U	mg/L	0.00284	0.00294	0.00292	0.00308	0.00296	0.00299	0.00296	0.00293	0.00535	0.00308	0.00288	0.00303	0.00286	0.00273	-	-	-	-
T-V	mg/L	0.0027	<0.002	<0.002	0.0028	<0.002	0.008	0.0075	0.0027	0.0041	<0.002	<0.002	0.003	<0.002	0.0032	0.05	-	-	-
T-Zn	mg/L	<0.008	<0.008	**0.014**	<0.008	**0.0107**	<0.008	<0.008	<0.008	0.0081	<0.008	<0.008	<0.008	<0.008	<0.008	0.01	0.055	-	-
T-Zr	mg/L	<0.0002	<0.0002	0.00026	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
Speciated Metals																			
Methyl Mercury	ng/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Polycyclic Aromatic Hydrocarbons (PAH)																			
Acenaphthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.006	-	-	-
Acenaphthylene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
Acridine	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	-	-	-
Benz(a)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	-	-	-
Benzo(a)pyrene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	-	-	-
Benzo(b+j)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Benzo(g-h-i)perylene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Benzo(k)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
2-Chloronaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-
Chrysene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0001	-	-	-
Dibenz(a-h)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	-	-	-
Fluoranthene	mg/L	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	-	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	-	-	-	-
Fluorene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.012	-	-	-
Indeno(1-2-3-cd)pyrene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
1-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.001	-	-	-
2-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.001	-	-	-
Naphthalene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.001	-	0.0014	-
Phenanthrene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-
Pyrene	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	-	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	-	-	-	-
Quinoline	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Total PAHs	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
Volatile Organic Compounds (VOC)																			
Benzene	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.11	-	0.11	-
Ethylbenzene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.25	-	0.025	-
Methyl-tert-butyl-ether	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	0.44	5	-
Styrene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Toluene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	0.215	-
Total Xylenes	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	-	-	-
Total BTEX	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Dioxins and Furans																			
2-3-7-8-TCDD	pg/L	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDD	pg/L	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDD	pg/L	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDD	pg/L	<3	<3	<3	<3	<3	-	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDD	pg/L	<4	<4	<4	<4	<4	-	<4	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
2-3-7-8-TCDF	pg/L	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDF	pg/L	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDF	pg/L	<3	<3	<3	<3	<3	-	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
1-2-3-4-7-8-9-HpCDF	pg/L	<3	<3	<3	<3	<3	-	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDF	pg/L	<4	<4	<4	<4	<4	-	<4	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
Total Furan TEQ	pg/L	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-	-	-	-
Total Dioxin Furan TEQ	pg/L	0	0	0	0	0	-	0	0	0	0	0	0	0	0	-	-	-	-
Microbiological Parameters																			
E.coli	MPN/100 mL	2	<1	<1	1	1	-	-	<1	<1	<1	<1.8	1	1	<1.8	-	-	-	-

Notes:
Results in **bold**: Exceedances of Long Term BC WQG
Results underlined: Exceedances of Short Term BC WQG
Results highlighted in grey: Exceedances of Long Term CCME guidelines
Results in red: Exceedances of Short Term CCME guidelines
[1] Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. These guidelines were not screened as there were no discharges to evaluate.
[2] The BC WQG for mercury is derived using the maximum methyl mercury concentration in the dataset (0.082 pg/L) and the total mercury detection limit of 0.00001 mg/L.

Table A-24: Water Quality Results for Marine Water Monitoring Station WQR2 - 2m Above Seafloor March to December 2021

Sample Date		2021-03-25	2021-04-22	2021-05-18	2021-05-26	2021-06-01	2021-06-08	2021-06-15	2021-07-20	2021-08-25	2021-09-28	2021-09-28	2021-10-26	2021-11-23	2021-12-14	Marine Water Aquatic Life Water Quality Guidelines			
Laboratory ID		**21C3505-12**	**21D2478-11**	**21E1990-11**	**21E2917-11**	**21F0167-11**	**21F1056-11**	**21F2014-11**	**21G2414-11**	**21H3040-11**	**21I3814-17**	**21I3814-11**	**21J3514-11**	**21K3046-11**	**21L2125-11**	**BC**	**BC**	**CCME**	**CCME**
Station Name		**WQR2-1**	**WQR2-1**	**WQR2-1**	**WQR2-1**	**WQR2-1**	**WQR2-1**	**WQR2-1**	**WQR2-1**	**WQR2-1**	**QR2-1 Duplic**	**WQR2-1**	**WQR2-1**	**WQR2-1**	**WQR2-1**	**Long Term**	**Short Term**	**Long Term**	**Short Term**
Field Parameters																			
Temperature	°C	8.3	8.4	8.5	8.6	8.5	8.5	8.5	12.4	10	-	9.5	10.8	9.9	9.7	Narrative [1]	-	Narrative [1]	-
Dissolved Oxygen (%)-field	%	73.0	69.0	64.6	65.1	57.9	56.4	58.5	85.0	58.9	-	60.8	58.0	69.3	81.4	-	-	-	-
Dissolved Oxygen (mg/L)-field	mg/L	7.10	6.70	6.24	6.27	5.58	5.43	5.65	7.89	-	-	5.68	5.37	6.53	7.67	-	-	>8	-
SPC	µS/cm	45576	45607	46049	46010	46591	46774	46209	35162	45303	-	33947	43564	44644	45556	-	-	-	-
Conductivity	µS/cm	45576	31111	31573	31630	31947	32045	31680	26707	-	-	-	31776	31753	32228	-	-	-	-
Salinity	ppt	-	29.3	29.6	29.6	30.0	30.1	29.7	22.1	-	-	31.3	28.0	28.7	29.3	Narrative [1]	-	Narrative [1]	-
TDS-field	mg/L	-	29644	29932	29907	30284	30399	30036	-	-	-	-	-	29018	29611	-	-	-	-
pH-field	pH units	7.67	7.53	7.37	7.42	7.44	7.42	7.49	7.68	7.63	-	-	7.29	7.51	7.58	7.0 - 8.7	7.0 - 8.7	7.0 - 8.7	-
ORP	mV	191.0	265.4	210.4	278.4	222.9	156.5	177.6	124.0	-	-	-	14.1	174.2	240.4	-	-	-	-
Turbidity	NTU	0.51	0.20	0.36	0.19	0.41	2.84	1.98	2.00	-	-	0.89	-0.62	0.65	0.40	Narrative [1]	Narrative [1]	Narrative [1]	-
Depth	m	26.2	26.9	26.5	27.4	28.7	28.5	27.2	22.6	25.2	-	22.4	25.4	28.9	27.0	-	-	-	-
General Parameters																			
Dissolved Oxygen-lab	mg/L	9.6	10.5	10.8	9.7	10.7	10.2	10	9.6	10.3	-	9.1	9	9.6	11	-	-	>8	-
pH-lab	pH units	7.55	7.54	7.71	7.47	7.47	7.41	7.4	7.51	7.65	-	7.59	7.54	7.44	7.47	7.0 - 8.7	-	7.0 - 8.7	-
TSS	mg/L	3.6	8.6	<2	4.7	2.2	7.6	<2	3.4	<2	2.2	4	3.8	6.4	<2	Narrative [1]	Narrative [1]	Narrative [1]	-
Total Hardness	mg/L	6190	5940	5950	6170	5330	5750	5800	5240	5320	5730	5660	5210	5840	5640	-	-	-	-
N-NH3	mg/L	<0.05	<0.05	<0.05	<0.05	0.139	0.066	0.075	<0.05	0.067	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-
N-NO3	mg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	3.7	-	45	339
Total Metals																			
T-Al	mg/L	0.0192	0.0111	0.0136	0.0182	0.0319	0.0323	0.0315	0.0265	0.0847	0.0317	0.051	0.021	0.0327	<0.01	-	-	-	-
T-Sb	mg/L	<0.0005	<0.0005	<0.0004	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0004	<0.0004	-	0.27 [Sb(III)]	-	-
T-As	mg/L	0.00171	0.00165	0.00174	0.00156	0.00148	0.00173	0.00175	0.00163	0.00151	0.0015	0.00139	0.00158	0.0016	0.00187	-	0.0125	0.0125	-
T-Ba	mg/L	0.0116	0.00989	0.0113	0.0107	0.00997	0.019	0.0107	0.0104	0.0131	0.0121	0.012	0.0115	0.0138	0.0112	-	-	-	-
T-Be	mg/L	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	0.1	-	-	-
T-Bi	mg/L	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	-	-	-	-
T-B	mg/L	**4.91**	**4.47**	**5.43**	**4.12**	**3.62**	**3.79**	**4.15**	**3.77**	**3.91**	**3.89**	**3.75**	**3.47**	**3.79**	**4.8**	1.2	-	-	-
T-Cd	mg/L	0.000111	0.0000841	0.000078	0.000082	0.0000703	0.0000883	0.0000901	0.0000716	0.0000891	0.000078	0.0000741	0.000067	0.000068	0.0001	0.00012	-	0.00012	-
T-Ca	mg/L	397	391	402	420	330	381	368	321	389	372	355	330	344	338	-	-	-	-
T-Cr	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	0.0015 [Cr(VI)]	-	0.0015 [Cr(VI)]	-
T-Co	mg/L	<0.00005	<0.00005	<0.0002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00021	0.000058	0.0000595	<0.00005	<0.0002	<0.0002	-	-	-	-
T-Cu	mg/L	<0.001	<0.001	<0.0008	<0.001	<0.001	0.0017	<0.001	<0.001	**0.00215**	0.0014	<0.001	0.00058	0.00176	<0.0008	0.002	0.003	-	-
T-Fe	mg/L	0.0202	<0.02	<0.02	0.0533	0.125	0.0254	0.0322	0.0245	0.148	0.0232	0.0477	0.013	0.04	0.034	-	-	-	-
T-Pb	mg/L	<0.0005	<0.0005	<0.0004	<0.0005	<0.0005	<0.0005	<0.0005	0.00139	0.000844	<0.0005	<0.0005	<0.0002	<0.0004	<0.0004	0.002	0.14	-	-
T-Li	mg/L	0.218	0.184	0.223	0.172	0.145	0.173	0.169	0.161	0.154	0.162	0.156	0.137	0.179	0.175	-	-	-	-
T-Mg	mg/L	1260	1210	1200	1240	1090	1160	1180	1080	1060	1160	1160	1060	1210	1160	-	-	-	-
T-Mn	mg/L	0.0023	0.00165	0.00235	0.00266	0.00244	0.00184	0.00287	0.00321	0.00816	0.00528	0.00605	0.00545	0.00762	0.00505	-	-	-	-
T-Hg	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00002 [2]	-	0.000016	-
T-Mo	mg/L	0.0112	0.0111	0.0112	0.0115	0.00969	0.0108	0.0106	0.00901	0.0102	0.0107	0.011	0.00951	0.0106	0.0102	-	-	-	-
T-Ni	mg/L	<0.003	0.000439	<0.0008	0.000591	0.000766	0.0011	0.000462	0.000526	0.00139	0.00057	0.00566	<0.0004	<0.0008	<0.0008	0.0083	-	-	-
T-P	mg/L	0.164	0.129	<0.1	0.124	<0.1	<0.1	<0.1	<0.1	<0.1	0.102	<0.1	0.075	0.111	<0.1	-	-	-	-
T-K	mg/L	374	380	378	379	331	350	354	313	323	361	365	278	353	364	-	-	-	-
T-Se	mg/L	<0.001	0.00217	<0.001	<0.001	<0.001	0.00102	0.00364	<0.001	<0.001	0.0089	0.00783	<0.0005	<0.001	<0.001	-	-	-	-
T-Si	mg/L	3.97	1.94	<2	1.94	2.19	2.07	1.09	<0.5	11.3	2.31	2.31	1.4	2.4	2.6	-	-	-	-
T-Ag	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.000137	<0.0001	<0.0001	<0.00005	<0.0001	<0.0001	0.0015	0.003	-	0.0075
T-Na	mg/L	10100	9380	10600	9670	8760	8070	9560	8540	9160	8880	8950	8370	9190	9720	-	-	-	-
T-Sr	mg/L	8.12	6.92	7.27	7.07	6.33	7.05	7.15	6.05	6.72	7.2	7.32	5.65	6.91	7.33	-	-	-	-
T-S	mg/L	939	943	912	874	719	835	904	804	812	844	864	0.7	871	899	-	-	-	-
T-Te	mg/L	0.000894	<0.0005	<0.001	0.000559	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	-	-	-	-
T-Tl	mg/L	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	0.0000777	<0.00004	<0.00004	<0.00004	<0.00004	<0.00002	<0.00004	<0.00004	-	-	-	-
T-Th	mg/L	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00002	<0.0002	<0.0002	-	-	-	-
T-Sn	mg/L	<0.0005	<0.0005	<0.0004	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00135	<0.0005	<0.0005	<0.00004	<0.0004	<0.0004	-	-	-	-
T-Ti	mg/L	<0.002	<0.002	<0.01	0.00419	0.00236	<0.002	0.00332	<0.002	0.00539	0.00228	0.00353	<0.005	<0.01	<0.01	-	-	-	-
T-W	mg/L	<0.0005	<0.0005	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.002	<0.002	-	-	-	-
T-U	mg/L	0.00298	0.003	0.00299	0.00296	0.00265	0.0029	0.00294	0.00258	0.0026	0.00284	0.00274	0.00203	0.00265	0.00268	-	-	-	-
T-V	mg/L	<0.002	<0.002	0.0024	0.00399	0.00202	0.00239	<0.002	<0.002	0.00288	<0.002	<0.002	0.0011	<0.002	<0.002	0.05	-	-	-
T-Zn	mg/L	<0.01	<0.01	<0.008	<0.01	<0.01	<0.01	<0.01	<0.01	**0.019**	<0.01	**0.0742**	<0.004	<0.008	<0.008	0.01	0.055	-	-
T-Zr	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.000433	<0.0002	<0.0002	<0.0001	<0.0002	<0.0002	-	-	-	-
Speciated Metals																			
Methyl Mercury	ng/L	<0.050	-	-	<0.024	<0.024	<0.023	<0.023	<0.025	<0.050	<0.024	<0.024	<0.050	0.037	-	-	-	-	-
Polycyclic Aromatic Hydrocarbons (PAH)																			
Acenaphthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-	<0.00005	<0.00005	0.006	-	-	-
Acenaphthylene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	-	<0.0002	<0.0002	-	-	-	-
Acridine	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	-	<0.00001	<0.00001	-	-	-	-
Benz(a)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	-	<0.00001	<0.00001	-	-	-	-
Benzo(a)pyrene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	-	<0.00001	<0.00001	0.00001	-	-	-
Benzo(b+j)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Benzo(g-h-i)perylene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Benzo(k)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-	<0.00005	<0.00005	-	-	-	-
2-Chloronaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	-	<0.0001	<0.0001	-	-	-	-
Chrysene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-	<0.00005	<0.00005	0.0001	-	-	-
Dibenz(a-h)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000027	<0.00001	<0.00001	<0.00001	-	<0.00001	-	<0.00001	<0.00001	-	-	-	-
Fluoranthene	mg/L	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	-	<0.00003	-	<0.00003	<0.00003	-	-	-	-
Fluorene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-	<0.00005	<0.00005	0.012	-	-	-
Indeno(1-2-3-cd)pyrene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-	<0.00005	<0.00005	-	-	-	-
1-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	-	<0.0001	<0.0001	0.001	-	-	-
2-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	-	<0.0001	<0.0001	0.001	-	-	-
Naphthalene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	-	<0.0002	<0.0002	0.001	-	0.0014	-
Phenanthrene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	-	<0.0001	<0.0001	-	-	-	-
Pyrene	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	-	<0.00002	-	<0.00002	<0.00002	-	-	-	-
Quinoline	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Total PAHs	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	-	<0.0002	<0.0002	-	-	-	-
Volatile Organic Compounds (VOC)																			
Benzene	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.0005	<0.0005	<0.0005	0.11	-	0.11	-
Ethylbenzene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	0.25	-	0.025	-
Methyl-tert-butyl-ether	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	0.44	5	-
Styrene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Toluene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	0.215	-
Total Xylenes	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	-	-	-	-
Total BTEX	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Dioxins and Furans																			
2-3-7-8-TCDD	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDD	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	<3	<3	<3	<3	-	-	-	-
OCDD	pg/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	<4	<4	<4	<4	-	-	-	-
2-3-7-8-TCDF	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	-	-	-	-
2-3-4-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	-	-	-	-
2-3-4-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	<3	<3	<3	<3	-	-	-	-
1-2-3-4-7-8-9-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	<3	<3	<3	<3	-	-	-	-
OCDF	pg/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	<4	<4	<4	<4	-	-	-	-
Total Furan TEQ	pg/L	0	0	0	0	0	0	0	0	0	-	0	0	0	0	-	-	-	-
Total Dioxin Furan TEQ	pg/L	0	0	0	0	0	0	0	0	0	-	0	0	0	0	-	-	-	-
Microbiological Parameters																			
E.coli	MPN/100 mL	<1	1	<1	<1	1	1	1	<1	<1	-	<1.8	<1	2	<1	-	-	-	-

Notes:
Results in **bold**: Exceedances of Long Term BC WQG
Results underlined: Exceedances of Short Term BC WQG
Results highlighted in grey: Exceedances of Long Term CCME guidelines
Results in red: Exceedances of Short Term CCME guidelines
[1] Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. These guidelines were not screened as there were no discharges to evaluate.
[2] The BC WQG for mercury is derived using the maximum methyl mercury concentration in the dataset (0.082 pg/L) and the total mercury detection limit of 0.00001 mg/L.

Table A-25: Water Quality Results for Travel Blanks May 2020 to March 2021

Sample Date		2020-05-20	2020-06-22	2020-07-21	2020-08-24	2020-10-20	2020-11-18	2020-12-14	2021-01-27	2021-01-27	2021-02-25	2021-02-25	2021-03-25	Marine Water Aquatic Life Water Quality Guidelines			
Laboratory ID		0051710-15	0062209-15	0071996-15	0082292-15	20J1961-15	20K2100-15	20L1589-15	21A2590-15	21A2594-06	21B2778-16	21B2778-22	21C3505-15	BC	BC	CCME	CCME
Station Name		TravelBlank	TravelBlank	TravelBlank	TravelBlank	TravelBlank	TravelBlank	TravelBlank	TravelBlank	TravelBlank	TravelBlank	TravelBlank	TravelBlank	Long Term	Short Term	Long Term	Short Term
Field Parameters																	
Temperature	°C	-	-	-	-	-	-	-	-	-	-	-	-	Narrative [1]	-	Narrative [1]	-
Dissolved Oxygen (%)-field	%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen (mg/L)-field	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>8	-
SPC	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Conductivity	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salinity	ppt	-	-	-	-	-	-	-	-	-	-	-	-	Narrative [1]	-	Narrative [1]	-
TDS-field	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH-field	pH units	-	-	-	-	-	-	-	-	-	-	-	-	7.0 - 8.7	7.0 - 8.7	7.0 - 8.7	-
ORP	mV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Turbidity	NTU	-	-	-	-	-	-	-	-	-	-	-	-	Narrative [1]	Narrative [1]	Narrative [1]	-
Depth	m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Parameters																	
Dissolved Oxygen-lab	mg/L		8.7	10.9	9.6	9.8	9.3	9.9	10	11	10	10.4	10.4	-	-	>8	-
pH-lab	pH units	7.58	**5.63**	**5.95**	**6.55**	**6.17**	7.66	8.05	**5.94**	**5.66**	7.37	**6.56**	**5.83**	7.0 - 8.7	-	7.0 - 8.7	-
TSS	mg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	3	<2	Narrative [1]	Narrative [1]	Narrative [1]	-
Total Hardness	mg/L	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<1	<0.1	-	-	-	-
N-NH3	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-
N-NO3	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	3.7	-	45	339
Total Metals																	
T-Al	mg/L	<0.01	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.002	<0.01	<0.002	<0.002	-	-	-	-
T-Sb	mg/L	<0.0004	<0.0004	<0.0004	<0.0004	<0.0002	<0.0004	<0.0004	<0.0004	<0.00005	<0.0004	<0.00005	<0.00005	-	0.27 [Sb(III)]	-	-
T-As	mg/L	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.00005	<0.001	<0.00005	<0.00005	-	0.0125	0.0125	-
T-Ba	mg/L	<0.01	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.0001	<0.01	<0.0001	<0.0001	-	-	-	-
T-Be	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.00001	<0.0002	<0.00001	<0.00001	0.1	-	-	-
T-Bi	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.00001	<0.0002	<0.00001	<0.00001	-	-	-	-
T-B	mg/L	<0.01	<0.1	<0.1	<0.1	<0.01	<0.1	<0.1	<0.1	<0.002	<0.1	<0.002	<0.002	1.2	-	-	-
T-Cd	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00002	<0.00002	<0.00002	<0.000002	<0.00002	<0.000002	<0.000002	0.00012	-	0.00012	-
T-Ca	mg/L	<0.4	<0.4	<0.4	<0.4	<0.2	<0.4	<0.4	<0.4	<0.04	<0.4	<0.04	<0.04	-	-	-	-
T-Cr	mg/L	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.0001	<0.001	0.00013	0.00011	0.0015 [Cr(VI)]	-	0.0015 [Cr(VI)]	-
T-Co	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.00005	<0.0002	<0.0002	<0.0002	<0.000005	<0.0002	<0.000005	<0.000005	-	-	-	-
T-Cu	mg/L	<0.0008	<0.0008	<0.0008	<0.0008	0.00138	<0.0008	<0.0008	<0.0008	<0.0002	<0.0008	<0.0002	<0.0002	0.002	0.003	-	-
T-Fe	mg/L	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.002	<0.02	0.0021	<0.002	-	-	-	-
T-Pb	mg/L	<0.0004	<0.0004	<0.0004	<0.0004	<0.0002	<0.0004	<0.0004	<0.0004	<0.00005	<0.0004	<0.00005	<0.00005	0.002	0.14	-	-
T-Li	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.00005	<0.0002	<0.00005	<0.00005	-	-	-	-
T-Mg	mg/L	0.031	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.005	<0.02	<0.005	<0.005	-	-	-	-
T-Mn	mg/L	<0.0004	<0.0004	<0.0004	<0.0004	<0.0002	<0.0004	<0.0004	<0.0004	<0.00005	<0.0004	<0.00005	<0.00005	-	-	-	-
T-Hg	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00002 [2]	-	0.000016	-
T-Mo	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.00001	<0.0002	<0.00001	<0.00001	-	-	-	-
T-Ni	mg/L	<0.0008	<0.0008	<0.0008	<0.0008	<0.0004	<0.0008	<0.0008	<0.0008	<0.00004	<0.0008	0.000044	<0.003	0.0083	-	-	-
T-P	mg/L	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.01	0.105	<0.01	<0.01	-	-	-	-
T-K	mg/L	<0.2	<0.2	<0.2	<0.2	<0.02	<0.2	<0.2	<0.2	<0.01	<0.2	<0.01	<0.01	-	-	-	-
T-Se	mg/L	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.0001	<0.0001	-	-	-	-
T-Si	mg/L	<2	<2	<2	<2	<0.5	<2	<2	<2	<0.1	<2	<0.1	<0.1	-	-	-	-
T-Ag	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.00005	<0.0001	<0.0001	<0.0001	<0.00001	<0.0001	<0.00001	<0.00001	0.0015	0.003	-	0.0075
T-Na	mg/L	<0.2	<0.2	<0.2	<0.2	<0.02	<0.2	<0.2	<1	<0.02	<1	<0.02	<0.02	-	-	-	-
T-Sr	mg/L	<0.002	<0.002	<0.002	<0.002	<0.001	<0.002	<0.002	<0.002	<0.0001	<0.002	<0.0001	<0.0001	-	-	-	-
T-S	mg/L	<6	<6	<6	<6	<0.6	<6	<6	<6	<1	<6	<1	<1	-	-	-	-
T-Te	mg/L	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.00005	<0.001	<0.00005	<0.00005	-	-	-	-
T-Tl	mg/L	<0.00004	<0.00004	<0.00004	<0.00004	<0.00002	<0.00004	<0.00004	<0.00004	<0.000004	<0.00004	<0.000004	<0.000004	-	-	-	-
T-Th	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.00002	<0.0002	<0.0002	<0.0002	<0.00001	<0.0002	<0.00001	<0.00001	-	-	-	-
T-Sn	mg/L	<0.0004	<0.0004	<0.0004	<0.0004	<0.00004	<0.0004	<0.0004	<0.0004	<0.00005	<0.0004	<0.00005	<0.00005	-	-	-	-
T-Ti	mg/L	<0.01	<0.01	<0.01	<0.01	<0.005	<0.01	<0.01	<0.01	<0.0002	<0.01	<0.0002	<0.0002	-	-	-	-
T-W	mg/L	<0.002	<0.002	<0.002	<0.002	<0.0002	<0.002	<0.002	<0.002	<0.0002	<0.002	<0.0002	<0.0002	-	-	-	-
T-U	mg/L	<0.00004	<0.00004	<0.00004	<0.00004	<0.00002	<0.00004	<0.00004	<0.00004	<0.000001	<0.00004	<0.000001	<0.000001	-	-	-	-
T-V	mg/L	<0.002	<0.002	<0.002	<0.002	<0.001	<0.002	<0.002	<0.002	<0.0002	0.0026	0.00024	<0.0002	0.05	-	-	-
T-Zn	mg/L	<0.008	<0.008	<0.008	<0.008	<0.004	<0.008	<0.008	<0.008	<0.001	<0.008	<0.001	<0.001	0.01	0.055	-	-
T-Zr	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.00002	<0.0002	<0.00002	<0.00002	-	-	-	-
Speciated Metals																	
Methyl Mercury	ng/L	-	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-	-
Polycyclic Aromatic Hydrocarbons (PAH)																	
Acenaphthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.006	-	-	-
Acenaphthylene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
Acridine	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	-	-	-
Benz(a)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000014	-	-	-	-
Benzo(a)pyrene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	**0.000019**	0.00001	-	-	-
Benzo(b+j)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000062	-	-	-	-
Benzo(g-h-i)perylene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Benzo(k)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
2-Chloronaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-
Chrysene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0001	-	-	-
Dibenz(a-h)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000023	-	-	-	-
Fluoranthene	mg/L	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	-	-	-	-
Fluorene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.012	-	-	-
Indeno(1-2-3-cd)pyrene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
1-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.001	-	-	-
2-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.001	-	-	-
Naphthalene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.001	-	0.0014	-
Phenanthrene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-
Pyrene	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	-	-	-	-
Quinoline	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Total PAHs	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
Volatile Organic Compounds (VOC)																	
Benzene	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.11	-	0.11	-
Ethylbenzene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.25	-	0.025	-
Methyl-tert-butyl-ether	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	0.44	5	-
Styrene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Toluene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	0.215	-
Total Xylenes	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	-	-	-
Total BTEX	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Dioxins and Furans																	
2-3-7-8-TCDD	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDD	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDD	pg/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
2-3-7-8-TCDF	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
1-2-3-4-7-8-9-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDF	pg/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
Total Furan TEQ	pg/L	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Total Dioxin Furan TEQ	pg/L	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Microbiological Parameters																	
E.coli	MPN/100 mL	<1.8	<1	<1	<1	<1.8	<1.8	<1	<1	<1	<1.8	<1.8	<1	-	-	-	-

Notes:
Results in **bold**: Exceedances of Long Term BC WQG
Results underlined: Exceedances of Short Term BC WQG
Results highlighted in grey: Exceedances of Long Term CCME guidelines
Results in red: Exceedances of Short Term CCME guidelines
[1] Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. These guidelines were not screened as there were no discharges to evaluate.
[2] The BC WQG for mercury is derived using the maximum methyl mercury concentration in the dataset (0.082 pg/L) and the total mercury detection limit of 0.00001 mg/L.

Table A-26: Water Quality Results for Travel Blanks April to December 2021

Sample Date		**2021-04-22**	**2021-05-18**	**2021-05-26**	**2021-06-01**	**2021-06-08**	**2021-06-15**	**2021-07-20**	**2021-08-25**	**2021-09-28**	**2021-10-26**	**2021-11-23**	**2021-12-14**	**Marine Water Aquatic Life Water Quality Guidelines**			
Laboratory ID		**21D2478-21**	**21E1990-21**	**21E2917-21**	**21F0167-21**	**21F1056-21**	**21F2014-20**	**21G2414-19**	**21H3040-19**	**21I3814-19**	**21J3514-16**	**21K3046-20**	**21L2125-20**	**BC**	**BC**	**CCME**	**CCME**
Station Name		**TravelBlank**	**TravelBlank**	**TravelBlank**	**TravelBlank**	**TravelBlank**	**TravelBlank**	**TravelBlank**	**TravelBlank**	**TravelBlank**	**TravelBlank**	**TravelBlank**	**TravelBlank**	**Long Term**	**Short Term**	**Long Term**	**Short Term**
Field Parameters																	
Temperature	°C	-	-	-	-	-	-	-	-	-	-	-	-	Narrative [1]	-	Narrative [1]	-
Dissolved Oxygen (%)-field	%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen (mg/L)-field	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>8	-
SPC	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Conductivity	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salinity	ppt	-	-	-	-	-	-	-	-	-	-	-	-	Narrative [1]	-	Narrative [1]	-
TDS-field	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH-field	pH units	-	-	-	-	-	-	-	-	-	-	-	-	7.0 - 8.7	7.0 - 8.7	7.0 - 8.7	-
ORP	mV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Turbidity	NTU	-	-	-	-	-	-	-	-	-	-	-	-	Narrative [1]	Narrative [1]	Narrative [1]	-
Depth	m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Parameters																	
Dissolved Oxygen-lab	mg/L	10.8	10.7	9.8	10.4	9.9	10.8	10.1	10.5	10.1	10.1	10	11.3	-	-	>8	-
pH-lab	pH units	**5.45**	**5.51**	**5.38**	**5.38**	**5.36**	**5.62**	**6.07**	**5.67**	7.84	**5.73**	**5.74**	**6.05**	7.0 - 8.7	-	7.0 - 8.7	-
TSS	mg/L	<2	<2	<3.3	<2	<2	<2	<2	<2	<2	<2	<4	<2	Narrative [1]	Narrative [1]	Narrative [1]	-
Total Hardness	mg/L	<1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<1	<0.5	-	-	-	-
N-NH3	mg/L	<0.05	<0.05	<0.05	0.126	0.109	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-
N-NO3	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	3.7	-	45	339
Total Metals																	
T-Al	mg/L	<0.002	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.01	<0.005	-	-	-	-
T-Sb	mg/L	<0.00005	<0.0002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0002	<0.0004	<0.0002	-	0.27 [Sb(III)]	-	-
T-As	mg/L	<0.00005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0005	<0.001	<0.0005	-	0.0125	0.0125	-
T-Ba	mg/L	<0.0001	<0.005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00012	<0.005	<0.01	<0.005	-	-	-	-
T-Be	mg/L	<0.00001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0001	<0.0002	<0.0001	0.1	-	-	-
T-Bi	mg/L	<0.00001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0001	<0.0002	<0.0001	-	-	-	-
T-B	mg/L	<0.002	<0.05	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.0341	<0.1	<0.01	1.2	-	-	-
T-Cd	mg/L	<0.000002	<0.00001	<0.000002	<0.000002	<0.000002	<0.000002	<0.000002	<0.000002	<0.000002	<0.00001	<0.00002	<0.00001	0.00012	-	0.00012	-
T-Ca	mg/L	<0.04	<0.2	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.2	<0.4	<0.2	-	-	-	-
T-Cr	mg/L	0.00014	<0.0005	0.00011	0.0001	0.00013	<0.0001	0.00011	<0.0001	0.0001	<0.0005	<0.001	<0.0005	0.0015 [Cr(VI)]	-	0.0015 [Cr(VI)]	-
T-Co	mg/L	<0.000005	<0.0001	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.00005	<0.0002	<0.00005	-	-	-	-
T-Cu	mg/L	<0.0002	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0008	<0.0004	0.002	0.003	-	-
T-Fe	mg/L	<0.002	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.0031	<0.01	<0.01	<0.01	-	-	-	-
T-Pb	mg/L	<0.00005	<0.0002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0002	<0.0004	<0.0002	0.002	0.14	-	-
T-Li	mg/L	<0.00005	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.0002	<0.0001	-	-	-	-
T-Mg	mg/L	<0.005	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0081	0.058	<0.02	<0.01	-	-	-	-
T-Mn	mg/L	<0.00005	<0.0002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00031	<0.0004	<0.0002	-	-	-	-
T-Hg	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.000005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00002 [2]	-	0.000016	-
T-Mo	mg/L	<0.00001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0001	<0.0002	<0.0001	-	-	-	-
T-Ni	mg/L	<0.00004	<0.0004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.00004	<0.0004	<0.0008	<0.0004	0.0083	-	-	-
T-P	mg/L	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.1	<0.05	-	-	-	-
T-K	mg/L	<0.01	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.39	<0.2	<0.02	-	-	-	-
T-Se	mg/L	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.001	<0.0005	-	-	-	-
T-Si	mg/L	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<2	<0.5	-	-	-	-
T-Ag	mg/L	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.0001	<0.00005	0.0015	0.003	-	0.0075
T-Na	mg/L	1.29	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.064	15.9	<0.2	<0.02	-	-	-	-
T-Sr	mg/L	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.002	<0.001	-	-	-	-
T-S	mg/L	<1	<3	<1	<1	<1	<1	<1	<1	<1	<0.6	<6	<0.6	-	-	-	-
T-Te	mg/L	<0.00005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0005	<0.001	<0.0005	-	-	-	-
T-Tl	mg/L	<0.000004	<0.00002	<0.000004	<0.000004	<0.000004	<0.000004	<0.000004	<0.000004	<0.000004	<0.00002	<0.00004	<0.00002	-	-	-	-
T-Th	mg/L	<0.00001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.0002	<0.00002	-	-	-	-
T-Sn	mg/L	<0.00005	<0.0002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00004	<0.0004	<0.00004	-	-	-	-
T-Ti	mg/L	<0.0002	<0.005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005	<0.01	<0.005	-	-	-	-
T-W	mg/L	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.002	<0.0002	-	-	-	-
T-U	mg/L	<0.000001	<0.00002	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.00002	<0.00004	<0.00002	-	-	-	-
T-V	mg/L	<0.0002	<0.001	<0.0002	0.00023	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.002	<0.001	0.05	-	-	-
T-Zn	mg/L	<0.001	<0.004	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.004	<0.008	<0.004	0.01	0.055	-	-
T-Zr	mg/L	<0.00002	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.0001	<0.0002	<0.0001	-	-	-	-
Speciated Metals																	
Methyl Mercury	ng/L	-	-	<0.024	<0.024	0	<0.023	<0.025	<0.050	<0.023	<0.050	<0.023	-	-	-	-	-
Polycyclic Aromatic Hydrocarbons (PAH)																	
Acenaphthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	0.006	-	-	-
Acenaphthylene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	-	-	-	-
Acridine	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	-	-	-	-
Benz(a)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	-	-	-	-
Benzo(a)pyrene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	0.00001	-	-	-
Benzo(b+j)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Benzo(g-h-i)perylene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Benzo(k)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
2-Chloronaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	-	-	-	-
Chrysene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	0.0001	-	-	-
Dibenz(a-h)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	-	-	-	-
Fluoranthene	mg/L	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	-	<0.00003	<0.00003	-	-	-	-
Fluorene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	0.012	-	-	-
Indeno(1-2-3-cd)pyrene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
1-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	0.001	-	-	-
2-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	0.001	-	-	-
Naphthalene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	0.001	-	0.0014	-
Phenanthrene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	-	-	-	-
Pyrene	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	-	<0.00002	<0.00002	-	-	-	-
Quinoline	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	0.000063	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Total PAHs	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	-	-	-	-
Volatile Organic Compounds (VOC)																	
Benzene	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0014	<0.0005	<0.0005	<0.0005	0.11	-	0.11	-
Ethylbenzene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0014	<0.001	<0.001	<0.001	0.25	-	0.025	-
Methyl-tert-butyl-ether	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0016	<0.001	<0.001	<0.001	-	0.44	5	-
Styrene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0012	<0.001	<0.001	<0.001	-	-	-	-
Toluene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	0.0014	<0.0005	<0.0005	<0.0005	-	-	0.215	-
Total Xylenes	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.004	<0.002	<0.002	<0.002	-	-	-	-
Total BTEX	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00675	<0.001	<0.001	<0.001	-	-	-	-
Dioxins and Furans																	
2-3-7-8-TCDD	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDD	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDD	pg/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
2-3-7-8-TCDF	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
1-2-3-4-7-8-9-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDF	pg/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
Total Furan TEQ	pg/L	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Total Dioxin Furan TEQ	pg/L	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Microbiological Parameters																	
E.coli	MPN/100 mL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-

Notes:
Results in **bold**: Exceedances of Long Term BC WQG
Results underlined: Exceedances of Short Term BC WQG
Results highlighted in grey: Exceedances of Long Term CCME guidelines
Results in red: Exceedances of Short Term CCME guidelines
[1] Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. These guidelines were not screened as there were no discharges to evaluate.
[2] The BC WQG for mercury is derived using the maximum methyl mercury concentration in the dataset (0.082 pg/L) and the total mercury detection limit of 0.00001 mg/L.

Table A-27: Water Quality Results for Field Blanks September 2020 to June 2021

Sample Date		**2020-09-28**	**2020-10-27**	**2020-11-03**	**2020-11-10**	**2021-03-25**	**2021-04-22**	**2021-05-18**	**2021-05-18**	**2021-05-26**	**2021-06-01**	**Marine Water Aquatic Life Water Quality Guidelines**			
Laboratory ID		**0093017-15**	**20J2778-15**	**20K0360-15**	**20K1261-15**	**21C3505-14**	**21D2478-22**	**21E1990-20**	**21E1990-22**	**21E2917-22**	**21F0167-22**	**BC**	**BC**	**CCME**	**CCME**
Station Name		**FieldBlank**	**FieldBlank**	**FieldBlank**	**FieldBlank**	**FieldBlank**	**FieldBlank**	**FieldBlank**	**FieldBlank**	**FieldBlank**	**FieldBlank**	**Long Term**	**Short Term**	**Long Term**	**Short Term**
Field Parameters															
Temperature	°C	-	-	-	-	-	-	-	-	-	-	Narrative [1]	-	Narrative [1]	-
Dissolved Oxygen (%)-field	%	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen (mg/L)-field	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	>8	-
SPC	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Conductivity	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salinity	ppt	-	-	-	-	-	-	-	-	-	-	Narrative [1]	-	Narrative [1]	-
TDS-field	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH-field	pH units	-	-	-	-	-	-	-	-	-	-	7.0 - 8.7	7.0 - 8.7	7.0 - 8.7	-
ORP	mV	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Turbidity	NTU	-	-	-	-	-	-	-	-	-	-	Narrative [1]	Narrative [1]	Narrative [1]	-
Depth	m	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Parameters															
Dissolved Oxygen-lab	mg/L	9.6	10.2	9.8	9.9	10.9	10.6	10.7	10.5	9.7	10.7	-	-	>8	-
pH-lab	pH units	**5.82**	**5.97**	**6.34**	**6.25**	**5.88**	**5.32**	**5.56**	**5.56**	**5.37**	**5.37**	7.0 - 8.7	-	7.0 - 8.7	-
TSS	mg/L	<2	<2	<2	<2	<2	<2	<2	<2	<3.3	<2	Narrative [1]	Narrative [1]	Narrative [1]	-
Total Hardness	mg/L	<1	<0.5	<1	<1	<0.1	1.14	<0.5	<0.5	<0.1	<0.1	-	-	-	-
N-NH3	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.058	-	-	-	-
N-NO3	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	3.7	-	45	339
Total Metals															
T-Al	mg/L	<0.01	<0.005	<0.01	<0.01	<0.002	<0.002	<0.005	<0.005	<0.002	<0.002	-	-	-	-
T-Sb	mg/L	<0.0004	<0.0002	<0.0004	<0.0004	<0.00005	<0.00005	<0.0002	<0.0002	<0.00005	<0.00005	-	0.27 [Sb(III)]	-	-
T-As	mg/L	<0.001	<0.0005	<0.001	<0.001	<0.00005	<0.00005	<0.0005	<0.0005	<0.00005	<0.00005	-	0.0125	0.0125	-
T-Ba	mg/L	<0.01	<0.005	<0.01	<0.01	<0.0001	<0.0001	<0.005	<0.005	<0.0001	<0.0001	-	-	-	-
T-Be	mg/L	<0.0002	<0.0001	<0.0002	<0.0002	<0.00001	<0.00001	<0.0001	<0.0001	<0.00001	<0.00001	0.1	-	-	-
T-Bi	mg/L	<0.0002	<0.0001	<0.0002	<0.0002	<0.00001	<0.00001	<0.0001	<0.0001	<0.00001	<0.00001	-	-	-	-
T-B	mg/L	<0.1	<0.05	<0.1	<0.1	<0.002	<0.002	<0.05	<0.05	<0.002	<0.002	1.2	-	-	-
T-Cd	mg/L	<0.00002	<0.00001	<0.00002	<0.00002	<0.000002	<0.000002	<0.00001	<0.00001	<0.000002	<0.000002	0.00012	-	0.00012	-
T-Ca	mg/L	<0.4	<0.2	<0.4	<0.4	<0.04	0.083	<0.2	<0.2	<0.04	<0.04	-	-	-	-
T-Cr	mg/L	<0.001	<0.0005	<0.001	<0.001	<0.0001	<0.0001	<0.0005	<0.0005	0.00013	<0.0001	0.0015 [Cr(VI)]	-	0.0015 [Cr(VI)]	-
T-Co	mg/L	<0.0002	<0.0001	<0.0002	<0.0002	<0.000005	<0.000005	<0.0001	<0.0001	<0.000005	<0.000005	-	-	-	-
T-Cu	mg/L	<0.0008	<0.0004	<0.0008	<0.0008	<0.0002	<0.0002	<0.0004	<0.0004	<0.0002	<0.0002	0.002	0.003	-	-
T-Fe	mg/L	<0.02	<0.01	<0.02	<0.02	<0.002	<0.002	<0.01	<0.01	<0.002	<0.002	-	-	-	-
T-Pb	mg/L	<0.0004	<0.0002	<0.0004	<0.0004	<0.00005	<0.00005	<0.0002	<0.0002	0.00006	<0.00005	0.002	0.14	-	-
T-Li	mg/L	<0.0002	<0.0001	<0.0002	<0.0002	<0.00005	<0.00005	<0.0001	<0.0001	<0.00005	<0.00005	-	-	-	-
T-Mg	mg/L	<0.02	<0.01	<0.02	<0.02	<0.005	0.227	<0.01	0.021	<0.005	<0.005	-	-	-	-
T-Mn	mg/L	<0.0004	<0.0002	0.00052	<0.0004	<0.00005	<0.00005	<0.0002	<0.0002	<0.00005	<0.00005	-	-	-	-
T-Hg	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00002 [2]	-	0.0000016	-
T-Mo	mg/L	<0.0002	<0.0001	<0.0002	<0.0002	<0.00001	<0.00001	<0.0001	<0.0001	<0.00001	<0.00001	-	-	-	-
T-Ni	mg/L	<0.0008	<0.0004	<0.0008	<0.0008	<0.003	<0.00004	<0.0004	<0.0004	<0.00004	<0.00004	0.0083	-	-	-
T-P	mg/L	<0.1	<0.05	<0.1	<0.1	<0.01	<0.01	<0.05	<0.05	<0.01	<0.01	-	-	-	-
T-K	mg/L	<0.2	<0.1	<0.2	<0.2	<0.01	0.073	<0.1	<0.1	<0.01	<0.01	-	-	-	-
T-Se	mg/L	<0.001	<0.0005	<0.001	<0.001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0001	<0.0001	-	-	-	-
T-Si	mg/L	<2	<1	<2	<2	0.1	<0.1	<1	<1	<0.1	<0.1	-	-	-	-
T-Ag	mg/L	<0.0001	<0.00005	<0.0001	<0.0001	<0.00001	<0.00001	<0.00005	<0.00005	<0.00001	<0.00001	0.0015	0.003	-	0.0075
T-Na	mg/L	<0.2	<0.1	<0.2	<0.2	<0.02	2.34	<0.1	0.22	0.099	<0.02	-	-	-	-
T-Sr	mg/L	<0.002	<0.001	<0.002	0.0039	<0.0001	0.00144	<0.001	<0.001	0.00011	<0.0001	-	-	-	-
T-S	mg/L	<6	<3	<6	<6	<1	<1	<3	<3	<1	<1	-	-	-	-
T-Te	mg/L	<0.001	<0.0005	<0.001	<0.001	<0.00005	<0.00005	<0.0005	<0.0005	<0.00005	<0.00005	-	-	-	-
T-Tl	mg/L	<0.00004	<0.00002	<0.00004	<0.00004	<0.000004	<0.000004	<0.00002	<0.00002	<0.000004	<0.000004	-	-	-	-
T-Th	mg/L	<0.0002	<0.0001	<0.0002	<0.0002	<0.00001	<0.00001	<0.0001	<0.0001	<0.00001	<0.00001	-	-	-	-
T-Sn	mg/L	<0.0004	<0.0002	<0.0004	<0.0004	<0.00005	<0.00005	<0.0002	<0.0002	0.000051	<0.00005	-	-	-	-
T-Ti	mg/L	<0.01	<0.005	<0.01	<0.01	<0.0002	<0.0002	<0.005	<0.005	<0.0002	<0.0002	-	-	-	-
T-W	mg/L	<0.002	<0.001	<0.002	<0.002	<0.0002	<0.0002	<0.001	<0.001	<0.0002	<0.0002	-	-	-	-
T-U	mg/L	<0.00004	<0.00002	<0.00004	<0.00004	<0.000001	<0.000001	<0.00002	<0.00002	<0.000001	<0.000001	-	-	-	-
T-V	mg/L	<0.002	<0.001	<0.002	<0.002	<0.0002	<0.0002	<0.001	<0.001	<0.0002	<0.0002	0.05	-	-	-
T-Zn	mg/L	<0.008	<0.004	<0.008	<0.008	<0.001	<0.001	<0.004	<0.004	0.0024	<0.001	0.01	0.055	-	-
T-Zr	mg/L	<0.0002	<0.0001	<0.0002	<0.0002	<0.00002	<0.00002	<0.0001	<0.0001	<0.00002	<0.00002	-	-	-	-
Speciated Metals															
Methyl Mercury	ng/L	-	-	-	-	-	-	-	-	<0.024	<0.024	-	-	-	-
Polycyclic Aromatic Hydrocarbons (PAH)															
Acenaphthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.006	-	-	-
Acenaphthylene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
Acridine	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	-	-	-
Benz(a)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	-	-	-
Benzo(a)pyrene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	**0.000025**	<0.00001	0.00001	-	-	-
Benzo(b+j)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Benzo(g-h-i)perylene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Benzo(k)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
2-Chloronaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-
Chrysene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0001	-	-	-
Dibenz(a-h)anthracene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000016	<0.00001	-	-	-	-
Fluoranthene	mg/L	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	-	-	-	-
Fluorene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.012	-	-	-
Indeno(1-2-3-cd)pyrene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
1-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.001	-	-	-
2-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.001	-	-	-
Naphthalene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.001	-	0.0014	-
Phenanthrene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-
Pyrene	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	0.000024	-	-	-	-
Quinoline	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-
Total PAHs	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-
Volatile Organic Compounds (VOC)															
Benzene	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.11	-	0.11	-
Ethylbenzene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.25	-	0.025	-
Methyl-tert-butyl-ether	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	0.44	5	-
Styrene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Toluene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	0.215	-
Total Xylenes	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	-	-	-
Total BTEX	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Dioxins and Furans															
2-3-7-8-TCDD	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDD	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDD	pg/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
2-3-7-8-TCDF	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
1-2-3-4-7-8-9-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDF	pg/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
Total Furan TEQ	pg/L	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Total Dioxin Furan TEQ	pg/L	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Microbiological Parameters															
E.coli	MPN/100 mL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-

Notes:
Results in **bold**: Exceedances of Long Term BC WQG
Results underlined: Exceedances of Short Term BC WQG
Results highlighted in grey: Exceedances of Long Term CCME guidelines
Results in red: Exceedances of Short Term CCME guidelines
[1] Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. These guidelines were not screened as there were no discharges to evaluate.
[2] The BC WQG for mercury is derived using the maximum methyl mercury concentration in the dataset (0.082 pg/L) and the total mercury detection limit of 0.00001 mg/L.

Table A-28: Water Quality Results for Field Blanks June to December 2021

Sample Date		2021-06-08	2021-06-08	2021-06-15	2021-07-20	2021-08-25	2021-09-28	2021-10-26	2021-11-23	2021-12-14	Marine Water Aquatic Life Water Quality Guidelines			
Laboratory ID		21F1056-22	21F1056-20	21F2014-19	21G2414-20	21H3040-20	21I3814-20	21J3514-15	21K3046-19	21L2125-19	BC	BC	CCME	CCME
Station Name		FieldBlank	FieldBlank	FieldBlank	FieldBlank	FieldBlank	FieldBlank	FieldBlank	FieldBlank	FieldBlank	Long Term	Short Term	Long Term	Short Term
Field Parameters														
Temperature	°C	-	-	-	-	-	-	-	-	-	Narrative [1]	-	Narrative [1]	-
Dissolved Oxygen (%)-field	%	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen (mg/L)-field	mg/L	-	-	-	-	-	-	-	-	-	-	-	>8	-
SPC	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-
Conductivity	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-
Salinity	ppt	-	-	-	-	-	-	-	-	-	Narrative [1]	-	Narrative [1]	-
TDS-field	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
pH-field	pH units	-	-	-	-	-	-	-	-	-	7.0 - 8.7	7.0 - 8.7	7.0 - 8.7	-
ORP	mV	-	-	-	-	-	-	-	-	-	-	-	-	-
Turbidity	NTU	-	-	-	-	-	-	-	-	-	Narrative [1]	Narrative [1]	Narrative [1]	-
Depth	m	-	-	-	-	-	-	-	-	-	-	-	-	-
General Parameters														
Dissolved Oxygen-lab	mg/L	9.8	10	10.2	9.8	10.5	9.8	10	10.5	11.7	-	-	>8	-
pH-lab	pH units	**5.39**	**5.47**	**5.64**	**5.9**	**5.55**	**6.82**	**5.93**	**6.24**	**6.12**	7.0 - 8.7	-	7.0 - 8.7	-
TSS	mg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	Narrative [1]	Narrative [1]	Narrative [1]	-
Total Hardness	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<1	<0.5	-	-	-	-
N-NH3	mg/L	0.063	0.121	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-
N-NO3	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	3.7	-	45	339
Total Metals														
T-Al	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	-	-	-	-
T-Sb	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0002	<0.0004	<0.0002	-	0.27 [Sb(III)]	-	-
T-As	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0005	<0.001	<0.0005	-	0.0125	0.0125	-
T-Ba	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.005	<0.01	<0.005	-	-	-	-
T-Be	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0001	<0.0002	<0.0001	0.1	-	-	-
T-Bi	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0001	<0.0002	<0.0001	-	-	-	-
T-B	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.0374	<0.1	<0.01	1.2	-	-	-
T-Cd	mg/L	<0.000002	<0.000002	<0.000002	<0.000002	<0.000002	<0.000002	<0.00001	<0.00002	<0.00001	0.00012	-	0.00012	-
T-Ca	mg/L	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.2	<0.4	<0.2	-	-	-	-
T-Cr	mg/L	0.00012	0.00016	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.001	<0.0005	0.0015 [Cr(VI)]	-	0.0015 [Cr(VI)]	-
T-Co	mg/L	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.00005	<0.0002	<0.00005	-	-	-	-
T-Cu	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0008	<0.0004	0.002	0.003	-	-
T-Fe	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.01	<0.02	<0.01	-	-	-	-
T-Pb	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0002	<0.0004	<0.0002	0.002	0.14	-	-
T-Li	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0001	<0.0002	<0.0001	-	-	-	-
T-Mg	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.072	0.02	0.015	-	-	-	-
T-Mn	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00039	<0.0004	<0.0002	-	-	-	-
T-Hg	mg/L	<0.000005	<0.000005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00002 [2]	-	0.000016	-
T-Mo	mg/L	<0.00001	<0.00001	<0.00001	0.000015	0.000019	<0.00001	<0.0001	<0.0002	<0.0001	-	-	-	-
T-Ni	mg/L	<0.00004	<0.00004	<0.00004	0.000057	<0.00004	<0.00004	<0.0004	<0.0008	<0.0004	0.0083	-	-	-
T-P	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.1	<0.05	-	-	-	-
T-K	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.45	<0.2	<0.02	-	-	-	-
T-Se	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.001	<0.0005	-	-	-	-
T-Si	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<2	<0.5	-	-	-	-
T-Ag	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.0001	<0.00005	0.0015	0.003	-	0.0075
T-Na	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	19.2	<0.2	0.12	-	-	-	-
T-Sr	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.002	<0.001	-	-	-	-
T-S	mg/L	<1	<1	<1	<1	<1	<1	<0.6	<6	<0.6	-	-	-	-
T-Te	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0005	<0.001	<0.0005	-	-	-	-
T-Tl	mg/L	<0.000004	<0.000004	<0.000004	<0.000004	<0.000004	<0.000004	<0.00002	<0.00004	<0.00002	-	-	-	-
T-Th	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.0002	<0.00002	-	-	-	-
T-Sn	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00004	<0.0004	<0.00004	-	-	-	-
T-Ti	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.005	<0.01	<0.005	-	-	-	-
T-W	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.002	<0.0002	-	-	-	-
T-U	mg/L	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.00002	<0.00004	<0.00002	-	-	-	-
T-V	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.002	<0.001	0.05	-	-	-
T-Zn	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.004	<0.008	<0.004	0.01	0.055	-	-
T-Zr	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.0001	<0.0002	<0.0001	-	-	-	-
Speciated Metals														
Methyl Mercury	ng/L	<0.023	<0.023	<0.023	<0.025	<0.050	0.029	0.06	<0.023	-	-	-	-	-
Polycyclic Aromatic Hydrocarbons (PAH)														
Acenaphthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	0.006	-	-	-
Acenaphthylene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	-	-	-	-
Acridine	mg/L	<0.00005	0.000072	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Anthracene	mg/L	<0.00001	0.000014	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	-	-	-	-
Benz(a)anthracene	mg/L	<0.00001	0.000027	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	-	-	-	-
Benzo(a)pyrene	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	0.00001	-	-	-
Benzo(b+j)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Benzo(g-h-i)perylene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Benzo(k)fluoranthene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
2-Chloronaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	-	-	-	-
Chrysene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	0.0001	-	-	-
Dibenz(a-h)anthracene	mg/L	<0.00001	0.000021	<0.00001	<0.00001	<0.00001	<0.00001	-	<0.00001	<0.00001	-	-	-	-
Fluoranthene	mg/L	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	<0.00003	-	<0.00003	<0.00003	-	-	-	-
Fluorene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	0.012	-	-	-
Indeno(1-2-3-cd)pyrene	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
1-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	0.001	-	-	-
2-methylnaphthalene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	0.001	-	-	-
Naphthalene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	0.001	-	0.0014	-
Phenanthrene	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	-	-	-	-
Pyrene	mg/L	<0.00002	0.000028	<0.00002	<0.00002	<0.00002	<0.00002	-	<0.00002	<0.00002	-	-	-	-
Quinoline	mg/L	<0.00005	0.000111	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	-	-	-	-
Total PAHs	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	-	-	-	-
Volatile Organic Compounds (VOC)														
Benzene	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.11	-	0.11	-
Ethylbenzene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.25	-	0.025	-
Methyl-tert-butyl-ether	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	0.44	5	-
Styrene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Toluene	mg/L	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	-	0.215	-
Total Xylenes	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	-	-	-
Total BTEX	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-
Dioxins and Furans														
2-3-7-8-TCDD	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDD	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDD	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDD	pg/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
2-3-7-8-TCDF	pg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-
1-2-3-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-7-8-PeCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-7-8-9-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
2-3-4-6-7-8-HxCDF	pg/L	<2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-
1-2-3-4-6-7-8-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
1-2-3-4-7-8-9-HpCDF	pg/L	<3	<3	<3	<3	<3	<3	<3	<3	<3	-	-	-	-
OCDF	pg/L	<4	<4	<4	<4	<4	<4	<4	<4	<4	-	-	-	-
Total Furan TEQ	pg/L	0	0	0	0	0	0	0	0	0	-	-	-	-
Total Dioxin Furan TEQ	pg/L	0	0	0	0	0	0	0	0	0	-	-	-	-
Microbiological Parameters														
E.coli	MPN/100 mL	<1	<1	<1	<1	<1	<1.8	<1	<1	<1	-	-	-	-

Notes:
Results in **bold**: Exceedances of Long Term BC WQG
Results underlined: Exceedances of Short Term BC WQG
Results highlighted in grey: Exceedances of Long Term CCME guidelines
Results in red: Exceedances of Short Term CCME guidelines
[1] Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. These guidelines were not screened as there were no discharges to evaluate.
[2] The BC WQG for mercury is derived using the maximum methyl mercury concentration in the dataset (0.082 pg/L) and the total mercury detection limit of 0.00001 mg/L.

Attachment C – Comments from Tsleil-Waututh Nation and Woodfibre LNG Limited's Responses

WLNG FDS Amendment Request – TWN Information Requests

Date	Section/Page #	Excerpt	Comment	Response
22-Apr-22	Condition as Issued and Economic and Technical Feasibility Page 6	Not only is this extensive impact area not technically feasible to effectively monitor for commonly occurring pinniped species…	It is noted that the exclusion zone for cetaceans is not being altered. WLNG states it is too difficult to maintain a 7,322m exclusion zone for pinnipeds. How does WLNG plan to do this for cetaceans? If monitoring for cetaceans within a 7,322m exclusion zone is feasible, can this same effort not be applied to pinnipeds also? TWN recommends that WLNG applies the same effort/resources/strategies for cetacean's towards monitoring the full pinniped exclusion zone.	The purpose of the marine mammal underwater noise impact area, as defined, is to reduce the potential for both injury of marine mammals and avoid potential behavioural disturbance. The majority of this area represents mitigation of potential behavioural disturbance. Prior to mitigation and with conservative assumptions, the pinniped injury threshold boundary was estimated to be 1/100 of this size (i.e., 73 m from source), while the cetacean injury threshold boundary was estimated to be 340 m. Pinnipeds and cetaceans are two groups with different behavioural characteristics and meriting different exclusion zones. Pinnipeds are known to be gregarious in nature and are often observed in areas during construction activities, suggesting a lack of disturbance. Cetaceans, however, are not known to show the same resilience to marine construction generated underwater noise. The 7,322 m marine mammal underwater noise impact area is also a theoretical maximum, based on modelling that conservatively depicts the furthest predicted extent over which the behavioural threshold is expected to be exceeded, and prior to application of mitigation measures. Woodfibre will apply noise mitigation measures that will reduce the in-field extent of the underwater noise impact area. As identified in the Environmental Assessment Certificate Application, key mitigation measures to be considered include vibratory pile installation methods (over impact pile installation) and sound dampening measures such as bubble curtains. Woodfibre will engage qualified environmental professionals with direct underwater noise and marine mammal monitoring experience to conduct hydrophone validation of the in-field sound levels. Finally, the context surrounding the quoted statement was meant to convey that it is technically unfeasible to construct the Project with a 7,322 m underwater noise impact area applied to pinnipeds, as the presence of one individual pinniped within the impact area will shut-down pile installation activities. Pinnipeds are expected to regularly be present within the 7,322 m area and would result in a critical number of project shutdowns, preventing the Project from progressing.

Date	Section/Page #	Excerpt	Comment	Response
22-Apr-22	Condition as Issued and Economic and Technical Feasibility Page 6	As written, noise monitoring of all in-water noise activities would be required, which is not technically or economically feasible to complete.	At a minimum, TWN requires noise monitoring for all in-water works. While TWN can acknowledge the challenges related to completing this task, the fact remains that a lack of proper monitoring on in-water works leaves a large potential for undocumented impacts to marine life and habitat. These potential impacts are not acceptable to TWN at any level.	Woodfibre will conduct in-field noise validation to confirm actual underwater noise levels. On-going construction monitoring will focus on activities with the highest potential to adversely affect marine mammals (i.e., higher sound level in-water activities). The proposed validation approach will provide a strong science-based foundation from which site-specific underwater noise monitoring procedures will be applied during active construction.
22-Apr-22	Requested Changes to Condition 3.8 Page 7	The Proponent shall establish and maintain a cetacean underwater noise impact area for all construction activities where impulsive underwater noise levels are predicted to exceed 160 decibels at a reference pressure of one micropascal to avoid adverse behavioural change in or injury to cetaceans. The Proponent shall establish and maintain a separate pinniped-specific exclusion area at 100-m	TWN requires WLNG to provide the details/framework on their adaptive management plan or strategy. This plan or strategy also needs to address what exceedance of acceptable noise level would activate the adaptive management, as well as how the exclusion zone would change in size if exceedances are recorded.	Adaptive management strategies will be developed through a combination of desktop analyses followed by validation of in-field sound levels during actual Project construction activities. Adaptive management may include activities such as modification of the size of the underwater noise impact area, implementation of additional mitigation measures, and/or modification of construction methods.

Date	Section/Page #	Excerpt	Comment	Response
		distance from impulsive underwater noise producing activities to avoid injury to pinnipeds.		
22-Apr-22	Rationale for Proposed Changes Pinniped-Specific Exclusion Area Page 9	A pinniped-specific exclusion area with a 100-m boundary of impact pile driving would be technically and economically feasible to effectively monitor.	What will adaptive management look like for this proposed 100m pinniped-specific exclusion zone?	The proposed pinniped specific 100 m exclusion zone is based on the experience of several other British Columbia-based marine terminal projects with in-water construction activities. If any pinnipeds come within this area, work activities (e.g. pile driving) that are known to result in underwater noise above the threshold levels discussed will be halted until the pinniped has vacated the exclusion zone. As discussed in the response above, pinnipeds are gregarious and curious in nature which, combined with their ubiquitous presence, is expected to lead to economically unfeasible regular and prolonged Project construction shutdowns if the current condition is maintained.
22-Apr-22	Rationale for Proposed Changes Pinniped-Specific Exclusion Area Page 9	A pinniped-specific exclusion area with a 100-m boundary of impact pile driving would be technically and economically feasible to effectively monitor.	TWN requires, at a minimum, an extension in the pinniped exclusion zone from 100 m to 300 m for any noise generating in-water works during pupping season.	Woodfibre has evaluated and assessed scientific evidence and modelling results and believes that the 100 m exclusion zone effectively mitigates the potential for pinniped injury. Predictive noise modelling indicates that the pinniped injury threshold is not expected to be exceeded beyond 73 m from the sound source in the absence of any mitigation measures. Woodfibre will actively evaluate and, if necessary, implement commonly-applied and effective mitigation measures (e.g. bubble curtains) during active impact pile driving activities. These measures will further reduce the injury threshold exceedance distance to less than 73 m from construction activities.

Date	Section/Page #	Excerpt	Comment	Response
				As noted in responses above, the area under discussion is a behavioural disturbance impact zone and, therefore, the 100 m adequately captures the potential predicted zone for injury, with consideration of no mitigation measures.
22-Apr-22	Rationale for Proposed Changes Pinniped-Specific Exclusion Area Page 9	The 100-m pinniped-specific exclusion area boundary would fully mitigate potential injury to pinnipeds considering the EAC Application's noise modeling assessment and conservative assumptions.	Please explain how WLNG intends to monitor noise at the 100m mark to ensure UWN levels do not exceed safe levels and cause potential injury to pinnipeds.	Woodfibre is not proposing to monitor noise at the boundary of the 100 m pinniped-specific exclusion area on a continuous basis. Spot check measurements will be completed periodically based on the construction activity underway. The 100m exclusion zone will be a physically defined exclusion zone and delineated with marker buoys or visually monitored using range finders or other distance measuring tools.

Attachment D – Comparison of Existing and Proposed Text for Conditions 3.8 and 6.4

Table D-1. Comparison between Original Conditions and Proposed Revised Conditions

Original Condition (Decision Statement as revised 2018)	Proposed Revised Condition
Condition 3.8 Protection of Marine Mammals	
3.8 The Proponent shall establish and maintain marine mammal underwater noise impact area for all construction activities where underwater noise levels are predicted to exceed 160 decibels at a reference pressure of one micropascal to avoid adverse behavioural change in or injury to marine mammals. In doing so, the Proponent shall: 3.8.1 identify each construction activity that generates underwater noise levels greater than 160 decibels and the periods of time when each activity occurs;	3.8 The Proponent shall establish and maintain a cetacean underwater noise impact area for all construction activities where underwater noise levels are predicted to exceed 160 decibels at a reference pressure of one micropascal to avoid adverse behavioural change in or injury to cetaceans. The Proponent shall establish and maintain a separate pinniped-specific exclusion area at 125-m distance from underwater noise producing activities to avoid injury to pinnipeds. In doing so, the Proponent shall: 3.8.1 identify each construction activity that generates underwater noise levels greater than 160 decibels and the periods of time when each activity occurs;
3.8.2 establish the boundary of the marine mammal underwater noise impact area for each construction activity identified in condition 3.8.1 at the distance from the activity at which the underwater noise level is predicted to reach 160 decibels;	3.8.2 establish the boundary of the cetacean underwater noise impact area for each construction activity identified in condition 3.8.1 at the distance from the activity at which the underwater noise level is predicted to reach 160 decibels;
3.8.3 employ a marine mammal observer, who is a qualified individual, and require that person to detect and report the presence of marine mammals in the marine mammal underwater noise impact area during construction activities identified in condition 3.8.1;	3.8.3 employ a marine mammal observer, who is a qualified individual, and require that person to detect and report the presence of cetaceans in the cetacean underwater noise impact area and pinnipeds in the pinniped exclusion area during construction activities identified in condition 3.8.1;
3.8.4 stop or not start the construction activities identified in condition 3.8.1 if a marine mammal is detected in the marine mammal underwater noise impact area, and only begin or continue the construction activities identified in condition 3.8.1 once the marine mammal has moved out of the marine mammal underwater noise impact area; and	3.8.4 stop or not start the construction activities identified in condition 3.8.1 if a cetacean is detected in the cetacean underwater noise impact area, or a pinniped is detected in the pinniped exclusion area, and only begin or continue the construction activities identified in condition 3.8.1 once the cetacean or pinniped has moved out of their respective monitoring areas; and
3.8.5 implement mitigation measures, including sound dampening technology and soft-start procedures, to reduce construction noise levels in the marine mammal underwater noise impact area.	3.8.5 implement mitigation measures, including sound dampening technology and soft-start procedures, to reduce construction noise levels in the cetacean underwater noise impact area and pinniped exclusion area.

Original Condition (Decision Statement as revised 2018)	Proposed Revised Condition
Condition 6.4 Water Quality Monitoring	
6.4 The Proponent shall monitor water quality and sediment, using as a benchmarks the Canadian Council of Ministers of the Environment's Water Quality Guidelines for the Protection of Aquatic Life and Interim Sediment Quality Guidelines for the Protection of Aquatic Life, and shall communicate any exceedance(s) of the Guidelines to relevant government authorities and Aboriginal groups, and implement additional mitigation measures to remedy those exceedances.	6.4 The Proponent shall, during construction and operation, monitor water quality and sediment, using as a benchmark the Canadian Council of Ministers of the Environment's Water Quality Guidelines for the Protection of Aquatic Life and Interim Sediment Quality Guidelines for the Protection of Aquatic Life, and shall communicate any exceedance(s) of the Guidelines attributable to the Project to relevant government authorities and Aboriginal groups, and implement additional mitigation measures to remedy those exceedances or reduce the associated risk to human health.